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EARLY MORBIDITY IN WOMEN WITH OBSTRUCTED LABOUR AT A TERTIARY CARE HOSPITAL

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ABSTRACT:

Background: Obstructed labour is a condition where progress of labour is at a standstill, with fetal presenting part arrested due to mechanical factors. It is one of the preventable causes of maternal mortality in developing world. Besides maternal deaths many women suffer from illness, disability and complications with obstructed labour. In developed world obstructed labour is almost always promptly remedied by cesarean section delivery.

Objective: To evaluate the rate of early morbidity in women with obstructed labour

Materials and Methods: This prospective observational study was conducted at Department of Obstetrics & Gynecology, Liaquat University of Medical & Health Sciences, Jamshoro / Hyderabad from January 2009 to December 2010. Patients were included in this study after obtaining informed consent. Data was collected on a predesigned proforma and statistical analysis was done on IBM SPSS 19.

Results: During the study period a total of 2935 deliveries were managed at Gynae out of those 70 patients (63(90%) cesarean deliveries and 7(10%) vaginal delivers) presented with obstructed labour. The commonest age group was between 20-29 years in 51 cases. Majority 65 (92.85%) had taken trial of labour by some TBA or local doctor.

The duration of labour was variable in each case; the commonest group was 13 to 24 hrs. and the longest labour recorded was more than 48hrs. Caesarean section was the commonest mode of delivery performed. Postpartum haemorrhage with atony of uterus occurred in 19 (27.14%) cases and shown statistically significant association vs parity.

Conclusion: Obstructed labour, one of the preventable entities still continues to plague the labour and delivery of many women with an increasing frequency and persistently same pattern of associated morbidity.

Keywords: Obstructed labour, early maternal, morbidity, morbidity, early.

INTRODUCTION:

Obstructed labour and its associated morbidity has been recorded in the literature since antiquity. The oldest evidence for the condition is from the remains of Queen Henhenit the wife of Egyptian ruler around 205013 BC . In 1923, detailed anatomical examination revealed a large defect in the bladder communicating directly with vagina, the presence of vesicovaginal fistula developed at the time of parturition as the result of obstructed labour.[1]

Another most famous account of obstructed labour perhaps in 1817, known in the history as " Triple Tragedy" is the case of prince Charlotte of England who delivered a 9 pounds stillborn after thirty hours of prolonged labour and died presumably due to hypovolemic shock after PPH. The obstetrician also committed suicide unable to bear the responsibility of death of heir.[2]

Obstructed labour is the condition resulting from failure of descent of fetal presenting part in the birth canal because of mechanical reasons, despite strong contractions and not managed timely leading to various maternal and fetal

complications. It is the leading cause of maternal illness and death in Sub-Saharan Africa and South Asia. Worldwide obstructed labour occurs in an estimated 5% of pregnancies and accounts for an estimated 8% of maternal deaths.[3,4] This life threatening obstetric complication is generally caused by either faults in the passage (maternal pelvis) or the passenger (fetus). Cephalopelvic disproportion is the most frequent cause of obstructed labour.

If a woman survive obstructed labour, she often sustains multiple physical problems - not only the obstetric fistula itself but also reoccurring infections, foot drop, secondary amenorrhea, infertility and damage to genital tract. Fortunately advances in obstetric care have made obstructed labour nearly obsolete in developed world.[4]

Incidence of obstructed labour in developing countries ranges from 2% to 8% of all hospital deliveries.[4] Various epidemiological studies of obstructed labour from Nigeria, Senegal, Mali, Mauritania and Niger demonstrated varying incidences of obstructed labour.[5,6,7] This is likely because of variations in case definitions and inadequate case ascertainment. Furthermore, hospital based studies of obstructed labour are not valid estimates of incidence as these includes only those who access health services.

Some local studies from tertiary care hospitals of Pakistan shows an incidence of 4.4 to 4.5%[8]. According to the WHO figures the estimated incidence of obstructed labour is 6/100 live births in the region of EMRO in which comes the Pakistan.[9] Globally obstructed labour has reached 41st in GBD 1990 representing 0.5% of the burden of all conditions and 22% of all maternal conditions.[9]

Disabilities associated with obstructed labour that is dealt with late or inadequately can be very significant for both mother and child. Immediate causes of maternal deaths is ruptured uterus, complications of caesarean section and anesthesia, postpartum hemorrhage and puerperal sepsis. Immediate maternal morbidity results from infection , rupture of uterus and fistula. Long term consequences are genital prolapse, foot drop, vaginal wall strictures, and infertility. The squeal associated after neglected obstructed labour is very diverse varying from fever to psychosis, also known as obstructed labour injury complex. Some women die in childbirth, recovery from organ failure, uterine rupture, fistulas trauma to genital tract, depression, puerperal psychosis and other severe complications can be long, painful and leave lasting sequel. In obstructed labour most fetuses die of birth asphyxia or septicemia or it result to still birth, brain damage and neonatal deaths.

METHODOLOGY

Study design: Prospective observational study.

Setting: Department of Gynecology and Obstetrics, Liaquat University of Medical & Health Sciences, Jamshoro.

Duration of study: January 2009 to December 2010.

Sample size: Seventy selected cases were included after obtaining informed consent during the study period by Non-probability purposive sampling.

Sample selection:

Inclusion criteria are identified as:

i) All women with obstructed labour.
ii) Irrespective of age and parity.
iii) Gestation more than 24 weeks confirmed clinically.
iv) Singleton gestation.

Exclusion criteria:

i) Women with diabetes
ii) Women with antepartum hemorrhage, severe PIH & eclampsia.
iii) Previous caesarean section.
iv) Multiple gestations.

TABLE 1
PARITY PRESENTED WITH OBSTRUCTED LABOUR

Parity	Frequency	Percent (%)
Primigravida	31	44.28
Para 1 to 6	17	24.28
7 and above	22	31.42
Total	70	100.0

TABLE 2
TRIAL OF LABOUR IN PATIENTS WITH OBSTUCTED LABOUR

H/o trial of labour	Frequency	Percent (%)
No trial	5	8.4
By doctor	35	47.7
Both, doctor and TBA	1	.9
TBA	29	43.0
Total	70	100.0

TABLE 3
RUPTURED UTERUS IN OBSTRUCTED LABOUR

Ruptured uterus	Frequency	Percent
No	58	82.85
Yes	12	17.14
Total	70	100.0

TABLE 4
RUPTURED BLADDER IN OBSTRUTED LABOUR

Ruptured bladder	Frequency	Percent
No	62	88.57
Yes	8	11.42
Total	70	100.0

TABLE 5
EXTENTION OF UTERINE INCISION IN OBSTRUTE LABOUR

Extension of uterine incision	Frequency	Percent
No	50	71.42
Yes	20	28.57
Total	70	100.0

RESULTS:

Most of the cases showed the term pregnancy, preterm occurred in 2 (2.85%) cases and post term occurred in 4 (5.71%) cases. The peak incidence of age group is 20 to 29 years and the second peak is related to multipara. The duration of labour in hours in obstructed labour. Results shows it can occur between 8 to 12

hours in 16 (22.85%) and also happen between 13 to 24 hours in 72 (67.3%) cases.

Table 1 displays the range of parity presenting obstructed labour, Primigravida with 43 (40.2%) followed by multiparas (7 & above) with 35(32.7%) cases.

Table 2 shows percentages and frequency of trial of labour. About 51(47.7%) of patient were given trial by doctor, 46(43%) by TBA, a few 9 (8.4%) were without trial and about 1 (0.9%) were given trial by both.

LSCS was the most commonly performed procedure about 73 (68.2%) followed by laparotomy and repair of rent about11 (10.3%) followed by forceps delivery10 (9.3%) cases and cesarean hysterectomy 7(6.5%) of cases with obstructed labour.

Table 3 shows the frequency of patients with ruptured uterus. Out of 107 cases 17 (15.9%) presented with ruptured uterus.

Table 4 shows the frequency of patients with ruptured bladder about 7 (6.5%) of patients presented with ruptured bladder. Two (1.9%) cases had irreparable fistula due to devitalized surrounding tissues. Table 5 Extension of uterine incision occurred in 27 (25.2%) of cases of obstructed labour while performing the cesarean section.

The frequency and percentages of patients with atony of uterus and PPH after the delivery occurred in 19 (17.8%) of cases.

DISCUSSION:

Obstructed labour is one of the leading causes of maternal illness and death in Sub-Saharan Africa and south Asia[10]. According to the National health survey of Pakistan 89% deliveries take place at home and out of these 80% are conducted by traditional birth attendants.[11]

The misery is that instead of providing good health care they send patients with complications such as obstructed labour along with associated squeal. It has been assumed in the GBD 1990, the incidence of obstructed labour varies between 3 to 6%.[9] Regarding the parity the commonest group presenting obstructed labour was primripara. It is important to note that obstructed labour may or may not be prolonged, our study also presenting obstructed labour with different duration of labour.

Comparison are difficult as studies may have used different definitions and study designs and results may not be generalized to women who deliver at home.[9] Most of the local and some international research corroborates our findings.

Vesicovaginal fistula is the commonest form of fistula occurring in obstructed labour shown in local & international data. Out of 107 cases 7 presented with vesicovaginal fistula & 2 cases had to be repaired later on because of surrounding necrosis and devitalized tissues. None of the patients show rectovaginal fistula in the study. About 15.9% patients presented with ruptured uterus comparable to Ozamba et- al in eastern Nigeria.[12]

Urinary tract infection followed by puerperal sepsis and later by extension of uterine incision during delivering the impacted baby was the leading morbidities similar to Chhabra et al.[13]

Maternal mortality rate in our study was 2.8%, two died because of massive PPH after cesarean section not responding even to meticulous measures to stop it and one died after hypovolemic shock after hysterectomy. Dutta and Pal reported maternal mortality of 11.4% [14] and Sahu and Sinha 4.3%[15]

One primigravida patient with obstructed labour had cesarean section with extension of uterine incision laterally was repaired but developed secondary postpartum hemorrhage with sepsis on fifteenth day postoperatively and her total abdominal hysterectomy done, but again after one week she bleed profusely from the vaginal vault with generalized peritonitis and pus collection. Second laparotomy done with possible repair of the deficient devitalized tissues along with peritoneal toilets. And patient survived with several pints of blood transfusion and a prolong hospital stay of more than one month.

A significant association between the duration of labour and maternal and perinatal mortality reported by some authors while our study do not show any statistically significant association.[6,8] Future research on the factors determining the early detection of the problem, development of audit based standards and national guidelines in low resource setting according to our population demographic values to curtail the morbidity associated with obstructed labour.[8]

CONCLUSION:

Obstructed labour a dilemma for third world countries, still a major obstetric emergency catered by our tertiary care hospitals from decade to decade with a steady increase in the frequency and associated morbidity and mortality. Sepsis and infection associated with obstructed labour is the commonest morbidity observed in local and international studies. The implementation of a comprehensive health care system can almost eradicate this preventable entity.

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