Original Article

Frequency of feto-maternal complications among referral cases to Shaikh Zaid Women Hospital, Larkana after unsuccessful trial of labor

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Objective: To determine the frequency of feto-maternal complications among the cases referred to Shaikh Zaid Women Hospital, Larkana after unsuccessful trial of labor.

Methodology: This descriptive study was conducted at Departments of Gynecology and Obstetrics, Shaikh Zaid Women Hospital, Larkana from January 1 to June 30, 2019. A total of 120 cases referred to emergency after unsuccessful trial of labor were included in the study. Personal details and present symptomatology were recorded.

Results: The average age of the patients was 26.70±4.39 years. Fever was the most common complication found in 64.2% patients, followed by shock in 55.8% and PPH in 49.2%. Oligohydramnios was observed in 37.5%, APH in 21.7% and uterine rupture in 6.7%. Low Apgar score was observed in 38.3% neonates, meconium staining in 33.3%, IUGR in 30.8% and there were 15.8% deaths.

Conclusion: Frequent maternal morbidity and its association with adverse perinatal outcome, suggests the need for tertiary care in developing for both mother and baby, along with provision of skilled birth attendant at doorstep will be an ideal solution. (Rawal Med J 202;45:443-446).

Keywords: Feto-maternal complications, oligohydramnios, uterine rupture.

INTRODUCTION

Labor is a natural physiological process of delivering a baby. However, if not supervised by skilled birth attendants, it carries the risk of high maternal and fetal complications. Worldwide, 210 million women become pregnant each year, out of which approximately 20 million suffer from pregnancy and labor related complications and 0.5 million die as a result of these.[1] In Pakistan, the current maternal mortality rate (MMR) is 280/100,000 live births.[2] It has been reported that 99% of pregnancy and labor related maternal and fetal deaths occurs in rural areas of developing countries due to poor antenatal care, lack of mother and child health care facilities and conduct of deliveries by untrained birth attendants.[3]

The mortality risk increases greatly under the conditions in which females are observed for labor by untrained birth attendants without prior antenatal assessment. When such trial fails to deliver the baby, cases are often referred to the tertiary care hospitals in emergency for further management. Labor conducted by untrained birth attendants has 4.67 times higher mortality rate as compared to the one conducted by skilled birth attendants.[4] In addition, illiteracy, low socioeconomic status and lack of roads and transport facilities are also contributing factors to this high maternal mortality in the rural areas.[5]

Apart from maternal mortality, postpartum hemorrhage (PPH) is one of the most common complications of delayed labor. It is caused by uterine atony, which cannot be predicted in the majority of cases.[6] Other complications includes prolonged obstructed labor, post-partum fever due to sepsis, shock, trauma to genitourinary tract, uterine rupture, broad ligament hematoma, urinary tract infections and pulmonary edema.[7] Fetal mortality rate is also significantly higher in prolonged obstructed cases of labor. Prolonged obstructed labor is one of the leading causes of fetal mortality ranging between 2.8-3% of live births. Other fetal complication which together accounts 30-50% of obstructed labor includes still birth, birth asphyxia, neonatal jaundice and umbilical sepsis.

A study by Ambreen et al documented that fever was

the most common complication found in 69% patients followed by APH 22% and PPH low Apgar score was observed in 36% neonates, meconium staining 34%.[4] The frequency of feto-maternal complications is different in various localities of Pakistan.[2-4] Comprehensive data of such complications among the cases of Larkana and its surrounding rural areas is lacking. The rationale of current study was to determine the frequency of feto-maternal complications among the general population from which the cases are referred after unsuccessful trial of labor.

METHODOLOGY

This descriptive study was conducted at Departments of Gynecology and Obstetrics, Shaikh Zaid Women Hospital, Larkana for a period of six months from January 1 to June 30, 2019. A total of 120 cases referred to emergency after unsuccessful trial of labor having age 15-35 years, Gravida 1-5, parity of 0-4 children and singleton pregnancy at term (37-42 weeks of gestation) confirmed through last menstrual period and Ultrasound of fetal well being were included in this study. Patients having hypertension, or cardiovascular disease, gestational hypertension or eclampsia (Systolic BP >140mmHg & diastolic >90 mmHg), suffering from convulsion or epilepsy and previous major uterine surgery like myomectomy were excluded from study. An informed written consent was obtained from all cases to take part in the study.

Personal details (name, age, address, family monthly income), gestational age, gravida, parity, height, weight, BMI, mode of delivery and outcome of baby), present symptomatology were recorded. Pelvic examination was carried out to assess cervical dilatation, fetal position and presentation. An obstetrical ultrasonography was done to confirm fetal well being, amount of liquor, presentation and gestational age. Keeping in view of examination finding, mode of delivery was planned accordingly like (vaginal delivery with the help of instrument or cesarean section). In case of dead fetus, with cephalic presentation, craniotomy was done with full cervical dilation. Mode of delivery, APGAR score at 5 minutes and maternal and fetal morbidity were recorded. The patients were followed for 2 days after delivery.

Outcome variables like fever, APH, PPH, shock, oligohydramnios, uterine rupture, low Apgar score, meconium staining, IUGR and perinatal death were noted as Yes/ No.

Statistical Analysis: Data were analyzed by SPSS version 21. Descriptive statistics were used to describe results of all quantitative parameters (maternal age, gestational age, gravida, parity, family monthly income, blood loss, height, weight and BMI). Confounding variables such as age, gestational age, gravida, parity, mode of delivery, h/o previous caesarean section, BMI & residence were controlled by stratification. To analyze the results, post stratification, Chi Square test was applied. $p \leq 0.05$ was considered statistically significant.

RESULTS

A total of 120 cases referred to emergency after unsuccessful trial of labor. Age distribution shows that most women were below 30 years of age and average age of the patients was 26.70±4.39 years. There were 39(32.5%) primigravida and 81(67.5%) multigravida (Table 1). 52.5% women belonged to rural area and 47.5% were from urban area. Previous history of cesarean section was noted in 37(44.58%) women. Current mode of delivery was also shown high caesarean section 81 (67.50%), normal delivery 25 (20.83%) and delivery with instrumentation 14 (11.67%)

Table 1. Demographic characteristic of patients.

Variable	Mean Std. Deviation	95% Confidence Interval for Mean	
		Lower Bound	Upper Bound
Age (Years)	26.70	25.91	27.49
Gestational Age (Weeks)	38.70	38.46	38.94
Weight (Kg)	64.28	63.06	65.51
Height (cm)	159.59	158.95	160.23
BMI (kg/m^2)	25.25	24.76	25.73
Gravida	2.35	2.15	2.55
Parity	1.28	1.10	1.47
Blood Loss (ml)	1130.29	994.37	1266.22

Table 2. Feto-maternal complications among cases after unsuccessful trial of labor.

Complication	Frequency	Percentage
APH	26	21.7%
Oligohydramnios	45	37.5%
Postpartum hemorrhage	59	49.2%
Postpartum fever	77	64.2%
Shock	67	55.2%
Uterine rupture	8	6.7%
IUGR	37	30.8%
Still Birth	7	5.8%
Meconium staining	40	33.3%
APGAR score at 5 min<7	46	38.3%
Death	19	15.8%

Fever was the most common complication found in 64.2% patients followed by shock in 55.8% and PPH in 49.2% patients. Oligohydramnios was observed in 37.5%, APH 21.7% and uterine rupture 6.7%. Further; the low Apgar score was observed in 38.3% neonates, meconium staining 33.3%. IUGR was found in 30.8% and there were 15.8% deaths (Table 2).

DISCUSSION

Even though labor is natural phenomenon and normal physiology to women health but owing to its complication to inborn fetus and mother, it should be dealt by trained person having adequate experience in dealing. When labor conducted by untrained birth attendant, it not only raises risk of complications but having more than 5 times mortality rate in comparison to skilled person.[9] Current literature suggest that globally around more than 5 lacs pregnant women die during pregnancy or labor each year and this along with other causes, leads to around one million children who lose their mother in each year.[10] Among causes, most commonly is due to less care of mother during antenatal, natal and postnatal period that leads to increased fetal and maternal mortality and morbidity, especially in our part of the world ranging up to 99% of cases.[10,11]

Almost all the maternal deaths are due heavy bleeding, disseminated intravascular coagulation, criminal abortion, uncontrolled pregnancy induced hypertension and prolonged obstructed labor[10] In our country, primary cause of maternal mortality is any factor that leads to postpartum hemorrhage, and important risk factor of that is atony of uterus. Most of time it's ignored or not detected leading to death in a few hours of birth. So birth attendants should be vigilant and eligible to detect that fetal complication timely, hence preventing mother and child both, leading to safe delivery.[13]

In present study, the average age of the patients was 26.70±4.39 years which is comparable to another study, where mean age was 29.2 years.[14] Placenta Previa (PP) is condition in which either part of the placenta or full is embedded in the lower part of uterus, that leads to massive hemorrhage.[15] Abrupto placenta is traumatic condition in which part of placenta or full is separated from its normal attached position of uterus[15] Both are drastic conditions for baby and mother leading to fetus is at risk of lack of oxygenation and mother at risk of shock due to massive bleeding leading to multi organ failure and eventually death.[16]

In this study, fever was most common complication found in 64.2% patients followed by shock in 55.8% and PPH in 49.2% patients. Similar result was reported in Ambreen et al study where PPH was common and detected up to 50%, when not tackled timely leading to death, which was seen in 10 patients in that study.[4,17] Common indications for emergency cesarean are fetal distress, obstructed labor, severe uncontrolled blood pressure during pregnancy, eclampsia and ruptured uterus.[17]

Antepartum hemorrhage which is defined as any bleeding in pregnant mother from the last week of six month of pregnancy up to delivery of fetus, is also major risk factor for maternal mortality. Again major causes of APH are placenta Previa and placental abruption.[12]

In present study, oligohydramnios was observed in 37.5%, APH 21.7% and uterine rupture 6.7%. Further; the low Apgar score was observed in 38.3% neonates, meconium staining 33.3%. IUGR was found in 30.8% and there were 15.8% deaths. Ruptured uterus is one of major complication having threat on life of mother and fetus, it can occur any time either during course of delivery or after**.** Risk factors of ruptured uterus are injudicious use of oxytocin, mal-presentation of fetus, congenital

abnormalities in fetus, previous history of multiple caesarian and excessive pressures on uterus at the time of delivery.[2,3] With above mentioned complication, many other complications occurs to mother like tear or trauma to pelvis related structures. Due to this, approximately 8 million babies die in one year and those who survived, many of them lose their mothers. These children are 10 times more at risk to die within 2 years of their mother's death.[8]

CONCLUSION

In this study, fever was the most common complication found in 64.2% patients followed by shock, PPH, oligohydramnios, APH and uterine rupture. Further; in fetal complications the low Apgar score was observed in 38.3% neonates, meconium staining 33.3%. IUGR was found in 30.8% and there were 15.8% deaths. Women who deliver in rural homes potentially need emergency obstetric care. Frequent maternal morbidity, and its association with adverse perinatal outcome, suggests the need for tertiary care in developing for both mother and baby, along with provision of skilled birth attendant at doorstep will be an ideal solution.

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