

FETOMATERNAL OUTCOME AND COMPLICATIONS OF OBSTRUCTED LABOUR

Shagufta¹, Aakanksha Mahajan¹, Shah Nawaz²

¹Registrar, Department of Obstetrics and Gynaecology, SMGS Hospital, GMC Jammu, India.

²Lecturer, Department of Pediatrics, SMGS Hospital, GMC Jammu, India.

Received : 30/09/2022
Received in revised form : 08/11/2022
Accepted : 20/11/2022

Keywords:

Caesarean section, apgar score, Maternal mortality, Obstructed labour.

Corresponding Author:

Dr. Shah Nawaz,

Email: loneshahnawaz7867@gmail.com

ORCID: 0000-0003-2173-1817

DOI: 10.47009/jamp.2022.4.5.109

Source of Support: Nil,

Conflict of Interest: None declared

Int J Acad Med Pharm
2022; 4 (5); 528-531



Abstract

Background: Obstructed labour is defined as when there is no descent of presenting part into the birth canal despite good uterine contractions which leads to various maternal and fetal complications. **Materials and Methods:** This retrospective observational study was conducted in the Department of Obstetrics and Gynaecology at SMGS Hospital, GMC Jammu over one year from August 2020 to July 2021. A total of 80 patients were enrolled in this study according to inclusion criteria. Data was collected from patient records kept in the hospital. **Result:** 80 cases of obstructed labour were studied. The maximum numbers of case were in the age group of 19-24 years (47.5 %). Majority of the patients were primigravida (47.5%). 77.5 % of the patients were from the rural areas and 22.5 % were from the urban areas. 75 % of the patients were booked and 25 % were unbooked. Most common cause of obstructed labour was cephalopelvic disproportion (52.5 %) followed by malpresentation, malposition (36.25 %) and congenital malformation (11.25 %). On clinical examination, Bands ring was present in 4 cases (5 %). Majority of the patients (83.75 %) were delivered by LSCS (lower segment caesarean section) followed by normal delivery (11.25 %) and laparotomy with repair of rupture uterus (5 %). Most common complication postoperatively was abdominal distension (25%) followed by wound soakage (16.25 %). 4 cases of rupture uterus were reported. There was no maternal death. Postpartum hospital stay was 8-10 days in most cases (63.75%). There were 75 live births (93.75 %) and 5 stillbirths (6.25 %). Majority of the babies had Apgar score of > 6(70%) and only 12.5 % had Apgar score less than 4. **Conclusion:** Obstructed labour is still a preventable condition. Lack of health education, proper antenatal care, low socio-economic status, poor referral system are important contributory factors. Early diagnosis of obstructed labour and immediate delivery by either vaginal or abdominal can decrease the incidence of maternal and perinatal morbidity and mortality.

INTRODUCTION

World Health Organization (WHO) defines obstructed labour as strong uterine contractions without descending of the fetus through the pelvis due to obstruction that usually occurs at the pelvic brim, in the cavity, or at the outlet of the pelvis.^[1] Estimated incidence is 1-2 % in developing countries. It is responsible for 8% of maternal deaths in the developing countries.^[2] It is a common cause of maternal and fetal morbidity and mortality in developing countries which is preventable. It signifies the availability and accessibility of health care facilities. Anticipation of cephalo pelvic disproportion during labour, intra partum partograph charting and timely decision making can decrease the incidence of obstructed labour.

The most common causes of obstructed labour are cephalopelvic disproportion and fetal malpresentations.

The obstruction can be managed by either caesarean section or instrumental delivery (forceps, vacuum extraction). Maternal complications include postpartum haemorrhage, abdominal distension, perineal injuries, puerperal sepsis, wound soakage, urinary tract infection, stress incontinence, obstetric fistula (vesico-vaginal fistula, recto-vaginal fistula), rupture uterus, shock, and maternal death. In the infant, neglected obstructed labour may cause asphyxia leading to stillbirth, jaundice, sepsis, neurological damage or even neonatal death.

MATERIALS AND METHODS

This retrospective observational study was conducted in the Department of Obstetrics and Gynaecology at SMGS Hospital, GMC Jammu. Study was conducted over one year from August 2020 to July 2021. A total of 80 patients were enrolled in this study according to inclusion criteria. Data was collected retrospectively from patient records kept in the hospital, which included the obstetric details, the medical history records, the socio demographic profile, intrapartum events, neonatal status and postpartum events.

Inclusion Criteria

1. Term pregnancy.
2. Singleton pregnancy
3. Primigravida to Gravida 5.

Exclusion Criteria

1. Preterm pregnancy.
2. Multiple pregnancy.
3. Previous LSCS or hysterotomies.
4. Maternal medical disorders.

Data was analysed statistically.

Objective:

To study the fetomaternal outcome and complications of obstructed labour.

RESULTS

80 cases of obstructed labour were studied. The maximum numbers of cases were in the age group of 19-24 years (47.5 %) as shown in [Table 1]. Majority of the patients were primigravida (47.5%) as shown in [Table 2]. 77.5 % of the patients were from the rural areas and 22.5 % were from the urban areas [Table 3]. 75 % of the patients were booked and 25 % were unbooked as shown in [Table 4]. Most common cause of obstructed labour was cephalopelvic disproportion (52.5 %) followed by malpresentation, malposition (36.25 %) and congenital malformation (11.25 %) as shown in [Table 5]. On clinical examination, Bands ring was present in 4 cases (5 %) as shown in [Table 6]. Majority of the patients (83.75 %) were delivered by LSCS (lower segment caesarean section) followed by normal delivery (11.25 %) and laparotomy with repair of rupture uterus (5 %) as shown in [Table 7]. Most common complication postoperatively was abdominal distension (25%) followed by wound soakage (16.25 %). 4 cases of rupture uterus were reported as shown in [Table 8]. There was no maternal death. Postpartum hospital stay was 8-10 days in most cases (63.75%) as shown in [Table 9]. There were 75 live births (93.75 %) and 5 stillbirths (6.25 %) as shown in [Table 10]. Majority of the babies had Apgar score of > 6(70%) and only 12.5 % had Apgar score less than 4 as shown in [Table 11].

Table 1: Age distribution of study population

Age	Number	Percentage
19-24	38	47.5
25-29	28	35
>29	14	17.5

Table 2: Obstetric history among study population.

Parity	Number	Percentage
Primigravida	38	47.5
Multigravida	28	35
Grandmultigravida	14	17.5

Table 3: Demographic profile.

Residence	Number	Percentage
Rural	62	77.5
Urban	18	22.5

Table 4: Distribution of booked and unbooked cases among study population.

Antenatal Checkup	Number	Percentage
Booked	60	75
Unbooked	20	25

Table 5: Causes of obstructed labour.

Causes	Number	Percentage
Cpd	42	52.5
Malposition/Malpresentation	29	36.25
Congenital Malformation	9	11.25

Table 6: Distribution of study population based on the presence of Bands Ring.

Bands Ring	Number	Percentage
Present	4	5
Absent	76	95

Table 7: Mode of delivery among study population.

Mode	Number	Percentage
Nvd	9	11.25
Lscs	67	83.75
Rupture Uterus Repair	4	5

Table 8: Distribution of maternal complications among study population

Maternal Complications	Number	Percentage
Pph	12	15
Abdominal Distension	20	25
Perineal Injury	5	6.25
Sepsis	6	7.5
Wound Soakage	13	16.25
Uti	10	12.5
Rupture Uterus	4	5
Maternal Death	0	0

Table 9: Duration of hospital stay among Study Population.

Hospital Stay	Number	Percentage
< 7 Days	15	18.75
8 - 10 Days	51	63.75
> 10 Days	14	17.5

Table 10: Fetal outcome among Study Population.

Outcome	Number	Percentage
Live	75	93.75
Stillborn	5	6.25

Table 11: Apgar score At 5 minutes among live Births.

Apgar Score (@5mins)	Number	Percentage
Less Than 4	10	12.5
04-06	14	17.5
More Than 6	56	70

DISCUSSION

In our study, the most common causes of obstructed labour were cephalopelvic disproportion (52.5 %), malpresentation and malposition (36.25 %) and congenital malformation (11.25 %) which was similar to study conducted by Fantu S et al.^[3]

Majority of the patients were primigravida (47.5 %) and were in the age group of 19-24 years (47.5 %) which was similar to study conducted by Rizwi et al,^[4] Anjum Ara (1996).^[5]

Most of the rural population is deprived of health care facilities, hence majority of the patients in our study were from the rural areas (77.5 %), though lower than the study by Islam JA et al.^[6]

Absence of partograph utilisation significantly increased the incidence of obstructed labour. Hence, proper partograph utilisation improves outcomes of labour and reduces obstructed labour.^[3]

Lower segment caesarean section was the commonest mode of delivery (83.75 %) which was higher than konje et al,^[7] which reported caesarean section rate of 82% and Shahneela et al,^[8] which reported caesarean section in 81.1% cases of obstructed labour. There were 4 cases of rupture uterus which were repaired.

In our study, the most common maternal complications were abdominal distension (25 %) followed by wound soakage (16.25 %), postpartum haemorrhage (15 %), urinary tract infection (12.5

%), sepsis (7.5 %), perineal injury (6.25 %), rupture uterus (5 %). These findings were comparable to earlier studies like that of Islam JA et al who reported abdominal distension as the most common complication followed by sepsis in 14.3% and postpartum hemorrhage in 9.6% cases.

Postpartum hospital stay was 8-10 days in most cases (63.75%). J Wanyoike et al,^[9] in his study reported majority of these patients with a postpartum hospital stay of 8 to 14 days (46.7%).

No maternal mortality caused by obstructed labour was seen in our study, as compared to study by Sabyasachi et al (1.60 %),^[10] Rizwi SM et al 4 (0.74%).

Total number of live births were 75 (93.75 %) and stillbirths (6.25 %) whereas J Wanyoike et al reported 81.5 % live births.^[9]

Obstructed labour increases neonatal morbidity also. Adverse fetal outcomes include still birth, intraventricular haemorrhage, birth asphyxia, jaundice and neonatal sepsis. In our study 12.5% of the neonates had an apgar score of < 4, while 17.5% had a score of 4-6.

CONCLUSION

Obstructed labour is a preventable cause of maternal morbidity and mortality.

The three delays model i.e delay in decision to seek health care services, delay in approaching

health care facilities and lastly delay in receiving appropriate health care and timely referral justifies the high incidence of obstructed labour. Lack of health education, proper antenatal care, low socio-economic status, poor referral system are important contributory factors. Early diagnosis of obstructed labour and timely intervention can decrease the incidence of maternal and perinatal morbidity and mortality.

REFERENCES

1. Girma T, Gezimu W, Demeke A. Prevalence, causes, and factors associated with obstructed labour among mothers who gave birth at public health facilities in Mojo Town, Central Ethiopia, 2019: A cross-sectional study. *PLoS One*. 2022;17(9):e0275170. doi: 10.1371/journal.pone.0275170.
2. Cron J. Lessons from the developing world: obstructed labor and the vesico-vaginal fistula. *MedGenMed*. 2003;5(3):24.
3. Fantu S, Segni H, Alemseged F. Incidence, causes and outcome of obstructed labor in jimma university specialized hospital. *Ethiop J Health Sci*. 2010;20(3):145-51. doi: 10.4314/ejhs.v20i3.69443.
4. Rizvi SM, Gandotra N. Maternofetal outcome in obstructed labour in a tertiary care hospital. *Int J Reprod Contraception, Obstet Gynecol*. 2017;4:1410-3.
5. Anjum Ara. Outcome of obstructed labour. *JPMI* 1996;18(3):512-517.
6. Islam JA, Ara G, Choudhury FR. Risk Factors and Outcome of Obstructed Labour at a tertiary care Hospital. *J Shaheed Suhrawardy Med Coll*. 2012;4(2):43-6.
7. Konje JC, Obisesan KA, Ladipo OA. Obstructed labor in Ibadan. *Int J Gynaecol Obstet*. 1992;39(1):17-21. doi: 10.1016/0020-7292(92)90774-d.
8. Shahneela M, Roshan Q, Imdad K. Pattern of obstructed labour at a public sector University Hospital of Sindh, Pakistan. *JLUMHS*. 2009;8(1):60-64.
9. Gichuhi JW, Soita M, Kiragu JM. Pregnancy outcome in women presenting with obstructed labour in a Rural Hospital, Kenya. 2015;4(2):77-86.
10. Mondal S, Chaudhuri A, Kamilya G, Santra D. Fetomaternal outcome in obstructed labor in a peripheral tertiary care hospital. *Med J DY Patil*. 2013;6(2):146-50.
11. Yeshitila YG, Daniel B, Desta M, Kassa GM. Obstructed labor and its effect on adverse maternal and fetal outcomes in Ethiopia: A systematic review and meta-analysis. *PLoS One*. 2022;17(9):e0275400. doi: 10.1371/journal.pone.0275400.