



Maternal outcome in obstructed labour in patients presenting to Nishtar Hospital Multan.

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ABSTRACT... Objective: The objective of the study was to determine the frequency of maternal outcome in obstructed labour. **Study Design:** Descriptive Case Series. **Setting:** Labour Ward of Nishtar Hospital Multan, Pakistan. **Period:** 01-11-2018 to 30-04-2019. **Material & Methods:** Two hundred and forty two clinically diagnosed cases of obstructed labour admitted in labour ward of Nishtar Hospital Multan were enrolled for the study. Patients were monitored till delivery (vaginal/caesarean section) and complication of pregnancy were assessed till six week postpartum. Outcome variables i.e. complications like sepsis, uterine rupture, bladder rupture, vesicovaginal fistula, postpartum haemorrhage, and mortality was noted. Data was analyzed by using SPSS version 10.0. **Results:** The majority of women was in age group 20-29 years i.e. 42.97% and were primigravida. Sepsis was the most frequent maternal complication observed i.e. in 22.31% of cases. Postpartum haemorrhage was next in line i.e. in 19.42% of cases. Uterine and bladder rupture was a finding in 16.94% and 7.02% of cases respectively. Vesicovaginal fistula was recorded in 12 (4.95%) patients and there were 1 (4.54%) maternal deaths during the study period. **Conclusion:** Obstructed labour is an important and preventable cause of both maternal morbidity and mortality and needs to be addressed adequately with provision of better antenatal, intrapartum, and postnatal care.

Key words: Maternal Complications, Morbidity, Mortality, Obstructed Labour.

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INTRODUCTION

Failure of cervix to dilate or failure of presenting part to descend in the pelvis in the presence of good uterine contractions due to mechanical obstruction is called Obstructed labour. Its Incidence is 2-8%¹ and it is a major cause of maternal mortality and morbidity in developing countries.² Major Causes of Obstructed labour are cephalopelvic disproportion, malposition and malpresentation, fetal congenital malformation and pelvic mass.³

Obstructed labour is the most common preventable causes of maternal and prenatal morbidity as well as mortality.⁴⁻⁶ Poor level of obstetric practice is considered as a factor for occurrence of obstructed labour and it can be prevented by careful monitoring of labour using partograph and early delivery by caesarean section when required.⁷

MATERIAL & METHODS

This study was conducted in the Labour ward of Nishtar Hospital Multan, Pakistan from 01-11-2018 to 30-04-2019.

It was a descriptive case series and Non-probability consecutive sampling was used. Two hundred and forty two clinically diagnosed cases of obstructed labour admitted in labour ward of Nishtar Hospital Multan were enrolled for the study. Informed consent was obtained from all the patients by explaining the procedure and its outcome and was ensured of their confidentiality. Study was conducted after approval from the hospital ethical committee.

Patients were monitored till delivery (vaginal/caesarean section) and complication of pregnancy were assessed till six week postpartum by the consultant gynaecologist having at least 5 years post fellowship experience. Outcome variables

i.e. complications like sepsis, uterine rupture, bladder rupture, vesicovaginal fistula, postpartum haemorrhage, and mortality was noted on the proforma along with demography of the patients by the researcher herself. Data was analyzed by using SPSS version 10.0. Descriptive statistics were used to calculate mean±SD for age and gestational age of the patients. Frequency and percentages were calculated for parity and maternal outcome i.e sepsis, uterine rupture, bladder rupture, vesicovaginal fistula, postpartum haemorrhage, and mortality.

RESULTS

A total number of 3874 deliveries were conducted during six month study period i.e. from 01-11-2018 to 30-04-2019 and 251 cases of obstructed labour were found constituting a prevalence of 6.47%. The majority of women were in age group 20-29 years i.e. 42.97%. Age group 30-39 years was next in line i.e. 35.95% and the least number of cases were seen in age group >40 years. i.e. 9.09%. Analysis of gravidity and parity distribution showed that majority of women were primigravida (G1P0) or of low parity (G2P1) i.e. 60.32% and 39.66% of patients were multigravida (Table-I).

Majority of the patients i.e. 53.30% presented at gestation >40 weeks and 45.69% of cases presented at gestation <40 weeks (Figure-1). Sepsis was the most frequent maternal complication observed i.e. in 22.31% of cases. Postpartum haemorrhage was next in line i.e. in 19.42% of cases. Uterine and bladder rupture was a finding in 16.94% and 7.02% of cases respectively. Vesicovaginal fistula was recorded in 12 (4.95%) patients and there were 5 (2.06%) maternal deaths during the study period. No complication was observed in 27.27% of cases. (Table-II).

DISCUSSION

Obstructed labour is still an important cause of both maternal death & disability. It is more common in communities in which mechanical problems during labour are more with poor availability of relevant health services. Between 4% and 70% of all maternal deaths are reported as a result of

obstructed labour.⁸ In many countries, maternal deaths due to obstructed labour are as prevalent as it was 30 years ago. Various studies have also reported that it is one of the major causes of perinatal and maternal mortality.⁹⁻¹¹

Age in Years	No of Patients	Percentage
<20	29	11.98
20-29	104	42.97
30-39	87	35.95
>40	22	9.09
Parity	No of patients	Percentage
G1P0	89	36.77
G2P1	57	23.55
G3P2	51	21.07
G4 or more	45	18.59

Table-I. Age and parity wise distribution of patients with Obstructed labour (n=242)

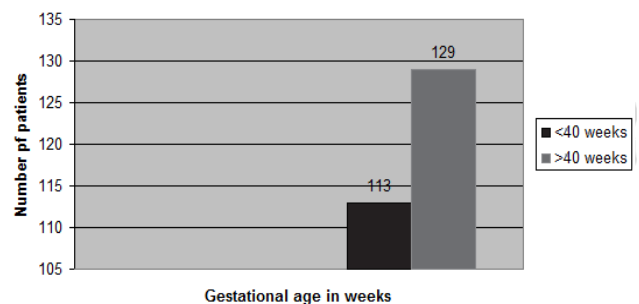


Figure-1. Gestational age at presentation of patients with obstructed labour (n =242)

Maternal Outcome	No of Patients	Percentage
Sepsis	54	22.31
Postpartum haemorrhage	47	19.42
Uterine rupture,	41	16.94
Bladder rupture	17	7.02
Vesicovaginal fistula	12	4.95
Maternal death	5	2.06
No complication	66	27.27
Total	242	99.97

Table-II. Maternal outcome of patients with obstructed labour (n =242)

A total number of 3874 deliveries were conducted during six month study period i.e. from 01-11-2018 to 30-04-2019 and 251 cases of obstructed labour were found constituting prevalence of

6.47%. Among 251 cases of obstructed labour 242 patients who fulfilled inclusion criteria were selected for the study. This observation is in line with the results of previous studies showing an incidence of obstructed labour ranging from 2 to 8% of all hospital deliveries.^{12,13} The incidence of obstructed labour was 0.9% in another study.¹⁴ In India and Eastern Nigeria incidence of obstructed labour was reported as 2.5%¹⁵ and 4.7%¹⁶ respectively. The incidence of obstructed labour in a local study conducted in Pakistan was 1 in 22 deliveries (4.5%).¹⁷

The majority of women were in age group 20-29 years i.e. 42.97%. Age group 30-39 years was next in line i.e. 35.95% and the least number of cases were seen in age group >40 years. i.e. 9.09% in the present study. The results of present study are in agreement with the results of another study in which majority of the patients were between 25-29 years.¹⁸ Similarly, in a local study, conducted in Pakistan, majority of the patients were in their twenties.¹⁹

Majority of women in our study was primigravida (G1P0) or of low parity (G2P1) i.e. 60.32% and 39.66% of patients were multigravida (Table-I). The results generated by the present study are corresponding with the results of another study in which, majority of these patients were primigravidae (52.4).²⁰ This finding is also supported by the results of a recent study showing that majority of women with obstructed labour were primigravida.¹⁸ In another local study from Pakistan, parity ranged from 0-13, and 36 out of 100 were grand multipara.¹⁹ Majority of the patients i.e. 53.30% presented at gestation >40 weeks and 45.69% of cases presented at gestation <40 weeks (Figure-1). This observation is also corresponding with a local study from Pakistan.²¹

In present study the main maternal complications or adverse outcomes observed were ruptured uterus, sepsis, bladder injury, postpartum haemorrhage, fistulae, and maternal death and are similar to what has been reported by other

authors.^{20,22} Table-II is revealing outcome of obstructed labour in the present study. Sepsis was the most frequent maternal complication observed i.e. in 22.31% of cases. Postpartum haemorrhage was next in line i.e. in 19.42% of cases. Uterine and bladder rupture was a finding in 16.94% and 7.02% of cases respectively. Vesicovaginal fistula was recorded in 12 (4.95%) patients and there were 11 (4.54%) maternal deaths during the study period. No complication was observed in 24.79% of cases. Corresponding with the result of the present study, in a Nigerian study, sepsis was commonest complication. Similarly, in a local study conducted in Pakistan showed maternal sepsis being most common (30 cases) complication, followed by PPH (20 cases). One patient expired due to severe PPH.¹⁹ Similarly, in another study, the commonest maternal complications observed were uterine rupture in 55 (45.1%) and sepsis in 48 (39.3%) of the cases.²³

A study observed that 26% of maternal deaths are directly due to obstructed labour.²⁴ A report from Uganda in 2006 reveals that obstructed labour was the reason in 22% of all maternal deaths.²⁵ About 1% of the maternal deaths were reported in the study conducted by Islam JA.^{19,19} which is corresponding with study of Khan Sadia & Roohi M.²⁶

CONCLUSION




Prevalence of obstructed labour was 6.47% in our study with high rate of maternal complications. Sepsis was the most frequent maternal complication observed i.e. in 22.31% of cases followed by postpartum haemorrhage. Non-availability of obstetrical care is the underlying cause of this problem. Malpractice by various local practitioners is also a contributing factor in many cases. Provision of good antenatal care, timely referral system and health education of the patients and their families is recommended to prevent its occurrence.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Sadia Zafar	Conceived, designed did statistical analysis.	
2	Nadia Taj	Did data collection and manuscript writing.	
3	Rida Iqbal	Did review and final approval of manuscript.	
4	M. Sajjad Masood	Editing of manuscript.	