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INCIDENCE & FETOMATERNAL OUTCOME IN OBSTRUCTED LABOUR IN RIMS

Obstetrics & Gynaecology

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ABSTRACT

AIM - To determine incidence & fetomaternal outcome in obstructed labour in RIMS.

INTRODUCTION- Obstructed labour is defined as a condition where inspite of good uterine contraction progressive descent of presenting part is arrested due to mechanical obstruction. It is one of the common preventable causes of maternal and perinatal morbidity & mortality in developing countries.

MATERIAL & METHOD- Hospital based cross sectional study was conducted on patients admitted in labour room with obstruction from June 2015 to March 2016. Data was collected taking in consideration relevant points related to pregnancy & delivery after obtaining ethical consent.

RESULT- Total number of deliveries during this period was 3300 & the incidence of obstructed labour was 3.03%. 80 % of cases was unbooked coming from rural areas. 63% of obstruction was observed in primigravida where cephalopelvic disproportion was the main cause and 37% was due to malpresentation. Most important maternal complication was sepsis 10 % & rupture of uterus was 6%. 1% had vesicovaginal fistula & maternal mortality was observed in 3%. Perinatal mortality was high 34%. 46% of fetus was born alive with low 1st minute Apgar score.

CONCLUSION- Obstructed labour is an important cause of maternal and perinatal morbidity and mortality. It's incidence and outcome is yardstick to judge nations health care in general and obstetric care in particular.

It is a preventable cause so early detection and effective management can prevent the hazard, concerned comprehensive obstetric care in nearby health institution is recommended.

KEYWORDS

Obstructed labour, rupture uterus, cephalopelvic disproportion, fistula.

INTRODUCTION

Each year 210 million women become pregnant of whoom 20 million will experience pregnancy related illness and 500000 will die as a result of complication of pregnancy and childbirth [1].

Obstructed labour also known as labour dystocia is when even though the uterus is contracting normally, the baby does not exit the pelvis during childbirth due to being physically blocked [2]. This lead to obstructed labour & spontaneous delivery of the fetus through natural passage becomes impossible.

Bandl first clinically recognized the pathological retraction ring in 1875 known as Bandl ring. It is the ring or furrow which forms at the junction of upper active segment and passive stretching or lower segment readily recognized by palpation through the abdominal wall. Several studies have described Bandl's ring and thinning of lower segment as definite sign of obstruction.

Obstructed labour is a hazardous clinical problem met in obstetrical practice. In a developing country like India where female literacy rate is low, maximum living in rural areas with no antenatal care and majority of them being delivered at home. It is not unusual to record 2 to 5% incidence of obstructed labour in referral hospitals. Obstructed labour accounts for 10% maternal mortality and 40 to140 per thousand perinatal mortality rates.

Such cases are unbooked brought late in labour with ruptured membrane infected and in a state of exhaustion. There is a risk of ruptured uterus, postpartum haemorrhage, septic shock, peritonitis and damage to surrounding pelvic structure. About 2% developed urinary fistula causing maternal morbidity.

It increases the risk of mother getting an infection , having uterine rupture or having postpartum bleeding [3]. Long term complication for the mother include obstetric fistula [4].

Main cause of obstructed labour include large or abnormally positioned baby, small pelvis and problems with birth canal. Risk factor for small pelvis includes malnutrition and lack of exposure to sunlight causing vitamin D deficiency [5]. It is also common in adolescent as the pelvis does not complete its growth. Partograph combined with clinical examination may identify obstructed labour. Once it is diagnosed active interference is called for. Lower section caesarean section, caesarean hysterectomy, forceps application or various forms of destructive operation are performed depending upon age of patients, parity, etiology and maternal and fetal condition.

Good antenatal care is available to only a fraction of patients. Patients are brought very late in an exhausted state after failed manipulation by untrained dais. Such types of cases are difficult to deal with. Favourable outcome cannot be expected. Present study has been undertaken to find the incidence of maternal and fetal morbidity and mortality due to obstructed labour.

MATERIALAND METHOD

The present study was carried out in the deppt. of Obstetrics and Gynaecology admitted in labour room and presented as obstructed labour from the period June 2016 to March 2017.

All cases of obstructed labour and their outcome were studied in relation to age, parity, antenatal check-up, socioeconomic condition, Clinical features and maternal and perinatal management. Detail history with general and obstetrical examination was done.

Selection of patient was based on the following criteria:

1. Maternal sign of exhaustion
2. Feature of dehydration
3. Rupture of membrane in early stage
4. Slow progress of labour
5. Overstretching and distension of lower segment
6. Oedematous or full bladder
7. Formation of caput succedaneum

Routine laboratory investigation with bedside ultrasound was done to exclude abnormal presentation, multiple pregnancy, congenital malformation of baby e.g. hydrocephalus.

Management was done depending upon the condition of mother and baby. Mode of delivery was instrumental, caesarean section or laparotomy for rupture uterus. To prevent puerperal sepsis broad spectrum antibiotic was used. During discharge of patients from the hospitals proper counselling was done regarding regular antenatal check up and institutional delivery. Contraceptive advice was given taking into account choice of patients.

OBSERVATION

Present observation is on 100 cases of obstructed labour out of 3300 cases admitted in labour room of Rajendra institute of Medical Sciences, Ranchi during the period of June 2016 and March 2017.

Incidence of obstructed labour in present study is 3.03% Majority 80% cases were unbooked with no antenatal check up. However the incidence was low 20% in patients who had antenatal check up.

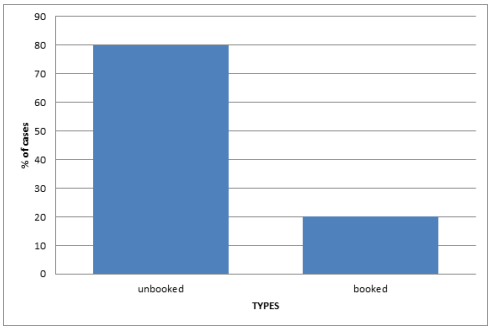

Figure 1

Incidence in primigravida was 63% compared to multiparity 3 and above where the incidence was 8%.

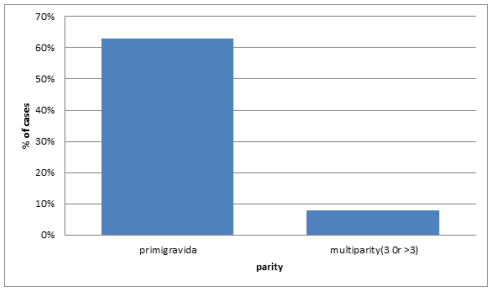

Figure 2

Table 1: Cause of obstructed labour

1) Pelvic disproportion	60%
2) Malpresentation & Malposition DTA (Deep Transverse Arrest) Shoulder presentation Brow presentation Mentoposterior (face) Impacted breech	37% 6% 20% 1% 1% 9%
3) Cervical dystocia	1%
4) Pelvic tumour	1%
5) Hydrocephalus	1%

Table 2: Mode of delivery

1) LSCS	82%
2) Force delivery	7%
3) Laparotomy Caesarean hysterectomy Repair of rent	9% 5% 4%
4) Destructive operation	2%

Table 3: Complication in obstructed labour

Postpartum haemorrhage	3%
Extension of incision	4%
Peritonitis	3%
Wound infection	10%
Post operative shock	2%
Burst abdomen	1%
Vesicovaginal fistula	1%
Cervical tear	2%
Pyrexia	9%
Rupture uterus	6%
Maternal mortality	3%
Post partum psychosis	1%
Perinatal mortality	34%
No complication	55%

DISCUSSION

Major cause of obstructed labour in our study was cephalopelvic disproportion 60% followed by malpresentation. Incidence was 3.03%. In Africa and Asia obstructed labour affects between 2% and 5% of deliveries [6]. The bigger size of the babies in subsequent pregnancy also predispose to cephalopelvic disproportion in multigravida [7]. Malpresentation was the second most common cause of obstructed labour & principally confined to multigravida. Laxity of abdominal musculature, lumbar lordosis and obesity contribute to pendulous abdomen leading to malpresention and malposition and ineffective bearing down effort during second stage of labour [8]. Deep transverse arrest and shoulder presentation were the main offenders causing obstruction.

In our study LSCS was the most common form of management done in 82% of cases. If caesarean section is done timely prognosis is good for mother and baby.

Rupture uterus is a hazardous complication which occurred in 5% of cases in our study. In 2015 about 6.5 million cases of obstructed labour or ruptured uterus occurred [9]. Obstructed labour is the leading cause of uterine rupture worldwide. It is very rare in primigravida. A recent 7 yr review carried out in Ghana found that rupture was due to prolonged labour in around 1/3 rd of all cases [10]. Similar figure have been reported from other regions e.g. in New Delhi 27% of rupture uterus in a 5yr period were due to obstructed labour [11]. Uterine rupture is life threatening because of haemorrhage and is often treated by abdominal hysterectomy. Perinatal mortality in above study was around 75% and maternal death was 1–3%. Women who have undergone caesarean section previously for obstructed labour are particularly at risk of uterine rupture in subsequent labour especially if stimulated by uterotonic drugs. Most death due to uterine rupture occurs in the developing world. In 2013 it resulted in 19000 maternal deaths down from 29000 deaths in 1990 [12].

Prolonged obstructed labour can lead to stillbirth, obstetric fistula and maternal death [13]. Vesicovaginal fistula was present in 1% of our study. It results from ischemic necrosis or direct injury during surgery. Other complications are postpartum haemorrhage, subinvolution of uterus, sepsis and shock.

It is one of the leading causes of stillbirth [14]. Besides perinatal mortality the newborn can suffer convulsion, sepsis, injury and asphyxia from obstructed labour.

CONCLUSION

Obstructed labour is a preventable condition. Health education should be promoted in rural areas and antenatal care with institutional delivery should be encouraged. Major cause of small pelvis is poor nutrition during childhood persisting into adult life. Another issue is early marriage. The community must be advised against early marriage and the importance of atleast delaying the first birth till after the age of 18 yrs. Obstructed labour is major obstetric problem resulting in maternal and perinatal morbidity and mortality. Timely detection and proper management can certainly bring down this dreadful problem.

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