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Research Paper

Study of Obstructed Labours Incidence, Causes and Outcome at Life Span Hospital Gulbarga.

Medical Science

KEYWORDS : Obstructed labor, cephalo-pelvic disproportion, uterine rupture,

DrMeenaz Nurullasayed Research Scholar, Obstetrics and Gynecology,JJTUniverstiy Rajasthan India,

Dr Shoukatsayed Professor, Shree Vivekanand N H T Medical college,Rahuri,Maharashra, India.

ABSTRACT

Obstructed labor is one of the common prevalent causes of maternal and perinatal morbidity and mortality in developing countries. Hospital-based, cross-sectional study was conducted on all mothers who were admitted and delivered in the labor ward Life span hospital Gulbarga. The incidence of obstructed labor was 12.2%. The causes of obstructed labor were cephalo-pelvic disproportion in 121(67.6%) and malpresentation in 50 (27.9%) of the cases. The commonest maternal complications observed were uterine rupture in 55 (45.1%) and sepsis in 48 (39.3%). Forty-five point eight percent of fetuses were born alive with low first minute APGAR score.The incidence of obstructed labor was high with high rate of complications. The antenatal care follow-up practice was also found to be low. Improved antenatal care, good referral system, and availing obstetric care in nearby health institution are recommended to prevent obstructed labor and its complications.

Intoroduction

Obstructed labor is an important cause of maternal death in communities in which childhood under nutrition and early marriage is common resulting in small pelvis,and in which there is no easy access to functioning health facilities with the capability of carrying out operative deliveries. Obstructed labor also causes significant maternal morbidity mainly due to infection and hemorrhage and in the long term leads to obstetric fistulae, skeletal and neurologic complications. Fetal death from asphyxia is also common [1]. There are different studies in developing countries showing incidences of obstructed labor varying from as low as 1.3% to as high as 7% in a retrospective study [2, 3, 4, 5]. The major cause of obstructed labor identified in different studies was Cephalo-pelvic disproportion [2, 3, 5]. Several procedures are done to relieve the obstruction in obstructed labor. The major procedure done was cesarean delivery (C/S) which was done in 60 % to 85% [3, 5]. Complications observed in women with obstructed labor at studied areas were puerperal sepsis,extension at time of surgeory.

Methods and Methodology

This hospital-based prospective cross-sectional study was conducted at life span Gulbarga, Karnataka, India. All mothers who were admitted to the labor ward with diagnosis of true labor during the 2 years study period were included in the study. Data were collected using questionnaire and check list which contains socio-demographic characteristics of the patients, reported distance from the hospital, clinical features of obstructed labor, the mode of delivery and outcome on the mother and baby. Data was gathered from patients record and by interviewing the patients. The patients were followed through their whole stay in the hospital so as to assess presence and development of complications. Obstructed labor was operationally defined as failure of the presenting part to descend in birth canal despite adequate uterine contractions for mechanical reasons. The diagnosis of obstructed labor was made by gynecology residents working in the hospital. Verbal consent was obtained from the study subjects and the right of the respondents to withdraw or not to participate was respected. Additionally, names of participants were not used in the study and confidentiality of the patient information was maintained

Results and Discussion

During the 2 years study period, there were a total of 1468 deliveries of which 179 were diagnosed to have obstructed labor (12.2%). All of the mothers with obstructed labor were married and in the age group of 20-29 years. One hundred ten (61.5%) of the obstructed labor cases did not have any ANC follow up while the rest had at least one visit. Most of the cases 145(81.0%), 160 (89.4%) and 170 (93.9%) were referred from health centers, visited after at least 12 hours of labor.

The duration of labor before arrival to hospital was assessed for its association with age, parity, ANC follow-up. With regard to causes of obstructed labor, cephalopelvic disproportion (CPD) was the main cause in 121 (67.6%) followed by malpresentation in 50 (27.9%) of the cases No case with scared uterus was seen.

The commonest type intervention was C/S in 98 (54.7%) of the patients, followed by laparatomy in 58 (32.4%). Laparatomy was done for three cases of post partum hemorrhage (PPH) after C/S and for one case after destructive delivery. The indications for hysterectomy were uterine rupture and PPH. Uterine rupture was the commonest complication of obstructed labor which occurred in 55 (45.1%) followed by sepsis in 48 (39.3%) of the cases. Bladder rupture was diagnosed intra operatively in three patients (2.6 %) Twenty seven cases (15.1%) had combination of complications.

Age, parity, history of ANC follow-up and duration of labor were assessed for association with presence of at least one complication of obstructed labor. Eighty two (45.8%) of the fetuses were born alive and all of them had low APGAR score in the first minute. The fifth minute APGAR score was normal for 62 (75.6%) of the live born. The perinatal mortality rate was 66.1 per 1000 births. The weight of the 153 (85.5%) of the newborns was in the normal range (2500–3999 grams), whereas 16 (8.9%) of them were macrosomic (>4000 grams) and the other 10 (5.6%) had low birth weight (1500–2499 grams).

This study had tried to look at incidence, causes and outcomes of obstructed labor. It showed the burden that it could bring to the health service, the community and the country in general. One limitation of the study is it has not addressed maternal mortality which is an important indicator though other outcomes like complications on the mother and on the fetus including perinatal mortality are assessed.

Sixty-two percent of the obstructed labor cases did not have any ANC follow-up; similarly in other studies the unbooked ladies are also more affected by obstructed labor. Even though ANC is a poor measure to prevent pregnancy and delivery complications, it could be good time to discuss about preparation for delivery and to go to the proper health institution earlier. Most of the cases had labor for more than twelve hours and 30.7% of them came with uterine rupture. Cephalo-pelvic disproportion was the major cause of obstructed labor (67.6%). which is comparable to the study done in Nigeria, but lower than the previous study undertaken in this hospital. The fact that the weight of most fetuses were in the range of 2500–3999 grams signifies

as contracted pelvis or malposition was the reason for the CPD than fetal size.

Cesarean section was the main way of delivery (54.7%), which is lower than the study done in Nigeria and India (3, 6), but it is more than the previous study of this hospital (2). Wound infection is the commonest complication of cesarean section (35.7%) which may be due to failure to use prophylactic antibiotic properly. Uterine rupture was the commonest complication of obstructed labor followed by sepsis in this study as uterine rupture is a well known contributor of maternal hemorrhage and sepsis, which are major causes of maternal mortality and morbidity.

The study also showed obstructed labor to be one of the major causes of poor perinatal outcome with low first minute APGAR score, and perinatal death (66.1 per 1000 births). This is a bit higher compared to the previous figure of this hospital.

Conclusion

In conclusion, this study revealed high incidence of obstructed labor and its complications as well as low ANC follow-up and delayed arrival to hospital. In order to alleviate these problems, the Ministry of Health and other responsible bodies need to exert efforts to increase the ANC follow-up coverage so that high risk mothers could be detected, improve functioning of health centers and the referral system as well as scaling up of the transportation system.

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