

AN AUDIT OF RATE AND INDICATION OF CESAREAN SECTIONS IN A PRIVATE TEACHING HOSPITAL

Shahnaz Parveen¹, Mohammad Naeem², Rubeena Gul²

¹Department of Obstetrics & Gynaecology, Mercy Teaching Hospital, Peshawar - Pakistan

²Department of Community Medicine, Khyber Medical College, Peshawar - Pakistan

ABSTRACT

Objective: To determine the rate and analyse the clinical indications of caesarean section in a private teaching hospital of Peshawar.

Materials and Methods: Retrospective record base study conducted in Mercy teaching Hospital, Peshawar. Records of caesarean section conducted from January 2011 to December 2013 were looked into and those patients who needed hysterectomy were excluded. Data was collected from admission/discharge records and analyzed in Microsoft Excel.

Results: A total of 5230 deliveries were conducted in three years. The overall rate of caesarean was 4.36% (228) were caesarean births, of which elective caesarean were 71 (31.14%) and emergency caesarean were 157 (68.86%). Out of 228 patients primigravida were 26(26.32%) , multigravida were 122(53.51%), grand multigravida 42(18.42%) and great grand multigravida 4(1.75%). 35(15.3%) patients were booked, 36 (15.7%) were admitted through OPD one day before C-section. Majority of caesarean sections were done in multigravidas. The major indication for emergency C-section was obstructed labour in 48 (30.57%) followed by fetus distress in 30(19.11%). common indication for elective C-section was previous 2 or more C-sections in 28 multigravidas(39.45%) followed by malpresentation in 14(19.72%).

Conclusion: The emergency C-section rate was high and most common indication was obstructed labour with its associated maternal and fetal complications. Selective and comprehensive emergency obstretical care (EmOC) should be implemented at the all health care facilities in order to further reduce the indications for ceasearen sections.

Key Words: Elective, caesarean section, emergency, Fetal distress.

This article may be cited as: Parveen S, Naeem M, Gul R. Retroseptive audit of rate and indication of cesarean sections in a private teaching hospital of Peshawar.. J Med Sci 2017; 25: (1) (Supplement) 149-152.

INTRODUCTION

Caesarean section is a common obstetrical procedure in which baby, placenta with membranes are delivered by giving an incision in abdominal wall and uterus¹. 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 controversy² 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 improving³. In developed countries the incidence of caesarean section is 15-25%⁴ 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 clinicians⁵.

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 system⁶. 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 delivery⁷. The effectiveness of strategies to reduce caesarean birth rates may depend on the social and cultural milieu and associated beliefs and practices of the society⁸.

Dr. Mohammad Naeem (Corresponding Author)

Associate Professor

Department of Community Medicine, Khyber Medical College, Peshawar - Pakistan

Cell: +92-300-5901841

Email: eaglebook@hotmail.com

Date Received: October 27, 2016

Date Revised: December 20, 2016

Date Accepted: February 10, 2017

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 sectors⁹. 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 quantative 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 caesrean 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%), Grandmitigravida were 42(18.42%) and great grand mutigravida 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^{9,10,11}. 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 refered to other tertiary care hospitals¹⁰.

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 foetus¹¹. 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 diabetes¹² 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 dependably 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 pregnancies¹³. In such scenerios elective Ceasern 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 preganant ladies ended up with obstructed labour and emergency intervention is the only option left to save the life of the mother and baby¹⁴.

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 dead¹⁵ 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 done¹⁶ and it could only be possible in those institutes where comprehensive emergency obstrectic care is available.

In our study fetal distress accounts for 19.11% of emergency cesarean sections. It is usally 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^{17,18}.

In ante partum hemorrhage (APH), cesearen 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^{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 cesearen section rates.

There should be on going training and supervision of the skilled birth attendants, so that they can properly asses 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 cesearen sections.

REFERENCES

- 1) Ruby N. Maternal complications associated with casearen section one year retrospective study.JPMI: 2011; 14(1); 83-89.
- 2) Husslein P, Elective caesarean Section versus Vaginal delivery. Wether end of traditional obstetrics? Arch Gynecol Obstet 2001;265(4); 167-74.
- 3) WHO statement on caesarean section rates Executive summary April 2015 WHO reference number: WHO/RHR/15.02
- 4) Mazzone A, Althabe F, Liu NH, Bonotti AM, Gibbons L, Sánchez AJ, Belizán JM. Women's preference for caesarean section: a systematic review and meta-analysis of observational studies. BJOG: an international journal of obstetrics & gynaecology. 2011 1;118(4):391-99.
- 5) Khuhro BN, Zahoor S, Hussain R. Maternal and Perinatal Outcome in Women having VBAC. Pakistan Journal of Medicine and Dentistry. 2014;3(02):21-24.
- 6) Human reproductive programme researcg for impact UNDP, UNFA, UNICEF, WHO World bank Who/RHR 15.02 2005.
- 7) Luries. The changing motives of caesarean section from the ancient world to the twenty first century. Arch gynecol obstet 2005; 271; 281-85.
- 8) Snymnl. Is high caesarean section rate a cause for concern? Obstet gynaecol forum 2002; 12(2); 8-13.
- 9) Haider G. Frequency and indications of caesarean section in a tertiary care hospital. Pak J Med Sci 2009;25(5):791-96.
- 10) Hafeez M, Yasin A, Badar N, Pasha MI, Akram N, Gulzar B. Prevalence and Indications of Caesarean Section in a Teaching Hospital. JIMSA. 2014;27(1):15-16.

Retroseptive audit of rate and indication of cesarean sections in a private.....

- 11) Koigi, Kamaur, Kabare LW, Wanyaoik, GinhuhiJ. Incidence of wound infection after caesarean delivery in district hospital in central Kenya. East afr Med J 2005;82(7);357-60.
- 12) Grissom NM, Reyes TM. Gestational overgrowth and undergrowth affect neurodevelopment: similarities and differences from behavior to epigenetics. International Journal of Developmental Neuroscience. 2013 31;31(6):406-14.
- 13) G Singh, K Sidhu. Bad obstetric history: A prospective study. Medical journal armed forces of India 2010; 669(2), 117-20.
- 14) Shamshad, factor leading to increased caesarean section rate Gomel J Med Sci 2008; 6(1); 1-4.
- 15) Roudsari RL, Zakerihamidi M, Khoei EM. Socio-cultural beliefs, values and traditions regarding women's preferred mode of birth in the North of Iran. International journal of community based nursing and midwifery. 2015;3(3):165-69.
- 16) Coughlan C, Kearney R, Turner MJ. What are implications for the next delivery in primigravidae who have an elective Caesarean Section for breech presentation? BJOG 2002;109:624-26.
- 17) Lee J, Romero R, Lee KA, Kim EN, Korzeniewski SJ, Chaemsaithong P, Yoon BH. Meconium aspiration syndrome: a role for fetal systemic inflammation. American journal of obstetrics and gynecology. 2016 31;214(3):366-70.
- 18) Peesay M. Cord around the neck syndrome. BMC Pregnancy and Childbirth. 2012 28;12(1):1-8.
- 19) Mayer DC, Smith KA . Chestnut's Obstetric Anaesthesia Principles and Practice. 4th Edn. Missouri: Elsevier Mosby; 2009. 825-30.
- 20) Biro MA, Davey MA, Carolan M, Kealy M. Advanced maternal age and obstetric morbidity for women giving birth in Victoria, Australia: A population-based study. Australian and New Zealand Journal of Obstetrics and Gynaecology. 2012 1;52(3):229-34.

CONFLICT OF INTEREST: Authors declare no conflict of interest

GRANT SUPPORT AND FINANCIAL DISCLOSURE NIL

AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Parveen S: Contributed to concept ,design, acquisition of data final approval

Naeem M: Drafting of manuscript

Gul R: Data Analysis

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.

The Journal of Medical Sciences, Peshawar is indexed with WHO IMEMR (World Health Organisation Index Medicus for Eastern Mediterranean Region) and can be accessed at the following URL.

<http://www.who.int/EMRJorList/details.aspx?docn=4468>