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C-SECTION DELIVERY;

COMMON INDICATIONS AND DETERMINANTS OF C-SECTION DELIVERY AT TERTIARY HOSPITAL MULTAN

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ABSTRACT … Objective: To evaluate the common reasons for C/section done at tertiary care hospital and to look into their major determinants, in order to reduce the rate of C/section delivery and its associated mortality and morbidity. **Study design:** Retrospective, descriptive study. **Place and duration of study:** At Ibn-E-Siena Hospital, the duration of study was 1 year from November 2016 to October 2017. **Material methods:** The study included 250 patients who were delivered by Caesarean delivery. All the patients who were delivered abdominally after 28 weeks of gestation were included in this study. The women delivered abdominally before 28 weeks gestation were excluded from study. **Results:** The common indications for C/section in this study were previous C/section delivery in 37.6%, oligohydramnios 36%, fetal distress 12%, hypertensive disorders of pregnancy 7.2%, multiple pregnancy 5.6%, preterm labour 5.6%, failed progress of labour and bad obstetrical history 4.8% each, placenta previa 3.2% and cardiac disease 0.8%. **Conclusion:** Repeat C-section has become the commonest indications for C-section effort should be put in to reduce the rate of C/section in primigravidas, proper trial of labour should be given, and fetal distress should be properly diagnosed before going for C/section.

Key words: Common indications, C-section, Oligohydramnios, Repeat C-section, VBAC.

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INTRODUCTION

C/section is referred as a procedure involving the surgical removal of a baby by making incisions in the abdomen and uterus to retrieve the baby.

The name of caesarean sections procedure is derived from latin word ‘Caedare” which means to “cut”. In previous times it was used to deliver babies whose mothers were dying or died before birth.

Over time there have been great advancement in anesthesia safety, antibiotic cover and surgical techniques. C/section is considered as a safe procedure, but still vaginal delivery is the preferred method of labour.

Over the past few decades C-section rate has increased many times. As this is a major surgical procedure, so it’s not free of side effects and complications. Being a tertiary care hospital, C-section rate is also high so it is important to evaluate its indications.

MATERIAL AND METHODS

In this study 250 patients were included to look into the common indications and determinants of caesarean delivery. All the patients who were delivered abdominally after 28 weeks of gestation were included in this study. The ladies who had to be delivered abdominally before 28 completed weeks were excluded from study.

It was a retrospective study. The data was collected by retrieving the record. Demographic determinants were also collected. This study was conducted at Ibn-E-Siena Hospital Multan, which is a tertiary care hospital located at the southern bypass of Multan.

It drains population not only with in the Multan but also from the peripheral areas and other nearby small cities of Punjab. As usually the spontaneous vaginal birth are usually conducted

by local traditional birth attendants, midwifes, the Ibn-E-Siena hospital usually get referred and problematic cases that cannot be dealt easily. This might be the reason that rate of caesarean delivery is quite high in this hospital. This study is conducted basically to evaluate the common indications and determinants of C/section delivery, so that we can work over as if how we can reduce the rate of this high C/section delivery. This will in turn help to reduce the corresponding mortality and morbidity associated with the procedure.

RESULTS

The record of 250 patients undergoing caesarean delivery at Ibn-E-Siena hospital was retrieved. Regarding demographic determinants, 64.8% of patients were 20-30 years old, 27.2% of 30-40, 4.8% less than 20, and 3.2% of age and above 40 years old. Majority of patients, i.e. 48% were in their second to fourth pregnancy. 24% were primigravida, 28% were gravid multipara i.e. gravida five and above.

28% of women included in this study were educated upto primary level, 14% till matriculation and above and 58% were totally uneducated. While considering socioeconomic status majority belonged to low socioeconomic status with income of less than 10,000 Rs/month.

When the indications of caesarean section were sort out. The common indications were previous caesarean section, oligohydramnios, preterm labour, preterm premature rupture of membrane, fetal distress, multiple pregnancy, hypertensive disorders of pregnancy, failed progress of labour, bad obstetrical history, Cardiac disease of mother, placenta previa and failed progress of labour.

DISCUSSION:

C-section is a major obstetric intervention introduced in late nineteenth century to save lives of women and infants and to prevent pregnancy related complications.[1]

C-section is a commonly done surgical procedure. There are a number of indications for this. Depending upon the demographics of the country, health issues and delivery techniques, the common indications may vary to some extent from place to place.

Indications of caesarean delivery Total no. of patients N = 250		
Indications	**No. of patients (n)**	**Percentage**
Oligohydramnios	36	14.4 %
Previous I C/section	46	18.4 %
Previous II C/section	24	9.6 %
Previous III C/section and above.	24	9.6 %
Preterm labour	14	5.6 %
Fetal distress	30	12 %
Multiple pregnancy	14	5.6 %
Hypertensive disorders of pregnancy	18	7.2 %
Failed progress of labour	12	4.8 %
Bad obstetrical history	12	4.8 %
Cardiac disease	2	0.8 %
Placenta previa	8	3.2 %
Failed induction	12	4.8 %

Total no. of patients N = 250		
Age	**No. of patients (n)**	**Percentage**
less than 20	12	4.8 %
20-30	162	64.8 %
31-40	68	27.2 %
Above 40	8	3.2 %

Total no. of patients N = 250		
Parity	**No. of patients (n)**	**Percentage**
Primigravida	34	13.6 %
Gravida 2 to Gravida 4	80	32 %
Gravida 5 and above	42	16.8 %

This study was conducted in a tertiary care hospital to look into the indications of this procedure. Globally alarmingly high C-section rate warrants monitoring indications of all C-section in public and private facilities.[2]

The rate of C-section delivery is on a rise both globally and locally.

Over past few decades around the world, C-section rates continue to rise. The WHO has long recommended that ideal C-section rate should be between 10-15%.

C-section can cause future pregnancy problems

but on the other hand when medically indicated C-section can save both the maternal and fetal morbidity and mortality. Recent statistics from 150 countries show a global C-section rate of 18.6% means 1 in 5 women around the world is delivered by C-section.

In some countries e.g. Brazil, China, Iran, Turkey C-section rates have been reported as high as 46-57%. In Germany and Srilanka 30-45% and in UK, Canada upto 25-30%.

As vaginal birth is normal outcome of a healthy low risk pregnancy, may contries are trying to reduce their C-section rates.[3]

In our hospital the C-section rate was 65% of all deliveries. This rate is higher as compared to other teaching and tertiary hospital in Pakistan i.e. about 24%.[4]

The top five indications were repeat C-section (37.6%), oligohydramnios 14.4%, fetal distress 12%, hypertensive disorder of pregnancy 7.2% and preterm labour 5.6%.

Demographic features showed high %age of C-section in young age group. This might be due to early marriage trends in this area. So many women in their 30's were in the 2nd, 3rd or 4th pregnancy.

Regarding parity maximum %age of C-section was of women who were in the 2nd to 4th pregnancy.

Majority of women undergoing caesarean delivery were uneducated and belonged to low socioeconomic status, this finding relates to the fact that as Ibn-E-Siena is a non-profitable tertiary care teaching hospital, so most of the women are referred from peripheral and rural areas who have low socio-economic status.

These patients have already been delt with traditional birth attendants and local clinics are referred in cases of emergency usually. WHO has recently stressed more on monitoring indications rather than concentrating on appropriate C-section rates.[5,6]

This study show previous C-section has become the commonest indication for repeat C-section (37.6%). Among these 18.4% were due to previous 1 C-section, 9.6% due to previous II C-sections and 9.6% due to previous III C-sections. A study conducted in 2001 shows that 30% of C-section in developed countries were due to previous C-sections.[7] Another study in Bangladesh reported that 35% of C-section were repeat C-sections.[8]

National Institute for Health and clinical excellence.[9] American College of Obstetricians and Gynaecologists[10] have told that previous C-section should not be an indication in absence of any obstetric emergencies. Studies have shown that success rate for vaginal birth after C-section (VBAC) was high (rof) and lesser morbidity was seen in women undergoing VBAC as compared to C-sections.[6,7]

As our study shows that majority of women underwent C-section due to previous C-section so greater and safe effort should be put in to deliver the women by VBAC, in Primigravidas liberal attitude of C-section should be avoided. In this regard better results can be obtained if client and her family is also involved in decision making process.

Oligohydramnios was the indication for 14.4% of C-sections in this study. Another study conducted in Bangladesh has given this prevalence at 14%.[4] Another study shows prevalence of oligohydramnios of about 6%.[11] A short study in Pakistan shows that isolated oligohydramnios does not cause adverse perinatal outcome as compared to women with adequate amniotic fluid. So elective C-section to decrease perinatal morbidity due to oligohydramnios also is not recommended.[12]

So trial of vaginal birth should be conducted with vigilant fetal monitoring, instead of performing C-section directly due to scanty liquor.

Fetal distress is another leading cause of C-section (12%) in this study. Globally this prevalence is about 20%[13] and 16% at tertiary level hospitals

in Bangladesh.[14] In our setting fetal distress is diagnosed by F.H.R and CTG abnormalities.

Most of the ladies coming to our hospital are malnourished and anemic (so their placental resources are also compromised). There is common chance of developing fetal distress is labour. Improving maternal nutritional status, with proper antenatal care routine iron supplementation, and during labour simple measures like nursing in left lateral position with intermittent inhalation may be helpful in reducing operative intervention in the form of C-section.

Hypertensive disorders in pregnancy are commonly seen in ladies coming to Ibn-E-Siena Hospital. As they may have negative impact are look the mother and baby, higher %age of such ladies are delivered by C-section.

The prevalence in our study was 7.2% majority of the women were diagnosed as pregnancy induced hypertension, and then pre-eclampsia and least common are chronic hypertension and eclampsia. Another study showed C-section rae of 17% in gestational hypertension or mild pre-eclampsia.[15]

CONCLUSION

In order to address the rising rate of C-section by looking into its major indications, this study was conducted. The data shows that top 5 indications were previous C-section. Oligohydramnios, fetal distress, hypertensive disorders of pregnancy and preterm labour. Work has to be carried out to reduce the C-section rate is primigravida by involving the patients and family in decision making, proper counseling, save attempts should be made for VBAC. Proper and appropriate antenatal care should be given to ladies if urban as well as rural areas better and definite diagnosis of fetal distress should be made before deciding for abdominal delivery.

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One thing I learned about people
is that if they do it once, they'll do it again.

– Unknown –

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Tanvir Jahan	Main Author	
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