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Transcendental Meditation is good for the heart, according to a new study.

The study was funded by the National Institutes of Health. It found that African-Americans with heart disease who regularly practiced TM reduced their risk of death, heart attack, and stroke by 48%. Researcher Robert Schneider, says those results should apply to the general population. This taps into a universal physical phenomenon that is not related to race, age, culture, etc.," Schneider says. "This state of restful alertness has restorative benefits for everyone. It's a way to utilize the body's own internal pharmacy."

It requires training by a certified teacher to "settle inward" to a place called "transcendental consciousness." The technique is one of the two pillars underlaying education at the Maharishi University of Management, according to the school's web site. The study was a collaboration between MUM and the Medical College of Wisconsin in Milwaukee.

Researchers recruited 201 African-American men and women whose average age was 59 and who were generally considered obese. All of the participants previously had been diagnosed with heart disease. Many of them were current smokers. African-Americans, says Schneider, have a 35% higher risk of dying from heart disease than the general population.

The people in the study were divided into two groups. While both groups continued to receive standard care and medication for heart disease, the study group attended a seven-step course in TM. The people in that group were then instructed to meditate twice a day for 20 minutes for the duration of the study. Schneider says that the program was standard for TM practitioners and had not been modified for the study.

The comparison group received conventional health education. The people in that group were told to spend at least 20 minutes a day on heart-healthy activities.

Members of both groups were followed for as long as nine years. In addition to reducing the risk of death, heart attack, and stroke by nearly half, TM also significantly lowered systolic blood pressure, the top number in a blood pressure reading. Anger control and overall anger also improved. Those who entered the study with either high blood pressure or high stress benefited the most from meditation."What this is saying is that mind-body interventions can have an effect as big as conventional medications, such as statins," says Schneider. The TM group was expected to meditate 14 times per week. But the researchers found that on average participants only practiced the technique 8.5 times. They would have done well to stick to their instructions. Those who followed the study guidelines more strictly, Schneider says, had even greater benefits. Their risk reduction was 66%. "In cardiology, we are always impressed when we see any effective intervention," says cardiologist Michael Shapiro, DO, of Oregon Health and Science University in Portland.

"But to actually show a reduction in overall mortality -- that is really impressive." Shapiro, who reviewed the study for WebMD, says that its design appears scientifically rigorous and that its results are likely valid. But he says the study was too small to draw any definite conclusions.

"I am enthusiastic and cautiously optimistic," says Shapiro. "Overall, I like the study, and it provides justification for a much larger study."

Shapiro, who practices a different form of meditation, also says that more needs to be learned about what drives these results. He says the reduction in blood pressure, while significant, is likely not enough to account for all of the study's positive outcomes.

"Meditation can do a whole host of positive things: reduce anger and stress, encourage happiness," he says. "Who is to say that these are not the most important factors? This study can't get at the mechanism involved. We don't know how it works."

Transcendental Meditation, says Schneider, is "a simple, effortless, and natural way to settle down to a quiet state of mind."

To Schneider, this study shows that TM is a cost-effective means of prevention. "This is the strongest study ever done on meditation or any mind-body intervention for cardiovascular disease," he says.

In July 2011, the study was pulled from publication in Archives of Internal Medicine, a last-minute decision made when one of the journal's reviewers raised questions about the data. Schneider says that in the intervening time, the data was re-analyzed. Also, new data was added and the study underwent an independent review. "This is the new and improved version," Schneider says.
Evaluation of Tube-Less Percutaneous Nephrolithotomy of Patients Suffering from Abnormalities of Kidneys
Muhammad Amjad, Muhammad Khalid, Muhammad Shafique and Muhammad Safdar

ABSTRACT

Objective: The purpose of this study is to evaluate the consequences and secureness of the tube-less Percutaneous Nephrolithotomy in patients suffering from abnormalities of kidneys.

Study Design: Prospective study

Place and Duration of Study: This study was conducted at the Department of Urology, Kidney Center, BV Hospital, Bahawalpur from May 2015 to June 2019

Materials and Methods: Total 60 patients suffering from abnormalities of kidney and nephrolithiasis were the part of this research work. These abnormalities contained of horseshoe kidney, rotational abnormalities of the pyelocalyceal structure and ectopic issue of kidneys. We divided the patients into 2 groups randomly; we performed the totally tube-less methods in thirty patients (we did not use internal stent and nephrostomy tube in these patients) and 30 patients had experienced standard procedure of percutaneous nephrolithotomy (we performed this procedure with the utilization of both stent and nephrostomy tube). We compared the prevalence of complications, the requirements of transfusions during hospital stay and stone-free frequencies in the patients of both of these groups.

Results: In the patients group who were undergoing totally tube-less percutaneous nephrolithotomy for the extraction of the stone, the average burden of the stone was 2.54 ± 0.96 cm2. The average stay of the patients in the hospital was 1.3 ± 0.43 days. The mean analgesics need was 4.5 ± 1.6 milligram of morphine. Patients recovered to normal routine activity 10 ± 3.2 days. The complications after the surgery were transfusion of blood in 3.3% (n: 1) patient and high fever in 3.3% (n: 1) patient. The achievement was the rate of free stone as 83.3%. For the standard group of percutaneous nephrolithotomy, the average size of stone was 2.83 ± 0.76 cm2, and average duration of the stay in the hospital was 2.6 ± 0.65 days. The mean analgesics need was 10.4 ± 3.2 milligram of morphine and patients recovered to their normal routine activity in 15.5 ± 3.2 days. There was need of transfusion in only 6.7% (n: 2) patients and 3.3% (n: 1) patient was present with pneumothorax after surgery. Out of thirty patients, 86.7 were free from stones. The disparities among duration of surgery, rates of transfusions, related complications, retreatment and overall rate of free stone state were not significant in the patients of both groups but there was significant hospitalization stay, analgesics need and duration to recover for normal routine activities.

Conclusion: Totally tube-less percutaneous surgery of kidneys is very secure and affectual method for the abnormalities of kidneys and it is very effective even for the patients having medium to large burden of the stones.

Key Words: Surgery, Tube-Less, Morphine, Analgesics, Pneumothorax, Transfusion, Kidneys.


INTRODUCTION

The settlement of the Percutaneous Nephrolithotomy tube after the accomplishment of percutaneous surgery of kidney is the standard practice available in the field. Majority of the endourologists currently challenged this method with start of the tubeless procedure for the percutaneous surgery of kidney; the latest modification is totally tube-less Percutaneous Nephrolithotomy, where there is no use of the internal ureteral stent as well as tubes for drainage¹. This procedure has many benefits over the method with the placement of the tube and stent including decrease of the stay in
hospital, requirement of analgesia requirements and very early return to the normal routine activities\textsuperscript{2,3}. But still there is no evaluation about the role of totally tube-less percutaneous nephrolithotomy in the patients suffering from abnormalities of kidney like horse-shoe kidney, kidney with ectopic anomaly and rotational abnormality of the calyces. In this research work, we divided the patients into 2 groups. The 1st group underwent totally tube-less percutaneous method and thirty patients with standard Percutaneous Nephrolithotomy were in 2\textsuperscript{nd} group.

MATERIALS AND METHODS

From May 2015 to June 2019, 60 patients suffering from various abnormalities of kidneys underwent percutaneous surgery of kidneys. The most common abnormalities were horse-shoe kidney, rotational abnormality of the pyelocalyceal structure and the ectopic anomaly of the kidney. Five students excluded from this research work due to serious complications and other surgical interventions. We took the consent of every patients then we divided the patients into two different groups. We performed the CT scan for every patient of the two groups before surgical intervention. We performed the totally tube-less percutaneous operation of kidney for thirty patients and standard percutaneous nephrolithotomy in the patients of 2\textsuperscript{nd} group. There was no use of the internal stent or the any drainage tube in the group of the totally tube-less.

We performed the 1 or 2 access tracts on every unit of kidney. The dilation of the every tracts carried out to twenty eight French utilizing a balloon to permit for the passage of the thirty French working sheath. The patients who were present with under controlled pain with oral medicines got discharge after one day. We compared the both groups regarding burden of the stones, frequency of the stone-free rate, duration of surgery, total stay in the hospital, analgesics need after the surgery, associated complications and the total duration required to return normal routine activities. SPSS V.15 was in use for the analysis of the collected information.

RESULTS

There were 30 patients in the group of Percutaneous Nephrolithotomy with 36.7\% (n: 11) females and63.3\% (n: 19) males, the average age of these patients was 38.5 ± 13.6 years. The average size of the stone was 2.83 ± 0.76 cm\textsuperscript{2}. The average duration of the surgery was 64 ±14.7minutes. No transfusion was required during surgery but 6.7\% (n: 2) patients required transfusion after surgery. Only 3.3\% (n: 1) was present with complication of pneumothorax after surgery administered with the insertion of the chest tube. Five patients were present with residual stones. There was achievement of overall 86.7\% stone free rate. Analgesics requirement was 10.4 ± 3.2 milligram of morphine. The hospital stay was 2.6 ± 0.65 days. The mean duration to return to the normal routine activities was 15.5 ± 3.2 days.

There were 30 patients in the group of totally tube-less percutaneous nephrolithotomy in which there were 33.3\% (n: 10) female and66.7\% (n: 20) male patients, with an average age of 39.1 ±12.4 years. Average size of stone was 2.54 ±0.96 cm\textsuperscript{2}. The average duration of the surgery was 57 ± 12.5 minutes. We provided no transfusion of blood during surgery, only single patient needed transfusion after surgery. Only one got complication and one patients suffered high temperature after surgery administered medically.

Five patients were present with residual stones which required another surgery. Total 83.3\% was the stone free rate. Analgesics requirement was 4.4 ±1.6 milligram of morphine. Average stay in the hospital was 1.3 ± 0.43) days. The duration required to return to normal routine activity was 10 ± 3.2days. Type of the anomalies are present in the Table-1. Table-2 presents the surgery’s outcome in the both groups.

<table>
<thead>
<tr>
<th>Anomaly</th>
<th>Malrotated kidney</th>
<th>Horseshoe kidney</th>
<th>Ectopic kidney</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>No</td>
<td>Percent</td>
<td>No</td>
<td>Percent</td>
</tr>
<tr>
<td>Standard PCNL</td>
<td>15</td>
<td>50.0</td>
<td>13</td>
<td>43.3</td>
</tr>
<tr>
<td>TT PCNL</td>
<td>16</td>
<td>53.3</td>
<td>13</td>
<td>43.3</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>51.7</td>
<td>26</td>
<td>43.3</td>
</tr>
</tbody>
</table>

PCNL = Percutaneous Nephrolithotomy; TT = Totally Tubeless.
DISCUSSION

Calculi presence in the kidneys with abnormal anatomy are serious challenge for urologists. The beginning of the percutaneous surgery of the kidneys has provided the specialists a negligibly invasive substitute to open management through surgery of the renal abnormalities as kidney stones. Though percutaneous surgery of kidneys has very low rate of morbidity but it contains some serious complications as well as discomfort due to tube. In 2009 and 2011, Bellman and his contemporaries\(^5\) tested the need for the routine settlement of the nephrostomy tube after the percutaneous surgical intervention. Tube-less method involved less stay, analgesia needs and time to return to the normal routine activities. These results were similar to the findings of many other research works.\(^6\)\(^9\)

In one research work conducted by Goh and Wolf\(^10\), they claimed that utilization of an external catheter is better option as compared to the internal stent. Finally, a current research work\(^1\) elaborated the totally tube-less percutaneous nephrolithotomy. Percutaneous method for the anomaly of the horse-shoe kidneys is good after a complete awareness of anatomy. Posterior calyx of lower pole is very anterior and medial.\(^11\) In 3 cases of the ectopic anomaly of kidney in current case work, under vision of laparoscopy and utilizing a trans-peritoneal procedure, there was avoidance of iatrogenic injuries to the abnormal vasculature. In the tube-less procedure, patients were present with short stay in hospital because of low requirement of analgesia and low rate of the morbidity. This was also very cost effective procedure and there was complete negation of the cost of the nephrostomy stent and removal of stent.

CONCLUSION

Totally tube-less percutaneous surgery of the kidney is very secure and effectual procedure for the abnormalities of the kidney, it provides considerable benefits in morbidity as well as cost effectiveness in comparison with the standard tube-less percutaneous nephrolithotomy methods and it can work even for the patients present with medium to large burden of the kidney stones.

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Awareness about Transmission of HIV/AIDS and related Stigma in Hospital Staff at a Tertiary Care Facility Hyderabad Sindh

Shamsuddin Solangi¹, Manzoor Ali¹, Saima Siraj¹, Hussain Bux Kolachi², Shazia Kazi¹ and Sajjad Kazi²

ABSTRACT

Objective: To determine the awareness about transmission of HIV/AIDS and related stigma in hospital staff.

Study Design: Cross sectional / Observational study.

Place and Duration of Study: This study was conducted at the Department of Medicine, Isra University Hospital Hyderabad from August 2019 to October 2019.

Materials and Methods: The study was done on group of medical and paramedical staff of the hospital; sample size was 79. Informed consent was obtained from all enrolled participants. Proforma was designed and filled by each participant. Data was analyzed on SPSS version 22. Likert scale was applied for statistical significance.

Results: Gender distribution of patients in the study population male were 40 (50.6%), female 39 (49.4%). Most common age group was 20 – 40 year (94.9%). Awareness in doctors and nurses was 24 (30.4%) and 28 (35.4%) respectively, mostly female nurses have better awareness overall. H/A stigma despite satisfactory knowledge was seen in doctors and nurses 22 (27.8%) and 34 (43.0%) respectively.

Conclusion: Lack of awareness about transmission of HIV/AIDS and H/A related stigma can accelerate epidemic. Seminars, workshops should be organized on a continuous basis for health care workers on universal precautions, stigma and discrimination reduction. Stigma is a public health problem so strategy for reduction is required in patients and public as well.

Key Words: Awareness, HIV / AIDS, Stigma, Hospital Staff

INTRODUCTION

In April 2019 Ratodero (Larkana) outbreak of human immunodeficiency virus (HIV) created panic in Sindh province of Pakistan after 900 children under 12 years out of 1112 cases so far test positive for HIV. Ratodero city of 200,000 with high illiteracy rate and the poorest population of Pakistan. The main source of HIV transmission was reuse of syringes and IV needles.¹ In 2018 about 37.9 million people globally were living with HIV; 1.7 million people became newly infected with HIV, 23.3 million people were accessing antiretroviral therapy, 770,000 people died from AIDS related illnesses. It is estimated that 49% of people living with HIV and tuberculosis are unaware of their co-infection and are therefore not receiving care.

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From 2010 to 2018, the number of HIV positive people in Pakistan almost doubled to about 160,000 according to UNAIDS.² Health-care professionals are trained in a way that they occupy an important position regarding knowledge about transmission of HIV / AIDS, prevention programs and the management of AIDS patients. The studies were performed to assess HIV/AIDS-related knowledge, attitude, and practice (KAP) and perceptions among health-care professionals.³⁴ HIV/AIDS related stigma (H/A stigma) is considered as major obstacle to effective response to the epidemic. In addition to devastating the familial, social, and economic lives of individuals, H/A stigma is cited as a major barrier to accessing prevention, care, and treatment services.⁵,⁶⁷,⁸

MATERIALS AND METHODS

The study was carried out on group of medical and paramedical staff to check knowledge regarding transmission of HIV/AIDS and related stigma. The study was done on 79 hospital staff of Isra University Hospital Hyderabad from August 2019 to October 2019. Informed consent was obtained from all enrolled participants. Proforma was designed to check awareness about transmission of HIV/AIDS and related
participants according to profession (n=79) Table No. 2: Participants distribution according to profession (n=79) Mean age (Mean ± SD=27.59±1.51 years)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-40 years</td>
<td>75</td>
<td>94.9%</td>
</tr>
<tr>
<td>41-65 years</td>
<td>04</td>
<td>5.1%</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender: Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>39</td>
<td>49.4%</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Mean age (Mean + SD=27.59±1.51 years) Table No. 2: Participants distribution according to profession (n=79)

<table>
<thead>
<tr>
<th>Hospital staff</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctors</td>
<td>26</td>
<td>32.9%</td>
</tr>
<tr>
<td>Nurses</td>
<td>37</td>
<td>46.8%</td>
</tr>
<tr>
<td>Paramedics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technician</td>
<td>12</td>
<td>15.2%</td>
</tr>
<tr>
<td>Non - Technician</td>
<td>04</td>
<td>5.1%</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

RESULTS

Table 1. shows demographic distribution of patients in the study population, males were 40 (50.6%), females 39 (49.4%). Most common age group was 20 – 40 year (94.9%), mean age was 27.59±1.51 years, age range 20 – 65 years. Table 2. shows distribution of participants according to profession; medical staff – doctors 26 (32.9%), nurses 37 (46.8%). Paramedical staff – technicians 12 (15.2%), non – technicians 4 (5.1%). Table 3. shows awareness distribution about transmission of HIV/AIDS in hospital staff – Likert scale; awareness in doctors and nurses was24 (30.4%) and 28(35.4%) respectively. Awareness in technicians and non – technicians was 8 (10.1%) and 1 (1.3%) respectively. Non - awareness in doctors and nurses was 11 (13.9%) and 4 (5.1%) respectively. Non – awareness in technicians and non – technicians were 3 (3.8%) respectively, undecided nurses were 8 (10.1%).

Table No. 1: Participants distribution according to Demographic characteristics (n=79)

<table>
<thead>
<tr>
<th>Awareness response</th>
<th>Doctors</th>
<th>Nurses</th>
<th>Technicians</th>
<th>Non-Technicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>24 (30.4%)</td>
<td>28(35.4) %</td>
<td>8 (10.1%)</td>
<td>1 (1.3%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>2 (2.5%)</td>
<td>1 (1.3%)</td>
<td>4 (5.1%)</td>
<td>3 (3.8%)</td>
</tr>
<tr>
<td>Undecided</td>
<td>0</td>
<td>8 (10.1%)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

HIV/AIDS related stigma (H/A stigma)in hospital staff (n=79)

Table 4 shows distribution of HIV/AIDS related stigma (H/A stigma) among hospital staff. H/A stigma was seen in doctors and nurses 22 (27.8%) and 34 (43.0%) respectively. Table 3. shows awareness distribution about routes of transmission of HIV/AIDS. In similar study by Rehan M et al (Pakistan 2016) revealed that knowledge regarding HIV/AIDS among women was higher than men 68.3%, 61.8% respectively. Other consistent study carried out by Doda A et al (India 2018) revealed that the average knowledge regarding AIDS transmission was found to be significantly higher in male clinicians. Poor knowledge about HIV infection, particularly among the young medical students and paramedical staff. Also they had misconceptions regarding mode of transmission, and prevention. Another consistent study by Alwafi HA et al (Saudi Arabia 2018) knowledge gaps and negative attitudes of the general public toward people living with HIV/AIDS had been identified. Another similar study by Ahsan Ullah AK (Bangladesh 2011) shows that 80% of the nurses and 90% of the physicians have H/A related stigma despite having good knowledge about

DISCUSSION

This study was conducted to assess the awareness about transmission of HIV/AIDS and related H/A stigma among hospital staff of tertiary care facility Hyderabad, Pakistan. In our study population young doctors and nurses (30 – 35%) mostly female nurses have better awareness about routes of transmission of HIV/AIDS. In similar study by Rehan M et al (Pakistan 2016) revealed that knowledge regarding HIV/AIDS among female students was higher than males 68.3%, 61.8% respectively. Other consistent study carried out by Doda A et al (India 2018) revealed that the average knowledge regarding AIDS transmission was found to be significantly higher in male clinicians. Poor knowledge about HIV infection, particularly among the young medical students and paramedical staff. Also they had misconceptions regarding mode of transmission, and prevention. Another consistent study by Alwafi HA et al (Saudi Arabia 2018) knowledge gaps and negative attitudes of the general public toward people living with HIV/AIDS had been identified. Another similar study by Ahsan Ullah AK (Bangladesh 2011) shows that 80% of the nurses and 90% of the physicians have H/A related stigma despite having good knowledge about
transmission of HIV/AIDS. But their behavior with the HIV-positive individuals was discriminatory.

Current study identified unfavorable attitude among paramedical staff toward HIV positive people which is inconsistent with studies by Rairikar SV et al (India 2016) and Tomohiro Ishimaru et al (Japan 2017) Rasania SK et al (India 2003) and (other studies) and (other studies) 19,17,18,19,20,21. In these studies, findings suggest that the paramedical staff had satisfactory Knowledge regarding transmission of HIV/AIDS. Most of the paramedical staff had favorable attitudes.

CONCLUSION

Lack of awareness about transmission of HIV/AIDS and H/A related stigma can accelerate epidemic. Stigma is a public health problem so strategy for reduction is required in patients and public as well.

Author’s Contribution:

Concept & Design of Study: Shamsuddin Solangi
Drafting: Manzoor Ali, Saima Siraj
Data Analysis: Hussain Bux Kolachi, Shazia Kazi, Sajjad Kazi
Revisiting Critically: Shamsuddin Solangi, Manzoor Ali
Final Approval of version: Shamsuddin Solangi

Conflict of Interest: The study has no conflict of interest to declare by any author.

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Outcome of Arterial Blood Gas (ABG) Status in Fetal Growth Restriction with Normal and Abnormal Doppler Studies

Isma Rauf1, Talat Nelofer1* and Yasir Arafat2

ABSTRACT

Objective: To determine the outcome of arterial blood gas (ABG) status of fetuses with IUGR with both normal and abnormal doppler velocimetry studies. Umbilical cord blood was drawn for this purpose.

Study Design: Descriptive / Cross-sectional study

Place and Duration of Study: This study was conducted at the Department of Obstetrics & Gynecology, Women Medical College, Abbottabad and Women & Children Hospital Abbottabad from July 2017 to August 2018.

Materials and Methods: 80 women with singleton pregnancy and IUGR fetuses who were delivered by Cesarean section were included in this study. Umbilical cord blood sampling was done immediately after doppler velocimetry which was done at the time of delivery. The study participants were divided into two groups based on their doppler velocimetry status. Different indices such as pulsatility index, resistivity indices and SD ratios were stratified by doppler velocimetry results and ABG results.

Results: Mean pulsatility and resistivity indices were higher in babies with abnormal doppler velocimetry (p=0.00). Similarly, SD ratio was higher in abnormal doppler group (p=0.00). Babies with abnormal ABG values had a higher SD ratio and resistivity index (p=0.05). 75% of neonates who had abnormal doppler velocimetry had abnormal ABG values (p=0.00). Babies with abnormal doppler had a statistically significant reduction in blood pH and oxygen content and increased PCO2 (p < 0.05). Likewise, the APGAR score of infants with abnormal doppler velocimetry studies was lower compared to those with normal doppler studies (p < 0.05).

Conclusion: Abnormal doppler velocimetry in IUGR fetuses is associated with acidosis, hypoxemia and hypercapnia in new-born. Anticipation of metabolic abnormalities in neonates with abnormal Doppler velocimetry can help in prompt management and as a result, decreased morbidity in these neonates.

Key Words: IUGR, Small-for-gestational age, birth asphyxia, Acute respiratory Distress, Hypoxia, perinatal mortality, Eclampsia

Citation of article: Rauf I, Nelofer T, Arafat Y. Outcome of Arterial Blood Gas (ABG) Status in Fetal Growth Restriction with Normal and Abnormal Doppler Studies. Med Forum 2020;31(2):9-12.

INTRODUCTION

Although Intrauterine growth restriction (IUGR), as the name implies, is fetal growth below “normal”, it can be defined in a number of ways1. For example, growth of the fetus below the potentially normal rate of growth that is specific for the gender or race of a fetus, or a decrease in or a deviation from the expected pattern of growth for a fetus usually resulting from causes related to the fetus itself i.e., growth anomalies or as a result of one or many adverse events affecting fetus in uterus.

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IUGR results from a number of causes such as chromosomal abnormalities, infections, maternal and placental factors, drug exposure, illicit drug use by the mother during pregnancy, co-morbid such as maternal hypertension and anemia etc2-4. IUGR places the fetuses at an increased risk of death in-utero and birth asphyxia5-6. Prompt diagnosis of IUGR can increase the chances of fetal survival by allowing for timely intervention. Doppler ultrasound of umbilical artery has been used as a surveillance tool for detection of IUGR and prediction of adverse perinatal outcomes in such cases5,8. Doppler ultrasound of umbilical artery can identify reduction in or absence of umbilical artery blood flow indicating an increased risk of respiratory distress, cesarean section, chronic lung disease later on in life, deterioration in acute renal function, necrotizing enterocolitis and/or death7. There is a higher risk of developing intra-uterine hypoxia / acidosis in a pregnancy with IUGR fetus. It is known that fetal lactate levels are higher than maternal lactate levels in human pregnancies9,10, and it has been shown that the lactate concentration of umbilical vein and umbilical artery at the time of birth
have a correlation with APGAR scores at one and five-minutes after birth in IUGR pregnancies\textsuperscript{12,13}. Fetal lactate concentrations have been deemed a better indicator of acidemia in fetus than pH measurements\textsuperscript{14,15}. However, measurement of umbilical vessels pH is a well-known method for assessment of fetal oxygenation in light of association of birth acidosis with increased incidence of complications in neonates\textsuperscript{16}. Sampling of fetal blood for determination of acid-base status and oxygenation can help differentiate between fetuses with IUGR and concomitant acidosis and / or hypoxia from fetuses with IUGR only. Since IUGR is one of the leading causes of perinatal mortality and is responsible for significant morbidity, and it is also known that acidosis at birth results in neonatal complications, this study was designed to assess early neonatal outcomes in fetuses with IUGR by performing umbilical artery doppler ultrasound and determining their acid-bases status via measurement of arterial blood gases. The study also aimed to assess the utility of umbilical artery doppler ultrasound in predicting the birth acid base status of fetuses with IUGR.

**MATERIALS AND METHODS**

This descriptive cross-sectional study was conducted at the Department of Obstetrics & Gynecology, Women Medical College, Abbottabad and Women & Children Hospital Abbottabad from July 2017 to August 2018. 80 pregnant women with a singleton pregnancy and IUGR fetuses and / or small for gestational age fetuses were enrolled in the study and who were delivered by emergency or elective cesarean sections were included in the study. Patients with fetuses who had structural anomalies onanomaly scans were excluded from the study. IUGR was confirmed by a detailed history and a thorough physical examination including measurement of symphysio-fundal height followed by ultrasonography in which biparietal diameters, length of femur, circumference of abdomen, circumference of head, placental maturity and amniotic fluid index were measured for confirmation of IUGR. Neonatal weightless than 10th percentile according to age and weight was used for diagnosis of IUGR at the time of birth. Umbilical artery doppler studies for pulsatility index (PI), resistive index (RI), and systolic diastolic ratio (S/D Ratio) were performed on neonates with IUGR. The study participants were subdivided into two groups based on doppler flow results. All patients with IUGR but normal doppler flow studies were segregated into one group while those with abnormal doppler flow and IUGR were put in the second group. Fetal blood sampling was performed immediately after doppler velocimetry was done via a co-axial pulsed doppler velocimeter with a sample volume of 5 ml using high-pass filters at 100Hz (Ultra mark 5, ATL Corp). The simplified Gosling formula was used to determine pulsatility index. Umbilical artery blood gases were analyzed by drawing a sample of blood from umbilical artery in a heparinized syringe at the time of cesarean section. Birth weight and APGAR scores at 1- and 5-minutes were recorded afterwards. Data recorded was analyzed using SPSS 20. Numerical variables were described as mean and standard deviation while categorical variables were described as frequencies and percentages. Data was stratified by SD ratio, birth Weight, APGAR score and perinatal outcome. Post stratification chi-square test was done and a p ≤ 0.05 was taken as significant.

**RESULTS**

The mean±SD age of pregnant women was 27.6±4.6 years with a range of 20-39 years. Patients with abnormal doppler were older than patients with normal doppler ultrasound (p=0.013). Age did not appear to affect the acid-base status of the study participants (p=0.8). Similarly, while the mean±SD gestational age of study participants was 260±11 days and the difference between doppler abnormal andnormal acid-base groups in terms of gestational age was not statistically significant (p > 0.05).The mean±SDpulsatility index was 1.46±0.62. The pulsatility index of study participants with normal doppler was significantly lower than that in participants with abnormal doppler flow (0.98±0.22 vs 1.98±0.51 respectively; p=0.00). Similar trend was observed for resistive index which was significantly lower in participants with normal doppler flow than those with abnormal doppler flow (0.62±0.15 vs 0.86±0.12 respectively; p=0.00), and for SD ratio (1.84±1 in normal doppler group vs 3.38±0.65 in abnormal doppler group; p=0.00).While no statistically significant difference was seen in pulsatility index of participants based on their acid-base status (p > 0.05), a statistically significant difference was observed in the resistivity index of patients with normal and abnormal ABG values (p =0.05). The mean± SD resistivity index of patients with normal ABG was 0.7±0.2 and of patients with abnormal ABG values was 0.78±0.2. Similarly, the SD ratio was significantly higher in patients with abnormal ABG (2.96±0.2) than those with normal ABGs (2.2±0.96) (p=0.001).While majority (43; 53.75\%) of the study participants were found to have abnormal ABGs, the prevalence of abnormal ABGs was higher in participants with abnormal doppler flow studies where as much as 75% of the participants had abnormal ABGs (30 (75\%) out of 40). On the other hand, only 13(32.5\%) patients with normal doppler flow studies had abnormal ABG values (p=0.00; OR 6.23; 95\%CI 2.35-16.51). A statistically significant difference was seen in the mean±SD blood pH of patients with normal doppler flow studies (7.14±0.98) and abnormal doppler flow studies (7.03±0.14) (p <0.05). Study participants with abnormal doppler had significantly high hypercapnia (52.07±8.66 vs
44.35±7.07 in patients with normal doppler flow studies; p < 0.05), more hypoxia (O2 content 14.17±2.64 vs 16.90±1.81 in those with normal doppler flow; p < 0.05) and a stronger base deficit (-2.71±7.6 vs 4.25±8.43 in those with normal doppler flow; p < 0.05). There was no statistically significant difference in birth weight of neonates in both doppler and ABG groups (p > 0.05). The difference between APGAR score of abnormal doppler group (5.35±1.3) and normal doppler flow group (6.5±1.2) at 1 minute was statistically highly significant (p = 0.00). On the other hand, no statistically significant difference was observed between APGAR scores of patients with normal ABGs and patients with abnormal ABG values (p > 0.05). Upto three-fourth (30) of babies in abnormal doppler group had an APGAR score of upto 6 at one minute compared to 13 in normal doppler flow group (p = 0.000). Of the 43 patients with abnormal ABGs, 28 (65%) had an APGAR score of more than 7 at 5 minutes compared to 30 (80%) patients in normal ABG group. Conversely, 15 (35%) babies in abnormal ABG group had an APGAR score of upto 6 at 5 minutes after delivery compared to 7 (19%) babies with normal ABG values (p > 0.05).

DISCUSSION

The main feature of IUGR is delayed or no growth of fetus in the uterus. Infants born with IUGR have increased of handicap later in their life. Now, the only effective treatment for IUGR fetuses is delivery. A clinical role has been suggested for doppler sonography, a non-invasive method for evaluation of uteroplacental circulation, for measuring the fetal blood-flow wave-forms, inumbilical artery via doppler velocimetry coupled with this non-invasive approach, the ability to sample cord blood either in-utero or immediately after birth allows the physicians to evaluate them etabolic stressors that the fetus may have faced before and at the time of delivery. Cordocentesis has been used to diagnosis several conditions such as lactic acidosis and anemia, hypoxia, low amino acid concentrations, and endocrine diseases in fetuses with IUGR. In our study, statistically significant differences were seen in ABG values between babies with normal doppler and babies with abnormal doppler studies. Babies with abnormal doppler studies had more severe hypoxia, hypercapnia, acidosis and stronger base deficit compared to the other group (p < 0.05). Similarly, babies with abnormal doppler and abnormal ABGs were more distressed at 1 minutes afterbirth (p < 0.05). However, this difference was not seen when APGAR scores at 5 minutes were compared (p > 0.05). The pulsatility index, resistive index and the SD ratio were increased in babies with abnormal doppler flow (p < 0.05). Similarly, the resistivity index and SD ratio were abnormal in babies with abnormal ABG values, while pulsatility index was not affected by abnormal ABGs. Interestingly, a study from Iran reported that there was no significant correlation between umbilical artery blood gases and abnormal color doppler in IUGR infants. The researchers evaluated 100 patients with IUGR and compared the results of umbilical artery blood gas analysis with abnormal color doppler. On the other hand, Blackwell and colleagues have reported that neonates with IUGR are hypoxemic and have acidosis when compared with normal neonates. Similar findings have been reported by Ferrazziet al. and colleagues who also reported hypercapnia in their study cohort in addition to acidosis and hypoxia. A study from the US reported that oxygen saturation, partial pressure of oxygen and blood pH of neonates with IUGR were significantly lower than neonates without IUGR, while opposite was seen for partial pressure of carbon dioxide (PCO2). A study from Turkey reported that Doppler velocimetry is a reliable tool for predicting adverse perinatal outcomes for neonates.

CONCLUSION

The studies concur with results of this study suggesting that abnormal Doppler velocimetry could be used as a prognostic tool in fetuses with IUGR. IUGR babies have deranged acid base status, and we observed a statistically significant association between abnormal ABGs and abnormal doppler velocimetry of umbilical artery.

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Author’s Contribution:
Concept & Design of Study: Isma Rauf
Drafting: Isma Rauf
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Revisiting Critically: Isma Rauf, Talat Nelofer, Yasir Arafat
Final Approval of version: Isma Rauf, Talat Nelofer, Yasir Arafat

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES


Objective: To assess how much the medical students were satisfied with their course work teaching and assessment method and what measures they will suggest for the future to rectify the current situation. It is necessary to determine the quality of the currently applied academic system.

Study Design: Cross-Sectional Study

Place and Duration of Study: This study was conducted at the Gomal Medical College, Dera Ismail Khan (a public sector medical college) from February to July 2019.

Materials and Methods: A random sample of 375 medical students (2nd to final year) was chosen to provide a structured questionnaire. However, demographic as well as data regarding the objective of the study could be collected only for 357 medical students. SPSS version 21 was used for the analysis of the data using descriptive statistics.

Results: There were more 53% (189) females in the studied sample. Most participants (67%) were satisfied with the teaching method and its standard in the college. Twenty-six percent of students expressed the difficulty of interaction among students. Satisfaction with assessment methods was 28%. Satisfaction with lectures using multimedia was up to 72%. There were 50% of students who were not satisfied with self-directed learning. Fifty-seven percent were pleased with the viva examination. There was a sense of academic workload among 29% of the students. Twenty-six percent students also expressed the need for career counseling. Fifty-six percent of students were satisfied with pre-clinical teaching.

Conclusion: There was suggestion of improving the lectures and applied training. Moreover, the need for career counseling was pointed out by arranging professional understanding sessions.

Key Words: Students, Satisfaction, Dissatisfaction, Educational Activities

Citation of article: Malik MO, Ahmad M, Rehman H, Umail M, Sajjad S, Salman M. Satisfaction Level of Medical Students Regarding Academic Activities of a Public Sector Medical College: Gomal Medical College, Dera Ismail Khan. Med Forum 2020;31(2):13-16.

INTRODUCTION

The conventional medical education system includes teachers as well as hospital-based training of medical students. In a developing country like Pakistan, the academic system is not very strong, and standards are not followed strictly. Due to limited assets, it allows a very nominal amount of financial plan to the educational sector. Despite such drawbacks, several steps have been taken to transform the medical curriculum. Particularly, consistent with international standards by private medical colleges. These changes generally involve the establishment of a superior system of education to impart information and skills using current methods of teaching, learning, assessment, and evaluation. A continuous monitoring system is imperative to determine the new system of medical education to produce better, competent, and competitive medical students. To bring change is essential as student demographics, the role, and responsibilities of teachers, educational management, and leadership have changed. These all have essential aftermaths on the medical education system. Medical students will directly benefit from the changing system. Students are considered an integral part of the curricular assessment,
monitoring, evaluation, and feedback. For instance, Graduate Exit Questionnaire (GEQ) is a part of the routine educational process in the United States of America. The evaluation of medical graduates through GEQ is utilized for quality assurance and revision of the curriculum. The information collected through curriculum evaluation about the quality of the educational program is utilized to bring positive change and improvement in the program. Subsequently, monitoring of the system helps to determine the corrective measure and way forward. However, data about student satisfaction and their level is scarce concerning their academic activities. Unfortunately, this is associated with impaired learning. Predominantly, where resources are limited, and budget allocation to the health sector is below par. With this statement, the implication of our study would be significant to break the traditional cycle teaching and assessment in medical education. Therefore, it is crucial to determine the weaknesses of the medical education system of a public sector medical college. We surveyed to identify the level of satisfaction with the academic activities of medical students.

MATERIALS AND METHODS

A cross-sectional study was carried out at Gomal Medical College Dera Ismail Khan from February to July 2019. In this survey, the used questionnaires included a part in which social and demographical information such as gender, race, and age were noted, while the other portion was related to the educational system in the medical college. A 5-point Likert type scale (strongly agree, agree, undecided, disagree, strongly disagree) was used to determine the satisfaction level of medical students. In the end, the participants were asked only one open ended question in which they were invited to communicate their proposals, perspectives, and suggestions directly. The questionnaire was acquired from a study of Manzar B and Manzar N. The motive of the survey was described to the participants. They gave written permission, and it was made sure that the data will remain confidential. We used SPSS version 21 for the analysis of the data; by using frequencies. For the assessment of different variables, Descriptive analysis was used.

RESULTS

According to the opinions of the participants about the module system, they mostly selected the option of strongly agreed and agreed for their satisfaction with the ongoing educating (15%, 52%, respectively). A significant number of students (20%) strongly agreed and (49%) agreed that teachers should encourage interaction among students during teaching sessions. Regarding students-lecturers communication during the lectures, the majority strongly agreed (20%) and agreed (49%) for good association between students and teachers during classes. 31% of students strongly agreed, and 41% of students agreed that lectures should be delivered using multimedia and videos should also be used. In terms of laboratory facilities of the college, 15% of students strongly agreed, and 41% agreed on their appropriateness for learning. Most of the students strongly agreed (26%) and agreed (40%) that the learning process should be problem-based. Likewise, a high percentage of them strongly agreed (30%) and agreed (42%) regarding the importance of discussion in small groups for a greater understanding of the subject. Some medical students strongly agreed (17%), and 36% agreed that self-directed study improves their learning. A significantly huge number of students, 23% strongly agreed, and 40% agreed that there is an academic workload in their program. For the betterment of academic activities, most of the participants about (20%) strongly agreed, and (46%) agreed with the crucial role of the digital library in luring more students to improve their learning activities.

Table No.1: Question with response

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Question/Issues</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>1</td>
<td>Satisfaction with teaching methods</td>
<td>53(15)</td>
<td>186(52)</td>
<td>22(6)</td>
<td>60(17)</td>
<td>36(10)</td>
</tr>
<tr>
<td>2</td>
<td>Interaction among students in sessions</td>
<td>71(20)</td>
<td>174(49)</td>
<td>20(6)</td>
<td>57(16)</td>
<td>35(10)</td>
</tr>
<tr>
<td>3</td>
<td>Assessment methods facilitate learning</td>
<td>57(16)</td>
<td>177(50)</td>
<td>24(7)</td>
<td>60(17)</td>
<td>39(11)</td>
</tr>
<tr>
<td>4</td>
<td>Lectures using multimedia</td>
<td>111(31)</td>
<td>148(41)</td>
<td>21(6)</td>
<td>41(11)</td>
<td>36(10)</td>
</tr>
<tr>
<td>5</td>
<td>Labs. appropriate for learning</td>
<td>55(15)</td>
<td>145(41)</td>
<td>24(7)</td>
<td>81(23)</td>
<td>52(15)</td>
</tr>
<tr>
<td>6</td>
<td>Emphasized on problem-based learning</td>
<td>94(26)</td>
<td>162(45)</td>
<td>23(6)</td>
<td>44(12)</td>
<td>34(10)</td>
</tr>
<tr>
<td>7</td>
<td>Small group discussions</td>
<td>107(30)</td>
<td>151(42)</td>
<td>20(6)</td>
<td>43(12)</td>
<td>36(10)</td>
</tr>
<tr>
<td>8</td>
<td>Self-directed learning is more helpful</td>
<td>60(17)</td>
<td>128(36)</td>
<td>26(7)</td>
<td>93(26)</td>
<td>50(14)</td>
</tr>
<tr>
<td>9</td>
<td>The viva system is effectiveness</td>
<td>61(17)</td>
<td>143(40)</td>
<td>36(10)</td>
<td>69(19)</td>
<td>48(13)</td>
</tr>
<tr>
<td>10</td>
<td>There is academic workload</td>
<td>81(23)</td>
<td>144(40)</td>
<td>30(8)</td>
<td>67(19)</td>
<td>35(10)</td>
</tr>
<tr>
<td>11</td>
<td>Digital library</td>
<td>72(20)</td>
<td>163(46)</td>
<td>29(8)</td>
<td>56(16)</td>
<td>37(10)</td>
</tr>
<tr>
<td>12</td>
<td>Career counseling</td>
<td>80(22)</td>
<td>156(44)</td>
<td>31(9)</td>
<td>56(16)</td>
<td>34(10)</td>
</tr>
<tr>
<td>13</td>
<td>Pre-clinical teaching</td>
<td>71(20)</td>
<td>130(36)</td>
<td>35(10)</td>
<td>77(22)</td>
<td>44(12)</td>
</tr>
</tbody>
</table>
survey reported among international students’ population. Those students may be more resistant to newer strategies of learning and having difficulty with coping with those strategies. Majority of student also expressed that lectures should not be more than one hour and many students considered 30-40 minutes enough time for the lecture. They felt, teaching beyond 30 minutes made them burdened with information and having difficulty in absorbing lecture. Longer lecture time has been cited as an important reason for skipping lectures among undergraduate students. A survey found that student felt that self-directed learning was more effective in the basic and clinical science as compared to lectures. Student of this study also preferred the multiple-choice question, extended matching questions, short essay questions, objective structured performance exam and objective structured clinical exam in their education system. These findings are consistent with Cilliers et al. study; which reported that student preferred assessment done multiple strategies than one or two methods of assessment. Students viewed the objective structured clinical exam and objective structured performance exam very appropriate for clinical and practical related skills as compared to old system of viva voce, which was more dependent on examiner knowledge and greater chance of bias. Few students opposed practical assessment in the controlled environment and preferred workplace-based assessment. Majority of students highlighted the need for career counselling, which will help them to guide and select the future filed of their study and practice. These findings are consistent with the Manzar B and Manzar N study; which found that students were generally dissatisfied with the university for not conducting the career counselling session with them. They strongly suggested the need for future guidance seminars to help them select way forward. Many students seemed to be confused and curious about their future fields of study and practice which they thought could be resolved with adequate counselling. Unfortunately, counselling and career guidance facilities are somehow rare among universities in developing world. In spite of medical students’ confusion with their future field of study and practice, most were confident of their success in the current program while few were more skeptical. The final question was asked to seek suggestion for the improvement in the current situation. Three themes emerged from the open-ended question: academic improvement, need for better facilities, educational management issues; lectures and co-curricular activities. In relation to academics, many students suggested that classes should start 0900 to 1000 hours and not exceeding seven hours a day. They also suggested the need for more self-directed learning and problem-based learning sessions in their routine study. Students suggest that their teaching activities should be based on small group discussions and more videos to be included in the lecture-based sessions. These qualitative findings were consistent with the quantitative findings where students pointed out that lectures should be delivered using multimedia and videos. Medical students, preferred interactive way of teaching style and practical based sessions. In addition, student suggested a special
weekly session to discuss current medical issues. Similar need was reported by different studies worldwide.\textsuperscript{7,10-21} Pertinent to management, few students suggested to improve the attendance system by installation of electronic devices in the campus. Many suggested the need for more co-curricular activities outside their campus and among other institutes. Some students mentioned regular and more visits in order to do the community services activities.

CONCLUSION

Study from one institute limits its generalize ability. However, we believe that this study has highlighted important area for improvement for medical teachers and management to determine the future strategic plan to solve the medical student’s problems and satisfaction with educational activities.

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Final Approval of version: Muhammad Omer Malik

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

Left Ventricular Systolic Function, Aortic Stroke Distance, Ejection Fraction and New York Heart Association Classification

Khalil Ur Rehman¹, Habib Ullah Shah², Majeed Ullah Buzdar³ and Shumaila Khalil⁴

ABSTRACT

Objective: To determine an effective time saving measure of Left Ventricular (LV) Systolic Function having good correlation with different classes of New York Heart Association (NYHA) classification for Heart failure in patients with limited transthoracic window, Abnormal septal motions and Ischemic Cardiomyopathy with areas of hypokinesis, akinesis and dyskinesis.

Study Design: Prospective / Descriptive / cross sectional study

Place and Duration of Study: This study was conducted at the Department of Cardiology, DG Khan Medical College, Dera Ghazi Khan from October 2018 to December 2018.

Materials and Methods: A total number of 96 patients having cardiac failure with different classes of New York Heart Association Classification were divided into two groups. Patients in Group A has symmetrical LV geometry while in Patients in Group B has asymmetrical LV geometry. Ejection fraction and Aortic Stroke distance was calculated in both groups and these parameter were correlated and compared with different classes of NYHA classification.

Results: The ejection fraction and Aortic Stroke distance correlated very well with NYHA classes in patients with symmetrical LV geometry while in those with asymmetrical LV geometry the Aortic Stroke distance was a better correlate of NYHA class.

Conclusion: Aortic stroke distance is a better, time efficacious measure of LV systolic function which can be easily determined in patients with limited trans-thoracic window.

Key Words: Aortic Stroke Distance, Ejection Fraction %, Left Ventricular Systolic Function, NYHA Class

Citation of article: Rehman K, Shah HU, Buzdar MU, Khalil S. Left Ventricular Systolic Function, Aortic Stroke Distance, Ejection Fraction and New York Heart Association Classification. Med Forum 2020; 31(2):17-20.

INTRODUCTION

Heart failure is a complex clinical syndrome that results from any structural or functional impairment of ventricular filling or ejection of blood (ACCF/AHA 2013).8-17 Filling is diastolic function and ejection is the systolic function of the ventricle. Incidence of heart failure increases with age and accounts more than 10 % after the age of 70 years. Echocardiography is the key investigation for the diagnosis and quantification of heart failure. Despite all controversies New York Heart Association (NYHA) classification provides valuable clinical assessment and mortality data on which heart failure patients can be classified.19 See Table 1.

Annual mortality risk percentage for the patient in class I , II, III , IV is respectively 5 to 10 %, 20 to 30 %, up to 50 % and more than 70%.18 Echocardiographically determined Left Ventricular (LV) parameters can be correlated with this classification. We compared two echocardiographically determined parameters, 2D Ejection Fraction (EF %) and Doppler Index Aortic Stroke Distance (AoSD).1,2 Both of them are correlated with the clinical class of heart failure as given by NYHA class.

NYHA class Description
NYHA class I No Limitation of Routine Physical Activity
NYHA class II Slide Limitation of Physical Activity
NYHA class III Marked Limitation of Physical Activity less than Ordinary activity causes fatigue, palpitation and dyspnea
NYHA class IV Symptomatic at rest no physical activity is possible without causes fatigue, palpitation and dyspnea

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2D Echocardiography graphically determined ejection fraction (EF) is widely used as a measure of LV systolic function. CHARM program analyzed 7599 patients with symptomatic heart failure and found every 10% reduction in LVEF below 45% was independently associated with 38% increase in the risk of all-cause mortality. However, the ejection fraction calculated by 2D measures is often inappropriate in patients having LBBB, small segmental wall motion abnormality in the measurement plane of ischemic dilated cardiomyopathy with areas of dyskinesia, akinesia, hypokinesia and paradoxical wall motion. For these patients, it is recommended to use aortic stroke distance as a supplementary and or surrogate measure of overall LV function. More over with Aortic Stroke Distance measurement cardiac output can be easily determined.

MATERIALS AND METHODS
This study was conducted in the Department of Cardiology, DG Khan Medical College, Dera Ghazi Khan from 1-10-2018 to 30-12-2018. A total number of 96 patients of cardiac failure were included in this study. They were divided into two groups on the basis of their left ventricular geometry. First group (Group-A) has symmetrical LV geometry while in second group (Group-B), the LV geometry was asymmetrical. These two groups were further sub-divided into four groups (A-1 to A-4 and B-1 to B-4) on the basis of their NYHA class. Each sub-group was having 12 patients on the basis of following criteria.

**Inclusion Criteria:** Patients with heart failure having dilated cardiomyopathy, hypertensive heart failure, ischemic dilated cardiomyopathy, left bundle branch block.

**Exclusion Criteria:** Patients having pericardial disease, aortic stenosis, aortic regurgitation and mitral regurgitation were excluded from the study.

Their echocardiographic ejection fraction by 2D method and aortic stroke distance were measured. The ejection fraction was determined by “Teichholz” method in the following way:

1. Parasternal long axis (plax) view was obtained through 2D, by 2.5 MH probe.
2. M-mode cursor was aligned across the right ventricle, intraventricular septum, and posterior left ventricular wall at the level of chordae tendineae or papillary muscle.
3. The measurements were recorded and ejection fraction was automatically calculated by the machine through its software package.

Aortic stroke distance was determined as follows:

1. Apical 4 chamber view was obtained, in few patients subcostal 4 chamber view was preferred because of their chest deformities.
2. Pulsed wave Doppler was used to record the velocity profile of LVOT.

3. Sample volume was placed within one cm proximal to aortic leaflets.
4. When the stable tracing was obtained at the above position it was subjected to calculations in centimeters (cm) see figure 1.

RESULTS
The results obtained from 48 patients of Group-A with dilated cardiomyopathy having global systolic dysfunction with different NYHA class are given in Table-1. It is evident from the data that the reduction in ejection fraction and aortic stroke distance fairly correlates with the NYHA class patients in Group A-1 to Group A-4.

The data of 48 patients of Group-B were with heart failure due to ischemic heart disease with wall motion abnormalities or left bundle branch block or ischemic dilated cardiomyopathy with and without diabetes had different NYHA class. Their results are given in Table-2. This is evident from the data that 2D determined ejection fraction shows a grey area of correlation with NYHA class IN Group-B patients. In Group B-2 and B-3. Patients having ejection fraction of 30% may fall in B-2 (NYHA class 2) or B-3 (NYHA class 3).

<table>
<thead>
<tr>
<th>Table No.1: Group-A</th>
<th>NYHA class</th>
<th>Ejection fraction</th>
<th>Aortic stroke distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A-1 (NYHA Class 1) (n=12)</td>
<td>≤ 45%</td>
<td>≥ 18 cm</td>
<td></td>
</tr>
<tr>
<td>Group A-2 (NYHA Class 2) (n=12)</td>
<td>40-44%</td>
<td>15-17 cm</td>
<td></td>
</tr>
<tr>
<td>Group A-3 (NYHA Class 3) (n=12)</td>
<td>25-39%</td>
<td>10-14 cm</td>
<td></td>
</tr>
<tr>
<td>Group A-4 (NYHA Class 4) (n=12)</td>
<td>&lt; 25%</td>
<td>&lt;10 cm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table (Group-B)</th>
<th>NYHA class</th>
<th>Ejection fraction</th>
<th>Aortic stroke distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group B-1 (NYHA Class 1) (n=12)</td>
<td>≥ 45%</td>
<td>≤ 18 cm</td>
<td></td>
</tr>
<tr>
<td>Group B-2 (NYHA Class 2) (n=12)</td>
<td>20-45%</td>
<td>15-17 cm</td>
<td></td>
</tr>
<tr>
<td>Group B-3 (NYHA Class 3) (n=12)</td>
<td>20-45%</td>
<td>10-14 cm</td>
<td></td>
</tr>
<tr>
<td>Group B-4 (NYHA Class 4) (n=12)</td>
<td>&lt;20%</td>
<td>&lt;10 cm</td>
<td></td>
</tr>
</tbody>
</table>
The aortic stroke distance in B-2 (NYHA class 2) would vary between 15 and 19 cm and in class 3 it would be between 10 and 14 cm. So aortic stroke distance in Group-B correlates better with NYHA class.

Figure 2.

DISCUSSION

The ejection fraction predicts the outcome in patients with the ischemic heart disease and heart failure. This was initially described as fraction of left ventricular volume ejected per beat in 1962 by Folse and Braunwald using radioisotope indicator dilution technique. Now-a-days the ease of its measurement with echocardiography has virtually replaced all other methods of its assessments. However, the ejection fraction determination by 2D technique is inaccurate in patients having heart failure and LBBB, paradoxical septal motions and in patients with poor transthoracic window to obtain parasternal long axis view. The application of the Simpson’s method to determine ejection fraction in these patients is much better than Teichholz method but it is time consuming and not used routinely. Similarly colour flow method of LV function assessment has inter observer limitations and is not used routinely.

We conducted our study in which the values of ejection fraction were obtained in patients having global systolic dysfunction because of dilated cardiomyopathy and it was compared with the aortic stroke distance which is the ultimate measure of stroke volume and cardiac output. Correlation was fairly accurate in all NYHA classes of heart failure IN Group-A but when this correlation was obtained for the Group-B (patients with heart failure due to ischemia related syndromes, LBBB, paradoxical septal motion), there was a grey area of 2D determined ejection fraction between NYHA classes 2 and 3. However, the aortic stroke distance correlated very well with the NYHA class in these patients also. So, it is concluded that the aortic stroke distance is a better measure of left ventricular systolic function as compared with the 2D determined ejection fraction.

It is recommended that the measurement of the aortic stroke distance should be added in the report while commenting on the LV function. This measurement is not only accurate but also time efficient (calculation only takes 1 to 2 minutes) and can be routinely used. However the accurate measurement only require careful placement of pulsed Doppler sample volume in Left Ventricular out flow tract where the velocity profile is stable. Portable machines equipped with Doppler package can be used to access and monitor the patients who are critically sick in ICU and lack invasive hemodynamic monitoring for the assessment of volume replacement and overload.

CONCLUSION

Aortic stroke distance is a better, time efficacious measure of LV systolic function which can be easily determined in patients with limited trans-thoracic window.
REFERENCES


The Possible Relationship Between Ankle Brachial Index and Microalbuminuria in Patients with Type 2 Diabetes Mellitus; A Cross-Sectional Study Conducted in Peshawar Pakistan

Baghdad khan¹, Redha Shahjehan², Nizamuddin³, Gul Hasssan⁴, Amjad Mustafa⁵ and Shamaila Zahid⁶

ABSTRACT

Objective: To determine the possible relationship between ankle-brachial index and microalbuminuria, in patients with Type-2 DM.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the Medicine Department of a Tertiary Care Hospital (Khyber Teaching Hospital) Peshawar from January 2018 to July 2018.

Materials and Methods: In this study total 69 patients with a history of type 2 diabetes mellitus (T2DM), with microalbuminuria (urine albumin 30 to 300 milligram/24 hours) were enrolled from 20-01-2018 to 20-07-2018. All peripheral pulses were palpated. Sphygmomanometer cuff was used to measure the systolic blood pressure by wrapping the cuff around each of the two ankles and arms respectively. This was done after a 10-minute rest in lying position. The ankle-brachial index was calculated as highest ankle systolic pressure divided by highest brachial systolic pressure in each patient.

Results: Among 69 patients, 29 (42%) patients were in age group 41-50 years while 40 (58%) patients were in age group 51-60 years. Mean age was 58 ± 3.78 years. Among them, 32 (46%) were male and 37 (54%) were female. Among 69 patients, ankle-brachial index was analyzed, showing as 7 (10%) patients had ankle-brachial index range >1.4, 47 (68%) patients had ankle-brachial index range 0.9 -1.4 and 15 (22%) patients had ankle-brachial index range 0.4-0.9. Mean ankle-brachial index was 1.1 SD ± 0.2. Microalbuminuria among 69 patients was analyzed as 26 (38%) patients had microalbuminuria range 1-30 mg while 43 (62%) patients had microalbuminuria range 30-300 mg. Mean microalbuminuria was 150 mg ± 8.32.

Conclusion: Our study concludes that there is a strong correlation of ankle-brachial index and microalbuminuria in patients presenting with type 2 diabetes mellitus.

Key Words: Ankle-brachial index, microalbuminuria, type 2 diabetes mellitus


INTRODUCTION

Diabetes Mellitus (DM) is one the major endocrine disorder historically known. In 2017, the total population suffering from DM was 414.9 million, while in Pakistan, according to a survey conducted in 2018, reported the known prevalence of diabetes to be 23.6% which was previously reported in a range between 7.6% to 11% among adults. DM leads to micro and macro vascular complications that badly affect the overall quality of life of the suffered patients. DM is one of the strongest risk factors in cardiovascular disorders, renal, liver, eye, dementia, Alzheimer and many others. In diabetic nephropathy, Microalbuminuria is the 1st clinical sign. The prevalence of microalbuminuria, as per literature review is 20% to 25% in both newly diagnosed as well as in established patients with DM. Albumin 30 to 300 milligram per 24 hours urine collection is defined as microalbuminuria. DM is also one of the risk factors in the development of
atherosclerosis, which leads to peripheral arterial disease and ultimately the cardiovascular disease risk upsurges. The prevalence of atherosclerosis ranges from 9.5% to 13.6% in patients with DM. It is also known that early detection of peripheral arterial disease (PAD), can the complications related to PAD might me controlled4. Compared to angiography, the ankle-brachial index (ABI) is very simple and cost effective technique5. It is 95% sensitive and 99% specific against angiography confirmed PAD5. Endothelial dysfunction can be assessed by both ankle-brachial index and microalbuminuria7,8. ABI was classified as non-compressible, calcified vessel with ABI more than 1.3, normal with ABI of 0.9 to 1.3, mild to moderate peripheral arterial disease with ABI between 0.41 to 0.9 and critical leg ischemia with ABI less than 0.49,11.

The aim of our study is to evaluate the value of ABI in the prediction of microalbuminuria in type 2 diabetics. ABI is non-invasive early detection of renal, peripheral and cardiovascular complications in diabetic patient. By early detection, the renal, peripheral and cardiovascular events could also be prevented. This study will provide us with the new and rapid local method which we can use for diagnosing the type 2 diabetes mellitus and the results of this study will be projected to other local healthcare professionals so that further research and future guidelines can be generated.

MATERIALS AND METHODS

To meet the objective of the study, a cross sectional study was designed and conducted in the department of medicine, Khyber Teaching Hospital, Peshawar. The duration of the study was six months starting from 20/1/2018 to 20/7/2018.

Data collection procedure: Sample size was 69, using 0.38 correlation coefficient, 95% confidence level and 90% power of test. Non-probability (consecutive) sampling. According to WHO formula for sample size calculation. Permission from ethical committee was taken. Recruitment was done after obtaining informed written consent. Data on age, sex, history of cardiovascular or cerebral accidents or pelvic malignancies. Patient who was diagnosed as diabetic by having fasting blood glucose greater than 126mg/dl while random blood glucose greater than 200mg/dl by laboratory tests. Once appropriate patient found than his microalbuminuria with albumin of 30 to 300 milligram/24hrs. urine collection was obtained. All peripheral pulses were palpated. Sphygmomanometer cuff was used to measure the systolic blood pressure by wrapping the cuff around each of the two ankles and arms respectively. This was done after a 10-minute rest in lying position. The ankle-brachial index was calculated as “the highest ankle systolic pressure divided by highest brachial systolic pressure in each patient”. Strict exclusion criteria were followed to control all the confounder and make the study results fair.

Data Analysis: The data was analyzed using SPSS version 22. Descriptive statistics was applied on demographics of the patients. The Pearson Correlation coefficient (r) was calculated formally between microalbuminuria and ankle-brachial index. Effect modifiers like age, gender was addressed through stratification. Post stratification Pearson coefficient correlation (r) was calculated.

RESULTS

This study enrolls total 69 patients. Twenty-nine (42%) patients were in the age ranged 41-50 years and 40 (58%) patients were in age ranged 51-60 years. The mean age was 58 ± 3.78 years. In our study, 32 (46%) patients were male while 37 (54%) patients were female. All the values are summarized in table 1.

Table 2 summarizes the frequencies and percentages of patient’s ankle-brachial index. 7 (10%) patients had ankle-brachial index range >1.4, 47(68%) patients had ankle-brachial index range 0.9 - 1.4 and 15(22%) patients had ankle-brachial index range 0.4 - 0.9. Mean ankle-brachial index was 1.1 SD ± 0.2. The frequencies and percentages of microalbuminuria among study patients is given in table 3 in which 26(38%) patients had microalbuminuria range 1-30 mg while 43(62%) patients had microalbuminuria range 30-300 mg. Mean microalbuminuria was 150 mg ± 8.32. Pearson correlation was applied to find any statistical correlation, present between ankle brachial index and microalbuminuria and other related parameters. The results of all these parameters are summed in table 4 below.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>41-50</td>
<td>29</td>
<td>42%</td>
</tr>
<tr>
<td></td>
<td>51-60</td>
<td>40</td>
<td>58%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>69</td>
<td>100%</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>32</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>37</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>69</td>
<td>100%</td>
</tr>
</tbody>
</table>

Mean ankle-brachial index was 1.1 with SD ± 0.2

Table No.3: Microalbuminuria in study patients (n=69)

<table>
<thead>
<tr>
<th>Microalbuminuria</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 1- 30 mg</td>
<td>26</td>
<td>38%</td>
</tr>
<tr>
<td>&gt; 30-300% mg</td>
<td>43</td>
<td>62%</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>100%</td>
</tr>
</tbody>
</table>

Mean microalbuminuria was 150 mg ± 8.32
DISCUSSION

The finding in our study shows that mean age among the patient studied was 58 ± 3.78 years. Forty six percent patients were male and 54% patients were female. Mean ABI was 1.1 ± 0.2. Mean microalbuminuria was 150 mg ± 8.32. Furthermore, 22% of our study population was presented with ABI <0.9. Similar studies was also done in the past in which Resnick and colleagues reported an ABI <0.9 in 4.9% of their patients and Li and coworkers reported it in 32.2% of their participants. The lower average of patients’ ABI in this study compared with the higher average ABI in the similar studies is due to selecting patients. In the current study, the average number of patients in all three groups of ABI was approximately the same and with incidental adjustment, the biasing variant of age was omitted, which was not done in other studies. Therefore, the rate of abnormal ABI calculated in this study has a better predictive value.

There was a significant positive correlation between ABI and microalbuminuria (r= 0.35). Our findings was similar to a study done by Makhdoomi K reported strong correlation between ABI with duration of disease, cardiovascular events and admission of patient in cardiac care units.

Conflicting results have been published reporting the effect of gender on ABI, some researchers reported no association while other reported positive correlation. The study conducted by Tseng and colleagues and Polenova and colleagues reported no significant association between gender and ABI. However, in our study we found positive correlation with gender and ABI which is in consistent with the study conducted by Li and associates, where they found significant correlation between an ABI less than 0.9 and female gender.

We did not correlate, the significance of ABI with obesity, smoking and/or cardiovascular diseases which is the limitation of our study. However, studies have been conducted in the past of the stated factors. There were studies that did not find any correlation between obesity and ABI <0.9. This implies that obesity may not be a risk factor for atherosclerosis. In the studies conducted by Khammash and colleagues and some other studies the comparison was between being smoker or not, without regarding the amount of pack year use, which showed significant correlation with abnormal ABI, reported the role of smoking and ABI. In a study conducted by Rafie and colleagues, the abnormal ABI was significantly associated with positive exercise test. Similarly, another study reported by Nematipoor and colleagues showed that patients with ABI <0.9 had coronary vessel disease. Furthermore, the ABI decreases with large number of vessel involvement.

CONCLUSION

In our study ABI was significantly correlated with microalbuminuria in patients with DM. Our study needs to be reconfirmed in high cohort of patients to further strengthen our findings.

Author’s Contribution:
Concept & Design of Study: Baghdad Khan
Drafting: Redha Shahjehan, Nizamuddin
Data Analysis: Gul Hasssan, Anjaj Mustafa, Shamaila Zahid
Revisiting Critically: Redha Shahjehan, Nizamuddin
Final Approval of version: Baghdad Khan

Conflict of interest: The study has no conflict of interest to declare by any author.

REFERENCES

Complications of Laryngeal Surgery

Saeed Razi¹, Javed Qureshi⁴, Salman Imran Butt², Kamran Hamid², Liaqat Ali³ and Haris Muaaz²

ABSTRACT

Objective: To study the Complications of Laryngeal Surgery

Study Design: Experimental Study

Place and Duration of Study: This study was conducted at the Idris Teaching Hospital Sialkot Medical College Sialkot from Jan 2016 to Jan 2019.

Materials and Methods: This study include 100 patients of laryngeal carcinoma. Their history was taken on performa and lab tests were advised to all of the patients. The study was conducted in Idris Teaching Hospital Sialkot Medical College Sialkot. Written informed consent was also taken from every patient. The permission of ethical committee was also considered to conduct this research work and publishing in medical journal.

Inclusion Criteria: All the patients of laryngeal carcinoma were included in this study

Results: Laryngeal cancer is basically disease of elderly. In this study largest number of lesions (12/30) occurred in six decade of life. This accounts for 40% of all the cases as shown in table no 1. Overall age incidence range between 45-80 years in another study the maximum incidence 34.5% was in the fifth decade of life. The world wide maximum figure approximately 40% occur in 51-60 years of age. It coincides with the findings of present study. Laryngeal cancer has clear cut preponderance for male population among the 30 patients consecutively undergoing laryngeal surgery for treatment of squamous cell carcinoma larynx, 27 patients were found to be male (90%) and remaining 3 female patients (10%). Thus male to female ratio was 9:1 as shown in table no 1.

Laryngeal cancer is basically disease of elderly. In this study largest number of lesions (12/30) occurred in six decade of life. This accounts for 40% of all the cases as shown in table no 1. Overall age incidence range between 45-80 years in another study the maximum incidence 34.5% was in the fifth decade of life. The world wide maximum figure approximately 40% occur in 51-60 years of age. It coincides with the findings of present study. Laryngeal cancer has clear cut preponderance for male population among the 30 patients consecutively undergoing laryngeal surgery for treatment of squamous cell carcinoma larynx, 27 patients were found to be male (90%) and remaining 3 female patients (10%). Thus male to female ratio was 9:1 as shown in table no 1. This ratio was 5.1:1² the world wide male to female ratio varies from 5 - 20 : 1. In UK and US this tumor is 5-6 times more common in male than in female. In US ratio has decreased from 12:1 to 5:1 over the last 20 years.

Conclusion: It was observed that there were definite complications during laryngeal surgery

Key Words: Complications, laryngeal surgery


INTRODUCTION

Like any surgical procedure laryngeal surgery can also face number of complication. In Addition to complication like those of anesthesia, wound infection, hemorrhage, systemic complications and keloid formation, laryngeal surgery can result into complication related to anatomy and function of the region. These depend on the type of surgical procedure done. Total laryngectomy can result in to stomal stenosis, pharyngeal stenosis, tracheal crusting and formation of mucocutaneous and tracheosophageal fistula. In 55 cases local study that included 37 cases (67.3%) total laryngectomies and 7 cases (12.7%) conservation surgeries, 13 patients (23.6%) developed some form of complication. These complication included stomal stenosis six cases (%). Pharngeocutaneous fistula 3 cases (%) tracheosophageal fistula 1 case (%) peritonitis 1 case (%) pneumonia 1 case (%) Post operative bleeding 1 case (%)² Partial Laryngeal resection shows complication depending upon type of procedure. They can be classified broadly into general (related to any major head and neck procedure) and specific (related to specific conservation procedure) specific complication
in this group include glotic, insufficiency, aspiration, poor voice, swelling problems and formation of webs. In literature ratio of complication supraglottic varies from 10% to 50%. Similarly Complication rate vertical partial laryngectomy is also very variable but generally lower than supraglottic one. It varies from 1.5% to 26%. Rate of complications is usually greater in patients in whom radiation is combined with surgery. Rate of mortality in peri operative period is found in up to 6% cases. It usually occur due to hemorrhage, cardiac dysfunction, acute pulmonary edema, septicemia and infection of wound.

MATERIALS AND METHODS

This study was conducted at the Idris Teaching Hospital Sialkot Medical College Sialkot from Jan 2016 to Jan 2019. This study includes 100 patients of laryngeal carcinoma. Their history was taken on performa and lab tests were advised to all of the patients. Written informed consent was also taken from every patient. The permission of ethical committee was also considered to conduct this research work and publishing in medical journal. Inclusion Criteria: All the patients of laryngeal carcinoma were included in this study.

RESULTS

Laryngeal cancer is basically disease of elderly. In this study largest number of lesions (12/30) occurred in six decade of life. This accounts for 40% of all the cases as shown in table no 1. Overall age incidence range between 45-80 years in another study the maximum incidence 34.5% was in the fifth decade of life. The world wide maximum figure approximately 40% occur in 51-60 years of age. It coincides with the findings of present study. Laryngeal cancer has clear cut preponderance for male population among the 30 patients consecutively undergoing laryngeal surgery for treatment of squamous cell carcinoma larynx, 27 patients were found to be male (90%) and remaining 3 female patients (10%). Thus male to female ratio was 9:1 as shown in table no 1. This ratio was 5.1:1. The world wide male to female ratio varies from 5 - 20:1. In UK and US this tumor is 5 - 6 times more common in male than in female. In US ratio has decreased from 12:1 to 5:1 over the last 20 years.

Table No. 1: Age and Sex Distribution

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45-50</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>51-60</td>
<td>11</td>
<td>1</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>61-70</td>
<td>9</td>
<td>0</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>70-80</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>3</td>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

Table No. 2: Complication of laryngeal Surgery

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Complications</th>
<th>Number of patients involved</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hematoma formation</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>2</td>
<td>Pharyngeocutaneous fistula</td>
<td>8</td>
<td>72.7</td>
</tr>
<tr>
<td>3</td>
<td>Stomal stenosis</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>4</td>
<td>Pharyngeal stenosis</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>11</td>
<td>100</td>
</tr>
</tbody>
</table>

Patients having complication =11/30 = 36 %

DISCUSSION

General policy to treat laryngeal carcinoma varies from country to country and center to center. Policy in northern Europe and UK is towards radiotherapy in most patients. Surgery in the form of total laryngectomy is reserved for recurrence. On other hand in north America and Southern Europe there is obvious tendency for conservative laryngeal procedures. Among complication there was hematoma formation in 1 patient (9.1%). Pharyngeocutaneous fistula in 8 patients (72.7%), Stomal Stenosis in 1 patient (9.1%), pharyngeal stenosis in patient (9.1%). There were 11 patients having complication during laryngeal surgery among 100 patients of laryngeal carcinoma. These findings coincides with study of many authors as shown in results.

CONCLUSION

It was observed that there were definite complications during laryngeal surgery

Author’s Contribution:
Concept & Design of Study: Saeed Razi
Drafting: Javed Qureshi, Salman Imran Butt
Data Analysis: Kamran Hamid, Liaquat Ali, Haris Muaaz
Revisiting Critically: Saeed Razi, Javed Qureshi
Final Approval of version: Saeed Razi

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES
2. Udaipurwola IH.Carcinoma of larynx. JCPS Pak 1994;150.
8. Major complication of endoscopic carbon dioxide laser surgery include, endotracheal explosions 35 % laryngeal web (19%) Faciak burns (11%) pneumothorax (6%) and laryngeal stenosis (5%) However using modern techniques and protective measures rate of complication has been reduced significantly
Hypovitaminosis B₁₂ in Pregnant Women Suffering from Gestational Diabetes Mellitus

Inayatullah Memon¹, Khadim Hussain², Momna Khan⁴, Sadia Nizamani², Ghulam Abbas Soomro and Syed Ali Akbar Shah³

ABSTRACT

Objective: To determine the frequency of vitamin B₁₂ deficiency (hypovitaminosis B₁₂) in Pregnant Women suffering from Gestational Diabetes mellitus.

Study Design: Observational / case control study

Place and Duration of study: This study was conducted at the Department of Pathology and Gynecology/Obstetrics, Indus Medical College, Tando Muhammad Khan from Jan 2018 to September 2019.

Materials and Methods: A sample of 200 pregnant women was divided into control normal pregnant women and GDM diagnosed cases. Subjects were selected by non – probability convenient sampling fulfilling criteria. Blood samples were collected by venesection and centrifuged to get sera. Hematological findings, blood glucose, HbA1c and vitamin B₁₂ were estimated. Hypovitaminosis B₁₂ was defined as <300 pg/mL. Continuous variable were analyzed by Student’s t-test and presented as mean +/- SD. Categorical data was cross tabulated by Chi – square test and presented as frequency and % at 95% CI (P≤ 0.05).

Results: Vitamin B₁₂ in control was 316.2±116.9 pg/ml and cases 270.5±131.1 pg/ml (P=0.023). Hypovitaminosis B₁₂ (<300 pg/mL) was noted in 39% of control compared to 61% in GDM cases (P=0.0001). Vitamin B₁₂ shows significant negative correlation with age (r= -0.262, P=0.0001), gestational age (r= -0.238, P=0.001), gravida (r= -0.277, P=0.0001), FBG (r= -0.284, P=0.0001) and RBG (r= -0.229, P=0.0001). Vitamin B₁₂ shows non – significant correlation with HbA1c (r= -0.014, P=0.083).

Conclusion: We found hypovitaminosis B₁₂ in 61% of GDM cases. Vitamin B₁₂ shows significant negative correlation with age, gestational age, gravida, fasting and random blood glucose.

Key Words: Vitamin B₁₂, Glycemic control, Gestational Diabetes, Sindh

INTRODUCTION

Gestational diabetes mellitus (GDM) is defined as any degree of glucose intolerance occurring first time in gestation that may disappear after parturition.³ Approximately 7–14% of pregnancies are complicated by GDM. Prevalence of GDM depends on environmental factor, dietary habits, social conditions, ethnicity and geography of patients and diagnostic criteria used for glucose intolerance.²

GDM prevalence of 4.2% to 26% has been reported for the South East Asia.⁴ Risk of developing frank type 2 diabetes mellitus (T2DM) is increased seven times for the future pregnancies in those suffering from GDM.⁵ Vitamin B₁₂ is a vital micro nutrient essential for few peculiar biochemical reactions of nuclear maturation and metabolic reactions. Vitamin B₁₂ is essential for the synthesis of methyl- cobalamin, S-adenosylmethionine (SAM) and regeneration of methionine. Methyl – cobalamin is a major one carbon donor methyl donor for DNA methylation, nuclear maturation and cell division.⁶⁷ Nowadays, the vitamin B₁₂ deficiency (hypovitaminosis B₁₂) has become increasing popular health problem.⁸⁹ Hypovitaminosis B₁₂ is linked with glucose intolerance, insulin resistance (IR), gestational diabetes and T2DM in future.¹⁰ Hypovitaminosis B₁₂ in pregnant GDM women often results in intrauterine growth retardation, brain retardation, myelination defects, neural tube defects (NTDs), congenital malformations, macrosomia, neural tube defects, etc.¹¹ Hypovitaminosis B₁₂ during pregnancy also puts mothers at grave complications of pre – eclampsia, eclampsia, abortions, etc. Pregnant women are at increased risk of hypovitaminosis B₁₂ due

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² Department of Obs. & .Gynaec, Bilawal Medical College, Jamshoro.

to the poor nutritional status, increased vitamin demand and poor dietary supply. Rapidly growing fetal tissue demands more vitamins, resulting in deficiency. Hypovitaminosis B\textsubscript{12} is very common in the general population, pregnant mothers, GDM pregnant women, etc. Health issues of vitamin and mineral deficiencies are hotly hinted in the medical literature and hypovitaminosis B\textsubscript{12} being very common and is a serious threat to the mother and fetus equally.\textsuperscript{12,13} There is dire need to make the data available at national level for the hypovitaminosis B\textsubscript{12} in pregnant GDM women for favorable maternal and fetal outcome. In this context, the present study was planned to determine the frequency of hypovitaminosis B\textsubscript{12} levels in Pregnant Women suffering from Gestational Diabetes mellitus reporting at our tertiary care hospital.

MATERIALS AND METHODS

The present observational (case control) study was conducted at the Department of Pathology and Gynecology/Obstetrics, Indus Medical College, Tando Muhammad Khan, Pakistan. The study covered duration from January 2018 to September 2019. Study was conducted after the approval of ERC (ethical review committee). Technique of “Sampling for proportions” was used for sample size calculation as; 95 by using 5% α-level of significance, and “Power of test” of 90% for an assumed % of vitamin B12 deficiency in 51% GDM women and 21.9% in non – GDM.\textsuperscript{5} Considering increase in power of study, 200 Pregnant women were equally divided into; Control (n=100) Non – GDM Pregnant women and Cases (n=100) GDM diagnosed Pregnant women. Pregnant women were selected by convenient sampling. Prior – set inclusion and exclusion criteria were followed for the control and case selection. Case was defined as a pregnant woman (2\textsuperscript{nd} & 3\textsuperscript{rd} trimester) showing fasting blood glucose (FBG) ≥100 mg/dL.\textsuperscript{14} Gravida was defined as number of total conceptions irrespective of outcome. Gestational age was calculated from the first day of last menstrual period (LMP). Pregnant women of 2\textsuperscript{nd}/3\textsuperscript{rd} trimester with normal FBG qualified as control. Volunteer pregnant women of 2\textsuperscript{nd}/3\textsuperscript{rd} trimester with FBG ≥100 mg/dL, age 21 – 40 years qualified for GDM control. Volunteer GDM patients taking metformin and B\textsubscript{12} vitamin supplements were excluded. Pregnant women with and without GDM suffering from major systemic disease, proton pump inhibitor intake, strict vegetarians, chronic liver diseases were also excluded. Participants were informed of the purpose of study, benefits and harms. Volunteers were informed that the data will be published in a medical journal for patient benefit. Participants were informed that biodata and blood findings will never be publicized individually. Expenses of laboratory investigations were borne by the researchers. A proforma was formulated prior to study for data entry and maintained confidentiality of patient data. Clinical history, physical examination and laboratory findings were noted. Volunteers were requested to abide by the study protocol strictly, full co-operation and follow ups. Volunteers were asked to sign the consent form and willingness for blood samples. Volunteer women were asked for blood sampling. Blood samples were collected by senior staff nurse as per standard criteria after securing sterilization protocol. Blood was collected by venesection from ante – cubital vein in a Disposable syringe (BD, USA). 5 ml blood was taken from peripheral vein; 3 ml was taken in EDTA tube and 2 ml in plain tubes. Sera were taken by centrifuging blood sample (x3000 rpm, 15 min.). Analysis of hemoglobin, Hct, RBC counts and Platelet counts were performed by researcher / consultant Pathologist. Sera were used for the estimation of blood glucose (hexokinase) and HbA\textsubscript{1c} (Colorimetric method) and vitamin B12 by ELISA assay. Hypovitaminosis B12 was defined as <300 pg/ml. Vitamin B12 levels were categorized as ≥300 pg/mL – as normal, 200 - 299 pg/mL – as marginal deficiency and <200 pg/mL – deficiency.\textsuperscript{15} Research variables were typed in a Microsoft Excel sheet and Statistical analysis on SPSS software 21.0 (IBM, Inc USA). Continuous variable output was tabulated as mean +/- SD and analyzed by Student’s t-test. Categorical variable output was cross tabulated as frequency and % and analyzed by Chi-square test. Numerical data association was analyzed by Pearson’s correlation and output were tabulated as correlation co – efficient (r) value with statistical significance. Statistical significance was taken at 95% CI (P≤ 0.05).

RESULTS

Graph No.1: Bar graph showing the vitamin B12 distribution in control and cases

Age, gestational age, gravida, hemoglobin, hematocrit, RBC and platelet counts are shown in table 1 in control and cases. Random blood glucose (RBG), fasting blood glucose (FBG) and Glycated HbA\textsubscript{1c} (HbA1c) shows...
statistically significant difference between control and cases (P <0.05).

**Table No.1: Demographic and Laboratory findings of control and cases**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Control (n=100)</th>
<th>Cases (n=100)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>30.3±1.59 (0.15)</td>
<td>30.1±1.27 (0.12)</td>
<td>0.93</td>
</tr>
<tr>
<td>Gestation age (weeks)</td>
<td>33.7±2.52 (0.25)</td>
<td>34.6±2.44 (0.24)</td>
<td>0.47</td>
</tr>
<tr>
<td>Gravida</td>
<td>2.3±0.48 (0.04)</td>
<td>2.45±0.49 (0.04)</td>
<td>0.10</td>
</tr>
<tr>
<td>Hct (%)</td>
<td>37.8±3.36 (0.33)</td>
<td>38.19±3.35 (0.33)</td>
<td>0.93</td>
</tr>
<tr>
<td>Hb (g/dl)</td>
<td>10.8±0.58 (0.05)</td>
<td>10.74±0.70 (0.07)</td>
<td>0.08</td>
</tr>
<tr>
<td>RBC counts (x10^6/µL)</td>
<td>3.21±0.45 (0.04)</td>
<td>3.19±0.48 (0.04)</td>
<td>0.12</td>
</tr>
<tr>
<td>Platelet counts (x10^9/µL)</td>
<td>3.74±0.39 (0.03)</td>
<td>3.61±0.40 (0.04)</td>
<td>0.65</td>
</tr>
<tr>
<td>FBG (mg/dl)</td>
<td>88.6±7.8 (0.78)</td>
<td>154.9±47.35 (4.73)</td>
<td>0.0001</td>
</tr>
<tr>
<td>RBG (mg/dl)</td>
<td>136.5±9.07 (0.90)</td>
<td>227.8±87.31 (8.73)</td>
<td>0.0001</td>
</tr>
<tr>
<td>HbA1c %</td>
<td>5.3±0.62 (0.11)</td>
<td>7.51±1.37 (0.13)</td>
<td>0.0001</td>
</tr>
<tr>
<td>Vitamin B12 (pg/ml)</td>
<td>316.2±116.9 (11.6)</td>
<td>270.5±131.1 (13.10)</td>
<td>0.023</td>
</tr>
</tbody>
</table>

**Table No.2: Frequency distribution of vitamin B12 in control and cases**

<table>
<thead>
<tr>
<th>Vitamin B12</th>
<th>Control %</th>
<th>Cases %</th>
<th>X^2-value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥300 pg/mL</td>
<td>61</td>
<td>39</td>
<td>201.0</td>
<td>0.0001</td>
</tr>
<tr>
<td>200 - 299</td>
<td>29</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pg/mL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;200 pg/mL</td>
<td>10</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table No.3: Pearson’s Correlation of serum cobalamin in cases**

<table>
<thead>
<tr>
<th></th>
<th>r-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.262</td>
<td>0.0001</td>
</tr>
<tr>
<td>Gestational Age</td>
<td>-0.238</td>
<td>0.001</td>
</tr>
<tr>
<td>Gravida</td>
<td>-0.277</td>
<td>0.0001</td>
</tr>
<tr>
<td>Fasting Blood Glucose</td>
<td>-0.284</td>
<td>0.0001</td>
</tr>
<tr>
<td>Random Blood Glucose</td>
<td>-0.229</td>
<td>0.0001</td>
</tr>
<tr>
<td>Glycated Hb A1(HbA1c)</td>
<td>-0.014</td>
<td>0.083</td>
</tr>
</tbody>
</table>

Vitamin B12 shows significant negative correlation with age (r=-0.262, P=0.0001), gestational age (r=-0.238, P=0.001), gravida (r=-0.277, P=0.0001), FBG (r=-0.284, P=0.0001) and RBG (r=-0.229, P=0.0001). HbA1c (r=-0.014, P=0.083) reveals non-significant correlation (Table – 3). Scatter plots 3 – 5 show the inverse correlation of vitamin B12 with FBG, RBG and HbA1c.
DISCUSSION

The present hospital-based study reports hypovitaminosis B12 in 61% of GDM cases and 39% of controls (P=0.0001). Findings of hypovitaminosis in GDM cases is in agreement with previous studies. A previous study from UK reported severe hypovitaminosis B12 in GDM cases compared to non-GDM pregnant women. They further added that risk of GDM is 2.59 times high in hypovitaminosis B12 pregnant women compared to those with normal vitamin B12. The findings are in keeping with the present study. Another previous study reported hypovitaminosis B12 is very common even in non-GDM pregnant women A previous study from South East Asia reported similar observation of hypovitaminosis B12 in gestational diabetes mellitus cases. This previous study reported hypovitaminosis B12 was positively associated with adiposity, insulin resistance (IR) and GDM. A previous study reported hypovitaminosis is prevalent in the South East Asia in GDM cases. They proved the cause effect relationship of hypovitaminosis B12 and GDM and the risk was doubled in cobalamin deficient pregnant women. The observations of this previous study are in consistent with the present study. However, the cause effect relationship was not ascertained in the present study due to the study design. Knight et al studied a cohort of pregnant women of British ethnicity and analyzed the vitamin B12 levels. They reported severe hypovitaminosis B12 in the indigenous population despite nutritious dietary habits. In present study, hypovitaminosis B12 in GDM cases was severe enough with vitamin levels of 270.5±131.1 pg/ml compared to 316.2±116.9 pg/ml in control (P=0.023). Other noteworthy finding of present study is vitamin B12 shows significant negative correlation with age, gestational age, gravida, fasting and random blood glucose. Severe hypovitaminosis B12 in GDM women suggests the gravity of the problem that may result in severe fetal malformations and adverse maternal outcome, and this may simply be prevented by vitamin B12 supplements particularly in the developing countries where malnutrition is prevailing. Findings of present study in context of national and international literature, is of opinion of timely screening of vitamin B12 and vitamin supplementation. Only limitation of present study is a small sample size, hence findings cannot be generalized for other parts of country. Study strength lays in its prospective study design, inclusion and exclusion criteria. It is suggested the vitamin B12 screening may be mandatory for women suffering from gestational diabetes mellitus and timely vitamin B12 supplements be given for fetal and maternal benefit.

CONCLUSION

The present study reports hypovitaminosis B12 in 61% of GDM cases. Vitamin B12 shows significant negative correlation with age, gestational age, gravida, fasting and random blood glucose. Severe hypovitaminosis B12 in GDM women suggests the gravity of the problem that may result in severe fetal malformations and adverse maternal outcome, and this may simply be prevented by vitamin B12 supplements particularly in the developing countries where malnutrition is prevailing.

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Revisiting Critically: Inayatullah Memon, Khadim Hussain
Final Approval of version: Inayatullah Memon

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

Incidence of Colles Fracture (5 years Experience) at Idris Teaching Hospital Sialkot Medical College Sialkot

Muhammad Asif Saeed¹, Haris Muaaz², Hamda Saqib², Kamran Hamid³, M Nouman³ and Malik Arslan³

ABSTRACT

Objective: To study Incidence of Colles Fracture (5 years Experience) at Idris Teaching Hospital Sialkot Medical College Sialkot.

Study Design: Experimental and Observational study

Place and Duration of Study: This study was conducted at the Department of Surgery, Idris Teaching Hospital Sialkot during Jan 2014 to July 2019.

Materials and Methods: This study comprises 156 patients of Colles Fracture. The Perfora was designed to record demographic data, etiology, causes, treatment given and complications of Colles fracture. Written informed consent was also taken from every patient before the start of the treatment. The Permission of ethical committee was also considered before collection of data and get publishing in the medical journal. The results were analyzed on SPSS version 10.

Results: At the age of 30-35 years, there were 12.43% male and 9/7.82% female, at the age of 36-40 years there were 3(7.31%) Male and 7(6.01%) female, at the age of 41-45 years there were 2 (4.87%) Male and 11(9.56%) Female, at the age of 46-50 years there were 4(9.75%) Male and 7(6.09%) female, at the age of 51-55 years there were 5(12.19%) Male and 6(5.21%) Female and age above 55 years there were 26(63.41%) Male and 75(65.21%) Female patients were found of Colles fracture. There were 16(39.02%) Male and 80(69.56%) female patients of Colles fracture were due to history of slip or fall. Due to RTA there were 8(19.51%) Male and 29(25.21%) Female patients of Colles fracture were detected. Due to Fight there were 17 (41.46%) Male and 6(5.21%) Female patients of Colles fracture were detected. There were 21(51.21%) Male and 97(84.34%) Female patients of Colles fracture were on conservative treatment (POP Cast). The Operative treatment there was external fixators in 7(17.07%) Male and 4(3.47%) Female, Orif e k wires was in 8(19.51%) Male and 11(9.56%) female, or if e plating was done in 5(12.19%) Male and 3(2.60%) female of Colles fracture were found. Due to early complications, there was unstable reduction 3(10%) Male and 5(7.35%) Female, Post reduction swelling 11(36.66%) Male and 18(26.47%) female, compartment syndrome 00(00%) Male and 1(1.47%) Female, injury to proximal segment of bone during reduction 00(00%) Male and 00(00%) Female, infection (surgery) there was 00(00%) Male and 1(1.47%) Female patients. Due to late complications, there was malunion in 4(13.33%) Male and 7(10.29%) Female, there was rupture of ext polio tender in 00(00%) Male and 00(00%) Female, there was frozen shoulder in 11(36.66%) Male and 31(45.58%) Female, there was non-union 00(00%) Male and 3(4.41%) Female, there was sudeck’s dystrophy in 1(3.33%) male and 2(2.94%) female patients of Colles fracture were detected.

Conclusion: Possessing a knowledge of the incidence and outcomes of distal radius fractures allows the physician to better counsel individual patients and determine the best management to optimize treatment.

Key Words: Colles fracture, etiology, Complications and Demographic data


INTRODUCTION

Distal radius fractures are one of the most common types of fractures, with over 640,000 cases reported during 2001 in the US alone.¹ For reasons not fully understood, and likely multi-factorial, the incidence of this fracture appears to be on the rise in the US and abroad.²-⁵ Many of the societal effects of these fractures extend beyond the significant medical costs, including decreased school attendance, lost work hours, loss of independence and lasting disability. Fragmented care and coding discrepancies can make accounting for the true number of these fractures difficult, likely underestimating the rates typically quoted in the literature. When analyzing the incidence of distal radius fractures, there are three major populations to consider: children and adolescents, young adults, and the elderly.
The pediatric and elderly populations are both considered at high risk for this injury, and the contributing factors will be examined in this paper. In addition to the 3 main age groups, gender and ethnicity may also be considered distinct risk factors within each of these populations. Understanding the epidemiology of distal radius fractures can help physicians choose the most appropriate treatment options for the fracture, as well as effectively target preventative measures towards at-risk populations.

Chung and Spilson used data from the National Hospital Ambulatory Medical Care Survey (NHAMCS) database and determined that 1.5% of all emergency department visits were due to hand and wrist fractures. Radius and ulna fractures consisted of 44% of these fractures. This study corresponds to a study by Larsen and Lauritsen showing that distal radius fractures accounted for 2.5% of all emergency department visits. These numbers vary more widely in earlier reports, but still represent a high incidence rate. In 1962, an analysis of fractures in Sweden documented the number of distal radius and ulna fractures to be as high 75% of all forearm fractures. A study by Knowelden et al. in 1964 found 32% of all fractures seen in women over the age of 35 in the distal end of the radius.

Current and past clinical data point to a rise in the incidence of distal radius fractures for the pediatric, adult, and elderly populations in recent years. This phenomenon has been a subject of debate as early as the 1960’s when Alffram and Bauer published their report on the increasing occurrence of distal radius fractures in a large Swedish city. A study from Rochester, Minnesota found a 17% increase in the incidence of this injury over a 40 year period. The incidence in Sweden almost doubled for the elderly population over a 30 year time span when compared to previous data from the same location. During the same study period as this increase, the incidence rates of shaft fractures of the radius and ulna remained the same, lending further validity to the increase in distal radius fractures as a legitimate trend. Although there is no single factor responsible for this phenomenon due to the absolute prevalence of distal radius fractures, any individual contributing factor is bound to have confounding variables.

Many theories have been proposed to determine the source of the increasing rates of distal radius fractures, but studies correlating a specific cause to the incidence of this injury must be carefully evaluated. The influence of lifestyle and environmental factors on the risk and incidence of distal radius fractures has recently been assessed to further examine the causes for the increasing rates. One study found a 30% greater risk for a distal radius fracture in urban women over rural women. Although the data indicated a significant difference between risk factors, it could not seem to determine the cause of this discrepancy, even after analyzing lifestyle and health factors. Others point to the impact of epigenetic influences on the development of diseases such as childhood obesity and osteoporosis as a basis for the increasing incidence of this fracture in different populations.

It is possible that changing cultural dietary habits may be altering bone metabolism, affecting the overall incidence of distal radius fractures. Additionally, as the population ages and individuals strive to remain active, fractures due to relatively minor traumas have increased. Other theories will be discussed in further detail throughout the following sections.

As the incidence of distal radius fractures rises, the short and long term costs become apparent. Each year, fractures account for over half of the days patients spend in the hospital receiving treatment and care for upper extremity injuries. The costs of treating distal radius fractures in the pediatric population of the United States has been cited to be in upwards of $2 Billion per year. This is not surprising considering the overall prevalence of this injury. Chung et al. recently evaluated the costs that accompany this injury with respect to the elderly community. They found in 2007, Medicare paid $170 million in distal radius fracture related payments. Additionally, they projected that the future burden of Medicare could be $240 million if the current trend in the use of internal fixation continues. These costs did not include any secondary expenses associated with this injury such as prescription drugs, lost time at work, and loss of independence, which may be more significant than the direct costs. This data reveals the significant socioeconomic costs incurred as a direct result of distal radius fractures, and highlights the importance of analyzing preventative measures and treatment protocols for individuals who are at a high risk for or suffer from this injury.

MATERIALS AND METHODS

This study comprises 156 patients of Colles Fracture. The Performa was designed to recorded demographic data, etiology, causes, treatment given and complications of Colles fracture

Written informed consent was also taken from every patient before the start of the treatment. The Permission of ethical committee was also considered before collection of data and get publishing in the medical journal. The results were analyzed on SPSS version 10.

RESULTS

At the age of 30-35 years , there were 1(2.43%) male and 9(7.82%) female , at the age of 36-40 years there were 3(7.31%) Male and 7(6.01%) female , at the age of 41-45 years there were 2 (4.87%) Male and 11(9.56%) Female , at the age of 46-50 years there were 4(9.75%) Male and 7(6.09%) female , at the age of 51-55 years there were 5(12.19%) Male and 6(5.21%)
Female and age above 55 years there were 26(63.41%) Male and 75(65.21%) Female patients were found of Colles fracture as shown in table no 1.

**Table No. 1: Age- Gender Distribution**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30-35</td>
<td>1(2.43%)</td>
<td>9(7.82%)</td>
</tr>
<tr>
<td>2</td>
<td>36-40</td>
<td>3(7.31%)</td>
<td>7(6.01%)</td>
</tr>
<tr>
<td>3</td>
<td>41-45</td>
<td>2(4.87%)</td>
<td>11(9.56%)</td>
</tr>
<tr>
<td>4</td>
<td>46-50</td>
<td>4(9.75%)</td>
<td>7(6.09%)</td>
</tr>
<tr>
<td>5</td>
<td>51-55</td>
<td>5(12.19%)</td>
<td>6(5.21%)</td>
</tr>
<tr>
<td>6</td>
<td>Above 55</td>
<td>26(63.41%)</td>
<td>75(65.21%)</td>
</tr>
</tbody>
</table>

Total patients=156

There were 16(39.02%) Male and 80(69.56%) Female patients of Colles fracture were due to history of slip or fall. Due to RTA there were 8(19.51%) Male and 29(25.21%) Female patients of Colles fracture were detected. Due to Fight there were 17(41.46%) Male and 6(5.21%) Female patients of Colles fracture were detected as shown in table no 2

**Table No. 2: Aetiology Distribution**

<table>
<thead>
<tr>
<th>Aetiology</th>
<th>Male</th>
<th>Females</th>
<th>Total fracture (Male + Female)</th>
</tr>
</thead>
<tbody>
<tr>
<td>h/o slip or fall</td>
<td>16(39.02%)</td>
<td>80(69.56%)</td>
<td>96</td>
</tr>
<tr>
<td>RTA</td>
<td>8(19.51%)</td>
<td>29(25.21%)</td>
<td>37</td>
</tr>
<tr>
<td>Fight</td>
<td>17(41.46%)</td>
<td>6(5.21%)</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>41(100%)</td>
<td>115(100%)</td>
<td>156</td>
</tr>
</tbody>
</table>

There were 21(51.21%) Male and 97(84.34%) Female patients of Colles fracture were on conservative treatment (POP Cast). The Operative treatment there was external fixators in 7(17.07%) Male and 4(3.47%) Female, Orif e k wires was in 8(19.51%) Male and 11(9.56%) Female, orif e plating was done in 5(12.19%) male and 3(2.60%) female of Colles fracture were found as shown in table no 3.

**Table No. 3: Treatment Distribution**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Male</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservative (POP Cast)</td>
<td>21(51.21%)</td>
<td>97(84.34%)</td>
</tr>
<tr>
<td>Operative</td>
<td>7(17.07%)</td>
<td>4(3.47%)</td>
</tr>
<tr>
<td>External fixators</td>
<td>8(19.51%)</td>
<td>11(9.56%)</td>
</tr>
<tr>
<td>Orif e k wires</td>
<td>5(12.19%)</td>
<td>3(2.60%)</td>
</tr>
<tr>
<td>Orif e plating</td>
<td>41(100%)</td>
<td>115(100%)</td>
</tr>
</tbody>
</table>

Due to early complications, there was unstable reduction 3(10%) Male and 5(7.35%) Female, Post reduction swelling 11(36.66%) Male and 18(26.47%) female, compartment syndrome 00(00%) Male and 1(1.47%) Female, injury to proximal segment of bone during reduction 00(00%) Male And 00(00%) Female, infection(surgery) there was 00(00%) Male and 1(1.47%) Female patients. Due to late complications, there was malunion in 4(13.33%) Male and 7(10.29%) Female, there was rupture of ext pollio tender in 00(00%) Male and 00(00%) Female, there was frozen shoulder in 11(36.66%) Male and 31(45.58%) Female, there was non union 00(00%) Male and 3(4.41%) Female, there was sudeck’s dystrophy in 1(3.33%) male and 2(2.94%) female patients of Colles fracture were detected as shown in table no 4.

**Table No. 4: Complications Distribution**

<table>
<thead>
<tr>
<th>Complications</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstable reduction</td>
<td>3(10%)</td>
<td>5(7.35%)</td>
</tr>
<tr>
<td>Post reduction swelling</td>
<td>11(36.66%)</td>
<td>18(26.47%)</td>
</tr>
<tr>
<td>Compartment syndrome</td>
<td>0(0%)</td>
<td>1(1.47%)</td>
</tr>
<tr>
<td>Injury to proximal segment of bone during reduction</td>
<td>0(0%)</td>
<td>0(0%)</td>
</tr>
<tr>
<td>Infection(surgery)</td>
<td>0(0%)</td>
<td>1(1.47%)</td>
</tr>
<tr>
<td>Malunion</td>
<td>4(13.33%)</td>
<td>7(10.29%)</td>
</tr>
<tr>
<td>Rupture of Ext Pollio Tender</td>
<td>0(00%)</td>
<td>0(00%)</td>
</tr>
<tr>
<td>Frozen Shoulder</td>
<td>11(36.66%)</td>
<td>31(45.58%)</td>
</tr>
<tr>
<td>Non union</td>
<td>0(00%)</td>
<td>3(4.41%)</td>
</tr>
<tr>
<td>Sudeck’s dystrophy</td>
<td>1(3.33%)</td>
<td>2(2.94%)</td>
</tr>
</tbody>
</table>

**DISCUSSION**

Stabilisation of intra-articular fracture of the distal radius is a challenge for the orthopaedic surgeon. Despite numerous published outcome studies, there is no gold standard surgical technique. Volar LCPs have shown greater rigidity and superiority when compared to conventional volar or dorsal plates in biomechanical studies. Introduction of LCPs in combination with the volar approach has shown a lower complication rate and an increasing popularity in comparison to the dorsal approach. In contrast to conventional plating, LCP fixation stability does not rely on the friction between the implant and the bone; the inherent angular stability of the screw and plate mechanism acts as a single unit to hold and support the bone fragments. Therefore, it is not necessary for the fixed-angle locking plate to conform perfectly to the palmar cortical surface of the distal radius. This makes the plate application technique simpler and further preserves the blood supply to the bone fragments, which is crucial for fracture healing.

Multiple studies have shown good results with use of LCP for distal radius intra-articular fracture with regard
to function of hand. Ayhankilic et al.⁸ reported good or excellent DASH scores in 74% patients, satisfactory in 23% and poor in 3%. Similarly, Figl et al.¹⁴ reported good scores with the use of LCP for distal radial. Rozental et al.¹⁵,¹⁶ reported 41 patients treated with volar fixed-angle plating for unstable distal radius fractures, with average follow-up period of 17 months. Radiographs in the immediate postoperative period showed a mean radial height of 11mm, mean radial inclination of 21 degrees, and mean volar tilt of 4 degrees. At fracture healing, the above values were 11mm, 21 degrees, and 5 degrees respectively.¹⁷,¹⁸. The average DASH score was 14. In our study, due to early complications, there was unstable reduction 3(10%) Male and 5(7.35%) Female, Post reduction swelling 11(36.66%) Male and 18(26.47%) female, compartment syndrome 00(00%) Male and 1(1.47%) Female, injury to proximal segment of bone during reduction 00(00%) Male And 00(00%) Female, infection(surgery) there was 00(00%) Male and 1(1.47%) Female patients. Due to late complications, there was malunion in 4(13.33%) Male and 7(10.29%) Female, there was rupture of ext pollio tender in 00(00%) Male and 00(00%) Female, there was frozen shoulder in 1(36.66%) Male and 31(45.58%) Female, there was non union 00(00%) Male and 3(4.41%) Female, there was sudeck’s dystrophy in 1(3.33%) male and 2(2.94%) female patients of Colles fracture were detected¹⁹,²⁰.

Luhas K. et al.²¹,²²,²³,²⁴ reported 40 cases of intra-articular distal radial fractures managed with LCP with a mean follow-up of 18 months. Four of their cases required surgical revision (1 because of loss of reduction, 2 due to fracture incongruity as seen on the postoperative computer tomogram and 1 case of screw displacement in the radial shaft). Immediate postoperative radiographs showed mean radial inclination of 22.1° and mean volar tilt of 7.2°. At follow-up examination, radial inclination was 23.8° and volar tilt was 6.2°. They had a mean DASH score of 18 points (26 very good, 11 good, 1 satisfactory and 2 poor). Complications were an extensor pollicis longus (EPL) tendon rupture, a tendon irritation and a complex regional pain syndrome in a patient who underwent revision.

CONCLUSION
Possessing a knowledge of the incidence and outcomes of distal radius fractures allows the physician to better counsel individual patients and determine the best management to optimize treatment. Although treatment outcomes for pediatric and young adults are fairly well defined for distal radius fractures, recent research in the elderly population has made decision-making for the patient and surgeon more complex. It is becoming increasingly difficult to define the difference between the active “older” adult that will continue to place high demands on an injured wrist, and the true “elderly” that may better adapt to an imperfect outcome. Large multi-center studies, such as the WRIST study, with long-term follow-up may be the only way to accurately delineate the best treatment options for an individual based on outcomes for a similar patient population.

Author’s Contribution:
Concept & Design of Study: Muhammad Asif Saeed
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Data Analysis: Kamran Hamid, Nouman, Malik Arslan
Revisiting Critically: Muhammad Asif Saeed, Haris Muaz
Final Approval of version: Muhammad Asif Saeed

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES
the NOREPOS study based on the Tromso study and the HUNT study. J Bone Min Res 2011; 26:850–856.
Incidence of Fractures of Neck of Femur (Intracapsular)

Imran Idrees Butt¹, Muhammad Asif Saeed², Maqsood Ahmed Khan³ and Salman Imran Butt⁴

ABSTRACT

Objective: To determine the incidence of fractures of neck of femur (intracapsular).

Study Design: Observational Study

Place and Duration of Study: This study was conducted at the Surgery, Idris Teaching Hospital Sialkot Medical College Sialkot from Jan 2017 to Jan 2018.

Materials and Methods: This study was conducted on 83 patients of fracture of neck of femur (intracapsular) The age, gender and bone involved was noted down. The informed consent was taken from each patient of fracture of neck of femur. The findings were noted on the design Performa. The permission of ethical committee was also considered before start of the study and publishing in research journal.

Results: At the age of 31-40 years there were 02 male and 00 female patients. At the age of 41-50 years there were 01 male and 01 female patients. At the age of 51-60 years there were 06 male and 04 female patients. At the age of 61-70 years there were 14 male and 11 female patients. At age above there were 27 male and 17 female patients.

Conclusion: It was concluded from the study that there was fracture of neck of femur intracapsular and extracapsular take place during violence or trauma.

Key Words: Incidence, Fractures, Neck, Femur (Intracapsular)


INTRODUCTION

Femoral Neck fractures treatment is done by surgical method, during surgery there is high chances of mortality and disease formation.¹ It is necessary to use treatment methods that are suitable and more reliable to use considering the aspects like health of patient, age of patient, nature of fracture and late complication². The ascending cervical arteries of extra capsular ring are greatly damaged by femoral neck fracture as a result the femoral head is deprived of blood supply³. Femur neck fractures are caused by greater force trauma in young age group. Studies shows that some complications occurs after the treatment of fracture.⁴ The complications include necrosis due to lack of blood supply to femoral head and bone non union⁵ and reduces the quality of life and make person dependable on other persons for assistance and recovery⁶.

A lot of recorded cases such as blood vessel damage, tamponade effect, fracture displacement, surgical treatment delay and surgical techniques have been reported during the treatment of fractures.⁷ Increasing incidences of femur fractures put extra expense on government setup hospitals and companies to meet the cost for the treatment of patients. The main goal of treatment is to reduce the anatomic reduction and stabilized fixation⁸. The treatment is considered successful if anatomic reduction is obtained, stability of fixation, type of fracture and bone quality is maintained⁹.

The study is designed to find the effects of age, timing of the surgery and presence of fracture displacement, complications and functional outcomes in patients with femur neck fracture (FNF).¹⁰

MATERIALS AND METHODS

We selected 83 patients of intracapsular fracture of neck of femur. This study was conducted at Idris teaching hospital Sialkot Medical college, Sialkot during January 2017 to January 2018 the demographic data, aetiology, treatment option, complications and output/outcome was noted on design performa. Written inform consent was taken from every patient before start of the study. The permission of ethical committee was considered before collection of data and get publishing in the medical journal.

RESULTS

At the age of 31-40 years there were 02 male and 00 female patients. At the age of 41-50 years there were 01 male and 01 female patients. At the age of 51-60 years
there were 06 male and 04 female patients. At the age of 61-70 years there were 14 male and 11 female patients. At age above there were 27 male and 17 female patients (Table 1).

Table No.1: Age and Gender distribution of the patients of intracapsular fracture of neck of femur.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Age (years)</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>31-40</td>
<td>02</td>
<td>00</td>
</tr>
<tr>
<td>2</td>
<td>41-50</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>3</td>
<td>51-60</td>
<td>06</td>
<td>04</td>
</tr>
<tr>
<td>4</td>
<td>61-70</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Above 70</td>
<td>27</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>33</td>
</tr>
</tbody>
</table>

The history of fracture from fall/slip ground has 42 male patients and 30 female patients. With fracture from RTA there are 08 cases of male and 03 female patients reported.

Table No.2: Aetiology in patients of intracapsular fracture of neck of femur.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Causes</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>History of Fall/Slip on ground</td>
<td>42</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>RTA</td>
<td>08</td>
<td>03</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>33</td>
</tr>
</tbody>
</table>

Table No.3: Treatment options in intracapsular fracture of neck of femur.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Treatment</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conservative (skeletal skin traction)</td>
<td>02</td>
<td>01</td>
</tr>
<tr>
<td>2</td>
<td>Operative</td>
<td>09</td>
<td>05</td>
</tr>
<tr>
<td></td>
<td>*Half threaded caulcellous strewus</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Austin Moors Prosthesis</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>*Cemented Biopolal Hemiarthroplasty</td>
<td>18</td>
<td>09</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>33</td>
</tr>
</tbody>
</table>

Treatment options with conservative approach include 02 male and 01 female. With operative approach there were 48 male patients and 32 female patients.

Table No.4: Complications in intracapsular fracture of neck of femur.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Complications</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pneumonia</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>2</td>
<td>Pulmonary Embolism</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>3</td>
<td>Infaction</td>
<td>03</td>
<td>02</td>
</tr>
<tr>
<td>4</td>
<td>Dislocation</td>
<td>00</td>
<td>02</td>
</tr>
<tr>
<td>5</td>
<td>Bed Sores</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>6</td>
<td>Mortality in 1st post operative year</td>
<td>01</td>
<td>02</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>05</td>
<td>07</td>
</tr>
</tbody>
</table>

Complications of patient with pneumonia includes 01 male and 01 female. Complications with infections includes 03 male and 02 female patients.

Table No.5: Output/ outcome in Intracapsular fracture of neck of femur.

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Outcome</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AVN</td>
<td>01</td>
<td>00</td>
</tr>
<tr>
<td>2</td>
<td>Removal of Prosthesis</td>
<td>03</td>
<td>02</td>
</tr>
<tr>
<td>3</td>
<td>Union</td>
<td>08</td>
<td>05</td>
</tr>
<tr>
<td>4</td>
<td>Non-Union</td>
<td>01</td>
<td>00</td>
</tr>
<tr>
<td>5</td>
<td>Girdle Stone procedure</td>
<td>02</td>
<td>01</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>15</td>
<td>08</td>
</tr>
</tbody>
</table>

With Avn there was 01 male and 00 female patients. With Removal of prosthesis there is 03 male and 02 female patients. With union of male there is 08 male and 05 female patients. With non union there is 01 male and 00 female patients. With girdle stone procedure there is 021 male and 01 female patients.

**DISCUSSION**

The goal is to determine the factors like age, timing of surgery, presence of displacement and complications during and after the treatment of femoral neck fractures. Successful treatment includes the healing of fracture, bone union, improved blood supply to bone thus promoting faster recovery of health of patient. There is high chances of disease formation and bone non union during the treatment of fracture at any age group but old people are more susceptible to disease formation. Much attention is required to prevent disease formation like necrosis due to lack of blood supply and overcome complications. There are some important factors that contribute during recovery and quality of treatment that includes hospital services, age, sex, health, obesity, area like urban or rural, socio economic values, culture, race, diet etc. Schweitzer et al. reported that femoral head necrosis rates in patients range from 50 to 65 years old are more when compared to younger patients, and this is not related to timing of the surgery. So age can be important contributing factor in necrosis. When ever a person feels any signs of fracture, early diagnosis is needed and earlier start of the treatment also plays a vital role in complete recovery without complications or less complications. Study shows that when an early action is needed which includes methods like full anatomic reduction and stable fixation is to be maintained and whether capsulotomy or joint aspiration to reduce pressure in the capsule, they have not achieved a consensus. There is conflict of studies about timing of surgery, some says early intervention within 6-24 hrs is necessary to prevent necrosis and some do not consider the early approach. “Braun et al state that fixation applied during the first 6 hours improves both functions and avascular necrosis rates, yet in some
other researches it is reported that there is no relation between nonunion or avascular necrosis development risk and timing of the surgery”

Femur neck fractures are caused by greater force trauma with multiple injuries to the body. Studies shows that there is great link of necrosis with displacement of fracture, the incidence of necrosis is high in displaced fractured. The rate of complications is also higher in displaced fractured as compared to non displaced. 

**CONCLUSION**

It was concluded from the study that there was fracture of neck of femur intracapsular and extracapsular take place during violence or trauma.

**Author’s Contribution:**

Concept & Design of Study: Imran Idrees Butt

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Data Analysis: Salman Imran Butt, Muhammad Asif Saeed

Revisiting Critically: Imran Idrees Butt, Muhammad Asif Saeed

Final Approval of version: Imran Idrees Butt

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

**REFERENCES**


Evaluation of Lipid Profile of Patients with Diabetes Mellitus, Mirpur, AJK

Zahid Mahmood¹, Muhammad Irfan Shereen², Adnan Bashir³ and Asnad⁴

ABSTRACT

Objective: The objective of this study to evaluate lipid profile of patients with diabetes mellitus in Mirpur, AJK.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the Department of Biochemistry Mohtarma Benazir Bhutto Shaheed Medical College, Mirpur, and AJK from February 2019 to August 2019.

Materials and Methods: In this study we select 80 diabetic patients and 20 controls. The study was conducted in the department of Biochemistry of Mohtarma Benazir Bhutto Shaheed Medical College Mirpurajk. We collected blood samples from both groups test and control. We analyzed blood sample for Glucose, High density lipoprotein, low density lipoprotein IDL, Triglyceride and Total cholesterol. We analyzed the sample of both groups’ diabetic patients and control by Micro lab 300. We use Merck kit for analysis the sample

Results: We observed in our study that glucose level in serum is high in patients with diabetes mellitus as compare to Control. We found that fasting glucose mg/dl is (137.8 ± 4.2) in diabetes mellitus patients while in Control fasting glucose level mg/dl is (98.4 ± 4.9). Lipid profile is also high in diabetes mellitus patients as compare to Control. Total cholesterol level in diabetes mellitus patients is (245.5 ± 12.8) mg/dl and in Control is (192.6 ± 30.5) mg/dl. LDL value in diabetes mellitus patients is (127.8 ± 22.5) mg/dl and in Control is (116.5 ± 18.5) mg/dl. HDL value in diabetes mellitus patients is (57.7 ± 8.5) mg/dl and in Control is (42.5 ± 9.2) mg/dl. Total glycereide value in diabetes mellitus patients is (179.2 ± 32.5) mg/dl and in Control is (143.3 ± 31.2) mg/dl

Conclusion: It is conclude that with passage of time the lipid level is high in diabetes mellitus as compare to control and the level remains constant in control. In diabetic patients some other metabolic disorder are produce with time. It should be control at initial stage as soon as possible. There is some variation occurred and it is due to environmental, factor, age, race and socio-economic factors.

Key Words: Diabetes mellitus, Lipid profile, Control


INTRODUCTION

Diabetes mellitus (DM) is found all over the world it is globally exist all over the world. In low income country is high prevalence as compare to developed country.¹ In Pakistan this disease also prevents like Bangladesh it 13 % which is more prevalent.² DM is group of metabolic disorders which is accompanied mostly with hypertension and also defect found in insulin secretion and insulin action. it mean it is the group of diseases it connect with more disease.³ DM mostly found in two groups type -1 and type.-2 Type -1 found in acute symptoms while type .2 prevalent latter or develop.⁴ The chronic DM are associated with loss of vision with retinopathy, nephropathy leads renal dysfunction,, which leads foot ulcer and amputation, cardiovascular disorders, and sexual dysfunction.⁵ Lipid play very important role in the physiology of the body. Important lipids are low-density lipoprotein cholesterol (LDL-C), total cholesterol (TC), high-density lipoprotein cholesterol (HDL-C) and triglycerides (TG).⁶ T2DM have abnormal lipid profile levels of LDL- C, TG and also found low level of HDL-C.⁷ TC, TG, HDL-C, LDL-C are tested and assay from serum of the patients.⁸ Lipid profiles are mostly checked by Physicians to detect lipid abnormality in diabetic patients. Patients have Hyperlipidemia or dyslipidemia is linked or mostly associated with type-2 diabetes.⁹ The is a major risk factor for cardiovascular disease linked and associated with dyslipidemia and cardiovascular disease which cause of morbidity and mortality in patients with diabetes mellitus. The objective of this study to evaluate lipid profile in patients with diabetes mellitus in Mirpur AJK.

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Accepted: December, 2019
Printed: February, 2020
MATERIALS AND METHODS
In this study we select 80 diabetic patients and 20 controls. The study was conducted in the department of Biochemistry of Mohtarma Benazir Bhutto Shaheed Medical College Mirpur AJK. We collected blood samples from both groups test and control. We analyzed blood sample for Glucose, High density lipoprotein, low density lipoprotein IDL, Triglyceride and Total cholesterol. We analyzed the sample of both groups’ diabetic patients and control by Micro lab 300. We use Merck kit for analysis the sample.

RESULTS
We observed in our study that glucose level in serum is high in patients with diabetes mellitus as compare to Control. We found that fasting glucose mg/dl level is (137.8 ± 4.2) in diabetes mellitus patients while in Control fasting glucose level mg/dl is (98.4 ± 4.9). Lipid profile is also high in diabetes mellitus patients as compare to Control.

Table No.1: Participant characteristics

<table>
<thead>
<tr>
<th></th>
<th>(n=80) Diabetic Mellitus Patients</th>
<th>Control (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>30.4 ± 6.2</td>
<td>30.7 ± 7.6</td>
</tr>
<tr>
<td>Male /Female (%)</td>
<td>40/40</td>
<td>10/10</td>
</tr>
<tr>
<td>Body weight (Kg)</td>
<td>69.1 ± 11.4</td>
<td>76.4 ± 11.5</td>
</tr>
<tr>
<td>BMI (kg/m2)</td>
<td>25.3 ± 2.6</td>
<td>25.4 ± 2.7</td>
</tr>
<tr>
<td>SBP sitting (mmHg)</td>
<td>137.9 ± 7.2</td>
<td>134.4 ± 7.3</td>
</tr>
<tr>
<td>DBP sitting (mmHg)</td>
<td>85.6 ± 6.7</td>
<td>86.7 ± 5.7</td>
</tr>
</tbody>
</table>

Table No.2: Ambulatory blood pressure monitoring. Mean values of blood pressure

<table>
<thead>
<tr>
<th></th>
<th>Diabetic Mellitus Patients (n=80)</th>
<th>Control (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic BP -24 hours (mmHg)</td>
<td>138.9 ± 8.2</td>
<td>135.4 ± 8.3</td>
</tr>
<tr>
<td>Diastolic BP -24 hours (mmHg)</td>
<td>86.6 ± 5.9</td>
<td>85.9 ± 6.5</td>
</tr>
</tbody>
</table>

Table No.3: Biochemical profile of pregnant women and non-pregnant women

<table>
<thead>
<tr>
<th></th>
<th>Diabetic Mellitus Patients (n=80)</th>
<th>Control (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting Blood Glucose (mg/dl)</td>
<td>137.8 ± 4.2</td>
<td>98.4 ± 4.9</td>
</tr>
<tr>
<td>Total Cholesterol (mg/dl)</td>
<td>245.5 ± 12.8</td>
<td>192.6 ± 30.5</td>
</tr>
<tr>
<td>LDL (mg/dl)</td>
<td>127.8 ± 22.5</td>
<td>116.5 ± 18.5</td>
</tr>
<tr>
<td>HDL (mg/dl)</td>
<td>57.7 ± 8.5</td>
<td>42.5 ± 9.2</td>
</tr>
<tr>
<td>Triglycerides (mg/dl)</td>
<td>179.2 ± 32.5</td>
<td>143.3 ± 31.2</td>
</tr>
</tbody>
</table>

Total cholesterol level in diabetes mellitus patients is higher compare to Control. Total cholesterol in diabetes mellitus patients is (245.5 ± 12.8) mg/dl and in Control is (192.6 ± 30.5) mg/dl. LDL value in diabetes mellitus patients is (127.8 ± 22.5) mg/dl and in Control is (116.5± 18.5) mg/dl. HDL value in diabetes mellitus patients (57.7± 8.5) mg/dl and in Control is (42.5 ± 9.2) mg/dl. Total glyceride value in diabetes mellitus patients is (179.2 ± 32.5) mg/dl and in Control is (143.3 ± 31.2) mg/dl

DISCUSSION
Death and disability is a leading cause of diabetes mellitus globally. Patients with T2DM lipid abnormalities are frequently found. And it is increases the cardiovascular diseases risk.\textsuperscript{1} In this study we select 80 diabetic patients and 20 controls. The study was conducted in the department of Biochemistry of Mohtarma Benazir Bhutto Shaheed Medical College Mirpurajk. We collected blood samples from both groups test and control. We analyzed blood sample for Glucose, High density lipoprotein, low density lipoprotein IDL, Triglyceride and Total cholesterol. We analyzed the sample of both groups’ diabetic patients and control by Micro lab 300. We use Merck kit for analysis the sample. 40-50 years are age ranges for patient’s type-2 diabetes. It was found in other study\textsuperscript{11}. Incidence and prevalence of T2DM are increases with age.\textsuperscript{12-14} We observed in our study that glucose level in serum is high in patients with diabetes mellitus as compare to Control. We found that fasting glucose mg/dl level is (137.8 ± 4.2) in diabetes mellitus patients while in Control fasting glucose level mg/dl is (98.4 ± 4.9). Lipid profile is also high in diabetes mellitus patients as compare to Control. Total cholesterol level in diabetes mellitus patients is higher compare to Control. Total cholesterol in diabetes mellitus patients is (245.5 ± 12.8) mg/dl and in Control is (192.6 ± 30.5) mg/dl. LDL value in diabetes mellitus patients is (127.8 ± 22.5) mg/dl and in Control is (116.5± 18.5) mg/dl. HDL value in diabetes mellitus patients (57.7± 8.5) mg/dl and in Control is (42.5 ± 9.2) mg/dl. Total glyceride value in diabetes mellitus patients is (179.2 ± 32.5) mg/dl and in Control is (143.3 ± 31.2) mg/dl
to environmental, factor, age, race and socio-economic factors.

**CONCLUSION**

It is conclude that with passage of time the lipid level is high in diabetes mellitus as compare to control and the level remains constant in control. In diabetic patients some other metabolic disorder are produce with time. It should be control at initial stage as soon as possible. There is some variation occurred and it is due to environmental, factor, age, race and socio-economic factors.

**Author’s Contribution:**
Concept & Design of Study: Zahid Mahmood  
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Data Analysis: Adnan Bashir, Asnad  
Revisiting Critically: Zahid Mahmood, Muhammad Irfan Shereen, Asnad  
Final Approval of version: Zahid Mahmood  

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

**REFERENCES**
Outcome of Embolectomy in Patients Presenting Late with Acute Limb Ischemia
Malik Asrar Ahmed¹, Abdul Karim², Sultan Shah² and Malik Mehmoed Ahmed³

ABSTRACT

Objective: To determine the outcome of embolectomy in terms of limb loss and mortality in patients presenting late with acute limb ischemia.

Study Design: Descriptive study

Place and Duration of Study: This study was conducted at the Department of Surgery, Sheikh Khalifa Bin Zahyed Al-Nahyan Hospital Rawalakot attached with Poonch Medical College from June 2017 to June 2018.

Materials and Methods: Study was carried out on 100 patients. Patients were included through Non-probability, purposive sampling. Detailed medical history was taken from all the patients and they were examined clinically. Embolectomy was done for acute limb ischemia. Post-operatively patients were followed up. The patients were evaluated for limb loss. Data was collected on a structured questionnaire and analyzed in SPSS software version 16.

Results: The mean age of the patients was recorded as 45 years. There were 72 (78%) male patients while 28 (28%) were female. Out of 72 male patients, 06 (8.3%) patients lost their limbs and one patient (1.38%) died. The cases in which patients are suffering from the critical ischemia, surgical embolectomy is the most suitable way to restore blood flow in the limbs.

Conclusion: The times in which patients are suffering from the critical ischemia, surgical embolectomy is the most suitable way to restore blood flow in the limbs.

Key Words: Embolectomy, Acute Limb Ischemia, Limb Loss

INTRODUCTION

Acute limb ischemia (ALI) is considered to be very challenging emergencies when it is about the vascular surgery. The outcomes of interventions for ALI are linked to higher rates of mortality and morbidity1. Acute limb ischemia is caused because of interruption in blood flow in the artery. Due to this, limb ischemia is resulted that leads to pain, ischemic ulcerations and gangrene4. Surgical revascularization within first 6-12 hours just after the beginning of symptoms provide the most effective results, but the rate of mortality and the likely chances to lose the limb have made this problem debatable and can be associated with other diseases. Acutely developed ischemia of low intensity, early diagnosis and proper treatment are the basic needs for successful cure of the disease. However it is important to first identify the different conditions and start proper treatment needed that is considered as the primary healthcare treatment. The number of primary amputations could be lesser if ALI is managed in a proper way that needs proper education of the doctors who deal with such situations and receive the patients in emergency condition2. ALI with the prevalence rate of 1.7 in 10,000 in the common population is seen to be having the high mortality and the morbidity rate. The new therapeutic methods are used frequently to get the issue resolved. There are many factors that lead to increase in the rate of morbidity like fasciotomy as a result of chronic disease and it is reported to be up to 48%. Amputation rate has been 5-28% and for the mortality it is 7-25%. Different previous studies show that the time before the surgical intervention, the sensory and motor deficits and the tenderness of the calf are linked to poor prognosis5. Pain usually progresses as duration of ischemia increases but it may also diminish in case of recruitment of the collaterals or if it progresses to sensory loss. Identification of the underlying cause could be helpful to manage the cases. Acute arterial embolism could be treated by using surgical embolectomy. Emboli usually produce acute ischemia having the risk of limb loss. Patients with embolic occlusions might remember that how the disease started. An embolus can be treated directly to restore normal circulation in an artery without the collaterals. Emboli usually produce acute limb ischemia having the risk of limb loss. Patients with embolic occlusions might remember that how the disease started.

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MATERIALS AND METHODS

The study was conducted out at Sheikh Khalifa Bin Zahyed Al-Nahyan Hospital Rawalakot from June 2017 to June 2018. Many of the districts are catchment areas of this hospital. The hospital provides 24 hour emergency services and it has well equipped vascular surgery facilities as well.

**Sample Technique:** Non-probability, purposive sampling.

**Inclusion criteria:**
1. History of Diabetes
2. History of hypertension
3. History of Ischemic heart disease (without dyspnea, orthopnea)
4. Raised lipid profile

**Exclusion criteria:**
1. ASA grade 3 and above
2. Dyspneic patient
3. Above 70 years old patient
4. Patient on mechanical ventilation
5. Patient on inotropic support
6. Patients with concurrent venous thrombosis.
7. Skin mottling/discoloration at presentation.
8. Tender calf/compartment and fixed contracture at presentation.

**Ethical Consideration:** The study was carried out after formal approval by ethical committee of Poonch Medical College Rawalakot.

**Data collection procedure:** In this study, the variables included were age, limbloss, reperfusion injury and mortality. All the patients were clinically examined and their medical history was recorded. Acute limb ischemia was diagnosed. Embolectomies were done within 6 to 72 hours of injury. Post-operatively patients were monitored. The patients were discharged from the hospital after ten days depending upon the general condition of the patients and wound. All the patients were followed up on OPD basis for six months. The patients were evaluated for limb loss, reperfusion injury and mortality. Data was collected on a structured questionnaire.

**Data Analysis:** Data was entered and analyzed in SPSS software version 16. Qualitative variables like limb loss, and mortality were presented in form of frequency and percentage. Chi-square test was applied.

**RESULTS**

The mean age of the patients was recorded as 45 years. There were 78 (78%) male patients while 28 (28%) were female. Out of 72 male patients, 6 (8.3%) patients lost their limbs and one patient (1.38%) died.

**Table No.1: Distribution of Gender**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>72</td>
<td>72%</td>
</tr>
<tr>
<td>Female</td>
<td>28</td>
<td>28%</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100%</td>
</tr>
</tbody>
</table>

In our study, 72 (72%) patients were male while remaining 28 (28%) were female.

**Table No.2: Distribution of saved and lost limbs**

<table>
<thead>
<tr>
<th>Limbs saved</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limbs lost (Amputated)</td>
<td>5</td>
<td>5%</td>
</tr>
</tbody>
</table>

In our study, 5 (5%) patients lost their limbs while the limbs of remaining 95 patients were salvaged.

**Table No.3: Distribution of saved and lost patients**

<table>
<thead>
<tr>
<th>Patients saved</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients lost</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>

In our study, 1 (1%) patient expired due to reperfusion injury while 99 (99%) patients were saved.

**DISCUSSION**

There might be different reasons for the delay that are seen during different stages such as the patient delay, delay due to the doctor, waiting time for diagnosis, preparation time, anesthesia etc. It is needed to take proper action to avoid delay as it could be life threatening for the patient.

A total of 100 patients were treated during one year of our study period with a salvage rate of 95% within the time period of 16 hours. Abbot and William experienced the limb salvage rate of 93% with embolectomy within the time period of 12 hours. The limb salvage rate decreased to 78% and the mortality increase when the patients were presented after 12 hours and later once the symptoms were started.

Embolectomy is considered to be the first line of treatment when it is about the case of embolus and could be carried out using local anesthesia. Intra-arterial thrombolysis is also considered as the alternative treatment for this problem.

Embolectomies for the lower limbs using local anesthesia and the spinal anesthesia were done for the patients who needed popliteal embolectomy and the bypass. Total 85 patients were included in the study that underwent pre-emptive fasciotomy. All the compartments of the lower limb were opened because of suspicious injury.

The first embolectomy was done in 1911 by Fogarty and from that day embolectomy catheters are used. The catheter embolectomy is considered to be a routine surgical procedure for revascularization of the patients who are affected by limb thromboembolic disease. The clinical attempts were made for revascularization. The
amputation rate is reported to reach 9-15%. Abbott and colleagues published the experience with the embolectomy providing the limb salvage rate of about 93% within the time period of 12 hours. The limb salvage rate decreased to 78% and the mortality increased when the patients were presented after the 12 hours and later once the symptoms were seen. Many studies provided the linear relationship between delay in intervention and the results among patients who are affected by acute limb ischemia. In patients who present late after the symptoms appear, the decision for intervention is questionable. In such cases, the clinical insight based on the experience and the guidelines that are established with quick imaging analysis is compulsory for successful management. The role of revascularization in acutely ischemic limb where there is delay in treatment is controversial. In case of critical ischemia of the limbs, different clinical measures are needed to prevent the body from the risk of morbidity. The attempt made to revascularize is considered to be acceptable when the damage to arterial intima is little, when thrombi are not adherent to the intima and with no secondary thrombus. Better results are seen for the reversal of acute ischemic limb in such cases. Though in different cases embolectomies are also performed after several days of acute limb occlusion, the reperfusion injury after revascularization need to be assessed and the patients who present late have the greater chances of reperfusion injury that might lead to limb loss and sometimes to death. So, it is important to avoid the delay in presenting the patient. It could be said that the earlier embolectomy within first 8 hours provide the better results and in some cases such embolectomies are also performed after few days once the acute occlusion is reported. It is also shown that in patients with arterial emboli, when the delay is more than 8 hours, chances of different complications of ischemia are increased but when the delay is for more than 7 days, the probability of complications decreases.

The cases in which patients are suffering from critical limb ischemia, surgical embolectomy is the most suitable way to restore the blood flow in the limbs as compared to the process of thrombolysis as it might take several hours.

CONCLUSION

It is needed to consider several issues associated with ALI like the major errors that might arise due to lack of time during diagnosis, anticoagulation, documentation and emphasizing much on the limb salvage.

Author’s Contribution:
Concept & Design of Study: Malik Asrar Ahmed
Drafting: Abdul Karim
Data Analysis: Sultan Shah, Malik

Revisiting Critically: Mehmoord Ahmed
Final Approval of version: Malik Asrar Ahmed

Conflict of Interest: The study has no conflict of interest to declare by any author.

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4. Goldstein, Jeffrey A, Mishkel G. Choosing the correct therapeutic option for acute limb ischemia. Int Cardiol 2011;3(3).
Causes of Uniocular Blindness in Adults Attending A Tertiary Care Hospital Outpatient Department

Imran Ali, Naresh Kumar, Rabia Chaudhry, Wejai Kumar, Nasar Qamar Khan and Gainty Roopchand

ABSTRACT

Objective: To determine the frequency of various causes of uniocular blindness in adults attending a tertiary care center.

Study Design: Cross-sectional study.

Place and Duration of Study: This study was conducted at the Department of Ophthalmology, Jinnah Postgraduate Medical Centre Karachi for six months from December 2017 to June 2018.

Materials and Methods: In our study 138 patients of uniocular blindness of either gender attending outpatient department of ophthalmology underwent a complete ophthalmic examination to evaluate various causes of uniocular blindness including cataract, glaucoma, corneal opacity and ocular trauma.

Results: The average age of the patients was 39.37 ± 14.78 years. (95%CI: 36.88 to 41.86). Out of 138 patients, 94 (68.1%) patients were male and 44 (31.9%) were female with male to female ratio of (2.1:1). The most common cause was trauma observed in 49 (35.5%) cases. Cataract were observed in 31(22.5%), glaucoma 26 (18.8%) and corneal opacity was observed in 32 (23.2%) cases. Highest number of various causes of uniocular blindness 32(23.2%) was found in the age group of 21 to 30 years and 31 to 40 years.

Conclusion: The various causes of uniocular blindness in adults in order of highest to lowest frequency were trauma, cataract, glaucoma and corneal opacity.

Key Words: uniocular blindness, trauma, cataract, glaucoma, corneal opacity.

INTRODUCTION

Blindness is defined by the world health organization (WHO) as visual acuity of less than 3/60 or a visual field of less than 10 degrees in the better eye with the best available correction. The terms low vision and visual impairment are often used interchangeably. Visual impairment is a global public health problem. As per WHO, category 1 is moderate visual impairment, less than 6/18 to 6/60 and category 2 severe visual impairment, less than 6/60 to 3/60. There are estimated 50 million blind people blind in the world whereas according to world health organization an estimated 45 million people are blind and an additional 135 million are severely visually impaired.

Another report by WHO estimates that 285 million people are visually impaired worldwide; 39 million among these are blind. The major causes of blindness in the affected eye as reported in surveys are cataract, central corneal opacity, glaucoma and phthisical / disorganized or absent globe. In a study conducted in Bangladesh in which prevalence of uniocular blindness was found to be 2.69%, among patients aged 30 and above. Major causes of uniocular blindness were cataract 62.24%, corneal opacity 9.18%, phthisical / disorganized or absent globe 6.12%. In a Nigerian study, the uniocular blindness was seen in 20% glaucomatous patients. Tajimi in his study found that the causes of low vision according to WHO criteria were cataract (40%), glaucoma (20%), myopic macular degeneration, corneal opacity, amblyopia, and optic atrophy (10%) each and those according to U.S criteria were cataract (44%), glaucoma (12%), myopic macular degeneration, choriorretinal degeneration, corneal opacity, diabetic retinopathy (8%) each, amblyopia, optic atrophy, and uveitis (4%) each. Other studies just like Pakistan national blindness and visual impairment survey, prevalence of visual impairment in adults in the rural area of coastal Karnataka and Pakistan National...
Blindness and Visual Impairment Survey suggests refractive error (39%) as the main cause of reduced vision in eyes that had visual acuity of less than 6/12, cataract (21%) being the next most common cause, followed by uncorrected aphakia (10%) and age related macular degeneration (5%).

In a study at Peshawar, cataract was the leading cause of severe visual impairment whereas a study conducted by Negrel AD et al states that the ocular trauma is the leading cause of visual loss and is known to be the most common cause of unocular loss of vision. It accounts for blindness in more than one million people about 87% of the worlds visually impaired live in developing countries. The number of people blinded by infectious diseases has been greatly reduced, but age related impairment is increasing.

Cataract remains the leading cause of blindness globally, except in the most developed countries. Correction of refractive error could give normal vision to more than 12 million patients. About 85% of all visual impairment is avoidable globally. Pakistan is a developing country and very few studies have been done so far. In a study during 1987-1990, the estimated prevalence of blindness in adults was 1.78%. while in another study of Baluchistan, it was found that uniocular injuries were 46.5% in age group of 16-70 years and ocular trauma was found to be the major cause affecting people on the most productive time of their working career.

It is important to understand the causes of unocular blindness in adults in Pakistan to see if these differ from those in other countries, hence, the current study is undertaken to have data on causes of unocular blindness amongst adult patients attending a tertiary care referral center hospital outpatient department. So that, appropriate measures could be taken by the policy decision makers to address these causes in order to minimize the morbidity.

**MATERIALS AND METHODS**

Study was conducted at the Department of Ophthalmology, JPMC Karachi. Duration of study was six months from 16th December 2017 to 16th June 2018. It was a Cross - sectional study. Sample size was calculated by taking Prevalence (p) As 6.124, margin of error (d) 4% and Confidence level 95%. The required sample size came out to be 138 patients. Non-probability purposive sampling was done.

**Inclusion Criteria:**

Adults of either gender: Age ranging from 16-70 years complaining of loss of vision confirmed by criteria given in operational definition to be suffering from severe visual impairment.

**Exclusion Criteria:**

Patients attending for follow up.

Non-consenting patients.

**Data Collection Procedure:** The patients with visual acuity of less than 3/60 or a visual field of less than 10 degrees in the better eye with best available correction fulfilling the inclusion criteria were recruited in the study. After taking informed consent by the patient, a detailed history and examination of each patient covering all ophthalmic problems to reach a correct diagnosis was carried out.

Among the causes of unocular blindness in adults cataract was diagnosed on the basis of visual acuity less than 3/60 recorded by Snellen’s chart and loss of red reflex was noted on direct distant ophthalmoscopy. If found it was labeled as cataract.

Glaucoma was diagnosed on the basis of IOP more than 21mmhg measured with applanation tonometer, optic disc atrophy seen on direct ophthalmoscopy and presence of glaucomatous visual field defects.

Corneal Opacity was diagnosed on the basis of history of infection, contact lens or trauma; visual acuity less than 3/60 and presence of corneal opacity on Slit lamp examination.

Ocular trauma was labeled as positive in the presence of history of trauma, visual acuity less than 3/60 and phthisical / disorganized globe is seen on slit lamp examination.

All the data of variables like cataract, glaucoma, corneal opacity and trauma was entered in a specially designed proforma attached as annexure by the researcher.

**Data analysis:** The collected data was analyzed by using SPSS version 21.0 on computer, percentage was computed for qualitative variables like gender and causes of unocular blindness like cataract, glaucoma, corneal opacity and trauma. Mean ± Standard Deviation was calculated for age of the patient. In order to control confounders or effect modifiers, separate data will be presented for male and female of different age groups.

**RESULTS**

A total of 138 patients with unocular blindness confirmed by W.H.O criteria, were included in this study. The average age of the patients was 39.37 ± 14.78 years. (95%CI: 36.88 to 41.86) as shown in table 1. Most of the patients were between 21 to 30 years of age (23.2%) and 31 to 40 years (23.2%) as shown in figure 1.

Out of 138 patients, 94 (68.1%) patients were male and 44 (31.9%) were female with male to female ratio of (2.1:1) as shown in figure 2.

Among causes of unocular blindness in adults attending our tertiary care hospital as outpatients, the most common cause was trauma observed in 49 (35.5%) cases. cataract were observed in 31(22.5%), glaucoma 26 (18.8%) and corneal opacity was observed in 32 (23.2%) cases as shown in figure 3.

Age wise distribution of causes of unocular blindness is shown in table 2. Highest number of various causes
of uniocular blindness 32(23.2%) found in the age group of 21 to 30 years and 31 to 40 years. Gender wise distribution of causes of uniocular blindness is shown in table 3. Male patients suffered more as compared to the females.

**Table No.1: Age of the patients  n=92**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean ± SD</th>
<th>95%CI</th>
<th>Max-Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>39.37±14.775</td>
<td>36.88 to 41.86</td>
<td>65 – 35</td>
</tr>
</tbody>
</table>

**Figure No.1: Age distribution of the patients n=138**

**Figure No.2: Gender distribution  n=138**

**Figure No.3: Causes of uniocular blindness**

**Table No.2: Age wise causes of uniocular blindness n=138**

<table>
<thead>
<tr>
<th>Age groups</th>
<th>Trauma</th>
<th>Cataract</th>
<th>Glaucoma</th>
<th>Corneal opacity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤20 years</td>
<td>13 (26.5)</td>
<td>1 (3.2)</td>
<td>0</td>
<td>0</td>
<td>14 (10.1)</td>
</tr>
<tr>
<td>21-30 years</td>
<td>16 (32.7)</td>
<td>5 (16.1)</td>
<td>1 (3.8)</td>
<td>10 (31.3)</td>
<td>32 (23.2)</td>
</tr>
<tr>
<td>31-40 years</td>
<td>15 (30.6)</td>
<td>5 (16.1)</td>
<td>2 (7.7)</td>
<td>10 (31.3)</td>
<td>32 (23.2)</td>
</tr>
<tr>
<td>41-50 years</td>
<td>2 (4.1)</td>
<td>10 (32.3)</td>
<td>7 (26.9)</td>
<td>5 (15.6)</td>
<td>24 (17.4)</td>
</tr>
<tr>
<td>51-60 years</td>
<td>2 (4.1)</td>
<td>5 (16.1)</td>
<td>11 (42.3)</td>
<td>7 (21.9)</td>
<td>25 (18.1)</td>
</tr>
<tr>
<td>&gt;60 years</td>
<td>1 (2.0)</td>
<td>5 (16.1)</td>
<td>5 (19.2)</td>
<td>0</td>
<td>11 (8.0)</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>31</td>
<td>26</td>
<td>32</td>
<td>138 (100)</td>
</tr>
</tbody>
</table>

Key: n=number, (%)

**Table No.3: Gender wise causes of uniocular blindness n=138**

<table>
<thead>
<tr>
<th>Causes</th>
<th>Gender</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma</td>
<td>30 (61.2)</td>
<td>19 (38.8)</td>
<td>49</td>
</tr>
<tr>
<td>Cataract</td>
<td>19 (61.3)</td>
<td>12 (38.7)</td>
<td>31</td>
</tr>
<tr>
<td>Glaucoma</td>
<td>21 (80.8)</td>
<td>5 (19.2)</td>
<td>26</td>
</tr>
<tr>
<td>Corneal opacity</td>
<td>24 (75.0)</td>
<td>8 (25.0)</td>
<td>32</td>
</tr>
</tbody>
</table>

Total 94 44 138

Key: n=number, (%)

**DISCUSSION**

Worldwide, about 135 million people are severely visually impaired. Major causes of severe visual impairment according to W.H.O were cataract, glaucoma, myopic macular degeneration, corneal opacity, amblyopia, and optic atrophy.

Pakistan, a developing country situated in the World Health Organization’s (WHO) Eastern Mediterranean Region is bordered by India, China, Iran, and Afghanistan. The geography and climate of Pakistan are diverse, consisting of hot arid areas, fertile regions, and the cold, snow-covered Himalayas.

Few studies on blindness and visual impairment had been conducted in Pakistan. One study (1987–1990), consisting of numerous sub surveys in different areas of the country, estimated the all-age prevalence of blindness to be 1.8%. After this initial study, a National Committee for the Prevention of Blindness (NCPB) was formed, which produced a Five-Year National Plan for the Prevention of Blindness (1994–1999). The purpose of this second survey was to provide more detailed information on the prevalence and causes of visual impairment and blindness particularly that due to posterior segment disorders, which become increasingly important as life expectancy increases and cataract blindness declines as a result of improved service delivery. The survey used a diagnostically rigorous methodology, as was used in the surveys in Bangladesh.

As in similar surveys in South Asia, socioeconomic indicators were strongly associated with visual acuity status. Iliterate subjects were significantly more likely to have a presenting visual acuity of <6/60. Subjects with primary level schooling were 60% (40%–80%) less likely to present with a visual acuity of <6/60 than were subjects who had never attended school, and subjects who had a higher education were even less likely to have SVI/BL (OR, 0.3; 95% CI, 0.2–0.4). Blindness was less prevalent in households with a nonmanual work status than in those with a manual work status. A significantly higher blindness prevalence was found in districts with a higher deprivation index (P<0.001).

According to Pakistan National Blindness and visual impairment survey, refractive error followed by
cataract, uncorrected aphakia and age related macular degeneration are the main causes of severe visual impairment.\textsuperscript{2}

Uniocular blindness is a common ocular problem which affects all ages and gender.\textsuperscript{17} It leads to loss of binocular single vision with all its advantages including stereopsis, field overlap, exteroception of form and colour, and enhanced performance of visuomotor tasks.\textsuperscript{18-19} A uniocularly blind person is at risk of developing bilateral visual impairment and therefore needs special care to prevent or treat visual disabilities in the fellow eye.\textsuperscript{20}

In our study we selected 138 patients from ophthalmic outpatients department at JPMC, Karachi. From amongst the 138 patients, 79 were male and 41 females. The causes of uniocular blindness were cataract, glaucoma, corneal opacity and trauma.

In our study, cataract was found to be 31 (22.5\%) patients while according to a study of Bangladesh it was 62.24\%.\textsuperscript{5} A study took place in the Eye clinic of the Niger Delta University Teaching Hospital over a period of one year (March 2008 – February, 2009), the prevalence of cataract was the highest among the various causes of uniocular blindness and it was 41.5\%.\textsuperscript{21} About fifty four percent of the cases were cataract and it was the leading cause of blindness in Ethiopia.\textsuperscript{22} Uniocular low vision affected 71 (40.8\%), caused predominantly by cataract (25 cases, 15.5\%). Age-related cataract was the major type of cataract causing visual impairment in this study (69/174 cases, 39.6\%).\textsuperscript{23}

The low incidence in our study could be due to the bias of hospital based population or due to small numbers.

In our study, 26 (18.8\%) patients presented with glaucoma, while in another study glaucoma was responsible for 10.7\% of blindness and is the third leading cause of unilateral blindness.\textsuperscript{21} In eastern and western Nigeria as well as in the Central African Republic, glaucoma was the second leading cause of monocular blindness, constituting 21\%, 20\%, and 10\% of blindness, respectively. In Yemen,\textsuperscript{24} glaucoma was found to be the fifth leading cause of monocular blindness. Among the main causes of uniocular blindness glaucoma was found in (22.58\%) of patients.\textsuperscript{25}

In our study corneal opacity was observed in 32 (23.2\%) cases.

Corneal disease was responsible for 8.7\% of monocular blindness in one study.\textsuperscript{26} In Kano, northern Nigeria,\textsuperscript{20} corneal diseases was responsible for 10\% of unilateral blindness while in Yemen,\textsuperscript{24} it was responsible for 11.5\% of monocular blindness, in Dubai it was 10.08\% in patients with uniocular blindness.\textsuperscript{23} The prevalence of monocular blindness was 1.89\% and the Corneal blindness accounted for 36.7\% of the cases.\textsuperscript{22}

Corneal blindness which was 20.8\% of the blindness in patients with uniocular blindness.\textsuperscript{22} The structural and functional integrity of the cornea is of paramount importance for normal visual function. Its external location makes it vulnerable to a variety of insults, each of which can lead to sight-threatening sequelae. Infections, injuries, malnutrition, congenital or hereditary problems and iatrogenic diseases constitute the gamut of etiologic factors leading to corneal blindness. Cornea diseases are caused by microbial and non-microbial factors. The effects of these agents on the eye depend on the time of presentation to eye care facilities as well as the availability of good medical services. Thus the impact of corneal disease on blindness is likely to vary from place to place.

Ocular trauma is the major cause of uniocular blindness and visual impairment throughout the world, although little is known about its epidemiology and associated visual outcome in developing countries. The national population based survey of blindness in Nepal (1981) found the prevalence of blindness as 0.84\% with trauma responsible for 7.9\% of monocular blindness. Since ocular injury causes severe disability and economic loss, several countries have estimated eye injury registries that serve to collect information regarding the serious ocular injury. In our study trauma was observed in 49 (35.5\%) cases whereas in a study at Goro district, Gurage zone, southern Ethiopia it was found in 31.6\%.\textsuperscript{22}

The main causes of uniocular blindness in Benin-city, Nigeria were cataract (23.79\%), glaucoma (22.58\%) and trauma (11.69\%).\textsuperscript{25} In Sana, Yemen, the trauma in uniocular blindness was found to be in 60(20.3\%) patients.\textsuperscript{24} It was responsible for 8.0\% of blindness in Bayelsa state Nigeria.\textsuperscript{21} Trauma was found to be the second leading cause of blindness in Indonesia while in northern Nigeria\textsuperscript{25} it was the third leading cause of unilateral blindness.

There were more blind males than females. This may be because more males attended the clinic than females. This is in agreement with an earlier hospital based study at Ibadan and Nigeria.\textsuperscript{25}

**CONCLUSION**

The various causes of uniocular blindness in adults in order of highest to lowest frequency found in our study were trauma, cataract, glaucoma and corneal opacity. The most vulnerable age groups for trauma were 21 to 30 years and 31 to 40 years.

**Author’s Contribution:**

- **Concept & Design of Study:** Imran Ali
- **Drafting:** Naresh Kumar, Rabia Chaudhry
- **Data Analysis:** Wejai Kumar, Nasar Qamar Khan, Gaintry, Roopchand

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Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES


Duration Between Tracheostomy and Laryngectomy in Tracheostomized Patients

Javed Qureshi¹, Saeed Razi², Umra Abdul Samid³ and M Sabir⁴

ABSTRACT

Objective: To study the Duration between Tracheostomy and Laryngectomy in Tracheostomized Patients
Design of Study: Experimental / Observational study
Place and Duration of study: This study was conducted at Idris Teaching Hospital Sialkot Medical College Sialkot from Jan 2016 to Jan 2019.

Materials and Methods: Fifty seven patients were included in this study and Duration between Tracheostomy And Laryngectomy in Tracheostomized Patients were recorded. The demographic data was also noted down on the designed performa. The written informed consent was taken before the start of study. The permission of Ethical Committee was considered before collection of data and publishing in medical journal.

Results: With margin of 5 days, the duration between tracheostomy and laryngectomy in tracheostomized patients, the patients were 03(5.26%), with margin 7 days the number of patients were 09(15.78%), With the margin of 10 days the patients were 09(15.78%), Wit margin of 12 days the patients were 09(15.78%), with the margin of 13 days the patients were 03(5.26%), with the margin of 15 days the patients were 06(10.52%), with the margin of 17 days the patients were 03(5.26%), with the margin of 30 days the patients were 09(15.78%), with the margin of 60 days the patients were 03(5.26%), with the margin of 90 days the patients were 03(5.26%) were found for the duration between tracheostomy and laryngectomy in tracheostomized patients. At the age of 35-40 years, there were 15(29.41%) Male and 01(16.66%) female, at age above 67 years there were 17(33.33%) Male and 02(33.33%) Female, at age of 56-66 there were 16(31.37%) Male and 02(33.33%) Female, at age above 67 years there were 3(5.88%) Male and 01(16.66%) female were found for the duration between tracheostomy and laryngectomy in tracheostomized patients.

Conclusion: It was concluded that during different periods duration between tracheostomy and laryngectomy in tracheostomized patients were different.

Key Words: Tracheostomy, Laryngectomy, Tracheostomized patients.


INTRODUCTION

Stress from surgery like tracheostomy and laryngectomy disturbs patients’ sleep¹-³. Even minor surgery like tracheostomy or laryngectomy can disrupt sleep with a reduction of total sleep and REM sleep⁴. “Major surgery curtails sleep even further. REM sleep on the first and second post-operative night is virtually eliminated⁵:6.” Knill et al’ reported that the REM sleep reappeared thereafter and even increased to a level greater than the pre-operative amount.

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In the post-operative period, hypoxemia is another well-known threat⁸-¹⁰. The hypoxemia in this stage is predominantly caused by a corruption of the airway patency, i.e. obstructive apnea⁹,¹². The obstructive apnea is often observed in the patients during REM sleep after major surgery¹³-¹⁵. Glossectomy and laryngectomy are major surgical procedures.” “These procedures are stressful to patients and may not only simply disrupt their sleep, they simultaneously interfere with the air flow in the upper airway because of surgery and post-operative edema”. “Hence, we suspected that after glossectomies and laryngectomies, patients could show disturbance as described, and have studied their breathing during the periooperative nights using an apnea monitor”.

MATERIALS AND METHODS

This study was conducted at Idris Teaching Hospital Sialkot Medical College Sialkot from Jan 2016 to Jan 2019. Fifty seven patients were included in this study and Duration between Tracheostomy And Laryngectomy in Tracheostomized Patients were recorded. The demographic data was also noted down on the designed performa. The written informed consent was taken before the start of study. The
permission of Ethical Committee was considered before collection of data and publishing in medical journal.

RESULTS

With margin of 5 days, the duration between tracheostomy and laryngectomy in tracheostomized patients, the patients were 03(5.26%), with margin 7 days the number of patients were 09(15.78%). With the margin of 10 days the patients were 09(15.78%), with the margin of 12 days the patients were 09(15.78%), with the margin of 13 days the patients were 03(5.26%), with the margin of 15 days the patients were 06(10.52%), with the margin of 30 days the patients were 09((15.78%), with the margin of 60 days the patients were 03(5.26%) , with the margin of 90 days the patients were 03(5.26%), with margin of 13 days the patients were 03(5.26%), with the margin of 15 days the patients were 06(10.52%), with the margin of 17 days the patients were 09(15.78%), with the margin of 2 days the patients were 09(15.78%), with the margin of 5,6 could be laryngectomy. Before that central sleep apnea was found to be negligible after glossectomies, pharyngo-laryngo-esophagectomies and laryngectomies, as reported in other operations. With assurance of airway and secured sleep with midazolam, all the patients slept well during the night following surgery. “Mean hemoglobin saturation of oxygen measured by pulse oximeter. All recorded values were averaged to calculate the mean, except when we considered that the changes were caused simply by the patient’s movements during the monitoring and excluded from the average calculation. The value of the patients who were not tracheostomized was compared with that of the patients who were tracheostomized. *P < 0.05, unpaired Student’s t-test”. “The post-operative sleep apnea after the glossectomy was obstructive sleep apnea. The results coincide with previous reports. The glossectomy patients who were extubated the next morning showed an acute rise in sleep apnea frequency and a decrease in mean values in the pulse oximeter. There were frequent temporary hypoxemias after the extubation in the glossectomy patients”. “In the questionnaire on the patient’s level of comfort, glossectomy patients reported that they had a dream, a part of which was dreadful. Because they did not receive any sedation on the first operative night and during the days after, it was possible that their REM sleep resumed”. “Study with electroencephalography to elucidate their sleep is preferable to maintain the patient’s post-operative condition better in future”. “To keep a free flap viable, the posture of the patients is important. The free flap is fed by the blood circulation through the anastomoses of feeding arteries and draining veins. The patient’s posture, when it interferes with the blood circulation, causes a failure of the tissue transplantation. It is preferable that the patients keep a posture in which the local circulation is at its best. In seven extubated patients, we found reports of two skin flaps that had failed, while none out of four with pharyngo-laryngo-esophagectomy had a failed free jejunal flap”. “We need to pursue the relationship between their nightmare and the skin flap failures. To keep the best posture further maintained, a longer more strict sedation may be beneficial for the patients undergoing glossectomies. Comfort of perioperative sleep. The value of the patients who were not tracheostomized was compared with that of those who were tracheostomized. **P < 0.01 in unpaired Student’s t-test. We conclude that patients with extensive head and neck surgery need at least a comfortable first and second post-operative night with close monitoring to keep them free from discomfort, and the free flap in the best possible condition”.

DISCUSSION

“A high value of the Sleep Apnea Index was seen in the patients after extubation. Before the extubation, it was not seen. Although we suspected there would be

Table No. 1: Duration between Tracheostomy and Laryngectomy in Tracheostomized Patients.

<table>
<thead>
<tr>
<th>Number of days</th>
<th>Number of patients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>05</td>
<td>03</td>
<td>5.26%</td>
</tr>
<tr>
<td>07</td>
<td>09</td>
<td>15.78%</td>
</tr>
<tr>
<td>10</td>
<td>09</td>
<td>15.78%</td>
</tr>
<tr>
<td>12</td>
<td>09</td>
<td>15.78%</td>
</tr>
<tr>
<td>13</td>
<td>03</td>
<td>5.26%</td>
</tr>
<tr>
<td>15</td>
<td>06</td>
<td>10.52%</td>
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<td>17</td>
<td>03</td>
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<tr>
<td>90</td>
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<td>5.26%</td>
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<tr>
<td>Total</td>
<td>57</td>
<td>100%</td>
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Table No. 2: Age and Gender Distribution

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Age(years)</th>
<th>Male</th>
<th>Female</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>35-40</td>
<td>15(29.41%)</td>
<td>01(16.66%)</td>
</tr>
<tr>
<td>2</td>
<td>41-55</td>
<td>17(33.33%)</td>
<td>02(33.33%)</td>
</tr>
<tr>
<td>3</td>
<td>56-66</td>
<td>16(31.37%)</td>
<td>02(33.33%)</td>
</tr>
<tr>
<td>4</td>
<td>67 and above</td>
<td>3(5.88%)</td>
<td>01(16.66%)</td>
</tr>
<tr>
<td>total</td>
<td>51(100%)</td>
<td>6(100%)</td>
<td></td>
</tr>
</tbody>
</table>
CONCLUSION

It was concluded that during different periods duration between tracheostomy and laryngectomy in tracheostomaized patients were different.

Author’s Contribution:
Concept & Design of Study: Javed Qureshi
Drafting: Saeed Razi
Data Analysis: Umra Abdul Samid, M Sabir
Revisiting Critically: Javed Qureshi, Saeed Razi
Final Approval of version: Javed Qureshi

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES


Prevalence of Endoscopy at Idris Teaching Hospital Sialkot Medical College, Sialkot
Brig Shahid Raza¹, Asif Javed², Manzoor Hussain Bajwa⁴ and M Sabir³

ABSTRACT

Objective: To study Prevalence of Endoscopy At Idris Teaching Hospital Sialkot Medical College Sialkot.
Study Design: Experimental and Observational study
Place and Duration of Study: This study was conducted at Idris Teaching Hospital Sialkot during Jan 2018 to July 2019.
Materials and Methods: This study comprises 1021 patients undergoing endoscopic examination. The demographic data was noted down and lab tests were also advised for example hepatitis A, B and C HIV. Written informed consent was also taken from every patient before the start of the endoscopic examination. The Permission of ethical committee was also considered before collection of data and get publishing in the medical journal. The results were analyzed on SPSS version 10.
Results: Mean Age was 45.34 years and SD (standard deviation) was 16.23 years. At the age of 10-20 years, there were 50 (10.18%) male and 51 (9.62%) female of endoscopy were included in this study. At the age of 21-30 years there were 101 (20.57%) male and 85 (16.04%) females. At the age of 31-40 years there were 100 (20.36%) male and 75 (14.15%) female. At the age of 41-50 years there were 101 (20.57%) male and 130 (24.52%) females. At the age of 51-60 years there were 25 (5.09%,) Male and 75 (14.15%) female. At the age of 61-70 years there were 75 (15.27%) male and 85 (16.04%) female. At the age of 70 years and above there were 35 (7.12%) Male and 29 (5.47%) females

Conclusion: Esophagogastroduodenoscopy is the only reliable tool for correctly determining the etiology of UGIB. We observed esophageal varices as the main cause of UGIB in our setup which is similar to those in local literature but different from those in western literature. Predominance of varices as a cause of acute UGIB reflects high prevalence of CLD due to viral hepatitis.

Key Words: Endoscopy, Hepatitis A, B and C, HIV, Demographic data

INTRODUCTION

“Acute upper gastrointestinal bleeding (UGIB) is a life threatening condition that results in 250,000-300,000 hospitalizations and 15000-30000 deaths/year in USA. Patients with UGIB presents with hematemesis, melena or hematochezia. The occurrence of UGIB in all age groups is twofold higher in men than women; nevertheless the fatality rate is identical in both gender. The epidemiology of various causes of UGIB is changing in recent years. With the beginning of 20th century, peptic ulcer disease (PUD) rose in frequency to become one of the most common causes of UGIB.” In Pakistan, the incidence of UGIB due to PUD is nearly half as compared with esophageal varices, resulting from liver cirrhosis due to HBV and HCV. Varices are identified in 30% cases of compensated Liver cirrhosis and 60% with decompensated cirrhosis. Upper gastrointestinal endoscopy (UGIE) is a diagnostic modality of choice for acute UGIB as it permits early detection and prognostic evaluation of
source of hemorrhage”. “UGIE should be performed urgently in patients with hemodynamic instability and high risk endoscopic findings (varices, ulcer with active bleeding or a visible vessel) who benefit from endoscopic hemostatic therapy”7,8 . “The prognostic knowledge gained from the procedure can considerably lessen the use of health resources even if the lesion is not amenable to particular endoscopic treatment”9,10 . “American society of gastrointestinal endoscopy (ASGE) described several danger signs which are linked with higher mortality such as recurring bleeding, requirement for endoscopic hemostasis or surgery, age over 60, severe co-morbidity, active bleeding, hypotension, RBC transfusion equal to or greater than 6 units and severe coagulopathy4 . Risk assessment in patients with acute UGIB depends on degree of hemorrhage and general health of the patient10,11. By utilizing clinical variables, various scoring tools have been prepared to assist the triage of patients suffering from acute UGIB, identifying individuals who require urgent endoscopic assessment, forecasts the risk of unfavorable outcome and help in guiding treatment11,12 . “The top risk evaluation tool is Rockall score derived from a large review of patients who were treated for acute UGIB in England11.” “The Rockall scoring system utilizes clinical features and endoscopy to spot patients at risk of adversative outcome following acute UGIB. The range of score is 0-11 points for total score and 0-7 for clinical score. Patients with total score of less than 2 following endoscopy are classified as low risk.” “Patients having clinical score of zero prior to endoscopy are regarded to be at less risk12.” “Another useful risk assessment tool is Blatchford scoring system (BSS). It is very valuable for differentiating among high and low risk group of patients suffering from UGIB, prior to endoscopy13. It utilizes only clinical and laboratory features and has no endoscopic factor. The BSS varies from 0-23, the majority of patients having score of six and above require intervention14. Upper gastrointestinal endoscopy is an effective initial diagnostic modality for locating site and cause of the bleeding. As bleeding esophageal varices stays the most frequent source of hematemesis in our society due to high prevalence of hepatitis B & hepatitis C, we undertook this study to evaluate different causes of acute upper G.I. bleeding endoscopically. Ejected to detailed history taking and physical examination.” “Data such as age, sex & clinical presentations were recorded. Patients were asked about bleeding (hematemesis, melena or both), history of drugs linked with UGIB (NSAIDs, steroids, anticoagulants), dysphagia and history of peptic ulcer disease, hepatitis and coagulation disorders15. “Presence of any underlying disease was also recorded. Each patient was then examined for signs of chronic Liver disease like pallor, Jaundice, palmar erythema and spider Nevei. Abdomen was examined for epigastric tenderness, splenomegaly, ascites and caput medusae. Blood samples were withdrawn for full blood count, LFT, coagulation profile, HBsAg, anti HCV, anti helicobacter pylori antibodies”. “Ultrasound of abdomen was also done in every patient. All patients were then undergone for UGIE, performed by a senior endoscopist having ≥ 05 years endoscopic skills experience. Olympus-XQ 30 video endoscope was used. Endoscopic findings were recorded and etiologies noted. All data entered in a prosforma.”

**MATERIALS AND METHODS**

This study comprises 1021 patients undergoing endoscopic examination. The demographic data was noted down and lab tests were also advised for example hepatitis A, B and C. HIV. Written informed consent was also taken from every patient before the start of the endoscopic examination. The Permission of ethical committee was also considered before collection of data and get publishing in the medical journal. The results were analyzed on SPSS version 10.

**RESULTS**

Mean Age was 45.34 years and SD(standard deviation) was 16.23 years. At the age of 10-20 years, there were 50(10.18%) male and 51(9.62%) female of endoscopy were included in this study. At the age of 21-30 years there were 101(20.57%) male and 85(16.04%) females. At the age of 31-40 years there were 100(20.36%) male and 75(14.15%) female. At the age of 41-50 years there were 101(20.57%) male and 130(24.52%) female, at the age of 51-60 years there were 25(5.09%) Male and 75(14.15%) female. At the age of 61-70 years there were 75(15.27%) male and 85(16.04%) female, at the age 70 years and above there were 35(7.12%) Male and 29(5.47%) females patients were included in this study. It was observed that female patients of endoscopy were more prevalence than male patients as shown table 1.

**Table No. 1: Age and Gender Distribution In endoscopic Examination Patients**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Age</th>
<th>Male (%)</th>
<th>Female (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10-20</td>
<td>50(10.18%)</td>
<td>51(9.62%)</td>
</tr>
<tr>
<td>2</td>
<td>21-30</td>
<td>101(20.57%)</td>
<td>85(16.04%)</td>
</tr>
<tr>
<td>3</td>
<td>31-40</td>
<td>100(20.36%)</td>
<td>75(14.15%)</td>
</tr>
<tr>
<td>4</td>
<td>41-50</td>
<td>101(20.57%)</td>
<td>130(24.52%)</td>
</tr>
<tr>
<td>5</td>
<td>51-60</td>
<td>25(5.09%)</td>
<td>75(14.15%)</td>
</tr>
<tr>
<td>6</td>
<td>61-70</td>
<td>75(15.27%)</td>
<td>85(16.04%)</td>
</tr>
<tr>
<td>7</td>
<td>70 and above</td>
<td>35(7.12%)</td>
<td>29(5.47%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>491(100%)</td>
<td>530</td>
</tr>
</tbody>
</table>

It was observed that there were 175(35.64%) Male and 201(37.92%) female patients at the high socioeconomic status, in the middle socio economics status there were 187(38.10%) Male and 210(39.62%) female, in the low socio economic status there were 129(26.27%) Male
and 119(22.45%) female patients of endoscopy were found in this study. It was observed that there were more patients of endoscopy in middle class than high gentry and lower class as shown in table no 2.

Table No. 2: Socioeconomic Status Distribution in Endoscopic Patients

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Socio-economic Status</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High</td>
<td>175(35.64%)</td>
<td>201(37.92%)</td>
</tr>
<tr>
<td>2</td>
<td>Middle</td>
<td>187(38.10%)</td>
<td>210(39.62%)</td>
</tr>
<tr>
<td>3</td>
<td>LOW</td>
<td>129(26.27%)</td>
<td>119(22.45%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>491(100%)</td>
<td>530</td>
</tr>
</tbody>
</table>

From urban area, there were 230(46.84%) Male and 300(56.61%) female and from rural area 261(53.15%) male and 230(43.40%) female patients of endoscopy were observed in this study. It was also observed there was more prevalence of endoscopy patients from rural area than urban area as shown in table no 3.

Table No. 3: Area Distribution

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Area</th>
<th>Male</th>
<th>Female</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Urban</td>
<td>230(46.84%)</td>
<td>300(56.61%)</td>
</tr>
<tr>
<td>2</td>
<td>Rural</td>
<td>261(53.15%)</td>
<td>230(43.40%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>491(100%)</td>
<td>530</td>
</tr>
</tbody>
</table>

DISCUSSION

“Acute UGIB is frequent and life threatening situation and requires timely evaluation and adamant medical treatment to prevent adverse outcomes14. It has a multifactorial etiology that fluctuates broadly among various geographical regions of the world”. “The epidemiological study of these cases in Pakistan is yet to be organized. In the previous twenty years the introduction of state of art UGIE has noticeably enhanced the diagnostic and curative modalities in the treatment of UGIB9. Despite advances in early diagnosis and management of this common emergency, the case death rate remains unaffected to 7-10%. The reason behind this may possibly be that nowadays patients are older and have higher numbers of co-morbidities as compared to the past14”. “No morbidity or mortality was reported in relation to endoscopic examination in our study”. “This study revealed varices as a cause in > 1/2 and PUD in 1/5th cases. In a study from Rawalpindi done in 2001 by Hussain T et al9, variceal bleed was the most common cause of UGIB (35.2%) followed by PUD (21.6%). Another study from Peshawar done in 2006 by Khan et al15, reported variceal bleed (45.7%) and PUD (31.4%) as the most common causes of UGIB. Gastro intestinal Endoscopic bleeding survey by ASGE on upper GIT involving 2225 patients revealed that 6 pathological entities were responsible for most bleeding episodes”. “These include duodenal ulcer, Gastric ulcer, acute gastritis, variceal bleed, Esophagitis and Mallory Weiss tear”. “Survey on these 2225 patients revealed that PUD was the most common cause and varices were present in only 15.4% of cases16,17 compared to 54% in our study. The higher incidence of variceal bleed in our study is due to higher rate of chronic infection with HBV and HCV leading to end stage liver disease. Lower incidence of PUD as a cause of UGIB in this study could be because of frequent use of proton pump inhibitors (PPI) and H2 blockers by medical practitioners in patients with symptoms of dyspepsia18”. “Augmented number of patients with Esophagitis (10%), Gastro duodenal erosions (9%) and Mallory Weiss tear (1%) in this study are due to gastro esophageal reflux disease (GERD) and use of NSAIDs. NSAIDs are a main reason of morbidity and mortality resulting in deaths of 1200 patients / year in UK19”.

CONCLUSION

Esophagogastroduodenoscopy is the only reliable tool for correctly determining the etiology of UGIB. We observed esophageal varices as the main cause of UGIB in our setup which is similar to those in local literature but different from those in western literature. Predominance of varices as a cause of acute UGIB reflects high prevalence of CLD due to viral hepatitis.

Author’s Contribution:
Concept & Design of Study: Brig Shahid Raza
Drafting: Asif Javed
Data Analysis: Manzoor Hussain Bajwa, M Sabir
Revisiting Critically: Brig Shahid Raza, Asif Javed
Final Approval of version: Brig Shahid Raza

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES
Examine the Incidence of Liver Cancer in Patients Presented with Hepatitis B Virus and Hepatitis C Virus Infection

Syed Waseem Ahmad Mujtaba¹, Awais Anwar² and Abdul Matin Qaisar³

ABSTRACT

Objective: To examine the prevalence of hepatocellular carcinoma in hepatitis B virus and hepatitis C virus patients.

Study Design: Prospective study.

Place & Duration of Study: This study was conducted at the Department of Medicine, Amna Inayat Medical College, Sheikhupura from July 2017 to December 2019.

Materials and Methods: One hundred and twenty patients of both genders clinically diagnosed to have Hepatitis B and Hepatitis C virus were included in this study. Patient’s demographical details were recorded. All patients were newly diagnosed and free of hepatocellular carcinoma. All the patients were underwent abdominal ultrasound, computerized tomography scan and AFP at every 6 months for diagnosing hepatocellular carcinoma. Mortality was recorded. Final follow-up was taken at 2 years.

Results: There were 75 (62.5%) male patients while 45 (37.5%) female patients. 25 (20.83%) patients were ages 25 to 40 years, 52 (43.33%) patients were ages 41 to 55 years, 30 (25%) had ages 56 to 70 years and 18 (15%) were above 70 years. 56 (46.67%) patients had Hepatitis B virus and 42 (35%) had hepatitis C virus and 22 (18.33%) had co-infection of hepatitis B virus and hepatitis C virus. Hepatocellular carcinoma was diagnosed in 8 (6.67%) cases at final follow-up. 4 (3.33%) patients were died during the study period.

Conclusion: Prevalence of hepatocellular carcinoma in our study was high. Hepatitis B virus and hepatitis C virus and co-infection considered a major cause for developing hepatocellular carcinoma.

Key Words: Liver cancer, Prevalence, Hepatitis B virus (HBV), Hepatitis C virus (HCV)


INTRODUCTION

Worldwide, liver cancer is the 7th most frequently diagnosed cancer type and this malignant disease is the major cause of deaths among all cancer types.¹ Hepatocellular carcinoma (HCC) is the most common histological type of liver cancer and it accounted 70 to 80% followed by intrahepatic cholangiocarcinoma accounted 10 to 25% globally.² Globally, HBV virus and HCV virus infections are the major cause for developing HCC and approx 80% of hepatocellular carcinoma is developed due to HBV and HCV virus infections.³ Some of researches reported that intrahepatic cholangiocarcinoma (iCCA) is also associated with HBV and HCV infections.⁴ The incidence of HCC among HBV and HCV patients have found to be differ due to different areas and due to different rate of frequency of HBV and HCV in different population.⁵ Globally it has been reported that the incidence rate of liver cancer in Southeast and East Asia is High as compared to western countries and HBV virus infection is the leading cause of liver cancer.⁶ ⁷ A meta-analysis that included 39 studies performed in China during the years 1954 to 2010, based on the seroprevalence of HBV surface antigen (HbsAg) and antibodies against HCV (anti-HCV) in HCC patients, reported that about 70% of HCC was associated with HBV infection, 5% with HCV infection, and 6% with HBV+HCV co-infection. Up to 19% of HCC cases showed no relationship with HBV or HCV.⁸

It is demonstrated that HBV vaccination is very helpful for reducing the rate of liver cancer in young adults. Better strategies for the treatment of HBV virus infection is also very helpful for decreasing the incidence of HBV surface antigen.⁹ ¹⁰

Present study was conducted aimed to examine the prevalence of hepatocellular carcinoma in patients presented with Hepatitis B virus and Hepatitis C virus.

¹ Department of Medicine, Amna Inayat Medical College, Sheikhupura.
² Department of Physiology, Niazi Medical & Dental College, Sargodha.
³ Department of Physiology, Shahida Islam Medical & Dental College, Lodhran.
MATERIALS AND METHODS

This prospective/observational study was conducted at Department of Medicine, Amna Inayat Medical College, Sheikhupura from 1st July 2017 to 31st December 2019. A total of 120 patients of both genders clinically diagnosed to have HBV and HCV infection with ages 25 to 80 years were included. Patients with chronic renal failure, patients with coronary artery disease, other severe diseases in which patients expected survival is very low and those who were unable for follow-up visit were excluded from this study. Patient’s demographical details including age, sex, residence, socio-economic status were recorded after informed consent. At the time of enrollment complete blood count, liver function test were obtained. Polymerase chain reaction (PCR) was done to detect the HBV and HCV viruses. These tests were done at every follow-up visit. Serum alpha-fetoprotein (AFP) was estimated using a particle enzyme immunoassay (normal range <20 ng/ml).

At the time of admission abdominal Ultrasound and CT scan was done. Features and findings of liver were recorded. Ultrasound and CT findings along with AFP levels were done to diagnose the presence of HCC. Liver biopsy was done for the histological confirmation of diagnosed HCC patients. These tests were obtained at every 6 months till final follow-up. Follow-up was taken at every 6 months. Final follow-up was at 2 years. All the data was analyzed by SPSS 21.

RESULTS

There were 75 (62.5%) male patients while 45 (37.5%) patients were females. 25 (20.83%) patients were ages 25 to 40 years, 52 (43.33%) patients were ages 41 to 55 years, 30 (25%) had ages 56 to 70 years and 18 (15%) were above 70 years. 70 (58.33%) patients had rural residency while 50 (41.67%) had urban residence. 55 (45.83%) patients had middle socio-economic status and 65 (54.17%) had low status (Table 1). There were 56 (46.67%) patients had hepatitis B virus and 42 (35%) had hepatitis C virus and 22 (18.33%) had co-infection of HBV and HCV (Table 2).

According to the abdominal ultrasound and CT scan in selected cases along with AFP estimation we found 8 (6.67%) patients had hepatocellular carcinoma. All HCC cases had done biopsy for histopathology confirmation. From all HCC cases 4 had HBV, 2 were HCV and 2 were co-infected. In 8 HCC cases 7 patients had AFP level <150 ng/ml and 1 case had >250 ng/ml. 5 patients had small sized HCC <5cm and 3 patients had sized >5 cm. From all the HCC patients 3 patients had BCLC stage A, 3 patients had stage B and 2 patients had stage C respectively (Table 3). During the study period we found 4 (3.33%) patients were died (Table 4).

DISCUSSION

Hepatocellular carcinoma of liver cancer is one of the most common cancer types in all over the world and approximately 70% deaths were recorded due to liver cancer. Many of studies illustrated that Hepatitis B

<table>
<thead>
<tr>
<th>Table No.1: Baseline characteristics of all the patients</th>
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<tbody>
<tr>
<td>Variable</td>
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</tr>
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<td>Residence</td>
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<td>Socioeconomic status</td>
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</table>

<table>
<thead>
<tr>
<th>Table No.2: Types of hepatitis viruses among all the patients</th>
</tr>
</thead>
<tbody>
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<td>HCV</td>
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<td>&gt;5 cm</td>
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</table>

DISCUSSION

Hepatocellular carcinoma of liver cancer is one of the most common cancer types in all over the world and approximately 70% deaths were recorded due to liver cancer. Many of studies illustrated that Hepatitis B
and Hepatitis C viruses were the major causes of developing HCC. Present study was also conducted aimed to examine the contribution of HBV and HCV for developing HCC. In this study we included 120 cases of HBV and HCV, in which 75 (62.5%) patients were males while 37.5% patients were females. These results were similar to some other studies in which male patients were high in numbers 60 to 70% as compared to females. In our study 25 (20.83%) patients were ages 25 to 40 years, 52 (43.33%) patients were ages 41 to 55 years, 30 (25%) had ages 56 to 70 years and 18 (15%) were above 70 years. 70 (58.33%) patients had rural residency while 50 (41.67%) had urban residence. 55 (45.83%) patients had middle socio-economic status and 65 (54.17%) had low status. A study conducted by Javed et al reported mean age of HBV and HCV patients were 45.1±13.1 years. In present study we found that 56 (46.67%) patients had Hepatitis B virus and 42 (35%) had HCV and 22 (18.33%) had co-infection of HBV and HCV. These results were comparable to many other studies in which patients with Hepatitis B virus were high in numbers as compared to HCV and co-infected.

We found from our study that the HCC developed in 8 (6.67%) patients at 9, 16, 26 and 32 months respectively. These results were comparable to many other studies in which HCC rate was 4.73%, 2.5%. Our results showed different values regarding HCC it may be due to atmospheric difference and due to severity of disease. We found that from all HCC cases 4 had HBV 2 had HCV and 2 were co infected. In 8 HCC cases 7 patients had AFP level <150 ng/ml and 1 case had >250 ng/ml. 5 patients had small sized HCC <5cm and 3 patients had sized >5 cm. From all the HCC patients 3 patients had BCLC stage A, 3 patients had stage B and 2 patients had stage C respectively. Many of previous studies reported HBV virus reported as most common cause of hepatocellular carcinoma. In our study we found that 4 (3.33%) patients were died at 9, 16, 26 and 32 months respectively. These results were comparable to international literature.

CONCLUSION

Hepatocellular carcinoma is one of the leading causes of morbidity and mortality in all over the world. We concluded from this that prevalence of Hepatocellular carcinoma in our study was high. HBV and HCV and Co-infection considered a major cause for developing HCC. Moreover, better strategies and awareness to this malignant disease may helps to reduce the incidence rate of hepatocellular carcinoma.

Author’s Contribution:
Concept & Design of Study: Syed Waseem Ahmad Mujtaba
Drafting: Awais Anwar
Data Analysis: Abdul Matin Qaisar

Revisiting Critically: Syed Waseem Ahmad Mujtaba, Awais Anwar
Final Approval of version: Syed Waseem Ahmad Mujtaba

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES
Examine the Frequency and Causes of Pericardial Effusion in Patients Presenting With Unexplained Dyspnea

Riaz-ur-Din¹, Farhan Faisal¹, Farida Khudaidad², Dost Muhammad¹, Abdul Ghaffar¹ and Fazal-ur-Rehman¹

ABSTRACT

Objective: To determine the frequency and causes of pericardial effusion in patients presenting to emergency department with dyspnea.

Study Design: Prospective/Observational study

Place and Duration of study: This study was conducted at the Department of Cardiology, Bolan Medical Complex Hospital Quetta from April 2019 to September 2019.

Materials and Methods: A total 220 patients of both genders with ages above 20 years presented with dyspnea were enrolled in this study. Patient’s detailed medical history was recorded after taking informed consent. All patients had received echocardiography to examine the incidence of pericardial effusion. Causes of pericardial effusion were recorded.

Results: There were 38 (17.27%) patients had pericardial effusion, among these 26 (68.42%) were males while rest 31.58% patients were females. 5 (13.16%) patients had ages <40 years while 33 (86.84%) patients had ages >40 years. 20 (52.63%) patients had small size effusion, 15 (39.47%) patients had moderate size and 3 (7.89%) patients had large size effusion. Neoplastic diseases were the commonest cause of pericardial effusion found in 15 (39.47%) patients followed by idiopathic in 10 (26.32%), uremia in 6 (15.79%) patients, 3 (7.89%) patients had bacterial infectious, 3 (7.89%) had HIV positive and 1 (2.63%) patient had other.

Conclusion: Incidence of pericardial effusion is high in patients with unexplained dyspnea. Neoplastic was the commonest cause of pericardial effusion.

Key Words: Pericardial effusion, Frequency, Causes, Dyspnea, Electrocardiogram


INTRODUCTION

Evaluating the heart is common practice in the modern emergency department (ED). Emergency echocardiography was first described more than a decade ago when it was recognized that life-threatening processes such as cardiac tamponade could be quickly diagnosed in the ED setting.¹³ A brief evaluation of the heart is included in the focused abdominal sonography for trauma (FAST) examination.⁴

One of the most basic indications for emergency ultrasonography of the heart in the ED is to evaluate for the presence of a pericardial effusion. It is well known that pericardial effusions can cause altered vital signs and may result in death if not rapidly treated.⁵ However, findings such as distended jugular veins, pulsus paradoxus, or electrical alternans are inconsistently present and appear late in the disease process.⁶⁻⁸

Pericardial effusion can be attributed to several etiologies, including malignant and non-malignant causes.⁹ The known causes include neoplasia, infection, congestive heart failure, iatrogenicity, radiation, trauma, connective tissue diseases, pericardial injury, and metabolic causes such as uremia and hypothyroidism; a substantial number of effusions are idiopathic.¹⁰

The cause of dyspnea in a patient presenting to the ED can be varied. Emergency physicians (EPs) commonly discover reactive airways disease, lung infections, psychiatric disease, cardiac processes, anemia, congestive heart failure, and pulmonary embolism as causes for dyspnea. However, when such pathology is ruled out, some patients remain with a diagnosis of unexplained dyspnea.¹¹ The present study was conducted aimed to examine the frequency of...
pericardial effusion and associated causes in patients presented with unexplained dyspnea.

MATERIALS AND METHODS

This prospective/observational study was conducted at Department of Cardiology, Bolan Medical Complex Hospital Quetta from 1st April 2109 to 30th September 2019. A total 220 patients of both genders with ages above 20 years presented with unexplained dyspnea were enrolled in this study. Patients detailed medical history including age and sex were recorded after informed written consent. Patients less than 20 years, patients with dyspnea and those with no written consent were excluded from the study.

All patients had received complete laboratory examination. Ultrasonography and chest x-rays was performed on all the patients. Echocardiography, CT scan and MRI was done to examine the incidence of pericardial effusion. Effusions were categorized as small when the fluid stripe measured less than 10 mm. Moderate-sized effusions measured 10 to 15 mm. Large effusions measured more than 15 mm. Causes of pericardial effusion were examined such as neoplasm, idiopathic, viral infection, collagen vascular, bacterial, renal diseases, and HIV. All the data was analyzed by SPSS 24.

RESULTS

There were 38 (17.27%) patients had pericardial effusion (Fig. 1). Among these 26 (68.42%) were males while rest 31.58% patients were females. 5 (13.16%) patients had ages <40 years while 33 (86.84%) patients had ages >40 years. 20 (52.63%) patients had small size effusion, 15 (39.47%) patients had moderate size and 3 (7.89%) patients had large size effusion (Table 1). According to the causes of pericardial effusion we found neoplasmic diseases were the commonest cause of pericardial effusion found in 15 (39.47%) patients followed by idiopathic in 10 (26.32%), uremia in 6 (15.79%) patients, 3 (7.89%) patients had bacterial infections, 3 (7.89%) had HIV positive and 1 (2.63%) patient had other (Fig. 2).

DISCUSSION

Pericardial effusion is common clinical disorder with high rate of morbidity and mortality. Unexplained dyspnea is one of the most important cause of pericardial effusion which leads to increase cardiac problems. The present study was conducted to examine the frequency of pericardial effusion in patients presented with unexplained dyspnea In this regard 220 patients were enrolled and among these pericardial effusion was observed in 38 17.27% patients. A study conducted by Shimony et al reported the incidence rate of pericardial effusion in unexplained dyspnea patients was 13.6%. Another study by Albugami et al reported that the incidence rate of pericardial effusion in MI patients was 28.6%. Some of other studies demonstrated that the incidence rate of pericardial effusion varies 10 to 30%. In present study male patients was high in numbers 68.42% as compared to females 31.58% and majority of patients were ages above 40 years. These results were similar to many of previous studies regarding pericardial effusion in which male patients were at high risk in developing pericardial effusion 55 to 70% as

<table>
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<td></td>
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<tr>
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<td>68.42</td>
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<tr>
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<tr>
<td>&lt;40</td>
<td>5</td>
<td>13.16</td>
</tr>
<tr>
<td>&gt;40</td>
<td>33</td>
<td>86.84</td>
</tr>
<tr>
<td>Effusion size</td>
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<tr>
<td>Small</td>
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Figure No. 1: Incidence of pericardial effusion

Figure No. 2: Etiology of pericardial effusion

Table No.1: Demographical details of pericardial effusion patients

Figure No. 1: Incidence of pericardial effusion
In our study according to the size of pericardial effusion we found that 20 (52.63%) patients had small size effusion, 15 (39.47%) patients had moderate size and 3 (7.89%) patients had large size effusion. A study conducted by Sagristà-Sauleda et al21 regarding pericardial effusion in hypothyroid patients and they reported that pericardial effusion in this study was 17%. 2 out of the 70 hypothyroid patients showed evidence of pericardial effusion. Mild pericardial effusion was found in 11 patients (15.71%) and moderate pericardial effusion in 1 patient (0.01%). Shimony et al22 also showed similarity to our findings in which majority of patients had small size pericardial effusion.

In our study according to the size of pericardial effusion we found neoplastic diseases were the commonest cause of pericardial effusion found in 15 (39.47%) patients followed by idiopathic in 10 (26.32%), uremia in 6 (15.79%) patients, 3 (7.89%) patients had bacterial infections, 3 (7.89%) had HIV positive and 1 (2.63%) patient had other. These results were similar to many of previous studies in which neoplastic diseases, idiopathic, viral infection, renal failure and HIV positive were the important causes of pericardial effusion. Some other studies revealed that viral infection is the most common identifiable cause of acute pericarditis, the condition may be associated with many diseases. Nonviral causes of pericarditis include bacterial infection, MI, chest trauma, and neoplasm.22-24

CONCLUSION

Pericardial effusion is one of the most common malignant disorder that can lead to increase morbidity and mortality rate. We concluded from this study that incidence of pericardial effusion is high in patients with unexplained dyspnea. Neoplastic was the commonest cause of pericardial effusion followed by idiopathic, collagen vascular, renal diseases, infection and HIV positive.

REFERENCES


Determine the Causes of Epilepsy, Types of Seizure, Precipitants for Seizure Attacks and Risk Factors for Poor Outcome of Epilepsy Management

Abdul Bari, Nimrah Zafar, Sadia Khan, Anum Zahra and Muhammad Saleem Barech

ABSTRACT

Objective: To determine the causes of epilepsy, types of seizure, precipitants for seizure attacks and risk factors for poor outcome of epilepsy management

Study Design: Prospective study

Place and Duration of Study: This study was conducted at the Department of Neurology, Bolan Medical Complex Hospital Quetta from October 2018 to March 2019.

Materials and Methods: One hundred and twenty patients of both genders with ages above 15 years presented with epilepsy were included in this study. Patient’s demographic details including age sex, residence and socio-economic status were recorded after informed consent. Patients with autoimmune diseases and patients with serious psychiatric symptoms were excluded. Electroencephalogram, computed tomography brain and magnetic resonance imaging were done in all the patients. Causes of epilepsy, risk factors, types of seizure and outcomes were recorded.

Results: Seventy (65%) were males while 50 (35%) were females. Twenty (16.67%) patients were ages 15 to 25 years, 38 (31.67%) patients were ages 26 to 35 years, 45 (37.5%) patients were ages 36 to 45 years, 17 (14.17%) patients were ages 46 to 60 years. The most common etiology of epilepsy was idiopathic and found in 102 (85%) patients. Tonic clonic was the most frequent type found in 79.17% patients. Stress was the most common risk factors found in 43.33% followed by sleep deprivation, excessive screen use. Epilepsy due to structural brain lesion was the most important cause of poor control of fits followed by noncompliance, wrong/suboptimal dose of medications, drug interactions and wrong diagnosis.

Conclusion: Idiopathic was the commonest type and stress was the commonest cause of epilepsy. Structural brain lesion and non-compliance were the commonest risk factors involved in the poor management of epilepsy.

Key Words: Epilepsy, Causes, Types, Management, Risk factors, Uncontrolled fits


INTRODUCTION

Epilepsy is a chronic neurologic disorder characterized by repeated epileptic seizures attacks which result from paroxysmal uncontrolled discharges of neurons within the central nervous system. The definition of epilepsy requires the occurrence of at least one epileptic seizure. Epilepsy is a major public health problem that affects more than 50 million people worldwide, of whom, 80% were living in developing countries. According to the Epilepsy Foundation, epilepsy affects three million people in the U.S. and 50 million worldwide. Epileptic seizures may be tied to a brain injury or genetics, but for 70 percent of epilepsy patients, the cause is unknown. Antiepileptic drugs (AEDs) can be indicated for Patients who have had one or more epileptic seizures. The choice of therapy for the management of epilepsy varies depending on the type, frequency, and severity of the seizures. Making an accurate diagnosis of the type of epilepsy is crucial to select the best therapy. Majority of epileptic seizures are controlled with the optimal use of the currently available AEDs. However, about one-third remained uncontrolled despite optimal therapy. Although most of the people with epilepsy can become seizure-free with the optimal use of drug therapy, the treatment outcome in the majority of epileptic patients remains unsatisfactory in resources limited countries. Studies have shown that majority [80–90%] of the patients with epilepsy are not receiving appropriate treatment in developing countries. Several factors have been found to be associated with treatment outcome in epilepsy. These include; gender, age of seizure onset, type of epilepsy, seizure...
frequency, etiology of epilepsy, duration of epilepsy, electroencephalography abnormality and presence of co-morbidities. Poorly controlled seizure leads to impairment of quality of life, excessive bodily injury, neuropsychological impairment, social stigma, reduced marriage rates, poor education, reduced employment levels, and finally shortened lifespan. The present study was conducted to examine the causes and risk factors associated to poor control of fits in patients with epilepsy.

MATERIALS AND METHODS
This prospective study was conducted at Department of Neurology, Bolan Medical Complex Hospital Quetta from 1st October 2018 to 31st March 2019. A total one hundred and twenty patients of both genders with ages above 15 years presented with recurrent fits following epilepsy were included in this study. Patient’s demographic details including age, sex, residence and socio-economic status were recorded after informed consent. Patients with autoimmune diseases and patients with serious psychiatric symptoms were excluded. Electroencephalogram, computed tomography brain and magnetic resonance imaging were done in all the patients. Causes of epilepsy, risk factors, types of epilepsy and outcomes in term of controlled and uncontrolled fits were recorded. Causes of uncontrolled fits were examined. All the data was analyzed by computer statistical software SPSS 24. Chi-square test was applied to examine the causes of uncontrolled fits. P-value <0.05 was taken as significant.

RESULTS
There were 78 (65%) males while 35% were females. Twenty (16.67%) patients were ages 15-25 years, 38 (31.67%) patients were ages 26-35 years, 45 (37.5%) patients were ages 36-45 years, 17 (14.17%) patients were ages 46-60 years. Seventy two (60%) patients had rural residency while 40% had urban residence. Majority of patients 66 (55%) had low socioeconomic status while 45% patients had middle status (Table 1). The most common etiology of epilepsy was idiopathic and found in 102 (85%) patients followed by meningitis 7 (5.83%), 1 (0.83%) patient had trauma, 5 (4.17%) patients had brain tumor and 5 (4.17%) patients were post stroke. According to the types of epilepsy, tonic clonic was the most frequent types found in 95 (79.17%) patients, 5 (4.17%) patients had tonic and 1 (0.83%) patient with clonic generalized type of epilepsy. In partial types, 7 (5.83%) patients had Jacksonian, 7 (5.83%) patients had complex partial and 5 (4.17%) patients had myoclonic (Table 2). Stress was the most common risk factors found in 52 (43.33%) patients followed by sleep deprivation 35 (29.17%), excessive screen use in 17 (14.17%), 10 (8.33%) patients had family history of epilepsy and 6 (5%) patients had alcohol abuse (Table 3).

Table No.1: Baseline characteristics of all the patients

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<thead>
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<tr>
<td>Male</td>
<td>78</td>
<td>65.0</td>
</tr>
<tr>
<td>Female</td>
<td>42</td>
<td>35.0</td>
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<tr>
<td>Age (years)</td>
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<td></td>
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<tr>
<td>15 – 25</td>
<td>20</td>
<td>16.67</td>
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<td>26 – 35</td>
<td>38</td>
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<td>36 – 45</td>
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<td>46 – 60</td>
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<tr>
<td>Residence</td>
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<td>Urban</td>
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<tr>
<td>Rural</td>
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<td>60.0</td>
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<td>Low</td>
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<tr>
<td>Middle</td>
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Table No.2: Causes and types of epilepsy among all the patients

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<td>Meningitis</td>
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<td>Brain Tumor</td>
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<tr>
<td>Trauma</td>
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<td>Post Stroke</td>
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<td>4.17</td>
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<tr>
<td>Generalized types</td>
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<tr>
<td>Tonic clonic</td>
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<td>79.17</td>
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<td>Tonic</td>
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<td>4.17</td>
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<tr>
<td>Clonic</td>
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<td>Partial types</td>
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<tr>
<td>Jacksonian</td>
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<td>5.83</td>
</tr>
<tr>
<td>Complex Partial</td>
<td>7</td>
<td>5.83</td>
</tr>
<tr>
<td>Myoclonic</td>
<td>5</td>
<td>4.17</td>
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Table No.3: Risk factors associated to seizures

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<th>Risk factors</th>
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<td>Stress</td>
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<td>43.33</td>
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<tr>
<td>Sleep deprivation</td>
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<tr>
<td>Excessive screen use</td>
<td>17</td>
<td>14.17</td>
</tr>
<tr>
<td>Family history</td>
<td>10</td>
<td>8.33</td>
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<tr>
<td>Alcohol abuse</td>
<td>6</td>
<td>5.00</td>
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Figure No. 1: Management of outcome

According to the outcomes, we found 50 (41.67%) patients had uncontrolled fits and 70 (58.33%) patients had controlled fits (Fig. 1). Epilepsy due to structural
brain lesion was the most important cause of poor control of fits found in 20 (40%) patients followed by noncompliance 15 (30%) patients, wrong/suboptimal dose of medications found in 10 (20%), drug interactions found in 3 (6%) and wrong diagnosis found in 2 (4%) patients (Table 4).

Table No.4: Risk factors associated to poor control of fits (n=50)

<table>
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<td>40.0</td>
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<tr>
<td>Non-compliance</td>
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<td>30.0</td>
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<tr>
<td>Wrong dose of medication</td>
<td>10</td>
<td>20.0</td>
</tr>
<tr>
<td>Drug interaction</td>
<td>3</td>
<td>6.0</td>
</tr>
<tr>
<td>Wrong Diagnosis</td>
<td>2</td>
<td>4.0</td>
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**DISCUSSION**

Epilepsy is one of the most common neurological disorders in all over the world with high rate of morbidity and mortality. Successful management of epilepsy has become a great challenge for specialists due to high rate of uncontrolled fits. Many of factors involved in the poor control of fits in which most common factors are non-compliance by patients, drug abuse and structural brain lesion. The present study was conducted to examine the management, causes, risk factors and outcomes of epilepsy also determine the causes of poor control of fits. In this regard 120 patients were enrolled, in which majority of patients 65% were males while 35% were females. Majority 69.17% of patients in our study were ages between 26 to 45 years. These results showed similarity to many of previous studies in which male patients were predominant 60 to 75% as compared to females and mostly patients were ages above 30 years.

In present study the most common etiology of epilepsy was idiopathic and found in 102 (85%) patients followed by meningitis 7 (5.83%), 1 (0.83%) patient had trauma, 5 (4.17%) patients had brain tumor and 5 (4.17%) patients were post stroke. A study conducted by Naseer et al regarding management and risk factors of epilepsy, in which they reported that idiopathic was the commonest cause of fits 86% followed by meningitis 4% and trauma 4%. In our study we found that tonic clonic was the commonest type found in 79.17% patients. These results were similar to the study by Naseer et al.

In this study we found that stress was the most common risk factors found in 52 (43.33%) patients followed by sleep deprivation 35 (29.17%), excessive screen use in 17 (14.17%), 10 (8.33%) patients had family history of epilepsy and 6 (5%) patients had alcohol abuse. These results were comparable to several previous studies in which stress, hypertension and sleep deprivation were the important risk factors of epilepsy.

In present study at final follow up we found 50 (41.67%) patients had uncontrolled fits and 58.33% patients had controlled fits. The rate of uncontrolled fits in our study was quite high and there were some important reasons behind poor control of fits. We found that structural brain lesion was the most important cause of poor control of fits found in 20 (40%) patients followed by noncompliance 15 (30%) patients, wrong/suboptimal dose of medications found in 10 (20%), drug interactions found in 3 (6%) and wrong diagnosis found in 2 (4%) patients. These results were comparable to some previous studies.

**CONCLUSION**

Idiopathic was the commonest etiology of epilepsy and tonic clonic was the commonest type. The rate of uncontrolled fits was high due to structural brain lesion, non-compliance by patients, drug abuse, wrong medication and wrong diagnosis. Uncontrolled fits are commonly encountered in epilepsy patients and all possible causes for uncontrolled fits should be promptly identified and corrected.

**Author’s Contribution:**

Concept & Design of Study: Abdul Bari
Drafting: Nimra Zafar, Sadia Khan
Data Analysis: Anum Zahra, Muhammad Saleem Barech
Revisiting Critically: Abdul Bari, Nimra Zafar, Sadia Khan Final Approval of version: Abdul Bari

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

**REFERENCES**


Frequency of Second Mesiobuccal (Mb2) Canal in Maxillary First Permanent Molar
Faisal Nawaz Khan\textsuperscript{1}, Abdul Rehman\textsuperscript{1}, Dilawar Sultan\textsuperscript{2}, Beenish Abbas\textsuperscript{3}, Hafiz Rabbi-ul-Ehsan\textsuperscript{4} and Atikah Sagheer\textsuperscript{3}

ABSTRACT

Objective: To examine the frequency of MB2 canals in maxillary first permanent molars.
Study Design: Cross sectional study.
Place and Duration of Study: This study was conducted at the Military Dental Centre, CMH Peshawar from April 2019 to September 2019.
Patients and Methods: Two hundred and thirty eight cases were included. Rubber dam for isolation was applied after achieving local anaesthesia. MB2 canal location was done in three stages.
Results: There were 65.1\% males while 34.9\% patients were females with mean age 31.12\pm11.74 years. Second mesiobuccal canal was found in 193 cases (81.1\%).
Conclusion: The frequency of second mesiobuccal canal was high and the majority of second mesiobuccal canal openings were located distal to the main mesiobuccal canal.
Key Words: Frequency, MB2 canals, Permanent maxillary first molar


INTRODUCTION

Worldwide most of the root canal treatments are performed in the permanent first molar teeth, because these are one of the first teeth to erupt into the oral cavity.\textsuperscript{1} For successful root canal treatment, complete and accurate examination of internal and external tooth morphology is basic pre-requisite requirement.\textsuperscript{2} Unsuccessful debacle of whole root canal system is the most important cause of endodontic failure in first permanent molars. It usually happens due to clinician’s negligence to detect additional root canals.\textsuperscript{3} In maxillary first permanent molars, the number of canals and roots may vary. Maxillary first molars have three roots and 3 to 4 canals and the 4th canal being a 2\textsuperscript{nd} mesio-buccal canal. The frequency of MB2 canal is reported to be 56.8\% to 80.9.\textsuperscript{4} MB2 is located 1-3 mm toward the palatal canal from the main/larger mesio-buccal canal MB.\textsuperscript{5} It is not so easy to diagnose MB2 orifice, so clinicians have to use microscope and ultrasonic tip at the same time to perform root canal therapy. In these teeth, use of microscope and ultrasonic tip is essential as these devices are very helpful in detecting MB2 canal orifices since they provide good visibility, access and can generate a deeper trough in the dentin on pulp chamber floor.\textsuperscript{6} Many of the studies reported that diagnosis of MB2 canal with aid of CBCT (cone-beam computed tomography) is very useful and incidence rate varies between 48\% to 97.6\%.\textsuperscript{7} A study was conducted by Khalid al Fouzan\textsuperscript{8} regarding frequency of MB2 canals in maxillary first and second molars and they reported the incidence of MB2 canals as 97\% and 93\% respectively in which they used micro computed tomography for the detection of MB2 canals. Globally the frequency rate of MB2 canals is reported 73.8\% and diagnosis made by using CBCT.\textsuperscript{9} Multiple studies have been conducted to examine the frequency of mesiobuccal root of maxillary molars by using micro-CT and reported this device is very useful and effective for detection of this accessory root and canal.\textsuperscript{10}

MATERIALS AND METHODS

This cross sectional study was conducted at Military Dental Centre, CMH Peshawar from 1\textsuperscript{st} April 2019 to 30\textsuperscript{th} September 2019. Two hundred and thirty eight patients (238) were included in study. Patients having pulpal exposure and requiring root canal treatment in maxillary first permanent molars, both genders between 15-60 years, and belonging to different races were included. Patients with maxillofacial surgery, patients having teeth with insufficient periodontal support, calcified canals, and canals extending to the floor of the pulp chamber were excluded. The patients clinically diagnosed with irreversible pulpitis, necrosed pulp and
fulfilling inclusion criteria were selected. Detailed medical and dental histories were taken. Patient’s demographic and clinical observations were recorded. Cross infection control measures were taken. Pulp chamber floor was carefully inspected by preparing the access cavity. Rubber dam for isolation was applied after giving local anaesthesia. MB2 canal location was done in three stages. Data was entered and analyzed using SPSS 20.

RESULTS

The mean age of patients in our study was 31.12±11.74 years with 155 (65.1%) were male while remaining 83 (34.9%) were female (Tables 1-2). Second mesiobuccal canal was found in 193 cases (81.1%) [Table 3].

Table No.1: Age-wise distribution (n=238)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>57</td>
<td>23.9</td>
</tr>
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<td>21-30</td>
<td>70</td>
<td>29.4</td>
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<tr>
<td>31-40</td>
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<td>41-50</td>
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<tr>
<td>51-60</td>
<td>17</td>
<td>7.2</td>
</tr>
<tr>
<td>Mean±SD</td>
<td>31.12±11.74</td>
<td></td>
</tr>
</tbody>
</table>

Table No.2: Gender-wise distribution (n=238)

<table>
<thead>
<tr>
<th>Gender</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
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<tr>
<td>Male</td>
<td>155</td>
<td>65.1</td>
</tr>
<tr>
<td>Female</td>
<td>83</td>
<td>34.9</td>
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</table>

Table No.3: Distribution of cases by second mesiobuccal canal (n=238)

<table>
<thead>
<tr>
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<th>No.</th>
<th>%</th>
</tr>
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<tr>
<td>Yes</td>
<td>193</td>
<td>81.1</td>
</tr>
<tr>
<td>No</td>
<td>45</td>
<td>18.9</td>
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</table>

DISCUSSION

The present study conducted was aimed to examine the frequency of MB2 canals in maxillary first permanent maxillary molars. In this regard we included 238 patients. In the present study, we found that 23.9% patients were ages 15 to 20 years, 29.4% patients had ages 21 to 30 years, 23.5% were ages 31 to 40 years, 16% patients were ages 41 to 50 years and 7.2% patients had ages above 50 years. The mean age of patients in our study was 31.12±11.74 years. Karabucak et al11 reported majority of patients were aged 15 to 30 years. Some other studies showed similarity to our study in which the most common age group was 20-35 years.12-13

This study showed that 65.1% patients were males while 34.9% patients were females. These results were similar to many of previous studies in which male patients population was high as compared to females.14-15 A study conducted by Atif et al16 regarding canal configuration and the frequency of mesiobuccal second canal reported majority of patients 56% were males.

The current study showed that the prevalence of MB2 canal was 81.1%. These results were similar to the study conducted by Burhley et al17 but higher than that reported by Badole et al.18 Another study done by Tayfun et al19 regarding frequency of MB2 canal in the maxillary first second and third molars was done using microscope and ultrasonic tip for troughing. They reported the incidence rate of MB2 canal 62%, 67% and 74% respectively.

Atif et al16 reported that the incidence rate of MB2 canal was 45%. Another study conducted by Vasundhara et al20 regarding frequency of MB2 canal in maxillary first permanent molars and they reported 68.3% prevalence of MB2 canal. They reported CBCT was the most useful and effective method in detection of MB2 canals.

Das et al21 reported that patients with age group 18 to 25 years had prevalence of 74% MB2 canals, age group 26 to 35 years had 73% and the age group 36 to 45 years had 68% prevalence of MB2 canals. They also reported that operating under microscope along with adjunctive aids showed better results in detecting MB2 canals in maxillary first and second permanent molars.

CONCLUSION

Frequency of MB2 canals in maxillary first permanent molars was found in 81.1%. Majority of the MB2 canal orifices originate distal to the main MB canal and most of the MB2 canal orifices are palatal to main MB canal.

Author’s Contribution:
Concept & Design of Study: Faisal Nawaz Khan
Drafting: Abdul Rehman, Dilawar Sultan
Data Analysis: Beenish Abbas, Hafiz Rabbi-ul-Ehsan, Atikah Sagheer
Revisiting Critically: Faisal Nawaz Khan, Abdul Rehman
Final Approval of version: Faisal Nawaz Khan

Conflict of Interest: The study has no conflict of interest to declare by any author.

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Original Article

Diagnosis of Gestational Diabetes in Females and Comparison of Glucose Challenge Test Versus Glucose Tolerance Test

Imran Aslam¹, Attiya Farhan³ and Ghazala Iftikhar²

ABSTRACT

Objective: To compare the glucose challenge test versus glucose tolerance test for diagnosis of gestational diabetes in females.

Study Design: Cross sectional study.

Place and Duration of Study: Department of Medicine/Gynaecology and Obstetrics, Social Security Teaching Hospital Multan Road, Lahore from September 2018 to September 2019.

Materials and Methods: This study included 200 cases of female patients. It was measured when glucose challenge test and glucose tolerance tests were performed for diagnosis of gestational diabetes mellitus either both positive or negative cases which show comparison between GCT and GTT i.e. 85.54% for diagnosis of GDM in females.

Results: Total of 200 patients, age ranged from 20-45 years. The mean age was 24.83±4.47 years. The mean gestational age was 24.86±2.12 weeks. There were 122 (61%) patients diagnosed with glucose challenge test and 108 (54%) patients were diagnosed with glucose tolerance test which is statistically significant (p 0.001).

Conclusion: It is concluded that in screening for gestational diabetes mellitus, the glucose challenge test is more useful than the glucose tolerance test.

Key Words: Gestational diabetes, Glucose challenge test, Glucose tolerance test


INTRODUCTION

Gestational diabetes is characterized as carbohydrate intolerance resulting about hyperglycemia of variable severity with beginning or first acknowledgment during pregnancy whether or not diabetes perseveres after pregnancy. Diabetic pregnancies are particularly in high risk group is related with expanded risk of congenital anomalies of embryo, early premature deliveries, hypertension, fetal macrosomia and obstructed labour. Gestational diabetes mellitus is also more common in obese women with sedentary life style. It has been proven that babies born to diabetic Asian mothers compared with diabetic Caucasian mothers have worse outcome.¹²³

In screening for gestational diabetes mellitus (GDM), 50gm glucose challenge test is more valuable than the arbitrary glucose test. The test evaluates the ability to metabolize glucose, the body’s primary source of energy.

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Printed: February, 2020

All pregnant females ought to be screened for gestational diabetes but selective screening on the basis of risk factors is highly effective.⁴⁵

The glucose challenge test (GCT) is typically ordered between 24-28 weeks of pregnancy. Pregnant women who are at higher risk of developing gestational diabetes may be screened earlier between 12 and 14 weeks of pregnancy. Screening and diagnosis of gestational diabetes is important to anticipate fetomaternal complications. The plasma glucose value of 140mg/dl in the GCT should be used because of its high sensitivity (70.2%) and specificity (89.1%) as screening value. In the given reference agreement between GCT and gestational tolerance test (GTT) is 88.45%. Gestational diabetes mellitus is unlikely to be present if venous plasma glucose is less than 140mg/dl, one hour after administration of 50gm oral glucose load at 24-28 week gestational age. The sensitivity of 75gm glucose tolerance test 2 hours after glucose load is 90% and specificity is 93%.⁶,⁷,⁸

Prevalence of GDM is 0.6%-15% globally and 8% in Pakistan. As GCT is achievable regarding better detection rate, time saving, less cost because of repeated visits to hospital and less repeated sampling, it can help in decrease in perinatal morbidity. Identify females at risk of future type 2 DM and gives opportunity for life changes. Morbidity identify in females at danger of future type 2 DM and gives opportunity for life changes.⁹,¹⁰

MATERIALS AND METHODS

This study was done in Medicine/Obstetrics and Gynaecology Department at Social Security Teaching Hospital, Multan Road, Lahore from September 2018 to
RESULTS

A total of 200 patients were included in this study and age range from 20-45 years and divided into two age groups. A major portion of patients were 184 (92%) in age group between 20-30 years. Sixteen (8%) patients were >35 years of age and mean age was 24.83±4.75 years (Table 1). 116 (58%) patients were gestational age from 24-26 weeks while 84 (42%) patients from 27-29 weeks of gestation age and mean gestational age was 24.86±2.12 weeks (Table 2). Table 3 shows the frequency of gestational diabetes diagnosed by glucose challenge test. There were 122 (61%) patients who had gestational diabetes and 78 (39%) patients had no gestational diabetes. In Table 4 there were 108 (54%) patients who had gestational diabetes while 92 (46%) patients had no gestational diabetes of glucose tolerance test. In comparison between glucose challenge test and glucose tolerance test, 122 (61%) patients were diagnosed with glucose challenge test and 108 (54%) patients who were diagnosed with glucose tolerance test respectively (p 0.001) (Table 5).

DISCUSSION

Gestational diabetes mellitus is a major obstetrical problem so its screening and diagnosis is important to reduce the fetomaternal complications. It is related with critical fetal and neonatal morbidity and mortality. The mean age of patients was 24.83±4.75. Most of the patients were between 20-35 years of age because some females pick pregnancy during the later long periods of life, although most of them develop obvious diabetes. In our study the gestational age of patients from 24-29 weeks. The mean age of gestational patient was 24.86±2.12 weeks which is comparable with Hassan's study. The mean gestational age was 30.42 weeks which was consistent with most world studies in which it is viewed as the disease influencing the females at advance age. A similar study done Adeqloba the gestational age range from 24 to 28 weeks which is comparable with our study.

In our study the frequency of gestational diabetes mellitus is 62% of patients which is slightly high with another study conducted by Hassan the frequency of gestational diabetes mellitus was 43 per 1000 (4.3%) pregnancies and incidence of IGT was 17 per 1000 (1.7%) cases. In another study carried out by Lolemans, a portion of factors contributing to this high occurrence are poverty and ignorance. Individuals are generally not aware of dietary and caloric values of food and suggestions on body weight and health. The circumstance is further emphasized during pregnancy, wherein the females are usually encouraged to take the food for two time. This prompts to obesity and unfortunately, this is taken as an indication of beauty and health in a large portion of rural people. Among various screening test commonly used were glucose challenge test and glucose tolerance test. In this study the glucose challenge test in 122 (61%) patients and 108 (54%) patients were diagnosed respectively. The gestational diabetes mellitus according to glucose challenge test is 61% of patients while gestational diabetes with glucose tolerance test is 54%. Agarwal et al reported in their study which shows that fasting plasma glucose at threshold 4.7mmol/L has sensitivity of 78.1% and specificity of 32.2% which is comparable to current study. This study concluded that due to high false positive rate fasting plasma glucose is inappropriate test for screening which is same as in my study. A study was done by Agarwal et al about utility of fasting plasma glucose as screening test which shows sensitivity of fasting blood sugar is 85% but specificity
is poor with WHO criteria which is comparable to current study. Another study reported by Wallace et al about the comparison of fasting plasma glucose and glucose challenge test (GCT) which showed get yield better specificity than FPG for comparable level of sensitivity which is same as in current study so GCT is better than FPG.13

Benhalima1 done a study about the screening of gestational diabetes which showed that 50gm GCT has high predictive value to diagnose gestational diabetes and impaired glucose intolerance disorders which is comparable to our study. A study was carried out by Ramos et al19 which showed that fasting blood glucose is an easier screening test yet it requires diagnostic test in 30% as compared to 14% require diagnostic test with GCT so diagnostic accuracy of GCT is more as compared to fasting FPG.

CONCLUSION

It is concluded that glucose challenge test is a useful diagnostic tool to detect gestational diabetes mellitus in high risk pregnancies, depending upon the high frequency of number of risk factors in each individual. It will not just improve the perinatal outcomes but also enable us to distinguish ladies in danger of creating diabetes in future. These potential diabetic females can be cautioned of that future occurring and encouraged to adopt preventive measures to end or delay that procedure.

Author’s Contribution:

Concept & Design of Study: Imran Aslam
Drafting: Attiya Farhan
Data Analysis: Ghazala Iftikhar
Revisiting Critically: Imran Aslam, Attiya Farhan
Final Approval of version: Imran Aslam

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

INTRODUCTION

Urinary bladder cancer is a disease of significant morbidity and mortality and it is a global problem. It occurs more commonly in elderly people and in males and is more common in developed countries. It is at sixth number among the top ten malignancies worldwide. Risk factors include inherited genetic predispositions and exposure to carcinogens such as tobacco smoking, chlorinated hydrocarbons and schistosomiasis. The median age of patients at the initial diagnosis is 69 years in men and 71 years in women. Presenting complaints include painless hematuria, dysuria and increased frequency of urine. Urinary bladder cancer metastasizes to lungs, liver, lymph nodes and rarely to skin. The WHO classifies Urinary bladder carcinomas as urothelial carcinomas, squamous cell carcinomas, adenocarcinomas and others including melanoma and neuroendocrine carcinoma. More than 90% of urinary bladder carcinomas are transitional cell carcinomas (urothelial carcinomas), <5% are squamous cell carcinomas and <2% are adenocarcinomas. The five year survival rate of low grade and early pathological stage of tumors is better than high grade and late stage tumors.

The lifetime risk for developing bladder cancer in males is 3.81% and females is 1.15%. According to a study conducted by Shimakawa, the worldwide incidence of bladder carcino ma is 19%. According to different studies in our population, Wani et al described bladder cancer frequency as 4%, while Kashif et al reported bladder cancer frequency as 5% of all cancers in Pakistan. Yusuf found it to be 4.6%. while Shahid et al and Sheraz et al found that bladder tumor frequency is 11% and 10.8% respectively. So, the variability has been found in different reports. The rationale of the present study is to determine the frequency of carcinoma of urinary bladder in transurethral resection specimens of patients with painless hematuria and to overcome the variability of frequency that has been observed in previous studies in our population. So that proper counseling of patients presenting with hematuria can be done regarding early cystoscopic biopsy and hence diagnosis at early pathological stages of tumor so that the tumor is resected before metastasis, as this practice is not commonly seen and surgery is delayed because of false social beliefs about surgery and the treatment.

Objective: To determine the frequency of urinary bladder carcinoma in transurethral resection specimens of patients presenting with pain less hematuria.

Study Design: Descriptive cross sectional study.

Place and Duration of Study: This study was conducted at the Department of Histopathology, Services Institute of Medical Sciences, Lahore from October 2015 to April 2016

Patients and Methods: One hundred and fifty transurethral resection specimens were included. Transurethral resection specimens were fixed in 10% Formalin and then they were grossed. Total weight of bladder tissue chips was noted. Sections were processed in Sakura Tissue-Tek 2 and 4-6u thick sections were cut from tissue blocks. After staining them with the Hematoxilin and Eosin (H&E), sections were analyzed histologically under the microscope. Frequency of urinary bladder carcinoma was recorded.

Results: There were 111 males and 39 females with mean age of 48.21±12.07 years and duration of the symptoms was 3.31±2.98 months. Sixteen (10.7%) patients had urinary bladder carcinoma and 134 had no urothelial carcinoma.

Conclusion: The increasing frequency of urinary bladder carcinoma in males is alarming, and requires extensive efforts of awareness, screening and early detection programmes.

Key Words: Frequency, Urinary bladder carcinoma, Transurethral resection, Hematuria

MATERIALS AND METHODS

This descriptive cross sectional study was carried out at Department of Histopathology, Services Institute of Medical Sciences Lahore from 5th October 2015 to 3rd April 2016. One hundred and fifty transurethral resection specimens taken through cystoscopic surgery were included. Patients between 25 to 70 years of both sexes and transurethral resection bladder specimens of patients with painless hematuria were included. Those patients with inadequate biopsies (having insufficient tissue), unfit for cystoscopy, undergoing bladder resection performed as a part of other surgical procedures (e.g. any metastatic carcinoma of genital tract etc) were excluded. Patient’s demographic and intraoperative findings were noted from patient’s operative notes. Transurethral resection specimens were fixed in 10% Formalin and then they were grossed. Total weight of bladder tissue chips was noted. Sections were processed in Sakura Tissue-Tek 2 and 4-6u thick sections were cut from tissue blocks. After staining them with the Hematoxilin and Eosin (H&E), sections were analyzed histologically under the microscope in the histopathology department. The data was analyzed using SPSS-20.

RESULTS

There were 111 (74%) males and 39 (26%) females with mean age 48.21±12.07 years. One hundred and twenty six (84%) had duration between 1-6 months and 24 patients (15%) had duration between 7-12 months. The mean duration of the symptoms was 3.31±2.98 months. Sixteen patients (10.7%) had carcinoma of urinary bladder while 134 (89.3%) did not have carcinoma of urinary bladder (Table 1).

<table>
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<td>Duration of symptoms (months)</td>
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<td>1 – 6</td>
<td>14</td>
<td>112</td>
<td>0.686</td>
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<tr>
<td>7 – 12</td>
<td>2</td>
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DISCUSSION

Globally, urothelial carcinoma is one of the most common malignant life threatening disorder and approximately above 90% from all the carcinomas.13 In United States, urinary bladder carcinoma is reported the fourth most commonly found carcinoma among male population and the 17th most commonly found cancers in female population along the world in 2014.14 The mortality rate is quite high with this disease and accounted 6.1 to 7.2% out of 0.1 million patients in men and 1.3% in females in European countries.15 Many of risk factors involved in developing urinary bladder carcinoma but smoking is one of the major risk factor for bladder carcinoma. The incidence rate of carcinomas is quite high in smokers with high rate of mortality and morbidity as compared to non-smoker patients.16 Occupational factors such as workers in dye, rubber, leather and aluminium industries were on high risk of developing bladder cancer and approximately 20% of carcinoma patients had occupational risk factors.17,18 It has been observed that male patients population had high rate of bladder carcinoma as compared to females.19

In present study, majority of patients were males 74% as compared to females 26%. These results showed similarity to the study conducted by Horstmann et al20 in which they reported males patients was high in number as compared to females with male to female ratio 2:1. Another study by Hoke et al21 reported male patients had high incidence rate of bladder carcinoma as compared to females with ratio 1.33 to 1. A study by Quirk et al22 and Koyuncuer et al23 demonstrated the ratio of male-to-female patients to be 3.2:1, 3.76:1 respectively.

In our study we found that 58.7% patients had ages less than 50 years and 41.3% patients had ages above 50 years. Previous studies reported patients with elderly ages had high rate of urinary bladder carcinoma as compared to younger and middle age population.24,25 A study conducted by Horstmann et al20 reported that majority of patients with urinary bladder cancer were of elderly ages with mean age 62 years in males ad 67
CONCLUSION

Ongoing international collaborations amongst pathologists have led to emerging standards in the reporting and microscopic diagnosis of bladder cancer specimens. The mortality rate is low today, owing to the fact that scientists are conducting extensive research and exhaustive investigations in this field. In the present study, the overwhelming majority of urothelial carcinoma is composed of both genders with a peak incidence in the seventh decade.

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Determine the Complications of Transradial Approach in Patients Undergoing Percutaneous Coronary Interventions

Abdul Ghaffar¹, Riaz-ud-Din¹, Fazal-ur-Rehman¹, Farida Khudaidad², Dost Muhammad³ and Farhan Faisal¹

ABSTRACT

Objective: To examine the prevalence of complications related with transradial approach in patients undergoing elective percutaneous coronary interventions.

Study Design: Cross-sectional/observational

Place and Duration of study: This study was conducted at the Department of Cardiology, Bolan Medical Complex Hospital Quetta from January 2019 to December 2019.

Materials and Methods: One hundred and ten patients of both genders with ages 20 to 75 years undergoing percutaneous coronary interventions were included. Patients detailed demographic including age, sex, body mass index and com-morbidities were recorded after taking informed written consent from all the patients. All the patients were received transradial approach and periprocedural complications were examined.

Results: There were 82 (74.55%) males while remaining 28 (25.45%) were females with mean age 57.85±8.54 years. Mean BMI was 27.12±3.45. Hypertension was the most common morbidity found in 50% patients followed by diabetes mellitus and smoking. Minor bleeding was the commonest complication found in 25 (22.73%) patients followed by radial artery occlusion, excessive bleeding, radial nerve injury and hematoma in 7 (6.36%), 6 (5.45%), 4 (3.64%) and 2 (1.82%) patients respectively.

Conclusion: Transradial approach for coronary interventions is safe and effective with fewer rates of complications.

Key Words: Coronary intervention, Angiography, Transradial approach, Complications

INTRODUCTION

Coronary angiography (CAG) is the gold standard for detection of arterial narrowing related to atherosclerotic coronary artery disease (CAD). This procedure provides the most reliable information for determining the effectiveness of medical therapy as well as interventional procedures such as percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG) in patients with CAD.¹ Coronary angiography is performed through percutaneous approach to arteries; therefore, selecting the best vascular access is one of the first decisions for any percutaneous cardiovascular procedure. For the first time this approach was applied in 1953,² and brachial artery was the first access to use.³ Then cardiovascular interventionists began to use of femoral access for CAG and PCI due to some complications of brachial access in 1967.⁴ However, this new access site has shown to have several complications as well.⁵-⁷ Initially reported in 2001, transradial approach was considered as an alternative for coronary interventions in candidates who were not suitable for trans ulnar interventions.⁸ Multiple factors including vasospasm, access site failure, variation in size and anatomy, poor collateral support can make trans ulnar approach a less suitable choice. Transradial angiographic interventions showed minor bleed was 5.9% and asymptomatic radial artery occlusion was 5.1% with no radial injury, major bleed, pseudoaneurysm and atrioventricular fistula formation.⁹,¹⁰ The present study was conducted aimed to examine the complications associated with transradial approach in patients undergoing percutaneous coronary interventions.

MATERIALS AND METHODS

This cross-sectional/observational study was conducted at Department of Cardiology, Bolan Medical Complex...
Hospital Quetta from 1st January 2019 to 31st December 2019. A total 110 patients of both genders presented with ischemic heart disease were undergoing percutaneous coronary interventions were included in this study. Patients detailed demographic including, age, sex, BMI, co-morbidities such as smoking, hypertension, diabetes mellitus, family history of CAD, and dyslipidemia were recorded after taking informed written consent from all the patients. Patients with primary PCI, patients with previous CABG were excluded from the study. All patients had received percutaneous coronary interventions by transradial approach. All patients were evaluated by clinical assessment of the forearm vessels before procedure by reverse Allens test to determine the patency of radial artery. Complications associated with procedure such as bleeding, radial nerve injury, radial artery occlusion and hematoma formation were examined and recorded. Data was analyzed by SPSS 24.

RESULTS

There were 82 (74.55%) males while remaining 28 (25.45%) females with mean age 57.85±8.54 years. Mean BMI was 27.12±3.45. Hypertension was the most common morbidity found in 50% patients followed by smoking, diabetes mellitus, dyslipidemia and family history of CAD in 52 (47.27%), 22 (20%), 13 (11.82%) and 10 (9.10%) patients respectively. Seventy three (66.36%) patients had stable angina, 22 (20%) patients had unstable angina and 15 (13.64%) patients had STEMI (Table 1).

According to the periprocedural complications we found minor bleeding in 25 (22.73%) patients followed by radial artery occlusion, excessive bleeding, radial nerve injury and hematoma in 7 (6.36%), 6 (5.45%), 4 (3.64%) and 2 (1.82%) patients respectively. No major complications were recorded (Table 2).

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<td>7</td>
<td>6.36</td>
</tr>
<tr>
<td>Excess Bleeding</td>
<td>6</td>
<td>5.45</td>
</tr>
<tr>
<td>Radial nerve injury</td>
<td>4</td>
<td>3.64</td>
</tr>
<tr>
<td>Hematoma</td>
<td>2</td>
<td>1.82</td>
</tr>
</tbody>
</table>

DISCUSSION

Ischemic heart disease is one of the most common cardiac problems in all over the world with high rate of morbidity and mortality.11 Percutaneous coronary interventions are the most performing successful morbidity and mortality.12 Transradial approach for coronary interventions considered as procedure of choice with very low rate of complications and higher success rate.13 The present study was conducted to examine the frequency of periprocedural complications related with transradial approach for patients undergoing PCI. In this regard 110 patients were enrolled and received transradial approach for PCI. Majority of patients 74.55% were males while 25.45% patients were females and majority of patients were ages above 45 years. These results were similar to many of previous studies in which PCI were performed and these studies illustrated male patients were predominant 65% to 80% as compared to females with average age 58.5 years.14,15 In present study hypertension was the most common morbidity found in 50% patients followed by smoking, diabetes mellitus, dyslipidemia and family history of CAD in 52 (47.27%), 22 (20%), 13 (11.82%) and 10 (9.10%) patients respectively. A study conducted by Malik et al16 regarding frequency of myocardial infarction in patients undergoing elective PCI and they reported hypertension was the most frequent morbidity in 72% patients, DM found in 20% and 54% patients had smoking history. In our study we found that 73 (66.36%) patients had stable angina, 22 (20%) patients had unstable angina and 15 (13.64%) patients had STEMI. These results were comparable to the study conducted by Lashari et al.17 In this study we found no major complications associated to transradial approach. We found minor bleeding in 25 (22.73%) patients followed by radial artery occlusion, excessive bleeding, radial nerve injury and hematoma in 7 (6.36%), 6 (5.45%), 4 (3.64%) and 2 (1.82%) patients respectively. These results were comparable to some previous studies.18-20

CONCLUSION

Transradial approach in patients undergoing PCI is safe and effective with no major complications. We found fewer minor complications such as minor bleeding, radial artery occlusion and nerve injury. Thus,
transradial approach is a better for percutaneous coronary interventions.

Author’s Contribution:  
Concept & Design of Study: Abdul Ghaffar  
Drafting: Riaz-ud-Din, Fazal-ur-Rehman  
Data Analysis: Farida Khudaia, Dost Muhammad, Farhan Faisal  
Revisiting Critically: Abdul Ghaffar, Riaz-ud-Din  
Final Approval of version: Abdul Ghaffar

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES
To Study the Efficacy of Intravenous Ondansetron on Cessation of Vomiting in 1 to 14 Years Old Children with Acute Gastroenteritis to Reduce Length of Hospital Stay

Nafees Khan¹, Shah Muhammad Khan Jadoon², Muhammad Fazil¹, Sehrish Gul², Muhammad Qasim Khan¹ and Saqib Saeed¹

ABSTRACT

Objective: To determine the efficacy of intravenous ondansetron on stoppage of vomiting in children having acute gastroenteritis to reduce hospital stay.

Study Design: Cross sectional study

Place and Duration of Study: This study was conducted at the Pediatric unit Mardan Medical Complex, Mardan from March 2019 to August 2019.

Materials and Methods: Study suggests intravenous ondansetron for children with acute gastroenteritis having uncontrolled vomiting. 390 patients, aged 1 to 14 years fulfilling the inclusion criteria were included, and randomly grouped. One received intravenous ondansetron, other received placebo. Inclusion criteria were the diagnosis of acute gastroenteritis and the absence of other diseases or allergies to drugs. Ondansetron was given intravenously at a dose of (0.15 mg/kg)(1); normal saline intravenously were given to placebo group. Data were collected and analyzed in SPSS20.

Results: After drug administration 184 out of 196 patients(93.9%)in the ondansetron group completely ceases vomiting(mean :1.0612 /sd 0.24036/p value <0.001) and were discharge with a hospital stay of less than 4-6 hrs as compared to placebo group where only 9 patients out of 185(4.6%) have stopped vomiting (mean 1.9536 / SD. 21088).

Conclusion: We have concluded that intravenous ondansetron is safe for children to control vomiting acute gastroenteritis. This will result in complete cessation of vomiting that will decrease patients stay in hospital,therefore decreasing the cost of treatment.

Key Words: Acute gastroenteritis, vomiting, ondansetron, hospital stay

INTRODUCTION

Acute gastroenteritis accounts for significant mortality and morbidity in children in developing countries. vomiting in acute gastroenteritis is a major concern for the clinicians as it results in failure of oral rehydration therapy .resultantly there will be promising increase in use of intravenous rehydration and lengthy stay of patients in hospital.¹,²,³

Defined as inflammation of gastrointestinal tract manifesting as increase in stool frequency (three or more watery stools),vomiting ,fever, lasting less than 2 weeks.⁴ It is usually a self limited disease that does not require any treatment. The treatment modalities focuses on correction of electrolytes and rehydration that is achieved with oral rehydration solution or intravenous rehydration depending upon the hydration status of patients.⁵,⁶,⁷ As Vomiting limits success of oral rehydration therapy, antiemetics are commonly prescribed to cope with, nowadays promethazine, prochlorperazine, and metoclopramide are less commonly prescribed as they are associated with serious side effects.⁸,⁹

Previous studies have shown the efficacy of ondansetron to prevent vomiting in acute gastroenteritis. Ondansetronexerts its antagonistic effect on serotonin 5-HT3) receptor, used primarily for prevention of vomiting associated with chemotherapy and after surgery.¹⁰

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Printed: February, 2020
It has been used for vomiting in hyperemesis gravidarum. By decreasing episodes of vomiting, patient will easily tolerate oral fluids, this will in turn minimize the need for intravenous fluids. According to FDA, ondasetron is associated with QT prolongation and other abnormal heart rhythms. Recently ondansetron has been studied that showed a promising result in controlling vomiting in patients having acute gastroenteritis, it also causes an increased incidence of diarrhea.

MATERIALS AND METHODS

It was a cross sectional study conducted at the Pediatric unit Mardan Medical Complex, Mardan from March 2019 to August 2019. The study was approved by ethical committee. After taking written consent from the parents. Patients 1 to 14 years, diagnosed as a case of acute gastroenteritis presented with three or more episodes of vomiting in 24 hours were included. Children who take any medication for vomiting or diarrhea prior to admission, children with renal compromise, any liver pathology, patients who were severely dehydrated defined by a WHO scale for dehydration, previous adverse reaction to ondansetron were excluded from the study.

Height and weight of the patients were recorded by the nursing staff. Hydration status was classified by WHO scale for dehydration. Enrolled children were grouped on random basis, one received ondansetron, other received placebo. Blood was taken for baseline investigations. One group of patients were given ondansetron intravenously at a dose 0.15 mg/kg over 2 min, the other group were given placebo (normal saline) intravenously in equal amount to ondansetron.

Patients were assessed for cessation of vomiting, secondarily length of hospital stay was documented. Vomiting is defined as a forceful expulsion of stomach contents through mouth. Descriptive statistics for age, gender were documented in the form of mean, standard deviation, percentages. To compare results of both groups cross tabulations, bar charts and chi-square test were used. SPSS 20 was used for the analysis of data. The P-value of <0.05 was considered as statistically significant.

RESULTS

Three hundred and ninety patients were enrolled for the study and were randomly assigned to two groups, one group received intravenous ondansetron and the other group received placebo. Mean age was 2.8 years (sd:1.25). Females were 52.1% whereas males were 47.9%.

Table 1: Effect of intravenous ondansetron on cessation of vomiting

<table>
<thead>
<tr>
<th>Drug</th>
<th>No. of patients</th>
<th>Mean Length of hospital stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ondansetron</td>
<td>196</td>
<td>1.0612 ± 0.24036</td>
</tr>
<tr>
<td>Placebo</td>
<td>194</td>
<td>1.9536 ± 0.21088</td>
</tr>
</tbody>
</table>

No adverse effects were noted.

Figure No.1: Gender Distribution

Figure No.2: Mean values for ondansetron and placebo on cessation of vomiting

Following figure shows the effect of intravenous ondansetron on cessation of vomiting. 184 out of 196 Patients who have given intravenous ondansetron responded and there was complete cessation of vomiting as compared to the placebo group where only 9 patients have cessation of vomiting (mean 1.9536 / SD .21088).

This figure showing relationship between hospital stay and drug. 184 out of 196 patients given ondansetron have stayed in the hospital for less than 4-6 hours while the patients belonging to placebo group or those who are not given the specified drug only 9 patients have hospital stay less than 4-6 hours, remaining 185 stayed for longer, more than 4-6 hours.

This shows that the drug is effective as it decreases the patient’s stay at the hospital as a result of decreasing the vomiting episodes.
Figure No.3: Vomiting ratio

Figure No.4: Effect of drug on hospital stay
According to the given data set figure shows the effect of intravenous ondansetron on different age groups. The group 2 (4-6 years) and group 3 (7-9 years) have less effect of the drug whereas the group 1 (1-3 years), group 4 (10-12 years) and group 5 (13-14 years) showing the effect of ondansetron drug. This might be because of the sample size as the trial is uncontrolled randomized trial.

Figure No.5: Relation of age group with drug.
This figure shows the relation of age groups with the drug. Green bars show the placebo group while the blue bars show the ondansetron group.

H0 : No association between hospital stay and drug utilized
H1: There is association between hospital stay and drug

P-Value (.001) was statistically significant for effect intravenous ondansetron on length of hospital stay.

Table No.2: Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig.(2-sided)</th>
<th>Exact Sig.(2-sided)</th>
<th>Exact Sig.(1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>310.601a</td>
<td>1</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>307.041</td>
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<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>377.480</td>
<td>1</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Assoc</td>
<td>309.804</td>
<td>1</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P-Value (.012) was statistically significant for effect of intravenous ondansetron on the cessation of vomiting.

Table No.3: Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig.(2-sided)</th>
<th>Exact Sig.(2-sided)</th>
<th>Exact Sig.(1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>306.998a</td>
<td>1</td>
<td>.000</td>
<td></td>
<td></td>
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<tr>
<td>Continuity Correction</td>
<td>303.460</td>
<td>1</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>371.577</td>
<td>1</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Assoc</td>
<td>306.211</td>
<td>1</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISCUSSION

We have found that intravenous ondansetron results in cessation of vomiting and consequently the length of hospital stay in children as compared to placebo.

We have enrolled and investigated 390 patients aged 1-14 years admitted to pediatric unit MTI MMC Mardan diagnosed as acute gastroenteritis having with vomiting. Patients with severe dehydration or allergy to rondonsetron were excluded. Also patients with comorbid conditions were excluded as they may have had effects on the results of the study.

Intravenous ondansetron given at a dose of 0.15mg/kg results in cessation of vomiting in (93.9%) of participants in comparison to (4.6%) of placebo, and resultanty the hospital stay in pediatric ward.

P-value (.001) was statistically significant for effect intravenous ondansetron on length of hospital stay and cessation of vomiting.

There is no evidence of cardiovascular events, nor any other adverse effects observed.

Previous studies show effect of ondansetron on cessation of vomiting that is consistent with our study, but instead of using oral ondansetron we preferred
intravenous route as younger children are not comfortable to swallow the oral form. Our study demonstrates clinical benefits of intravenous ondansetron for cessation of vomiting and consequently hospital stay in children with acute gastroenteritis

CONCLUSION

We have concluded that intravenous ondansetron is safe for children to control vomiting acute gastroenteritis. This will result in complete cessation of vomiting that will decrease patients stay in hospital, therefore decreasing the cost of treatment.

Author’s Contribution:
Concept & Design of Study: Nafees Khan
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Muhammad Fazil, Sehrish Gul
Data Analysis: Muhammad Qasim Khan, Saqib Saeed
Revisiting Critically: Nafees Khan
Final Approval of version: Nafees Khan

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES


Comparison Between International Federation of Gynaecology and Obstetrics Guidelines Versus Conventional Method for the Treatment of Third Stage Labour

Attiya Farhan¹, Nousheen Ghaffar², Sujaria Yaseen³, Wajiha Mehwish³ and Unaiza Taufiq⁴

ABSTRACT

Objective: To observe the comparison between International Federation of Gynaecology and Obstetrics guidelines versus conventional method for the treatment of third stage labour.

Study Design: Quasi experimental study

Place and Duration of Study: This study was conducted in Gynaecology and Obstetrics Department at Pak Red Crescent Medical & Dental College, Dina Nath, Kasur from July 2019 to December 2019.

Materials and Methods: It was a quasi experimental study and consisted of a total 100 labouring women after gestational period of 28 weeks till 41 weeks having spontaneous labour or augmented labour. Fifty women were managed conservatively and 50 women managed by FIGO guideline.

Results: The patients were divided into 2 groups, 50 in each group. Group A was managed by FIGO guideline and group B was managed by conventional method. As compared to group A, in group B the risk of PPH, need of blood transfusion was significantly high and there was significant reduction in haemoglobin percentage after delivery in group B as compared to group A. Other side affects like headache, nausea, vomiting are also higher in group B as compared with group A.

Conclusion: It is concluded that FIGO guidelines are more efficacious in prophylaxis of PPH. The conventional method of third stage of labour with minimal side effects and can safely be administered to hypertensive patients.

Key Words: Post partum haemorrhage, Conventional method, Uterotonic agents and Third stage labour.

INTRODUCTION

In the worldwide postpartum haemorrhage (PPH) is a main cause of maternal mortality and morbidity. A major part of the cases happen in immediate postpartum period within 24 hours after birth and are because of uterine atony, which is a failure of uterus to appropriately contract after kid is born. In this way bleeding from blood vessels is not controlled.

There are 14 million cases of postpartum haemorrhage (PPH) in every year. PPH accounts for approximately 25% of maternal deaths worldwide¹ and for up to 60% of deaths in developing countries.² In industrialized world, life threatening PPH happens with a recurrence of 1 per 1000 deliveries.³ Massive PPH term has been introduced as blood loss of more than >1000ml or 1500ml after delivery, being mainly responsible for maternal mortality and morbidity.⁴ Globally haemorrhage accounts for 28% of all maternal deaths.⁵ As estimation of blood loss is typically subjective, extreme haemorrhage has been characterized as evaluated blood loss (EBL) >1500ml, peripartum fall in haemoglobin (Hb) concentration of ≥4gm/dl or intense transfusion of 4 at least units of blood.⁶ According to local estimate obstetrical haemorrhage was leading cause of maternal mortality (43%) with PPH occurring in 14% maternal deaths. Another study of maternal deaths in developing countries showed the rate of PPH 30% in about 125 million births a year.⁷,⁸ Uterine atony, due to various underlying risk factors, is major cause of PPH.⁹ Antenatal risk assessment predicts only 40% of those who will have PPH.³ As every woman is potentially at risk of having PPH, active management of third stage of labour should be
offered to all women. The benefits of active treatment of third stage labour are well documented and this practice has saved many lives in developing countries.\textsuperscript{10-12}

MATERIALS AND METHODS

This quasi experimental study was done in Gynaecology and Obstetrics Department at Pak Red Crescent Medical & Dental College, Dina Nath, Kasur from July 2019 to December 2019. One hundred women were included in this study and divided into two groups, 50 in group A (FIGO guideline) and 50 in group B (Conventional). Informed consent patient was taken for information and record maintenance. Patients attending Gynae/Obst OPD and labour room were assessed for inclusion criteria, both booked and un-booked patients were considered. A complete history of patient was taken and physical examination was done. Routine investigations including ultrasonography were done. Women were randomly allocated to FIGO/ICM group according to serial numbers i.e. every 2\textsuperscript{nd} case. Fifty women were administered conventional management of third stage of labour. Statistical analysis was done on SPSS-20 version software. Descriptive statistics like age and parity were analyzed. Maternal outcome analysis was scrutinized with cross-tabulation on basis of further therapeutic measures. Number of blood transfusions were fall in haemoglobin and estimated blood loss in each group. Frequency or proportion were computed for categorical variables like past history, complication. Mean was computed for quantitative variable like age. Chi-square test was used to compare complication between groups (FIGO guideline vs conventional). P \leq 0.05 was considered level of significance.

RESULTS

The mean age of patients in group A was 31.25±5.3 years while in group B was 30.52±5.4. Out of fifty 29 (58\%) patients were in age group between 20-30 years in group A, while 23 (46\%) patients were in group B. Twenty one (42\%) patients were in age group between 31-40 years in group A, while 23 (46\%) patients were in group B (Table 1).

The labour characteristics were 21 (42\%) patients in group A and 23 (46\%) in group B. Twenty nine (58\%) patients were spontaneous labour in group A and 27 (54\%) patients in group B (Table 2).

The mean antenatal haemoglobin was 9.49±0.60 in group A and 9.25±0.68 which is statistically not significant (P >0.05). The post delivery haemoglobin was 9.32±0.49 in group A and 9.51±0.73 in group B which is statistically not significant (p 0.39 (Table 3). The renal failure complication was 4 (8\%) in group A while 6 (12\%) in group B which is statistically significant (P 0.05). Uterine atony 9 (18\%) in group A and 18 (36\%) in group B which is statistically significant (p 0.04). Myocardial ischemia was 1 (2\%) patients in group A while 2 (4\%) patients in group B (p 0.03) (Table 4). The estimated blood loss was 513.00±163.47ml in group A and 652.00±234.09ml in group B which is statistically significant (P <0.05) (Table 5).

| Table No.1: Age Distribution of Patients (n=100) |
|---|---|---|---|
| Age in years | Group A (n=50) || Group B (n=50) |
| | No. | % | No. | % |
| 20-30 | 29 | 58.0 | 27 | 54.0 |
| 31-40 | 21 | 42.0 | 23 | 46.0 |
| Mean±SD | 31.25±5.3 | 30.52±5.4 |

| Table No.2: Distribution of Labour Characteristics (n=100) |
|---|---|---|
| Labour Characteristics | Group A (n=50) | Group B (n=50) |
| | No. | % | No. | % |
| Augmented labour | 21 | 42.0 | 23 | 46.0 |
| Spontaneous labour | 29 | 58.0 | 27 | 54.0 |

| Table No.3: Comparison of Antenatal and Post Antenatal Haemoglobin (n=100) |
|---|---|---|---|
| Haemoglobin | Group A (n=50) | Group B (n=50) | P value |
| Antenatal | 9.49±0.60 | 9.25±0.68 | 0.35 |
| Post antenatal operative | 9.32±0.49 | 9.51±0.73 | 0.39 |

| Table No.4: Comparison of Complications of Patients (n=100) |
|---|---|---|---|
| Complications | Group A (n=50) | Group B (n=50) | P value |
| Renal failure | 4 (8\%) | 6 (12\%) | 0.05 |
| Uterine atony | 9 (18\%) | 18 (36\%) | 0.04 |
| Myocardial ischemia | 1 (2\%) | 2 (4\%) | 0.03 |

| Table No.5: Comparison of Estimated Blood Loss (EBL) ml of Patients (n=100) |
|---|---|---|---|
| Estimated blood loss | Group A (n=50) | Group B (n=50) | P value |
| | 513±163.47 | 652±234.09 | <0.001 |

The nausea was in 16 (32\%) patients in group A and 20 (40\%) in group B. Nausea + vomiting was 5 (10\%) patients in group A and 7 (14\%) in group B. The other complications were headache 1 (2\%), nausea + vomiting 5 (10\%), headache + nausea + vomiting 2 (4\%), headache and vomiting 1 (2\%) and headache & nausea 1 (2\%) in group A while in group B headache 3 (6\%), nausea & vomiting 7 (14\%), headache + nausea & vomiting 6 (12\%), headache & vomiting 4 (8\%) and headache & nausea 5 (10\%) in group B respectively.

(14%) patients and in group B 17 (34%) patients (Table 7).

Table No.6: Comparison of Symptoms after Delivery of Patients (n=100)

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Group A (n=50)</th>
<th>Group B (n=50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Headache</td>
<td>1  2.0</td>
<td>3  6.0</td>
</tr>
<tr>
<td>Nausea</td>
<td>16 32.0</td>
<td>20 40.0</td>
</tr>
<tr>
<td>Nausea + vomiting</td>
<td>5 10.0</td>
<td>7 14.0</td>
</tr>
<tr>
<td>Headache + nausea</td>
<td>2  4.0</td>
<td>6 12.0</td>
</tr>
<tr>
<td>Headache + vomiting</td>
<td>1  2.0</td>
<td>4  8.0</td>
</tr>
<tr>
<td>Headache + nausea</td>
<td>1  2.0</td>
<td>5 10.0</td>
</tr>
</tbody>
</table>

Table No.7: Frequency of Blood Transfusion (n=100)

<table>
<thead>
<tr>
<th>Blood Transfusion (units)</th>
<th>Group A (n=50)</th>
<th>Group B (n=50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>1 unit blood</td>
<td>7 14.0</td>
<td>17 34.0</td>
</tr>
</tbody>
</table>

DISCUSSION

Primary postpartum haemorrhage is the postpartum blood loss of 500ml or more in the first 24 hours. Massive PPH term has been introduced as blood loss of more than 1000ml, 1500ml after delivery, being mainly responsible for maternal mortality and morbidity.\(^3\) Globally haemorrhage accounts for 26% of all maternal deaths.\(^5\) In industrialized world life threatening PPH happens with a recurrence of 1 per 1000 deliveries.\(^3\)

Uterine atony is the most widely recognized reason for PPH and happen in the prompt postpartum period because of different underlying risks factors.\(^3\) Other risk factors for postpartum haemorrhage are multiparity, retained placenta, fetal macrosomia (>4kg), prior PPH, genital tract laceration, choioamnionitis and prolonged labour.\(^4\,5\)

As each female is potentially at risk of having PPH, dynamic treatment of third stage of labour should be offered to all females. The advantages of dynamic treatment of third stage of labour are well documented. Post partum haemorrhage is a great extent preventable complication of third stage labour as many patients at risk may be recognized having pregnancy or labour and proper steps taken to prevent blood loss.\(^10\,11\)

The patients characteristics including age, gestational amennorea, parity, duration of labour and outcome after delivery like, blood loss in 24 hours of delivery, post delivery haemoglobin percent, need for blood transfusion and other symptoms like, nausea, vomiting and headache and increase in blood pressure were evaluated. In our study there was greater mean blood loss in group B as compared with group A as shown by the antenatal and post natal haemoglobin concentration (p 0.01).

A study reported uterine atony was the most common cause of PPH. This is comparable to one study in which 16 patients in group A and 34 patients in group B had uterine atony which is statistically significant.\(^13\)

In this study the complications like renal failure was 8% group A, 12% in group B. Rise in systolic and diastolic circulatory strain after delivery is fundamentally higher in group B as compared to group A. Other complications i.e nausea was 32% and 40% respectively. Nausea and vomiting was 10% and 14%, headache was 2% and 6% respectively.\(^14\)

CONCLUSION

It is concluded that Federation of Gynaecology and Obstetrics Guide lines for the treatment of third stage labour are more efficacious in prophylaxis of post partum haemorrhage. The conventional method of third stage of labour with minimal side effects and can safely be administered to hypertensive patients.

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

To Compare the Frequency of Ischemic and Hemorrhagic Stroke in Hypertensive Patients
Farhan Fateh Jang¹, Amna Malik² and Muhammad Mossa²

ABSTRACT

Objective: To compare the frequency of ischemic and haemorrhagic stroke in hypertensive patients presenting with stroke.

Study Design: Cross sectional study.

Place and Duration of Study: This study was conducted at the Department of Neurosciences, Divisions of Neurosurgery and Neurology at Sharif Medical and Dental College, Sharif Medical City Hospital, Lahore from August, 2017 to December, 2019.

Materials and Methods: This study included eighty hypertensive patients with stroke and were analysed. The clinical and laboratory variables were statistically evaluated. All the clinical examination and analysis was done by same person.

Results: Total of 80 patients, 18 (22%) patients were between 40-50 years of age and most of the patients 31 (39%) of stroke belong to 51-60 years of age. Mean age of the patients was 63.52±12.85 years. Forty eight (60%) patients were male and 32 (40%) patients were female with male to female ratio 1.5:1. Forty nine (61%) patients had ischemic stroke and 31 (39%) had haemorrhagic stroke.

Conclusion: In hypertensive patients the frequency of ischemic stroke is increased than hemorrhagic stroke.

Key Words: Hypertension, Ischemic stroke, Intracerebral haemorrhage.

INTRODUCTION

Stroke is a leading cause of death and disability worldwide. It is an acute focal neurological deficit lasting for more than twenty four hours and is due to vascular lesions, which may be cerebral infarction or haemorrhage. It is a significant long term disability in adults and the third leading reason for death in the United States. Overall, another stroke happens every 45 seconds.¹ ² The rationale for thrombolysis in acute ischemic stroke, clinical evidence supporting the use of thrombolytics and the application of thrombolysis in practice. Thrombotic or embolic occlusion of a blood vessel leads to cerebral infarction which constitutes more than two thirds of all cases of stroke. The major modifiable risk factors associated with acute ischemic stroke include hypertension, diabetes mellitus, hyperlipidemia, smoking and atrial fibrillation.

Ischemic stroke has numerous causes. Cerebral infarction may result from large artery atherosclerosis, cardiac embolism, small artery lipohyalinosis, cryptogenic embolism, or, more rarely, from other diverse conditions such as arterial dissection, infective endocarditis and sickle cell disease.³ According to WHO estimates for the year 2020, stroke will become the second leading cause of death and ischaemic heart disease as the leading cause in developing and developed world. About 200 people per 100,000 populations will have first ever stroke every year. Stroke or brain attack is the second leading cause of death and disability worldwide and results due to interruption of cerebral circulation, either due to occlusion of main blood vessel due to thromboembolism or rupture of blood vessel thus resulting in hypoxaemia to brain cells and causing damage which may be transitory or permanent. Studies have shown that more than 50% of patients of ischaemic stroke, who survive, are left with severe and permanent disability.⁴ ⁵ ⁶

Ischemic stroke has numerous causes. Cerebral infarction may result from large artery atherosclerosis, cardiac embolism, small artery lipohyalinosis, cryptogenic embolism, or more rarely, from other diverse conditions such as arterial dissection, infective endocarditis and sickle cell disease. Arterial occlusion is the cause of at least 80% of acute cerebral infarctions.⁷ ⁸
MATERIALS AND METHODS

This study was a cross sectional included eighty hypertensive patients with stroke in the Department of Neurosciences, Divisions of Neurosurgery and Neurology at Sharif Medical and Dental College, Sharif Medical City Hospital, Lahore from August, 2017 to December, 2019. Either gender patients above 40 years of age having ischemic stroke were enrolled after getting written consent with complete demographic data. Patients presented in emergency department with acute ischemic stroke within 24 hours from the onset of symptoms. The diagnosis of acute ischemic stroke was based upon signs of focal neurological deficit resulting in partial or complete loss of motor or sensory function, supported by computed tomography scan of brain. The data was collected for hypertension, diabetes mellitus, hypercholesterolemia (hyperlipidemia) and smoking. A detailed history was taken with special emphasis on history pertaining to these risk factors. A patient was labelled hypertensive if he/she is on treatment with antihypertensives drugs or is found to have an average systolic blood pressure >140mmHg or diastolic blood pressure >90mmHg or both on three separate occasions, discarding the first reading on admission. Similarly a patient was labelled diabetic if he/she is on treatment with oral hypoglycemic drugs or insulin or if the fasting blood sugar level is >126mg/dL and hypercholesterolemic (hyperlipidemic) if he/she is on treatment with lipid lowering drugs or has fasting total serum cholesterol level of >126mg/dL and hypercholesterolemic (hyper-lipidemic) if he/she is on treatment with lipid lowering drugs or has fasting total serum cholesterol level of >160mg/dL. Age was expressed as mean and standard deviation. Gender was expressed as percentage. The presence or absence of hypertension, diabetes mellitus, hypercholesterolemia and smoking was expressed as frequency and percentage of stroke patients studied suffering from them.

RESULTS

Majority of the patients of hemorrhagic stroke belong to 40-60 years of age (61%). Only 8 (10%) patients were >70 years. Mean age of patients was 63.52±12.85 years (Table 1). Forty eight (60%) patients were male and 32 (40%) patients were female with male to female ratio 1.5:1 (Table 2).

Out of 80 patients, 49 (61%) had ischemic stroke and 31 had haemorrhagic stroke (P >0.05) (Table 3). Out of 49 patients of ischemic stroke, left middle cerebral artery is involved in 25 (51%) patients, right middle cerebral artery 18 (37%) and involvement of anterior cerebral artery 4 (8%) while only 2 (4%) posterior cerebral artery was involved (Table 4).

Thirty one (39%) patients had hemorrhagic stroke, there was cerebellum involvement in 6 (19%) patients while 11 (35%) involvement was noted among left anterior lobe. Pons 4 (13%) patients and right parietal lobe was also noted in 4 (13%) respectively and left basal ganglia in 5 (16%) while right basal ganglia was involved in 5 (16%) (Table 5).

Table No. 1: Age distribution of patients (n=80)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-50</td>
<td>18</td>
<td>22.0</td>
</tr>
<tr>
<td>51-60</td>
<td>31</td>
<td>39.0</td>
</tr>
<tr>
<td>61-70</td>
<td>23</td>
<td>29.0</td>
</tr>
<tr>
<td>&gt;70</td>
<td>8</td>
<td>10.0</td>
</tr>
<tr>
<td>Mean±SD</td>
<td>63.52±12.85</td>
<td></td>
</tr>
</tbody>
</table>

Table No. 2: Sex distribution of patients (n=80)

<table>
<thead>
<tr>
<th>Sex</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>48</td>
<td>60.0</td>
</tr>
<tr>
<td>Female</td>
<td>32</td>
<td>40.0</td>
</tr>
<tr>
<td>M:F ratio</td>
<td>1.5:1</td>
<td></td>
</tr>
</tbody>
</table>

Table No.3: Frequency of diagnosis in stroke patients (n=80)

<table>
<thead>
<tr>
<th>Model of Stroke</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic</td>
<td>49</td>
<td>61.0</td>
</tr>
<tr>
<td>Haemorrhagic</td>
<td>31</td>
<td>39.0</td>
</tr>
</tbody>
</table>

Table No. 4: Distribution of ischemic stroke (n=49)

<table>
<thead>
<tr>
<th>Ischemic Stroke</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right middle cerebral artery</td>
<td>18</td>
<td>37.0</td>
</tr>
<tr>
<td>Left middle cerebral artery</td>
<td>25</td>
<td>51.0</td>
</tr>
<tr>
<td>Anterior cerebral artery</td>
<td>4</td>
<td>8.0</td>
</tr>
<tr>
<td>Posterior cerebral artery</td>
<td>2</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Table No. 5: Distribution of haemorrhagic stroke (n=31)

<table>
<thead>
<tr>
<th>Haemorrhagic Stroke</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebellum</td>
<td>6</td>
<td>19.0</td>
</tr>
<tr>
<td>Left anterior lobe</td>
<td>7</td>
<td>23.0</td>
</tr>
<tr>
<td>Right parietal lobe</td>
<td>4</td>
<td>13.0</td>
</tr>
<tr>
<td>Pons</td>
<td>4</td>
<td>13.0</td>
</tr>
<tr>
<td>Left basal ganglia</td>
<td>5</td>
<td>16.0</td>
</tr>
<tr>
<td>Right basal ganglia</td>
<td>5</td>
<td>16.0</td>
</tr>
</tbody>
</table>

DISCUSSION

This study was determined the frequency of ischemic and haemorrhagic stroke in hypertensive patients. The stroke was common in elder age but it is not uncommon in younger age. Our study showed that the hypertensive patients of ischemic stroke were 49 (61%) and more common than haemorrhagic stroke 31 (39%) as compare to other studies. More elevation of blood pressure is more frequently associated with cerebral haemorrhage than cerebral infarction.9,10 The proportion of hemorrhagic strokes in Asian countries has been reported as high as 21-33%. Reported frequency of intracerebral haemorrhage in our country is even higher, ranging from 24-46%.11,12 Our
results shows even more frequency of intracerebral bleed (49%).
The mean age was 63.52±12.85 years which was slightly higher than 57.5 years reported in a study and much lower than 70 years in United states. This difference is possibly because of better awareness and control of risk factors in United States or shorter life span in Pakistan as compared to Western countries. Various studies showed that stroke is more prevalent in men than women.\textsuperscript{13,14} In our study males patients were 48 (60%) and females were 32 (40%) which is different from a study by Sacco et al where 57% were females which may be due to selection bias or geographical distribution.\textsuperscript{15}

The result of a shorter life expectancy and a higher incidence rate of stroke in male as compared with female, lifetime risk of stroke in male and female were similar at different ages. Role of gender in predicting the stroke type in hypertensive patients is controversial. In a population based case control study, men were noted to have odds ratio of 3.51 for ischemic infarctions; however, another study did not show any difference.\textsuperscript{16,17}

Age below 70 years has been found to predict haemorrhage. We also found that younger age (<55 years) was associated with intracerebral haemorrhage. It is unclear why younger patients are more likely to have hemorrhagic stroke. Ross Russel’s postulation suggests that massive haemorrhage is most likely to result if a miliary aneurysm ruptures early in its development. If rupture does not occur when elastic lamina of the parent vessel is breached, the aneurysm wall becomes stretched, thickened and the lumen becomes occluded by thrombus.\textsuperscript{18} Younger patients have hypertension of shorter duration and the early stages of the pathological changes in their vessels (formation of the aneurysms) may be predisposed to a haemorrhage. Various studies have shown that compliance to anti-hypertensive therapy is relatively poor in young patients. The poor compliance will result in poorly controlled hypertension and could also explain higher rates of intracerebral haemorrhage in younger population.\textsuperscript{19,20}

Hypertension is a most important risk factor for both ischemic and haemorrhagic stroke and reduction in blood pressure has been shown to decrease the risk of both stroke subtypes; however, risk reduction is greater for hemorrhagic stroke.\textsuperscript{21} In hemorrhagic stroke contribution of other risk factors is not straightforward, however, it is logical to assume that various risk factors for atherosclerosis e.g. DM, IHD and dyslipidemia would increase the risk of ischemic strokes. Frequency of hemorrhagic stroke is higher in Asian population as well as in black Americans.\textsuperscript{10} It has been attributed to uncontrolled hypertension. Hypertension increases risk for ischemic infarction as well as hemorrhage, however, the predictors of ischemic versus hemorrhagic stroke in an individual patient are not clear. A few studies have been done to address the issue.\textsuperscript{22}

In this study previous stroke is another important risk factor, in a study 21 patients who gave history of a stroke in the past; there are four hypertensive, two smokers and two diabetics, while ten patients had shown no other risk factor than a previous stroke.\textsuperscript{15} Most of our patients were uneducated and unaware of the drastic outcome of poor control hypertension and other risk factors.\textsuperscript{23,24} Non-compliance to treatment is the main cause of stroke in our patients because they are very unlikely to take treatment because it is very expensive. As a result most of them stop anti-hypertensive, resulting in stroke and other complications which are more expensive to treat the patients.

CONCLUSION

It is concluded that the frequency of hypertensive patients of ischemic stroke is increased than hemorrhagic stroke patients.

Author’s Contribution:

Concept & Design of Study: Farhan Fateh Jang
Drafting: Amna Malik
Data Analysis: Muhammad Mossa
Revisiting Critically: Farhan Fateh Jang, Amna Malik
Final Approval of version: Farhan Fateh Jang

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES


Spectrum of the Gallbladder Diseases in a Teaching Hospital of Lahore, Pakistan – 20 Years Experience

Nadeem Reyaz¹, Muhammad Bahadur Baloch², Muhammad Ejaz Butt³, Sara Khan⁴ and Ali Afzal⁵

ABSTRACT

Objective: To document the prevalence and the histologic pattern of gallbladder diseases in our setup.

Study Design: Observational study.

Place and Duration of Study: This study was conducted at the Department of Histopathology, Gulab Devi Hospital, Lahore from January 1996 to December 2015.

Materials and Methods: Our study consisted of 1083 consecutive cholecystectomy specimens, received in 20 years (1996 to 2015) by the Department of Histopathology, Gulab Devi Hospital, Lahore, Pakistan. Cholecystectomy accounted for 9% of the total operations during the study period. The patients’ medical and histopathology records were entered in Proforma. Their age, sex, clinical complaints, history of gall stones and histological diagnosis was entered accordingly.

Results: There were 921(85.04%) females and 162(14.96%) males. The male to female ratio was 1:5.7. The pathologies were divided mainly in two groups: Non-malignant lesions numbered 1027 (94.8%) while the malignant lesions were 56 (5.17%). The main underlying complaints were pain in right hypochondrium 1018 (94%), nausea/vomiting 353 (33%) and jaundice 21 (2%) cases. The ages ranged from 7 to 93 years.

Conclusion: Gallbladder pathologies are very common in Central part of the Pakistan. We found that rate of malignancies in this study is much higher than those in the northern areas of the country.

Key Words: Adenocarcinoma, Cholecystectomy, Cholelithiasis, Gallbladder

INTRODUCTION

Cholecystectomy is the most common elective abdominal operation all over the world and is overwhelmingly necessitated by the presence of gall stones¹. A summary of several large studies that estimated the prevalence of gall bladder disease in different populations show several interesting points which include disease prevalence among different populations which may reflect real genetic or environ-

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⁵ Gulab Devi Hospital, Lahore.

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Accepted: December, 2019
Printed: February, 2020
MATERIALS AND METHODS

This study was planned at Department of Histopathology, Gulab Devi Hospital, Lahore. A total of 1083 consecutive cases of cholecystectomies specimen were received in the department from 1st January 1996 to the end of December 2015.

The data was collected on a proforma containing informations regarding name, age, sex, complaints and histologic diagnosis.

The summary of main gallbladder pathologies was tabularized. Age and sex allocation for gallbladder malady and gallstones was also tabularized. The number of gallbladders received with stones and the cases where an already cut opened gallbladder was received were entered.

RESULTS

Out of 1083 cases of the gallbladder, 921 cases were females and 162 cases were males, having a male to female ratio of 1:5.7. Seventeen cases were found below the age of twenty while a maximum of 357 cases were found in the 5th decade (Table 1). Biliary colic, nausea, vomiting and jaundice were the commonest complaints (Table 2). The mean cholecystectomy rate concerning the total number of operations was 9%. The occurrence of gallstones in persons below aged 30 years was 1.6% and 3.8% for men and women, respectively; gallstone occurrence in persons between 50 to 60 years of age was 14.4% for men and 46.6% for women.

Table No.1: Number of cases in different age groups

<table>
<thead>
<tr>
<th>Age Group (Yr)</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>1</td>
<td>0.09</td>
</tr>
<tr>
<td>10-19</td>
<td>16</td>
<td>1.48</td>
</tr>
<tr>
<td>20-29</td>
<td>91</td>
<td>8.40</td>
</tr>
<tr>
<td>30-39</td>
<td>263</td>
<td>24.28</td>
</tr>
<tr>
<td>40-49</td>
<td>357</td>
<td>32.97</td>
</tr>
<tr>
<td>50-59</td>
<td>208</td>
<td>19.21</td>
</tr>
<tr>
<td>60-69</td>
<td>101</td>
<td>9.33</td>
</tr>
<tr>
<td>70-79</td>
<td>34</td>
<td>3.14</td>
</tr>
<tr>
<td>80-89</td>
<td>10</td>
<td>0.92</td>
</tr>
<tr>
<td>90+</td>
<td>2</td>
<td>0.18</td>
</tr>
<tr>
<td>Total</td>
<td>1083</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table No.2: Presenting complaints of the patients

<table>
<thead>
<tr>
<th>Complaints</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain Right Hypochondrium</td>
<td>1018</td>
<td>93.99</td>
</tr>
<tr>
<td>Nausea, Vomiting</td>
<td>353</td>
<td>32.59</td>
</tr>
<tr>
<td>Jaundice</td>
<td>21</td>
<td>1.94</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>9</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Non malignant lesions comprised of 1027(94.8%) cases with a 45.25 years of mean age. Most of these cases were those of chronic cholecystitis (Figure 1). These included 892(82.36%) cases. Acute cholecystitis was seen in 84 (7.76%) cases. Malignant lesions (Figure 2) comprised of only 56 (5.17%) cases with a mean age of 51.87 years. Metastatic tumor was diagnosed in one patient only (Table 3).

Table No.3: Histological diagnosis on the surgical specimens

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Histological Diagnosis</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edema and congestion</td>
<td>18</td>
<td>1.66</td>
</tr>
<tr>
<td>2</td>
<td>Atrophic, fibrosed</td>
<td>3</td>
<td>0.28</td>
</tr>
<tr>
<td>3</td>
<td>Cholesterolosis</td>
<td>5</td>
<td>0.46</td>
</tr>
<tr>
<td>4</td>
<td>Mucocoele</td>
<td>7</td>
<td>0.65</td>
</tr>
<tr>
<td>5</td>
<td>Pyocoele</td>
<td>13</td>
<td>1.20</td>
</tr>
<tr>
<td>6</td>
<td>Hematocoele</td>
<td>1</td>
<td>0.09</td>
</tr>
<tr>
<td>7</td>
<td>Gangrene</td>
<td>3</td>
<td>0.28</td>
</tr>
<tr>
<td>8</td>
<td>Acute cholecystitis</td>
<td>84</td>
<td>7.76</td>
</tr>
<tr>
<td>9</td>
<td>Chronic cholecystitis</td>
<td>892</td>
<td>82.36</td>
</tr>
<tr>
<td>10</td>
<td>Papillary adenoma</td>
<td>1</td>
<td>0.09</td>
</tr>
<tr>
<td>11</td>
<td>Adenocarcinoma</td>
<td>55</td>
<td>5.08</td>
</tr>
<tr>
<td>12</td>
<td>Metastatic carcinoma</td>
<td>1</td>
<td>0.09</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1083</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Figure No.1: Chronic Cholecystitis

Figure No.2: Malignant lesions
DISCUSSION

The range of gallbladder diseases varies from asymptomatic gallstones to gallbladder colic, cholecystitis, cholangitis and cholelithiasis. It is readily assumed that gallstones are common in Pakistani women. However, no exact index of incidence of the country is available. Correlation of the prevalence of gallstones amongst the various communities of Pakistan is troublesome not only with the discrepancy in the accessibility of diagnostic facilities and attitude towards treatment but even many patients with gallstones remain free of symptoms².

In a study from Italy, 20% of women and 14% men were diagnosed with stones corresponding. The population-based Italian study showed 78% of subjects with gallstones were asymptomatic. In a Danish report, gallstone incidence in individuals aged 30 years was 4.85% for females and 18% for males; gallstone incidence was 22.4% for women and 12.9% for men in persons aged 60 years⁹. In our study prevalence of gallstones in individuals below aged 30 years was 1.6% for male and 3.8% for female. The incidence in individuals aged amid 50 to 60 years was 14.4% to 46.6% from men to women.

Three major factors can be involved in the formation of gallstones in addition to the other risk factors. These are elevated biliary cholesterol, diminished bile acids and defects in nucleation¹⁰. The additional risk factor includes family history, age and sex, obesity, oral contraceptives, smoking, dietary factors and diabetes mellitus¹¹.

In our study, all the 1083 patients were operated for clinical presentation of acute and chronic cholecystitis. The male to female ratio was 1:5.7. The mean age was 45.6 year. A study was conducted in Ethiopia which includes 712 patients which were operated. The mean age was 42.7 years¹².

In a total of 892 cases of chronic cholecystitis, 761(85.31%) were females with the peak incidence in the 5th decade, and a mean age of 46.02 years, whereas 131(14.69%) were males with the mean age of 48.36 years. The utermost incidence of chronic cholecystitis in both males and females was in the 5th decade, while in a study conducted by Zahran and Mansoor¹³ in Saudi Arabia found 83% of total cases with diagnosis of chronic cholecystitis. Among those cholecystitis, 79% of female patients were in the 3rd decade and 71% of male had a peak age in the 4th decade. A study on 750 patients was conducted in Northern areas of Pakistan. In this study chronic cholecystitis was reported in 512 (68.27%) patients, acute/empyema cholecystitis in 225 (30%) which is entirely different than our Central region study⁷. In our study, out of 84 cases of acute cholecystitis, 62(73.81%) cases were females with the peak incidence in the 4th decade and a mean age of 38.52 years. Twenty two (26.19%) cases were males with the peak incidence in the 3rd decade with the mean age of 32.27%.

Cholelithiasis is an uncommon condition in childhood¹⁴,¹⁵. There are several other conditions which are treated by cholecystectomy, like edema and congestion, atrophy, acute cholecystitis instead of actual cholelithiasis. In the pediatric age group gallstones are rare with a range of 0.13-0.22%. Stones propagate for the first 2 to 3 years, after which their progress stabilizes¹⁶. In our study we didn’t find gallstone in any pediatric case.

After the age of 60, the occurrence of gallbladder diseases in men and women is 10% to 15% whereas 20% to 40% has been reported by Zahran and Mansoor¹³. In our study we found that the gallbladder disease in men and women after the age of 60 is 13.57%.

The three phases of gallstones are clinically categorized as asymptomatic, symptomatic and with complications (e.g., cholecystitis, cholangitis, cholelithiasis). Majority of gallstones (60-80%) are without symptoms, however certain symptoms, such as pomposity, pain in right upper quadrant are traditionally concomitant with gallstones¹⁷. Consistently 1-3% of people have biliary colic and 20-33% developed symptoms in 20 years. Most of the patients describe symptoms prior to complications. Once symptoms of biliary colic occur, 3-9% of patients progress to severe symptoms. In patients with mild symptoms, 50% have complications after 20 years¹⁸,¹⁹. In our study 38% of the patients were found to be symptom free. The most common symptoms were pain in the right hypochondrium (94%) and nausea with vomiting (33%).

The cholelithiasis is documented in literature to be about 20% of the cholecystectomy specimens¹⁶. In our study cholelithiasis was seen only in 5 cases (0.46%). The etiology of cholelithiasis is anonymous, most theories believe that either super saturation of the bile along with cholesterol, which is found in several but not every case, or abnormal transport of lipid across the mucosa prompts the lipid deposits formation²⁰,²¹.

In our series in addition to acute cholecystitis, chronic cholelithiasis and cholesterolosis, we reported edema and congestion in 18 cases (1.66%) with no histological changes in the mucosa of the gallbladder. In 3 cases (0.28%) we found atrophic and fibrosed gallbladder. There were 13 cases of pyocele, making 1.2% of all the cases and 7 cases of mucocele (0.65%) along with only one case of hematocoele and necrosis of mucosa. In our study we found 3 (0.28%) such cases in which emergency cholecystectomy was done. In one case we reported papillary adenoma as diagnosis which was clinically suspected as carcinoma.

There were 55 (5.08%) cases of carcinoma of the gallbladder in our study. Out of these 6(10.9%) occurred in male (mostly in 5th decade) and were diagnosed as adenocarcinoma. There were 49 (89.1%)
cases in females (mostly in 5th and 6th decade) with the same diagnosis. This is in contrast to the study conducted in Saudi Arabia, that reported only 2% malignant lesions. Literature from the west have revealed gallbladder carcinoma as the most common malignancy of the gastrointestinal tract, with the occurrence of 2.5 cases per 100,000 populations per year. A study shows 17.9% higher odds of cancer in Chile than in Sweden and Czechoslovakia. The study which was conducted in a teaching hospital of Northern areas of Pakistan on 750 patients had reported 3 cases (0.4%) of malignancies. Another study which included 112 consecutive cases showed 6-8% of gallbladder malignancies which is higher than our study. Among Chile, Sweden and Czechoslovakians the risk of gallbladders cancer was 7 times more among patients with stones than those without stones. The age difference may be more apparent than real as the life expectancy in Pakistan is low but even after the adjusting the present data 74.5% cancer occurred below the age of 60 years while a study from Canada showed that 84% of the cases were above the age of 60 years.

CONCLUSION

The frequency of gallbladder stones and associated diseases is reported high. There is a big difference in the malignancies ratio in between the Northern and the Central part of the Pakistan and this may include the dietary habits like reuse of boiled ghee, defective storage of food in hot and humid climate, repeated heating of the cooked food improperly, repeated habits of eating the food, betel and tobacco chewing. A large scale population based study is required to get a more accurate picture.

Author’s Contribution:
Concept & Design of Study: Nadeem Reyaz
Drafting: Muhammad Bahadur, Baloch
Data Analysis: Muhammad Ejaz Butt, Sara Khan, Ali Afzal
Revisiting Critically: Nadeem Reyaz, Muhammad Bahadur, Baloch
Final Approval of version: Nadeem Reyaz

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

The Clinicocytopathological Study of the Breast Lumps beyond 25 Years in A Tertiary Care Unit – Sialkot
Sajid Hussain, Javed Mughal, Hira Shahid and Ume Habiba

ABSTRACT

Objective: To study the cytopathological pattern of breast lumps in relation to the clinical findings above 25 years of female.

Study Design: Descriptive study

Place and Duration of Study: This study was conducted at the Surgical Department of Allama Iqbal Memorial Teaching Hospital Sialkot from 1st January 2014 to Dec 2018.

Materials and Methods: A total of 2000 breast lump patients visited the OPD, only 325 of which have been diagnosed from 2014 to 2018 in 40.21 mean age group same for four years.

Results: A total of 325 cases were studied, with the mean age of 40.21 years; the most involved site was left (52%) as compared to right (47.06%). The commonest lesions in descending order were fibroadenoma (56%), carcinoma (27%) and abscess (14%). The data was analyzed through SPSS 20.

Conclusion: The commonest cytopathological lesion is fibroadenoma, followed by carcinoma. Early detection and diagnosis is required to reduce mortality and morbidity significantly.

Key Words: Inflammatory lesions, malignant disease, phylloides, fibrocystic

INTRODUCTION

Breast is one of the modified sweat glands, which gets its cyclic changes throughout the life of a woman. It may present as inflammatory or neoplastic lesions, for which women get alarmed to be investigated and are compelled to seek treatment. In females, breast development occurs at the age of puberty and serves the purpose of feeding their offsprings.

In USA, it has been found that sixty percent patients have benign breast diseases and ten percent have malignancy. Breast carcinoma is one of the commonest cause of death in Pakistan, while in USA lung carcinoma is the commonest cause of death. The benign breast diseases are more common as compared to breast cancer including fibroadenoma, considered to be the most common benign breast disease.

The diagnosis of any breast lump should be through triple assessment, which includes clinical breast examination, radiological and pathological investigations.

This is because it is very important to differentiate between benign and malignant breast lesions, as it concerns all women presenting with breast lump. We still need more public awareness about the risks of breast lumps and its associated morbidity and mortality, for earliest consultation and treatment.

There is effect of various hormones on this complex structure of female breast, giving rise to various palpable lesions ranging from inflammation, fat necrosis, hematoma, solid tumors with a suspicion of carcinoma with a strong family history. The sensitivity and specificity of breast examination is determined to be fifty four percent and ninety four percent respectively.

Because of the increasing awareness among young females, they are visiting outpatient departments but certain age groups are still not aware of the poor outcomes of breast lumps after the age of twenty five. The incidences vary in different parts of the world in different age groups.

Breast cancer is one of the commonest cancers in the world, present both in developed and developing countries. In developed countries it is becoming more common due to greater life span with improved health care and adoption of western life style.

The rational of our study was to ascertain the incidences of breast lumps among age group above twenty five. As, some are anxious about their palpable lumps and some are ignorant, therefore there is rising trend of carcinoma of breast due to progression of age with all risk factors.
MATERIALS AND METHODS

A total of 2000 breast lump patients visited the OPD, only 325 of which have been diagnosed from 2014 to 2018 in 40.2 mean age group same for four years.

A thorough study was obtained with general physical examination, local examination, ultrasonographic, mammography, and excision biopsy. The data was analyzed. Age group below twenty five was excluded, as there are very scarce chances of malignancy in that age group.

RESULTS

The most involved site was left 169 (52.00%) as compared to the right side 153 (47.06%) while only 03(0.92%) cases were of bilateral site, as shown in the graph below.

The pathology in order of commonest lesions were found to be fibroadenoma 182(56%), carcinoma 88 (27.08%), abscess 46(14.15%), fibrocystic disease 5(1.54%), discharging sinus 2 (0.62%), ulcer 1(0.31%), hematoma 01(0.31%)

The commonest age for malignant diseases 46 (32.9%) was 35 to 50 years whereas the other lesions were 127(92%).

The data analyzed both descriptive and statistical data, one way ANOVA applied between age groups and within groups which are as follows.

Table No.1:

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right</td>
<td>153</td>
<td>41.61</td>
<td>11.941</td>
<td>.965</td>
<td>39.71-43.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left</td>
<td>169</td>
<td>39.05</td>
<td>11.663</td>
<td>.897</td>
<td>37.28-40.82</td>
<td>20</td>
<td>84</td>
</tr>
<tr>
<td>Bilateral</td>
<td>3</td>
<td>33.67</td>
<td>6.506</td>
<td>3.756</td>
<td>17.50-49.83</td>
<td>27</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>325</td>
<td>40.21</td>
<td>11.820</td>
<td>.656</td>
<td>38.92-41.50</td>
<td>20</td>
<td>84</td>
</tr>
</tbody>
</table>

Table No.2: Multiple Comparisons

<table>
<thead>
<tr>
<th>(I) Pathology3</th>
<th>(J) Pathology3</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval for Mean</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinoma</td>
<td>Fibroadenoma</td>
<td>11.914</td>
<td>1.359</td>
<td>.000</td>
<td>8.64-15.19</td>
<td>53.19</td>
<td>68.60</td>
</tr>
<tr>
<td>Others</td>
<td>Fibroadenoma</td>
<td>13.864</td>
<td>1.799</td>
<td>.000</td>
<td>9.53-18.19</td>
<td>48.95</td>
<td>62.64</td>
</tr>
<tr>
<td>Fibroadenoma</td>
<td>Carcinoma</td>
<td>-11.914</td>
<td>1.359</td>
<td>.000</td>
<td>-15.19-8.64</td>
<td>53.95</td>
<td>69.00</td>
</tr>
<tr>
<td>Others</td>
<td>Carcinoma</td>
<td>1.950</td>
<td>1.611</td>
<td>.681</td>
<td>-1.93-5.83</td>
<td>56.00</td>
<td>59.95</td>
</tr>
<tr>
<td>Others</td>
<td>Fibroadenoma</td>
<td>-1.950</td>
<td>1.611</td>
<td>.681</td>
<td>-5.83-1.93</td>
<td>53.00</td>
<td>58.95</td>
</tr>
</tbody>
</table>

Table No.3:

<table>
<thead>
<tr>
<th>Age_Cat</th>
<th>Pathology3</th>
<th>Carcinoma</th>
<th>Fibroadenoma</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;35</td>
<td>Count</td>
<td>11</td>
<td>93</td>
<td>34</td>
<td>138</td>
</tr>
<tr>
<td>% within Age_Cat</td>
<td>8.0%</td>
<td>67.4%</td>
<td>24.6%</td>
<td>100.0%</td>
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</tr>
<tr>
<td>35-50</td>
<td>Count</td>
<td>46</td>
<td>77</td>
<td>17</td>
<td>140</td>
</tr>
<tr>
<td>% within Age_Cat</td>
<td>32.9%</td>
<td>55.0%</td>
<td>12.1%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>51-60</td>
<td>Count</td>
<td>20</td>
<td>10</td>
<td>3</td>
<td>33</td>
</tr>
<tr>
<td>% within Age_Cat</td>
<td>60.6%</td>
<td>30.3%</td>
<td>9.1%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>&gt;60</td>
<td>Count</td>
<td>11</td>
<td>2</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>% within Age_Cat</td>
<td>78.6%</td>
<td>14.3%</td>
<td>7.1%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>88</td>
<td>182</td>
<td>55</td>
<td>325</td>
</tr>
<tr>
<td>% within Age_Cat</td>
<td>27.1%</td>
<td>56.0%</td>
<td>16.9%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>
DISCUSSION

Every female gets breast changes during her pubertal, pregnancy and post pregnancy changes; and before and after menopause, leading to stromal and epithelial changes for which various tests like FNAC were done to determine the exact pathology of the breast lesion,12 mammography was also carried out above twenty five years of age in order to confirm the diagnosis.

Majority of the lesions were on the left side of the breast as compared to the right side. This finding was consistent with study by Isaac U and colleagues, while Talpur A et al also noted the same findings.13,14 While study by Singh SK showed right side to be 54.84% and left 45%. All lumps of whatsoever volume were mostly present in the upper outer quadrant while the inflammatory lesions were most commonly in the inner quadrant. Therefore, findings are consistent with those often one study, the cytopathological diagnosis in order of preference from abscess > inflammatory lesion > benign lesion > malignant lesion, the left side was found to be more involved. One study which was consistent with the study carried out by Basale et al 95% cases were found in left breast.15

Inflammatory Lesions: Inflammatory lesions 46 (14.15%) mostly involved the lactating mothers with left side of breast mostly involved as compared to right side, this also include cases of abscessina and tuberculosis and our study is in consistent with the study carried out by Ami et al and Baplist et al.16

Benign Lesions: The frequency of fibro adenoma was found to be 182(56%) in our study which is in consistent with the study carried out by Alpur and colleagues, who reported it was most common benign lesion in breast lump, while in other studies carried out by Rashid et al showed that 42% of patients with fibro adenoma, while 47% in study of Jeddah. Our and other studies frequencies are much higher than England (7.7%) and USA (8.5%)17. The reasons are not known but it could be the racial predisposition. Few researchers described it as most common beningntumour in female, few patients presented with bilateral fibroadenoma which is less in number as compared to study done by onighol et al where it was 0.9%.18

Malignant Lesions: This pathology was found in 88(27.08%) which is in consistent with studies carried out in the past,19 in one study invasive ductal cell carcinoma was the most common, consistent with past studies.20

Phylloides Tumour: It was found in six patients out of total number of subjects since it is a very rare entity with 2 to4.4% as reported in various review literature,21 the youngest female who has been presented with this rare sort of entity was 12 years age female in Ojanda R,A et al22.

Fibrocystic Disease: It comprised of 05(1.54%) of total number of cases, our study is consistent with studies carried out in USA 33.9% and UK 37%.23

CONCLUSION

Benign Breast lesions are the commonest lumps in the form of fibroadenomas, while invasive ductal cell carcinoma are most commonly reportetumors on FNAC, still considered to be a useful diagnosing tool for assessing Breast lump patterns to reduce the mortality and morbidity significantly.

Author’s Contribution:
Concept & Design of Study: Sajid Hussain
Drafting: Hira Shahid
Data Analysis: Ume Habiba
Revisiting Critically: Javed Mughal
Final Approval of version: Sajid Hussain

Conflict of Interest: The study has no conflict of interest to declare by any author.

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