ORIGINAL RESEARCH PAPER

Obstetrics & Gynecology

FETO MATERNAL OUTCOME OF OBSTRUCTED LABOUR IN GOVERNMENT GENERAL HOSPITAL , A TERTIARY CARE HOSPITAL, KADAPA ,ANDHRA PRADESH.

KEY WORDS: Obstructed Labour, Cephalopelvic Disproportion, Perinatal Mortality

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ABSTRACT

BACKGROUND: Obstructed labour is still a major cause of maternal morbidity and mortality and adverse outcome of new-born in developing countries. It is the leading cause of hospitalization, comprising 39% of obstetric patients in developing countries. Objectives:To study frequency, causes, outcome and complications of obstructed labour.
METHODS: 49 patients admitted with feature of obstructed labour were studied. Detailed history included sociodemographic factors, obstetric history, features of obstruction, intrapartum events condition of patients, mode of delivery, postoperative complications, maternal and foetal outcome were recorded.
RESULTS: A total of 8048deliveries were conducted during one year,49 cases of obstructed labour were found with incidence of 0.6%. Out of the obstructed labour 81.6 % of the patients were from rural areas and 16.33%of patients were unbooked and 57.14% patients were primigravida. The commonest cause of obstructed labour was cephalopelvic disproportion (61.22%) followed by Malposition (38.77%). The mode of delivery was caesarean section. Destructive procedures are discouraged in our setup. Rupture uterus was seen in 2 cases (4.08%) and hysterectomy was performed in 2 patients (4.08%). The common maternal complications were sepsis, pyrexia (20.4%), surgical site infections (16.32%), urinary tract infection (12.24%), abdominal distention (10.2%), postpartum haemorrhage (10.2%). Perinatal mortality was 3/49(6.12%), live birth rate 46/49(93.8%), still birth rate 2/49 (4.08%). Perinatal morbidity was most commonly due to birth asphyxia, meconium aspiration syndrome.
CONCLUSIONS: Obstructed labour is a preventable condition prevalent in developing countries. Improving nutrition, antenatal care, early diagnosis and timely intervention may result in decrease in incidence of morbidity and mortality.

INTRODUCTION:

Labour is considered abnormal when the presenting part of the foetus cannot progress in to the birth canal, despite strong uterine contractions which leads to various maternal or foetal complications [2]. Obstructed labour accounts for about 8% of all maternal deaths in developing countries like India [3]. Obstructed labour is the single most important cause of maternal death and is one of the leading causes of perinatal mortality [5] . Maternal mortality ranges between 1% and 13% and perinatal mortality between 74% and 92% [6,7].It is one of the most common preventable causes of maternal morbidity and mortality in developing countries.

Each year 210 million women become pregnant of whom 20 million will experience pregnancy related illness and 500,000 will die as a result of complications of pregnancy or child birth [8].In 1987, the world health organisation launched the safe motherhood initiative which aimed to reduce maternal morbidity and mortality by 50% by year 2000.This initiative did not succeed, but maternal continuous to be a major focus of WHO effort . The current WHO initiative [9] is to reduce maternal mortality to 75% of 1990 level by 2015. If this is to be successful , the problem of obstructed labour will need to addressed effectively.

Maternal mortality from obstructed labour is mainly due to rupture uterus and puerperal infection . whereas perinatal mortality is mainly due to asphyxia .Significant maternal morbidity is associated with prolonged labour . Obstetric fistulas are long term complications.Traumatic delivery affects both mother and child [8,9].

There are differences in the behaviour of uterus during obstructed labour depending upon whether the women had delivered previously .The pattern in primigravida women may result from tissue necrosis where as in parous women ,contractility may be maintained with risk of uterine rupture [10]. The present study was conducted to detect the risk factors ,presentation management, outcome of obstructed labour in a tertiary care centre ,so that early intervention strategies may decrease the incidence of morbidity and mortality.

OBJECTIVES:

To study the incidence ,causes, management, outcome and complications of obstructed labour.This will help to formulate a positive strategy in our setup to prevent obstructed labour and its consequences.

METHODS:

This is a retrospective study of obstructed labour studied from June 2018 to may 2019 in the department of obstetrics and gynaecology , government medical college ,Kadapa, Andhra Pradesh ,a tertiary care hospital, where cases are referred from peripheral hospitals and rural areas. All patients with obstructed labour were included in the study.

Detailed history regarding age, socioeconomic status, parity, previous obstetric history ,antenatal care, duration of labour, details of referral and management were recorded. The general condition of mother was assessed, as well as foetal lie, presentation ,position and heart sounds were recorded. Pelvic examination was carried out to assess the cervical dilatation ,state of amniotic fluid , position, pelvic assessment ,degree of caput and moulding .Diagnosis of maternal exhaustion, dehydration , sepsis, pyrexia, rupture uterus, post partum haemorrhage, shock and vesicovaginal fistulas were made .Any death occurring asphyxiated or dead foetus or neonatal death was done by taking APGAR score at 1 and 5 minutes following birth . Assisted vaginal delivery and destructive procedures were discouraged in our set up .Mode of delivery (caesarean section),time interval between referrals , admission , intervention done at tertiary care centre and related feto maternal outcome was recorded , which includes abdominal distension , postpartum haemorrhage , foul smelling discharge, fever, character of wound ,burning micturition ,urinary incontinence . Foetal condition was assessed by nature of feeding ,development of jaundice , neonatal infections. Outcome and complications of lower segment caesarean section were recorded.

RESULTS:

Table 1: Magnitude of obstructed labour.

Total deliveries	Obstructed labour	Percentage
8048	49	0.6%

During the study period a total of 8048 deliveries of which 49 cases were diagnosed to have obstructed labour, incidence being 0.6%.

Table 2: Demographic profile

Characteristics	Number	Percentage
Residence		
Rural	40	81.6%
Urban	9	18.4%
Antenatal checkup		
Booked	41	83.67%
Unbooked	8	16.33%

81.6% of the patients were from rural areas and 16.33% of the patients were un booked.

Table 3: Age distribution of patients

Age (years)	Number	Percentage
19-24	26	53.06%
25-29	13	26.53%
>30	10	20.40%

Maximum cases were in age group of 19-24 years (53.06%).

Table 4: Parity of patients of obstructed labour.

PARITY	Number	percentage
Primigravida	28	57.14%
Multigravida (<3)	17	34.69%
Grand multigravida(>3)	4	8.16%

Incidence of obstructed labour was maximum among primi gravida 57.14% .The commonest mode of delivery was caesarean section (100%). Instrumental deliveries were discouraged in our setup .

Table 5: Causes of obstructed labour

Causes	Number	Percentage
Cephalopelvic disproportion	30	61.22%
Malposition	19	38.77%
Malpresentation	Nil	
Fetal congenital anomaly	Nil	
Myoma	Nil	
Previous cesarean section	Nil	
Others (non-dilation of cervix)	Nil	

The commonest cause of obstructed labour was cephal opelvic disproportion (61.22%) followed by malposition (38.77%).

Table 6: Maternal complications of obstructed labour

Complication	Number	Percentage
Maternal Sepsis		
Pyrexia	10	20.4%
Urinary Tract infection	6	12.24%
Wound Infection	8	16.32%
Postpartum Haemorrhage	5	10.2%
Rupture Uterus	2	4.08%
Vesico Vaginal Fistula	0	
Bladder Injury	1	2.04%
Hysterectomy	2	4.08%
Maternal Death	0	
Broad Ligament Hematoma	0	
Abdominal Distention	5	10.20%
No Complications	10	20.40%

The most common maternal complications were sepsis (pyrexia (20.4%), urinary tract infection (12.24%), wound infections (16.32%), abdominal distention (10.2%), post-partum haemorrhage (PPH) (10.2%). Rupture uterus was present in 2 cases and hysterectomy was done for both cases. Other complications were Rupture uterus (4.08%); vesico vaginal fistula (0%), bladder injury (2.04%), hysterectomy (4.08%), broad ligament hematoma (0%).

Table 7: Foetal outcome of obstructed labour

Outcome	Number	Percentage
Still Births	2	4.08%
Live births	47	95.91%

There were no maternal deaths due to complications associated with obstructed labour. Total live births were 47 (95.91%) and 2 (4.08%) were still births . There were total 2 perinatal deaths and both still births are due severe asphyxia

Table 8: Perinatal complications of obstructed labour.

Morbidity	Number	Percentage
Birth Asphyxia	5	10.20%
Septicemia	4	8.16%
Meconium Aspiration Syndrome	4	8.16%
Convulsions	4	8.16%
Jaundice	5	10.16%
Umbilical Sepsis	1	2.04%
No Complications	24	48.97%

Perinatal complications included birth asphyxia (10.20%), jaundice (10.16%), and septicaemia (8.16%), meconium aspiration syndrome (8.16%).

Table 9: Referral in

	Number	Percentage
Referred from peripheries	29	59.18%
Inpatient	20	40.81%

Maximum cases presented with obstructed labour (59.18%) were referred from peripheral primary and secondary care at last minute

DISCUSSION

The incidence of obstructed labour in the present study was 0.6% which was lower than the incidence by Rizvi SM et al [1] (1.71%) ,Fantu et al[11] (12.2%), 4.2% by Islam et al,[12] 2.7% by Ikojo et al[13] 3.3 % by Gassessew et al[14] 2.1 % by Menon et al, 3.2% by Aboyeji et al.[15] by Sabyasachi et al[16] 1.64%, 1.1% by Ritu et al,[17] 0.8% by Omele-ohonsi et al,[19] 1.27% by Dafallah et al[19]. It was higher than the incidence reported by Adhikari et al,[18] 0.56% , The decreasing trend is a reflection of improvement in antenatal and intranatal care.

In our study, common causes of obstructed labour were cephalopelvic disproportion (61.22%), Malposition (38.77%). Mostly the patients were primigravida (57.14%) and of age group 19-24 years (53.06%). The incidence of obstructed labour was higher in booked patients (83.1) contradictory to study done by Rizvi SM et al [1], Shimelis and Fantu et al.[11] 81.6% of the patients who presented with features of obstruction were from rural areas showing lack of proper healthcare facilities.

Lower segment caesarean section was the commonest method of delivery (100%). In our centre destructive procedures and instrumental procedures were not encouraged. There were total 2 cases of rupture uterus and 2 underwent total hysterectomy neither of ruptured uterus were rescued .

Maternal mortality in the study group was nil(0%), lower than study by Rizvi SM et al [1](0.74%) Sabyasachi et al [16](1.60%), Adhikari et al[18] (2.04%), Nwogu-ikojo[13] et al (3.3%) showing the timely management of the patient in our set up. In our study common maternal complications were maternal sepsis (pyrexia (20.40%), urinary tract infection (12.24%), wound infection (16.32%), abdominal distention (10.2%), Post-partum hemorrhage (10.2%), rupture uterus (4.08%). Vesico vaginal fistula was not noted.

The total number of live births were 47 (95.91%) and still birth 2 (4.08%). Perinatal mortality reported from various studies was as follows: Rizvi SM et al [1](26.6%), Dafallah et al[19] 27.1%, Neena et al[20] 38%, Sabyasachi[16] et al 22.68%. In our study perinatal mortality was 2/49(4.08%). Perinatal morbidity was commonly due to birth asphyxia (10.2%), Jaundice (10.2%), Septicemia (8.16%), Meconium aspiration syndrome (8.16%).

CONCLUSIONS

Obstructed labour continues to be a major cause of maternal and perinatal morbidity in low income countries and accounts for approximately 8% of maternal deaths globally. The common mode of delivery is by caesarean section. Poor referral system, low socioeconomic status, inadequate antenatal care services lead to many cases of obstructed labour. They are further compounded by poor road connectivity resulting in delayed specialized care. Lack of well quipped secondary and tertiary care centres that are adequately staffed is also an important factor for better obstetric care. Early recognition of obstructed labour cases and immediate safe abdominal delivery can decrease the incidence of maternal and perinatal morbidity and mortality. Addressing socio demographic determinants will certainly contribute towards reducing the incidence of obstructed labour.

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