

Laparoscopic Finding in Infertile Females: A Study at a Tertiary Care Hospital

Laparoscopic
Finding in
Infertile FemalesSarwat Rizvi¹, Anum Jafri² and Rubar Haider³

ABSTRACT

Objective: To study the laparoscopic findings in infertile females.

Study Design: Descriptive cross sectional study

Place and Duration of Study: This study was conducted at the Department of Obstetrics & Gynaecology, Lady Willingdon Hospital, Lahore from January 2018 to January 2020.

Materials and Methods: One hundred and fifty patients with either primary or secondary infertility who underwent diagnostic laparoscopy and fulfilled the inclusion criteria were included.

Results: The mean age of the participants was 32.15 ranging from 20 to 45 years. Mean age of the patients with primary infertility was 26.15 years and those with secondary infertility were 31.3 years of age. Amongst these females, 107 (71.3%) had primary infertility, whereas 43(28.6%) females had secondary infertility. Forty-seven (31.3%) cases turned out to have normal findings. Anomalous findings were noticed in 103 (68.7%) patients. Among the patients with abnormal findings, the leading cause of infertility was found to be tubal blockade which was seen in 40 (31.3%) cases. This was followed by endometriosis in 30 (29.1%) cases. The third leading cause in our study population was pelvic adhesions found in 28 (27.1%) cases. Polycystic ovarian disease was noticed in 3 (2.9%) and fibroid in 2 (1.9%) cases.

Conclusion: The most common factor leading to infertility among females in our study was tubal blockade. This was followed by endometriosis, pelvic adhesions, PCOD and fibroids.

Key Words: Laparoscopic finding, Infertile female, Tertiary care.

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INTRODUCTION

Infertility is a major global public health predicament. It is defined as failure to conceive after one year of regular unprotected intercourse. Sub fertility has been a problem in nearly 60-80 million couples worldwide. Infertility is seen in 10-15% married couples of reproductive age. The prevalence of infertility in Pakistan is 21.9% of which primary infertility cases are 3.5% and secondary infertility cases are 18.4%.¹ Numerous factors lead to infertility including physiological, anatomical and genetic factors. Fertility is also influenced by several environmental and acquired factors. Among these the most common causes are menstrual irregularities and ovulation dysfunction.

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In different parts of the world the prevalence and causes of infertility are different. This inconsistency is owing to existence of variation in environmental factors related to reproductive practices, for instance age at marriage, smoking and alcohol abuse, lifestyle and diet.² The term primary infertility is used if conception has never taken place; secondary infertility is defined as failure to get pregnant after having achieved an earlier conception. Most favorable age group which has the maximum chances of conception is 20-35 years in females. Above 40 years of age, there is a significant reduction in fertility rate and an increase in the risk of chromosomal and other anomalies.³

Infertility has been documented as a grave, expensive and troublesome dilemma for distressed families. The stigma in society of being childless even today can lead to seclusion and rejection in several countries.⁴

Various causes of infertility were explored in this study. The major hurdle in assessing global estimation in the epidemiology of infertility is the paucity of local population based researches. Consequently, precise measurement of the occurrence of infertility with epidemiological data is needed so as to prepare suitable plan for prevention and treatment of infertility and its devastating socio-economic cost. Thus, in this population-based study we intended to recognize the prevalence and causes of primary infertility in a group of females in reproductive age.

MATERIALS AND METHODS

This was a descriptive cross sectional study carried out in the department of gynecology and obstetrics, Lady Willingdon hospital, Lahore. From the outpatient department, 150 female patients who presented with infertility from January 2018 to January, 2020 were included in the study. These patients were collected through purposive sampling after a thorough history including demographics, obstetrical and gynecological and medical and surgical history. History was followed by detailed physical examination, baseline investigations, hormonal profile (serum FSH, LH, TSH) and pelvic ultrasound of the patients. Male factor was ruled out. Patients from the age group 20 to 45 years, with primary or secondary infertility were included in the study. The patients who had a previous history of laparoscopy, abdominal surgeries, or those who were deemed unfit for anesthesia were excluded from the study. Patients who refused to give consent for the procedure or whose husbands had abnormal semen analysis were also excluded. Written informed consent was obtained from the patients. Laparoscopy procedure was carried out under general anesthesia. Mostly single port was used however accessory port had to be used in several patients. Those patients who underwent this procedure were admitted a day earlier and discharged on the second post op day. The data was analyzed by using SPSS version 20.

RESULTS

The mean age of the participants was 32.15 ranging from 20 to 45 years. Mean age of the patients with primary infertility was 26.15 years and those with secondary infertility were 31.3 years of age. Amongst these females, 107 (71.3%) had primary infertility, whereas 43(28.6%) females had secondary infertility. Forty-seven (31.3%) cases turned out to have normal findings. Anomalous findings were noticed in 103 (68.7%) patients. Among the patients with abnormal findings, the leading cause of infertility was found to be tubal blockade which was seen in 40 (31.3%) cases. This was followed by endometriosis in 30 (29.1%) cases. The third leading cause in our study population was pelvic adhesions found in 28 (27.1%) cases. Polycystic ovarian disease was noticed in 3 (2.9%) and fibroid in 2 (1.9%) cases (Table 1).

Table No.1: Distribution of the causes of infertility

Laparoscopic Findings	No.	%
Normal	40	31.3
Tubal blockade	40	31.3
Endometriosis	30	29.1
Pelvic adhesions	28	27.1
PCOD	3	2.9
Fibroid	2	1.9

DISCUSSION

The mean age of the patients in this study was 32.15 years. Mean age of the patients with primary infertility was 26.15 years and those with secondary infertility were 31.3 years of age. This is comparable to the study carried out by Al-Turki⁵, where patients who came up with secondary infertility belonged to an older age group compared to the one with primary infertility.

In our study the leading type of infertility we came across was primary infertility (71.3%). Similar results were seen in the study carried out by Tamrakar⁶ and Benksim et al⁷, where primary infertility was also the main type of infertility. However, in other studies the rate of secondary infertility was higher than primary infertility.⁸ This difference could be due to socio demographic factors like higher age of marriage in certain parts of the world.

The mean duration of patients who presented with the complaint of infertility was 5.4 years. This is in contrast to a study conducted in USA where the patients' mean duration of infertility was 3.5 years.⁹ This difference could be due to lack of medical care and reliance on traditional medicine in our part of the world.

Our study revealed that the major reason for infertility in our study population was tubal ligation followed by endometriosis. This is in accordance with the study conducted by Wani et al¹⁰ where tubal pathology was the leading cause of infertility and the second common cause was endometriosis. Similar results were also reported in another study by Shetty¹¹ which also revealed tubal blockade as the foremost cause of infertility.

The prevalence of endometriosis in the study carried out by Aziz¹² was 12.5% whereas in the current study this prevalence was found to be higher, i.e. 29.1%.

Frequency of fibroids in this study was 1.9%. In a study by Olive et al¹³, fibroids are routinely found in infertile patients.

In this study tubal adhesions were seen in 27.1% patients. This is in contrast with the study by Bonneau et al¹⁴, where 40% patients turned out to have pelvic adhesions.

In our study PCOD was observed in 2.9% cases whereas 6.6% cases came up with PCOD in the study by Jain.¹⁵

CONCLUSION

The leading cause of infertility in developing world is tubal pathology. Hence laparoscopy ought to be performed earlier in management of infertility. This can avoid the emotional and physical toll it takes on an infertile couple. Early diagnosis can also assist in recognizing patients who can be benefitted from assisted reproductive technology (ART). In this study we attempted to assess the factors leading to primary or secondary infertility. We can conclude that

laparoscopy has emerged as an invaluable method for detailed assessment of infertility in females. Moreover, it aids in treating the underlying cause.

Author's Contribution:

Concept & Design of Study: Sarwat Rizvi
 Drafting: Anum Jafri,
 Data Analysis: Rubar Haider
 Revisiting Critically: Sarwat Rizvi, Anum Jafri
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Conflict of Interest: The study has no conflict of interest to declare by any author.

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