Original Article

Obstructed Labour

Determine the Prevalence of Obstructed Labour also Examine the Causes, Mortality and Complications Associated to Obstructed Labour

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ABSTRACT

Objective: To examine the frequency of obstructed labour in our hospital, also determine the complications, causes and mortality associated obstructed labour.

Study Design: Descriptive / cross-sectional study

Place and Duration of Study: This study was conducted at the Department of Obstetrics & Gynecology Bolan Medical Complex Hospital, Quetta from January 2017 to June 2017.

Materials and Methods: A total of 82 confirmed cases of obstructed labour were included. Patient's ages were ranging from 16 to 45 years. Patient's detailed history including socio-economic status, booking status, parity were examined after taking informed consent. Causes, complications associated to obstructed labour were examined. Mortality was recorded.

Results: Twenty two patients were ages between 16 to 24 years, 43 patients were ages 25 to 34 years, 17 patients were ages above 34 years. Sixty five (79.27%) patients had rural residency. Nine (10.98%) patients were booked while 89.02% patients were un-booked. Forty six (56.10%) patients were primiparous, 31 (37.80%) patients were multigravida with parity 2 to 4 and 5 patients with parity >5. Most common cause of obstructed labour was noted as cephalopelvic disproportion in 52 (63.41%) patients and most frequent complication of obstructed labour was maternal pyrexia in 29 (35.37%). Mortality occurred in 3 (3.66%) patients.

Conclusion: Incidence of obstructed labour was most common in age group 25 to 34 years and mostly patients had rural residency. Early and accurate diagnosis and early treatment can reduce the rate of maternal and perinatal mortality and morbidity due to obstructed labour.

Key Words: Obstructed labour, Maternal mortality, Uterine rupture, C-Section, Postpartum hemorrhage.

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INTRODUCTION

Maternal health is the basic right of all women and includes the phases of pregnancy, delivery and puerperium. The provision of health services for contraception, antenatal, intrapartum and postnatal care are the pillars of maternal health.[1] In developing countries like ours, pregnancy complications are very high and one woman dies due to complications related to delivery of baby every minute worldwide.[2]

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Obstructed labour is defined as 'labour when the presenting part of fetus fails to enter the birth canal, despite efficient uterine contractions.[3] According to World Health Organization, obstructed labour is an obstetrical emergency.[4] It's common cause being cephalopelvic disproportion, which differences in the proportion of fetal head and maternal pelvis, malposition and malpresentation being few other causes.

Obstructed labour is responsible for 8% of maternal mortality in developing countries like Pakistan.[5] Thirty nine percent of hospitalization of obstetric patients is attributed to obstructed labour.[6] It is an important cause of maternal and perinatal mortality[7] with maternal mortality rate ranging between 1-13% and perinatal mortality rate between 74-92%.[8] About half of the maternal deaths are attributed to obstructed labour in a direct or indirect way. Out of the 210 million women who become pregnant annually worldwide, 500,000 die because of complications of pregnancy/delivery and obstructed labour is an important cause.[9,10]

Obstructed labour is responsible for a number of complications in mother as well as fetus. Maternal

complications include uterine rupture, septicemia, postpartum hemorrhage, secondary infertility, fistulas and skeletal and neurological disorders.[11] The fetal complications include perinatal mortality, cerebral palsy and developmental disabilities.[12]

MATERIALS AND METHODS

This cross-sectional study was carried out at Department of Obstetrics & Gynecology Bolan Medical Complex Hospital, Quetta from 1st January 2017 to 30th June 2017. A total of 82 patients of obstructed labour with age ranges from 16 to 45 years were included. Pregnant patients with prolonged labor, patients with no obstructed labor were excluded from this study. Patient's detailed history including age, socio-economic status, booking status, parity were examined after taking informed consent. Causes, complications associated to obstructed labor were examined. Mortality was recorded. State of fetus was also recorded. APGAR score, early neonatal death was recorded. C-section was performed in all cases. All the data was analyzed by SPSS 19.

RESULTS

There were 22 (26.83%) patient's ages between 16 to 24 years, 43 (52.44%) patients ages 25 to 34 years, 17 (20.73%) patients ages above 34 years. Sixty five (79.27%) patients had rural residency while 17 (20.73%) had urban residency. 9 (10.98%) patients were booked while 73 (89.02%) patients were un-booked. Forty six (56.10%) patients were primiparous, 31 (37.80%) patients were multigravida with parity 2 to 4 and 5 patients with parity >5 (Table 1). Causes of obstructed labor were noted as cephalopelvic disproportion, malposition, malpresentation, fetal congenital anomaly and unidentified in 52 (63.41%), 15 (18.29%), 12 (14.63%), 2 (2.44%) and 1 (1.22%) patients respectively (Table 2).

Table No.1: Demographic information of the patients

Variable	No.	%
Age (years)		
16 -24	22	26.83
25 -34	43	52.44
> 34	17	20.73
Residency		
Urban	17	20.73
Rural	65	79.27
Primigravida	46	56.10
Multigravida	36	43.90
Booked	9	10.98
Un-booked	73	89.02

Complications followed by obstructed labor was recorded as Maternal pyrexia in 29 (35.37%) patients, uterine rupture found in 19 (23.17%) patients, wound sepsis found in 11 (13.41%) patients, urinary tract infection was found in 8 (9.76%) patients, postpartum haemorrhage found in 7 (8.54%) patients, abdominal distension in 5 (6.10%) patients, 2 (2.44%) patients had bladder injury and 1 (1.22%) patients had ligament hsematoma (Table 3). Maternal mortality was observed in 3 (3.66%) patients and all were uterine rupture. Perinatal mortality was seen in 29 (35.37%). (Table 4).

Table No.2: Causes associated to obstructed labor

Variable	No.	%
Age (years)		
16 -24	22	26.83
25 -34	43	52.44
> 34	17	20.73
Residency		
Urban	17	20.73
Rural	65	79.27
Primigravida	46	56.10
Multigravida	36	43.90
Booked	9	10.98
Un-booked	73	89.02

Table No.3: Complications followed by obstructed labor

Variable	No.	%
Age (years)		
16 -24	22	26.83
25 -34	43	52.44
> 34	17	20.73
Residency		
Urban	17	20.73
Rural	65	79.27
Primigravida	46	56.10
Multigravida	36	43.90
Booked	9	10.98
Un-booked	73	89.02

Table No.4: Maternal and perinatal mortality associated to obstructed labor

Variable	No.	%
Age (years)		
16 -24	22	26.83
25 -34	43	52.44
> 34	17	20.73
Residency		
Urban	17	20.73
Rural	65	79.27
Primigravida	46	56.10
Multigravida	36	43.90
Booked	9	10.98
Un-booked	73	89.02

DISCUSSION

Obstructed labor is an important cause of maternal mortality in underdeveloped and developing countries, and has many short and long term complications. Reduction in the mortalities resulting from

complications of obstructed labor will be considered an indication for the improvement and upgradation of obstetric care system and financial status of a country.

In the present study the incidence of obstructed labor was 2.00%. A study conducted by Rizvi et al[13] and Mondal et al[14] regarding obstructed labor reported incidence of obstructed labor was 1.7 and 1.6%. Some other studies demonstrated the incidence of obstructed labor was 3.6% and 4.5%.[15,16] All these studies including our study shows high rate of obstructed labor and there is a need of better treatment and to provide awareness of this malignant disorder.

In this study most of the patients were in the age group 25 to 34 years. Some other studies regarding obstructed labor demonstrated the same results to our study in which the most common age group was 20 to 35 years.[17,18] In our study mostly patients had rural area residency and these results were similar to some other studies in which 75 to 90% of patients were belong to rural areas.[19,20]

In our study 9 (10.98%) patients were booked while 73 (89.02%) patients were un-booked. These results were similar to another study in which 88% cases were unbooked.[21] In this study we found that the most common cause of obstructed labor was CPD 63.41%, these results were close to some other studies in which the CPD cause was rated 65 to 70%.[20,22] Malposition, malpresentation, fetal congenital anomaly and unidentified in 52 (63.41%), 15 (18.29%), 12 (14.63%), 2 (2.44%) and 1 (1.22%) patients respectively. A study conducted in India reported malposition in 22.9% cases.[23] Mondal et al[14] reported malpresentation 18.2% cases.

In our study the most frequent complication was maternal pyrexia and found in 35.37%. Another study reported maternal pyrexia in 39.3%.[17] Uterine rupture found in 19 (23.17%) patients, wound sepsis found in 11 (13.41%) patients, urinary tract infection was found in 8 (9.76%) patients, postpartum haemorrhage found in 7 (8.54%) patients, Abdominal distension in 5 (6.10%) patients, 2 (2.44%) patients had bladder injury and 1 (1.22%) patients had ligament haematoma. These results was bit similar to some other studies in which uterine rupture recorded in 25% patients[24] and some other studies shows similarity regarding wound sepsis and PPH was 12.8% and 8.2% respectively.[17,25]

In our study the maternal mortality rate was 3.66% and perinatal mortality rate was 39.37%. All the maternal mortality was occurred due to uterine rupture. These results were similar to another study in hich uterine rupture was the main cause of maternal mortality.[26]

CONCLUSION

Obstructed labor is one of the most common causes of mortality and morbidity in maternal and perinatal. Incidence of obstructed labor was most common in age group 25 to 34 years and mostly patients had rural residency. Early and accurate diagnosis and early treatment can reduce the rate of maternal and perinatal mortality and morbidity due to obstructed labor.

Author's Contribution:

Concept & Design of Study:	Uzma Afridi
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Revisiting Critically:	Uzma Afridi, Maryam Shoaib
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Conflict of Interest: The study has no conflict of interest to declare by any author.

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