OUTCOME OF OBSTRUCTED LABOUR

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ABSTRACT

Objective: To evaluate the faetal and maternal morbidity and mortality associated with obstructed labour.

Material and Methods: A prospective study of outcome of obstructed labour was conducted in Gynae "A" Unit of Khyber Teaching Hospital, Peshawar, over a period of two years extending from 1st December 1996 to 1st December 1998.

Results: 6280 deliveries were conducted during this period and 284 cases of obstructed labour were found constituting an incidence of 4.52%. 94.8% patients came in emergency and 5.2% were booked patients. The most common cause of obstructed labour was cephalo-pelvic disproportion (47.5%) followed by fetal malposition and malpresentation (45.5%). The majority of these patients were between 25-29 years of age and primigravida. Caesarean section was the most common mode of delivery. Maternal morbidity due to different complications accounted for 84.1% of the cases while fetal morbidity occurred in 47.8% of the cases. The maternal mortality in this series was 1% and perinatal mortality 38%.

Conclusion: In our study the incidence of obstructed labour is very high. Improving the access to and promoting the use of reproductive and contraceptive services will help reduce the prevelance of this complication.

Key words: Obstructed labour, Cephalo pelvic disproportion, C Section.

INTRODUCTION

Obstructed labour is a life threatening obstetric complication associated with significant maternal and fetal morbidity and mortality.[1] It is one of the most common preventable cause of maternal and perinatal morbidity and mortality in developing countries.[2]

The common causes of this condition are cephalopelvic disproportion, fetal malposition and malpresentation. Recognizing the causes of obstructed labour are important to prevent the complications.[2] It can be antici-

pated in multiparas based on obstetrical history.[3]

It is isolated almost exclusively to the developing world and has not received the international attention that it deserves, from either medical or a social stand point.[4]

Hayat Shaheed Teaching Hospital, Peshawar is a tertiary care hospital where cases are referred from maternity homes, private hospitals and general practitioners in Peshawar, other parts of NWFP and most of Afghanistan. Due to poor transport facilities and long distance most of the patients are brought late in morbid state.

MATERIAL AND METHODS

This was a prospective observational study carried out from December 1996 to December 1998 in Gynae "A" Unit of Hayat Shaheed Teaching Hospital, Peshawar.

284 patients were included in the study. All patients admitted with obstructed labour or those developing this condition in the hospital were included. A detailed history including obstetrical details of present and past pregnancy and details of intrapartum events were recorded. Condition of patient was noted, peri-operative findings, mode of delivery, associated complications, maternal and fetal outcome were also recorded. An effort was made to detect avoidable etiological factors, to ensure a decrease in prevelance of obstructed labour and its associated maternal and fetal morbidity and mortality.

RESULTS

During the study period 6280 women were delivered in Gynae "A" Unit. The incidence of obstructed labour was 4.53%.

Obstructed labour was more common in primigravidae (40.8%) and age group of 20-30 years (55.6%). The youngest patient was a 14 years old primigravida having contracted pelvis. She had intra-natal death and delivered fresh still born by lower segment caesarean section (Table No. 1). Two cases had gross fetal ascites. They presented at term in labour with footling breech and fully dilated. Fetal abdominal ascites was drained suprapubically after emptying the urinary cervices with foley's catheter. About 3000 cc of clear ascitic fluid was drained followed by spontaneous delivery of fetal abdomen and head in both the cases.

CHARACTERISTICS OF PATIENTS.

N = 284

Age in Years	Number of patients	Percentage
< 20	45	15.9%
20-30	157	55.6%
> 30	82	28.4%

Parity	Number of patients	Percentage
0	116	40.8%
1-5	89	31.4%
> 5	79	27.8%

TABLE–I

Nearly all patients were admitted through the emergency department with history of labour 12-36 hours prior to admission. 267 (94%) of the patients in the study had received oxytocin injection either by Traditional Birth Attendant at home or by doctor at private clinic. Once the diagnosis of obstructed labour was made the patient required urgent and active resuscitative measures followed by immediate delivery.

Fourty five (15.8%) patients were admitted with hand prolapse, 10 (3.5%) with antepartum haemorrhage, 5 cases (1.7%) with cessation of contractions. 205 cases (72%) had history of handling by Traditional Birth Attendant, 267 (94%) had history of oxytocin injection/infusion (Table-2).

ASSOCIATED PRESENTATION OF PATIENTS WITH OBSTRUCTED LABOUR.

Presentation	Number of patients	Percentage
Hand prolapse	45	15.8%
Antepartum haemorrhage	10	3.5%
Cessation of labour pains	5	1.7%
Shock	4	1.4%
Stuck fetal abdomen	2	0.70%
Stuck fetal head	2	0.70%
History of oxytocin injection/infusion	267	94%
History of handling by TBA	205	72%

TABLE-2

The common cause of obstructed labour was cephalopelvic disproportion followed by fetal malpresentation and malposition (Table-3).

CAUSES OF OBSTRUCTED LABOUR.

Causes of Obstructed Labour	Number of patients	Percentage
1. Cephalopelvic disproportion	135	47.5%
2. Malposition of fetus	59	21.3%
– Persistent occipitoposterior	5	2%
– Deep transverse arrest	26	9.2%
– Face presentation	17	6.1%
– Brow presentation	11	4.0%
3. Malpresentation		
– Transverse lie	68	24.2%
4. Fetal abnormality	16	7.8%
– Hydrocephalus	14	7.1%
– Fetal ascites	2	0.7%

TABLE-3

Majority of the patients were delivered by caesarean section (246 cases). Eighteen cases (6%) were delivered by outlet forceps and 3 cases (1%) with ventous extraction for deep transverse arrest. 11 (4%) caesarean hysterectomies were performed out of which 9 were for rupture uterus and 2 for postpartum haemorrhage due to uterine atony. In 6 cases (2%) rupture uterus was diagnosed at the time of caesarean section and was repaired. They had previous one caesarean section and were admitted in emergency with obstructed labour (Table-4). All deliveries were done by senior residents, followed by close surveillance in the post-operative ward or intensive care unit.

MODE OF DELIVERY.

Mode of Delivery	Number of patients	Percentage
Caesarean section	246	86.6%
Forceps delivery	18	6%
Laparatomy and STAH	11	3.6%
Repair of rupture uterus	6	2%
Ventous extraction	3	1%

TABLE-4

Many patients had more than one complication. The most common complication was abdominal distension (40.8%). Fifteen cases (5.2%) had rupture uterus out of which 6 (2%) patients had scared uterus. Three patients (1%) died due to postpartum haemorrhage (Table-5).

One hundred and ninety six (69%) fetuses were live born and 88 (31%) were still born. 20 neonates (7%) died within first week of life due to neonatal complications (Table-6). Perinatal mortality was 38%.

COMPLICATIONS OF OBSTRUCTED LABOUR.

Maternal Complications	Number of patients	Percentage
Abdominal distension	115	40.8%
Urinary tract infection	50	17.5%
Puerperal sepsis	29	10.4%
Wound sepsis	16	5.7%
Rupture uterus	15	5.2%
Postpartum haemorrhage	7	2.5%
Vesicovaginal fistula	3	1%
Mortality	3	1%

Fetal Complications	Number of Fetuses	Percentage
Asphaxia	60	21%
Neonatal sepsis	45	15.8%
Neonatal death	20	7%
Severe neonatal jaundice	10	3.5%
Facial palsy	1	0.35%

TABLE-5

CONDITION OF FETUS AT BIRTH.

Condition of Fetus at birth	Number of new born	Percentage
Alive	196	69%
Still born	88	31%

TABLE-6

DISCUSSION

Obstructed labour is defined as failure of progress of labour inspite of good uterine contractions. This may be due to failure of cervix to dilate or failure of the presenting part to descend through the birth canal for mechanical reasons.

The incidence of obstructed labour in this study was 1 in 22 deliveries (4.5%) which is comparable to those reported in local studies from Hyderabad (3.32%),[6] 4% in district headquarter hospital Faisalabad.[7]

It is comparable to the study done in Nigeria[8] in which its incidence is 4.7%. The incidence is reflective of over all health care system, illiteracy, poverty, lack of vigilant obstetric care coupled with delayed referral and poor facilities for transport of patients from remote areas. The incidence is much lower in developed countries. In a study by Biswas A et al 2001 it is 1.17%[9] which is in sharp contrast to our study. This low incidence may be due to early reporting of patients to hospital and good quality of antenatal care.

Mostly obstructed labour occurred in non-booked, primigravidae from rural areas and those belonging to poor class. Health education is suggested specially of primigravidae whose pelvis has not been tested before and of grand multiparae who are unaware of the problems they can face. They usually avoid hospital for antenatal and intranatal care, prefer at home to be delivered by Traditional Birth Attendant, and are referred to the hospital late in labour when delivery fails to occur.

Regarding complications of obstructed labour, abdominal distension (40.8%) was the most common complication followed by urinary tract infection (17.5%). Uterine rupture was seen in 5.2% cases in our study. Rupture uterus is the common sequelae of obstructed labour.[10,11] In a study of 62 cases of obstructed labour conducted by Khan Sadia and Roohi M at a district headquarter hospital, Faisalabad[7] the incidence was 8% which is higher than our study. This may be due to referral of most of the very mismanaged patient of our area to Lady Reading Hospital, Peshawar (tertiary care hospital) be cause of its easy location and

being known to people for more than 50 years.

Vesicovaginal fistula is a well known late sequelae of prolonged obstructed labour.[12,13] In our study 1% patients developed vesicovaginal fistula. As regards the maternal mortality obstructed labour was the leading cause of maternal mortality in a study by Vork FC et al in rural Zambia.[14] Three (1%) maternal deaths occurred in our study of 284 patients due to extensive uterine rupture causing massive haemorrhage and hypovolumic shock. Our results are comparable to that of Khan Sadia & Roohi M[7] having maternal mortality of 1.6%. The maternal mortality reported by Ozumba[9] 3.2% and Puspha[6] 3.9% was higher than our study due to landing up of most of the mismanaged cases in Lady Reading Hospital, Peshawar.

As far as perinatal mortality is concerned, it was 38% in our study comparable to 39.8% in Puspha 1993.[6]

CONCLUSION

In our study the incidence of obstructed labour is very high. Non-availability of health care facilities, non-utilization of the available facilities due to illiteracy and ignorance is the underlying cause of problem. Malpractice by Traditional Birth Attendant, Lady Health Visiters and private practitioners is responsible for a large number of cases and should be checked. Most of the cases of obstructed labour are preventable provided all pregnant women obtain proper antenatal care and all births are attended by properly trained persons.

In Pakistan 90% of deliveries are conducted by Dais. Due to injudicious use of oxytocin, poor childhood nutrition, frequent infection, early start of childbearing and in multigravidae, repeated pregnancies, repeated blood loss and prolong lactation period affect the bony texture resulting in secondary contracted pelvis and increased incidence of obstructed labour. Health education of the patients and their families should be the first step. Early motherhood should be discouraged, and efforts are needed to improve nutrition during infancy, childhood, early adulthood, and pregnancy. Improving the access to and promoting the use of reproductive and contraceptive services will help reduce the prevelance of this complication.

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