INTRODUCTION

Caesarean section is a common obstetrical procedure in which baby, placenta with membranes are delivered by giving an incision in abdominal wall and uterus. It is a major surgical operation with associated maternal and fetal risks and should be performed in presence of clear and specific indications. Some of the obstetricians consider it a safe, well tolerated simple procedure, and safer than instrumental deliveries but by large caesarean section is a subject of controversy world wide. As evidence shows that when there is steady rise towards 10% caesarean section rates in hospitals maternal and foetal mortality decreases but when the procedure is more then 10%, then there is no proof that mortality rates are improving. In developed countries the incidence of caesarean section is 15-25% and is of major public health concern not only for health professional but also for the policy makers. As most of the time it is done mainly on the request of patient while in least developed countries it is only 2% where normal delivery is preferred mode both by the patient and the clinicians.

In developed countries right of self determination has led to increase in caesarean section on maternal request without any medical or surgical indication. But the trend of increasing caesarean births had lead to a increase in direct and indirect cost on the health delivery system. Upto now all the available data from well developed countries is suggestive of increased morbidity and mortality for both mother and baby in caesarean section than in vaginal delivery. The effectiveness of strategies to reduce caesarean birth rates may depend on the social and cultural milieu and associated beliefs and practices of the society.
In Pakistan maternal health services are readily available in private sectors as there is less waiting time, patients can avoid smelly labour rooms and can get prompt care as compare to the public sector hospital. Therefore, it is important to know the rate and clinical indication for this intervention in private set up. As staff in public sector is train and supporting services are readily available as compare to private set up where health professional are looking for monetary benefits. There is drastic increase in number of emergency caesarean section as compared to elective caesarean section in private sectors. This study was conducted to determine the rate and analyse the clinical indications of caesarean section in a private teaching hospital of Peshawar. This will also identify the factors needed to be addressed in order to decrease maternal mortality rate in our set up.

MATERIAL AND METHODS

A retrospective quantitative study was conducted in Obstetrics and Gynecology department of Mercy teaching hospital of Peshawar. Study period was from January 2011 to December 2013 the information was gather from admission/discharge records. All the relative information about caesarean section such as parity, obstetric background of the patient. Status of the patient at time of admission booked (two visits during antenatal period) and unbooked (no antenatal visits and not seen by Trained birth attendants or midwives) status, elective (hospitalised on a scheduled day at a scheduled time to have a cesarean section for previously diagnosed indication) or emergency (entirely unexpected and unplanned procedure). All women with gestational age of 37 weeks and more were included in study population those who presented with rupture uterus with 37 weeks pregnancy were excluded from study population. Ethical review committee of the institute gave approval for the data collection. Data was collected by trained data collectors by using a structured proforma which was implemented after pretesting was done. Data was analysed in Microsoft Excel and presented in form of Text, graphs and figures.

RESULTS

There were 5458 admissions in the Gynae and obstetric unit in last three years. Among them 5230 delivered vaginally in the labour suit of the department and 228 patients had caesarean section. All of CS were performed under general anaesthesia and were lower segment caesarean sections. There was no maternal death in operated cases. The over all rate of caesarean section was 4.36%. The number of emergency CS were high, 157 (68.86%) while elective CS were 71 (31.14%). Of 228 patients who had CS, only 25 (10.96%) were booked and 203(89.04%) were not booked. 50 (31.8%), 46(64.78%) of patients were admitted for emergency and elective CS through OPD respectively. While majority 107(68.15%) came in emergency and rest were admitted through private clinic for elective CS. Majority of the respondent were multigravida 122 (53.50) and primigravida 60(26.32%), Grandmultigravida were 42(18.42%) and great grand multigravida were 4(1.75%). The period of gestation was between 37-42 weeks.

The most common indication for elective CS was previous CS in 28 patients (39.44%) followed by malpresentation (Breech and Transverse lie) 14 (19.72%). Among them 5(17.85%) patients were multigravida and 9 (32.14%) were primigravida. Cephalo-pelvic disproportion accounted for in 11 (15.49%), among them 8 (28.57%) were primigravida having fractures, polio in childhood and outlet contracture. The most common indication for Emergency CS was obstructed Labor 48(30.57%). Half 48(50.50%) of them presented with obstructed labour. Fetal distress was observed in 30(19.11%) with fetal bradycardia and grade 3 meconium, malpresentation noted in 21(14.65%) of the sample population.

DISCUSSION

Although our rates are lower then the WHO recommended rate of CS 10-15% and also to other local studies. This low rate could be due to low work load on the hospital as this hospital caters mainly for the Afghan refugees. The rate of low c-section could be because they consider birth a natural process and mostly delivered at home by elderly ladies mother in law or traditional birth attendant. The women is bought to the hospital only when all measures of normal vaginal delivery at home have failed and they still insist on vaginal delivery. In our hospital after intial assessment most of them after hydration, pain relief and use of oxytocin deliver normally. But those having clear indications are delivered by C-Section. Another reason for the low caesarean birth rates in our hospital is due to our department policy of strict protocols where operations are perform only when there is clear maternal and fetal indications. Also we lack neonatal facilities at the hospital therefore all preterm labor either primigravida or multigravida with previous C/S were reffered to other tertiary care hospitals.

In our study majority of patients going for elective Csection were having past one cesarean (39.45%) which could have been a contender for normal vaginal delivery if proper antenatal assessment was done on time. Also in our hospital no trial was given to these patients because of known dangers to mother and the foetus. Cephalopelvic disproportion, the most common indication in primigravida as baby head is larger then the pelvic outlet the reason could be short stature of the mother, narrow pelvis or baby size is large due to gestational diabetes but we lacked data regarding the cause of cephalopelvic disproportion in our study population.
Death of the child in utero or during childbirth in present or past pregnancies has depended been an overwhelming tragedy for the mother and of worry in clinical practice. Perinatal mortality remains a test being taken care of by pregnant ladies around the world, especially for the individuals who had history of antagonistic result in past pregnancies\textsuperscript{15}. In such scenarios elective Cesarean are performed early both for the benefit of the mother and the family, in order to prevent devastating experience for the mother and it is still of concern in clinical practice. Perinatal mortality remains a challenge in the care of pregnant women worldwide, particularly for those who had history of adverse outcome in previous pregnancies.

The frequency of emergency CS was high in obstructed labour. Due to non utilization and non availability of antenatal services in the periphery also due to mishandling by daies, unwise use of oxytocin or unjustified induction with prostaglandins without prior assessment of risk factors, fetal size, stage of labour, position and pelvic adequacy. In such suitation most of pregnant ladies ended up with obstructed labour and emergency intervention is the only option left to save the life of the mother and baby\textsuperscript{14}.

Fourteen percent of cases presented with malpresentation and Cesarean section was preformed as it is the preferred and the safest mode of delivery even when the child is dead\textsuperscript{15} also Caesarean section is a preferred mode of delivery for Transverse lie. While for breech presentation if regular antenatal checkup is done, then external cephalic version could be done followed by proper assessment trial for assisted breech delivery can be given as vaginal delivery for term breech does not increase fetal morbidity or mortality if proper case selection is done\textsuperscript{16} and it could only be possible in those institutes where comprehensive emergency obstetric care is available.

In our study fetal distress accounts for 19.11% of emergency cesarean sections. It is usually diagnosed by increasing or decreasing fetal heart rate and presence of meconium. Reasons could be cord around the neck which could be indentified during antenatal visits and rectify in time. In any case, the determination of fetal trouble is frequently subjective and needs standard clinical criteria in health care facilities\textsuperscript{17,18}.

In ante partum hemorrhage (APH), cesareaen is the life saving procedure both for the mother and the fetus. As there are numerous causes of antepartum haemorrhage ranging from cervical infection to placental abnormalities, most common findings of our study was placental praevia or placental abruption(9.6%). APH carries higher risk of complication to the mother who already have existing anemia, malnutrition which predisposes them to complications like maternal shock, fetal hypoxia, and sudden fetal death, making antepartum haemorrhage an even greater risk to the fetus than to the mother\textsuperscript{19,20}.

**CONCLUSION**

The rate of caesarean section was lower in this study than WHO recommended

**RECOMMENDATIONS**

The need of the day is emergency obstetrical care (EmOC) encompassing both selective and comprehensive services should be provided in all levels of health care facilities in order to further reduce the cesarean section rates.

There should be on going training and supervision of the skilled birth attendants, so that they can properly assess the patient before augmenting or inducing the labor. There should be regular clinical audit of the hospitals in order to find the cause of these cesarean sections.

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Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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