

# FETOMATERNAL OUTCOME OF OBSTRUCTED LABOUR

Shazia Tabassum, Sadia Shamsher, Rabeea Sadaf, Bushra Rauf, Iqbal Begum

## ABSTRACT

**Background:** Obstructed labour is still a major preventable cause of fetomaternal morbidity and mortality in low income countries like Pakistan.

**Objective:** To study the causes and fetomaternal outcome of pregnancy complicated by obstructed labour.

**Methods:** Total 84 cases admitted in emergency with the diagnosis of obstructed labour were studied. Detailed history, examination and relevant investigations were done in each case. Various causes and fetomaternal outcome was noted down.

**Results:** Total 84 cases were studied. Majority were unbooked 80 cases (95.23%) and only 4 cases (4.76%) were booked. Commonest cause was CPD (Cephalo Pelvic Disproportion) followed by malposition and malpresentation. 80 cases (95.23%) needed emergency C/S to relieve the obstruction and only 4 cases (4.76%) required IVD (Instrumental Vaginal Delivery). Commonest maternal complication was puerperal pyrexia found in 13 cases (15.47%) followed by wound infection, PPH and UTI. Maternal mortality was found in 1.19%. 73 babies (86.90%) were live births and 11 babies (13.09%) were still births. Commonest fetal complication was birth asphyxia seen in 24 cases (28.57%) followed by neonatal sepsis and jaundice. Perinatal mortality was 21.39%.

**Conclusion:** Obstructed labour is a preventable condition prevalent in developing countries. Majority were unbooked patients who did not receive proper antenatal care and hence presented late in advanced labour with signs of obstruction. Commonest cause of obstructed labour was CPD. Commonest maternal complication was puerperal pyrexia followed by PPH and UTI. Commonest fetal complication was birth asphyxia followed by neonatal sepsis.

**Key Words:** obstructed labour, CPD, perinatal mortality and morbidity, maternal mortality and morbidity.

## INTRODUCTION

Obstructed labour is a life threatening obstetric complication associated with significant maternal and fetal morbidity and mortality<sup>1</sup>. Labour is said to be obstructed when there is failure of descent of the presenting part into the birth canal due to mechanical obstruction despite of adequate uterine contractions which in turn leads to various fetomaternal complications<sup>2</sup>.

Labour is said to be neglected obstructed labour when the obstruction is not detected and relieved on time. Labour that is not supervised by skilled birth attendants (unsupervised labour) may end up in neglected obstructed labour and this situation is still prevalent in most developing countries like ours<sup>3,4,5</sup>. Obstructed labour accounts for about 8% of all maternal deaths in developing countries like Pakistan<sup>6</sup>. The main cause of obstructed labour is cephalo pelvic disproportion i.e good size baby or enlarged head (hydroceph) or small size pelvis. Other causes include malpositions like brow presentation, face etc and malpresentations like neglected transverse lie with shoulder presentation and hand prolapse<sup>7</sup>.

Department of Obstetrics and Gynecology  
Hayatabad Medical Complex, MTI Peshawar, KPK

### Address for correspondence:

**Dr. Shazia Tabassum**

Department of Obstetrics and Gynecology  
Hayatabad Medical Complex, MTI Peshawar, KPK  
E-mail: shaziakhattak85@gmail.com

Obstructed labour is responsible for a significant short and long term maternal morbidities and even maternal mortality. Maternal morbidities include sepsis, uterine rupture, PPH and long term morbidity include obstetric fistula and other neurological and skeletal complications<sup>8</sup>. It also causes fetal morbidity and mortality which includes birth asphyxia, convulsions, neonatal sepsis, jaundice and still birth. Survived children suffer from long term complications like cerebral palsy due to birth asphyxia and developmental disabilities<sup>9,10</sup>.

## MATERIAL AND METHODS

This prospective observational study was carried out in the department of Obstetrics and Gynecology, Hayatabad Medical Complex, a tertiary care hospital in Peshawar, Khyber Pakhtunkhwa, Pakistan from 1st January to 31st December 2016.

Following patients were included in the study.

### Inclusion criteria

All referred patients with features of obstructed labour attending the Obstetric emergency department were included in the study.

### Exclusion criteria

Patients with no signs of obstruction.

Patients with signs of obstruction but with associated other obstetrical and medical disorders.

Detailed history was taken from each patient including age, parity, booking status, socio economic status, previous obstetrical history, duration of labour. Details of referral notes were reviewed and management done there was also noted down. Then GPE was also carried out including assessing exhaustion status, dehydration status, B.P, pulse and temperature. Then systemic examination including abdominal examination was done. On abdominal examination following features were noted down. SFH, Lie, P/P, LV, EFW, FHS, uterine tenderness and contractions, distended bladder, Bands ring, signs of uterine rupture and number of fifth fetal head is palpable abdominally. Then vaginal examination was done for assessing cervical dilatation, effacement, station of the presenting part, moulding, caput, bleeding or meconium and pelvic assessment to see adequacy. On catheterization hematuria was also looked for. Relevant investigations were done including blood group with Rh factor, FBC, urine R/E, RBS, HBsAg/ Anti HCV, HVS and if patient was febrile then blood cultures, RFTS, LFTS and coagulation profile were also done to exclude septicemia. Mode of delivery was noted down. These patients were followed till discharge. Following maternal outcome was noted down including uterine rupture, PPH, puerperal pyrexia and maternal mortality. Following fetal outcome was noted down including fetal distress, IUD, stillbirth, neonatal death, birth asphyxia, neonatal sepsis and neonatal jaundice. All the parameters were entered into a pre designed proforma and was analyzed by SPSS version<sup>19</sup>.

## RESULTS

We studied a total of 84 cases. Among them 80 cases (95.23%) were unbooked and only 4 cases (4.76%) were booked as shown in Table 1. Causes of obstructed labour, mode of delivery, maternal complications, fetal outcome, and fetal complications are given in Table 2, 3, 4, 5 and 6 respectively.

**Table 1: Booking status of the patients**

Booking status	No. of patients	%age
Booked	4	4.76%
Unbooked	80	95.23%

**Table 2: Causes of obstructed labour**

Causes	No of patients	%age
CPD	49	58.33%
Malposition	19	22.6%
Malpresentation	16	19.04%

**Table 3: Mode of delivery**

Mode of delivery	No of patients	%age
C/S	80	95.23%
IVD	4	4.76%

**Table 4: Maternal complications**

Maternal complications	No of patients	%age
Ruptured uterus	05	5.59%
PPH	10	11.90%
Puerperal pyrexia	13	15.47%
UTI	09	10.71%
Wound infection	11	13.09%
Maternal mortality	01	1.19%

**Table 5: Fetal outcome**

Fetal outcome	No of babies	%age
Live birth	73	86.90%
Stillbirth	11	13.09%

**Table 6: Fetal complications**

Fetal complications	No of patients	%age
	No of patients	%age
Birth asphyxia	24	28.57%
Neonatal sepsis	16	19.04%
Neonatal jaundice	12	14.28%
MAS	10	11.90%
Convulsions	05	5.95%
Perinatal mortality	18	21.39%

## DISCUSSION

Obstructed labour is one of the most common preventable cause of maternal and perinatal morbidity and mortality in developing countries like ours.

In our study majority of the patients were unbooked 80 cases (95.23%) and were referred from areas with limited health care facilities and only 4 cases (4.76%) were booked. In a study by Islam JA et al, 82% were unbooked and 18% were booked<sup>11</sup>. In our study the commonest cause of obstructed labour was CPD 49 cases (58.33%), followed by malposition 19 cases (22.61%) and malpresentation 16 cases (19.04%). In a study by Islam JA et al CPD was seen in 42.8%, malposition 25.7% and malpresentation in 10.5%<sup>11</sup>.

In our study 80 cases (95.23%) required immediate C/S to relieve the obstruction while only 4 cases (4.76%) underwent IVD. In a study by Indra et al , 96% required emergency C/S and 4% had IVD<sup>12</sup>.

In our study uterine rupture was seen in 5 cases (5.95%) in which 3 had sub total abdominal hysterectomy and 2 were repaired. PPH was seen in 10 cases (11.90%), UTI in 9 cases (10.7%), puerperal pyrexia 13 cases (15.47%), wound infection 11 cases (13.09%). In our study there was only one maternal death due to septicemia. In a study by Subyasachi Mondal et al, uterine rupture, PPH, UTI, puerperal pyrexia and maternal mortality were seen in 2.56%, 34%, 11%, 50% and

1.6% respectively<sup>13</sup>.

In our study 73 babies were delivered alive (86.90%), while 11 babies (13.09%) were born as stillbirths. Among alive babies 24 babies (28.57%) had birth asphyxia, 16 babies (19.04%) had neonatal sepsis, 12 babies (14.28%) had neonatal jaundice, 10 babies (11.90%) had MAS and 5 babies (5.95%) developed convulsions. Perinatal mortality in our study was 21.39%. In a study by Subyasachi Mondal et al live babies were 82% and still births were 18%. Birth asphyxia was seen in 20%, neonatal sepsis 14%, neonatal jaundice 17%, MAS 10% and perinatal mortality was 23%<sup>13</sup>.

## CONCLUSION

In our study majority of the patients were unbooked and were referred from areas lacking health care facilities. Commonest cause of obstructed labour was CPD, followed by malposition and malpresentation. Commonest maternal complication was puerperal pyrexia followed by wound infection, UTI and PPH. Commonest fetal complication was birth asphyxia followed by neonatal sepsis, jaundice and MAS.

Obstructed labour is a preventable condition. Antenatal detection of the factors likely to produce obstructed labour, continuous vigilancy and monitoring of labour with partogram, timely detection and referral and timely intervention can prevent obstructed labour and hence fetomaternal morbidity and mortality associated with it.

## REFERENCES

1. Wagaarachi PT, Graham WJ, Penney GC et al. Holding up a mirror: Changing obstetric practice through criteria based clinical audit in developing countries. *Int J Gynecol Obstet*, 2001; 74 (2):119.
2. Adhikari SM, Dasgupta M. Management of obstructed labour: A retrospective study. *Journal Obs Gyne Ind*. 2005;55(1):48-51.
3. Adeoye IS, Dimejesi I, Onoh R, Bartholomew O, Ezeonochie M, Collins Kalu. Obstructed labour in South East Nigeria Revisited: A Multi Center Study on Maternal Socio- Demographic and clinical correlates *J womens Health Care*. 2014;3:160.
4. National Population Commission and ICF Macro. Nigeria Demographic and Health Survey 2008. Nigeria 2009.
5. And A, Olagbuji B, Ezeonochie M. An audit of maternal death from a referral university teaching hospital in Nigeria: the emergenc of HIV/AIDS as a leadind cause. *Nigeria Postgrad Med J*. 2012; 19:83-87.
6. Cron J. Lessons from the developing world :Obstructed labour and the vesico vaginal fistula. *Med Gen Med*. 2003;5:24.
7. a b c d e f g h I j k Education material for teachers of midwifery 2008. Midwifery education module (2nd edition). Geneva [Switzerland]:World Health Organization. 2008. PP.17-36. ISBN 9789241546669.
8. Wall LL. Dead mothers and injured wives. The Social context of maternal mortality and morbidity among the Mausea of Northen Nigeria. *Study Fam Plan*, 1998;29:341-359.
9. Fantu S, Segni H, Alemseged F. Incidence , causes and outcome of Obstructed labour in Jimme University Specialized Hospital. *Ethiop J Health Sci* 2010;20:145-51.
10. Kabakyenga JK, Ostergren, PO, Turyakira E, Mukasa, PK and Odberg- Pettersonk. Individual and health facility factors and the risk of obstructed labour and its adverse outcomes in South –Western. Uganda. *Biomed Cental Prednancy and Child birth* 2011 b;11(73):1-10.
11. Islam JA, Ara G, Choudhury FR. Risk factors and Outcome of Obstructed Labour at a tertiary care Hospital. *J Shaheed Suhrawardy Med Coll*. Vol.4 No 2, December 2012; 4(2):43-46.
12. Indra, Usharani N, Mumtaz Bendigeri. A Study on Clinical Outcome of Obstructed labour. *Int J Reprod Contracept Obstet Gynecol*. 2017 Feb; 6(2):439-442.
13. Subyasachi Mondal, Arunima Chaudhuri, Gourisankar Kamilya, De bojyoti Santra. Fetomaternal Outcome in obstructed labour in a peripheral tertiary care hospital. *Medical Journal of Dr D. Y. Patil University /April-June 2013/ /Vol 6/ issue 2*.