

Maternal and Perinatal Outcome in Obstructed Labour.

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Received: August 2017

Accepted: September 2017

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ABSTRACT

Background: Obstructed labour comprises one of the five major causes of maternal mortality & morbidity in developing countries. It accounts for 5% of all maternal deaths in India unfortunately this preventable condition of obstructed labour still prevails in this part of our country. Our hospital M.K.C.G. medical college being a tertiary care hospital has maximum referred patients from rural areas, viewed in this context this prospective study has been undertaken in department of obstetrics and gynaecology to find out how far this condition prevails and its impact on the labour outcomes. **Aims & objective:** To study the cases of obstructed labour to evaluate maternal morbidity and mortality & perinatal morbidity and mortality. **Methods:** In this study 250 cases of obstructed labour were randomly selected. Each case was managed depending on her own merit. In all cases both the mother & neonate were followed up critically till their discharge from hospital. **Result:** Cephalopelvic disproportion was found to be the most common cause of obstructed labour. Caesarean section was the mode of management in 80.4% of cases. Maternal morbidity was seen in 86% of cases & puerperal pyrexia was the commonest followed by PPH. Maternal mortality was 1.6%. The perinatal mortality rate was 21.14% and birth asphyxia was the commonest neonatal morbidity. **Conclusion:** Early detection of risk factors and timely referral is the best approach in preventing the high maternal and perinatal morbidity & mortality due to obstructed labour.

Keywords: Obstructed labour, maternal mortality, perinatal outcome.

INTRODUCTION

Obstructed labour is one where in spite of good uterine contraction the progressive descent of the presenting part is arrested due to mechanical obstruction, either due to factors in the foetus or in the birth canal or both.^[1] Obstructed labour indicates the lacunae in antenatal & intranatal care and it shouldn't have a place in modern obstetrics. However, in developing countries, obstructed labour which is an entirely preventable condition is still prevalent, its incidence being 5-8% of deliveries in tertiary hospital.^[2] Obstructed labour still stands as one of the significant contributory factors for the high maternal & perinatal morbidity & mortality in developing tolling a good number of young lives each year. Early recognition of this complication and timely intervention is the best approach in improving the outcome.^[3] The objective of the present study is to find out how far this condition prevails in this tertiary hospital catering to a largely rural population and its impact on the labour outcome.

MATERIALS AND METHODS

This is a Prospective study was carried out in the department of obstetrics and gynaecology, M.K.C.G. medical college, Berhampur. period of study was from July 2015 to December 2016. All patients were admitted to labour room with obstructed labour were included.

This study comprised of 250 cases of obstructed labour randomly selected during this period and detailed history including detailed personal profile recorded. Detailed obstetric history of past pregnancy, type, duration and place of delivery were enquired. History of current pregnancy, regular antenatal check-up, duration of labour and type of treatment she had received at the periphery hospital before admission to this institute were noted. A thorough clinical examination was carried out in each case. Then obstetric examination was done. Stage of labour, cause of obstruction and fetal condition were determined. Specific signs of obstruction like stretching of lower segment, oedematous urinary bladder, distention of bowels, prominence of round ligament, presence of bandl's ring, oedematous vulva, dry hot vagina, jammed presenting part with caput succedaneum and moulding were searched for. Each patient is managed depending on her own merit according to the stage of labour, fetal condition and presence or absence of rupture. Modalities of management were

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caesarean section, forceps delivery or destructive operation if foetus were dead. Cases of rupture uterus were managed by exploratory laparotomy. In all cases both the mother and neonate were followed up critically with respect to the morbidities and mortality till their discharge from hospital.

RESULTS

In this study, a total of 250 cases of obstructed labour were enrolled. During this period, a total of 10,512 deliveries were conducted in our hospital which included 250 cases of obstructed labour giving an incidence of 3.67%.

Table 1: Demographic Profile.

Characteristics	Number	%
Age		
<20	47	18.8
20-30	181	72.4
>30	22	8.8
Parity		
0	152	60.8
1	52	20.8
2-3	27	10.8
≥4	19	7.6
Rural-Urban distribution		
Rural	181	72.4
Urban	69	27.6
Education status		
Illiterate	132	52.8
Literate	118	47.2
Socioeconomic status		
Lower	216	86.4
Upper	34	13.6
Middle	0	0
ANC check-up		
Booked	179	71.6
Unbooked	71	28.4

Table 2: Place of Intranatal Care Before Admission

Received from	cases	%
Home	9	3.6
ANM/SBA	43	17.2
FRU	160	64.0
SRU	38	15.2
Total	250	100.0

Table 3: Duration Of Labour At Admission

Duration in hour	No. of cases	%
<12	39	15.6
12-24	177	70.8
>24	34	13.6



Figure 1: Causes of Obstructed Labour

CPD was the most frequent cause of obstruction while malpresentation and malposition contributed to 42% cases of obstruction.

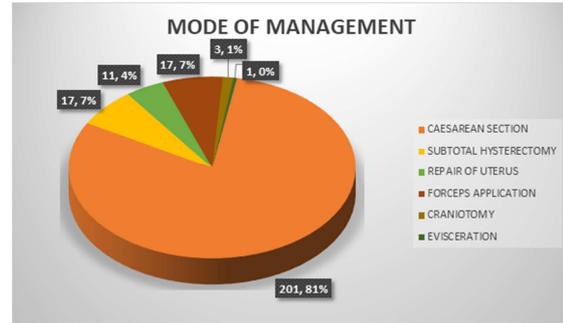


Figure 2: Modes Of Managements

Caesarean section was the mode of delivery in management (80.4%) subtotal hysterectomy was done in 6.8% and repair of uterus was done in 4.4% of cases of rupture (28) uterus which was encountered during operation.

Table 4: Causes of Maternal Morbidity

Maternal morbidity		
Complication	cases	%
Pyrexia	94	37.6
PPH	52	20.8
Abdominal distension	44	17.6
Anaemia	43	17.2
Wound infection	36	14.4
UTI	24	9.6
Wound dehiscence	15	6.0
Thrombophlebitis	8	3.2
Peritonitis	6	2.4
Shock	4	1.6
Burst abdomen	3	1.2
Septicaemia	3	1.2
VVF	2	0.8
Total	216	86.4

Out of 250 cases of obstructed labour 216 (86.4%) had one or more morbidities. Puerperal pyrexia was the most common followed by postpartum haemorrhage. VVF was reported in 2 cases.

Table 5: Causes Of Maternal Mortality

Causes of maternal mortality		
Cause	No. of cases	%
Endotoxic shock	3	1.2
Primary PPH	1	0.4
Total	4	1.6

There were 4 maternal deaths. 3 were due to endotoxic shock and one case due to PPH.

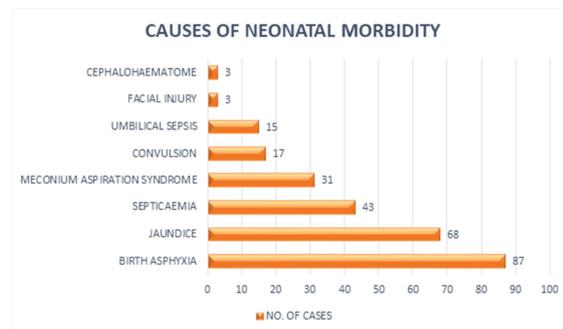


Figure 3: Causes Of Neonatal Morbidity

Birth asphyxia was the commonest cause of neonatal morbidity.

Table 6: Neonatal Mortality

Neonatal mortality		
Cause	No. of cases	
Birth asphyxia	13	59.17
Septicaemia	7	29.16
Meconium aspiration syndrome	4	16.67
Total	24	100

Mortality of neonatal deaths were due to severe birth asphyxia followed by septicaemia. Out of 227 live birth, there were 24 neonatal deaths so neonatal death rate was 10.57%.

Table 7: Perinatal Outcome

Perinatal outcome		
Outcome	No. of cases	%
Live birth	227	
Neonatal death	24	9.56
Delivered alive	203	80.88
Still birth	24	
Fresh	19	7.57
Macerated	5	1.99
Total	251*	100

There were 227 live birth and 24 neonatal deaths. Of within 1 week and 203 babies were delivered alive. So perinatal death rate was 19.12% of all cases studied.

- Including one locked twin where first baby was breech, dead and half delivered; the other baby survived without any complication.

DISCUSSION

Frequent incidence of obstructed labour and its adverse outcomes created necessary stimulations for the present perspective study in critically evaluating the course of obstructed labour and to identify the preventable factors to reduce the prevalence of this obstetric tragedy and its uncherished outcome. During the period of 1 ½ year 10,512 deliveries were conducted in our hospital, which included 250 cases of obstructed labour. Thus, the incidence of obstructed labour comes out to be 3.67% of cases which is comparable to Anjum Ara (2004).^[4]

In the present study of 250 cases, mortality (72.4%) were between the age 21-30 years, primi gravida (60.8%), from rural areas, low socioeconomic status and illiterate. But 71.6% of cases were booked cases [Table 1]. More no. of booked cases is a reflection of ongoing JSY, JSSK and presence of ASHA in the rural areas of the state. Majority of cases were reflected from PHC and CHC. Maximum cases were admitted after 12 hours of labour pain. In the present study CPD was the most leading cause of obstruction comprising 54.4%. Of cases which is comparable Dafallah et al Neena chuni (2008) and Shimelis et al (2010).^[5-7] Malpresentation and

malposition have taken together contributed 42% of cases in the present study which is similar to the incidence of 45.4% and 50.5% as reported by Neena chuni (2008) and Islam et al (2012).^[6,8] In the present study caesarean section was done in 80.4% of cases which is comparable with the Neena chuni (2008) series where CS was done in 82.1% of cases.^[6] In the modern era, CS under good antibiotics coverage has a very low morbidity and mortality and it is the best option.

Different complications during operative procedure and vaginal delivery were encountered. Rupture uterus was found in 28 (11.2%) of cases followed by PPH in 9.6% of cases. Sometimes the ruptures are incomplete and without classic signs, rupture was not possible to detect before laparotomy.

This is comparable well with study by Ritu Gupta (2012) 7.1% and 8.4% reported by Neena chuni (2008).^[6,9] 216 cases had one or more morbidities. Puerperal pyrexia was the most frequent followed by PPH. Abdominal distention was seen in 17.6% of cases, blood transfusion required in 17.2% and wound infection was reported in 14.4% of cases.

There were 4 maternal deaths in the present study. Out of 250 cases of obstructed labour. Thus, MMR was 1.6% maternal death rate was 2.04% in Adhikari et al (2005) and 6.8% was reported by Neena Chenu (2008).^[6,10]

Out of 227 live births, birth asphyxia (38.33%) was the most common morbidity followed by Icterus (29.96%) and septicaemia (18.94%). Birth asphyxia is the frequent and foremost cause of neonatal mortality. In the present study, the perinatal death rate was 19.12% comparable with 27.1% in Dafallah et al (2003) and 22.8% in Islam et al (2012) series.^[5,7] However, it is quite less as compared to reported in Neena Chenu series in 2008 as 58%.^[6]

CONCLUSION

Obstructed labour is a quite frequently encountered obstetric complication in our hospital. Its incidence can be minimized by effective ANC and its anticipation in women with risk factors like contracted pelvis, short stature, CPD and Malpresentation. So early detection of risk factors, timely referral and its prompt management are the best approach in preventing the high maternal and perinatal morbidity and mortality associated with obstructed labour.

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How to cite this article: Mohapatra S, Patel J. Maternal and Perinatal Outcome in obstructed labour. Ann. Int. Med. Den. Res. 2017; 3(6):OG01-OG04.

Source of Support: Nil, **Conflict of Interest:** None declared