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AN AUDIT OF CAESAREAN SECTION IN DISTRICT HEADQUARTER TEACHING HOSPITAL, GOMAL MEDICAL COLLEGE D. I. KHAN.

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Abstract

Background: There is a global concern for rise in CS rate over the past few years. C-Section (CS) deliveries are not only associated with high morbidity and mortality but also prolonged hospital stay and a general financial burden. **Objective:** To analyze the rate and frequency of different indications of CS in DHQ teaching hospital D. I. Khan-KPK, Pakistan. **Place and duration:** This cross sectional study was conducted at the Gyne and Obs department of DHQ hospital D.I.K. from January 2015 to December 2020. **Patients and Methods:** A total of 25884 delivery cases were entertained during the study period. Detailed gynecological and obstetrical history was recorded using a pre designed questionnaire format with an informed consent. All the base line investigations were carried out. Strict fetometernal monitoring was done during labour period. Prostein E2 tablets were used for induction using Bishof score. Clinical record of all patients including mode of delivery and indications were analyzed in terms of percentage and frequencies. **Results:** Out of 25884 patients enrolled in the study, 11.6% (n=3009) were delivered by CS 88.4% (n=22875) delivered by vaginal birth. Rate of CS ranges from 8.9% to 12.5% between January, 2015 to December, 2020. Whereas the mean rate calculated was 11.6%. Audit of different indications of CS for January 2015 to December 2020. Audit was divided into two broad categories for an emergency and an elective CS. The most common indication for an emergency CS was primary breech (10.80%) followed by fetal distress (7.80%), obstructed labour (7.40%), cephalo pelvic disproportion (5.54%), and previous-I (6.60%). The most common indications for an elective CS were previous-I (6.05%), previous-II (4.20%), cephalo pelvic disproportion (4.03%), breech (2.50%) and previous-III (2.1%). **Conclusion:** We concluded from our findings that rate of CS was low at our unit but still it needs to be closely monitored and audited so as to take measures to keep the check on CS rates. Assisted vaginal breech delivery should be encouraged to reduce CS rate for this indication.

Key words: Caesarean Section, Audit, DHQ hospital D.I.Khan

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INTRODUCTION

In many parts of the world, caesarean delivery cases are increasing considerably. Though, caesarean delivery is associated with a marked increase in obstetric outcomes, yet concerns regarding health and economic consequences of the practice with high caesarean delivery rates are also raised[1]. CS delivery has been revealed to considerably augment the jeopardy of motherly and perinatal morbidity, including anaesthetic complication, bleeding, postpartum thrombo-embolism, infection and postpartum depression. The maternal mortality rates among women who experience CS are 4-10 times greater than among those who deliver vaginally, and uterine scar from a CS can destabilize reproductive health [2-7]. So we can say that although CS is a safer technique yet it cannot replace vaginal delivery.

As for as ratio is concerned, one third CS cases are performed electively where as two third are performed as emergency procedures. To predict the future obstetric course of a woman, primary CS have a major contribution. Among primary CS cases, breech is the most common indication for an elective procedure whereas labour dystocia and non-reassuring fetal heart rate tracing are common indications for an emergency technique [8].

The purpose of the study was to audit the caesarean section in district headquarter teaching hospital, Gomal medical college D. I. Khan.

Patients and Methods

This cross sectional study was carried out at Gyne and Obs department, DHQ teaching hospital D.I.khan from January 2015 to December 2020.

Inclusion Criteria: All pregnant females reported to gyne unit during the study tenure were included in the study excepting cases mentioned in exclusion criteria.

Exclusion Criteria: Cases of uterine rupture, ectopic pregnancies and termination of pregnancies were excluded from the study.

Data Collection: A total of 25884 delivery cases were entertained during the study period. Detailed gynecological and obstetrical history was recorded using a pre designed questionnaire format with an informed consent. All the base line investigations were carried out. Strict fetometernal monitoring was done during labour period. Prostein E2 tablets were used for induction using Bishof score. Clinical record of all patients including mode of delivery and indications were analyzed in terms of percentage and frequencies.

RESULTS

Out of 25884 patients enrolled in the study, 11.6% (n=3009) were delivered by CS. 88.4% (n=22875) delivered by vaginal birth. Rate of CS ranges from 8.9% to 12.5% between January 2015 to December 2020. whereas the mean rate calculated was 11.6%. Audit of different indications of CS for January 2015 to December 2020 was divided into two broad categories for an emergency and an elective CS. The most common indication for an emergency CS was primary breech (10.80%) followed by fetal distress (7.80%), obstructed labour (7.40%), previous-I (6.60%) and cephalo pelvic disproportion (5.54%). The most common indications for an elective CS were previous-I (6.05%), previous-II (4.20%), cephalo pelvic disproportion (4.03%), breech (2.50%) and previous-III (2.1%). Results are shown in Table 1 and Fig I and 2

Years	Total Deliveries	C-Sections	Rate of C-Section
2015	3029	324	10.7 %
2016	3453	311	9.0 %
2017	3520	313	8.9 %
2018	3904	488	12.5 %
2019	5860	808	13.8 %
2020	6118	765	12.5 %
Total	**25884**	**3009**	**11.6 %**

Table 1: Year wise Total Deliveries, C-section and Rate of C-Section

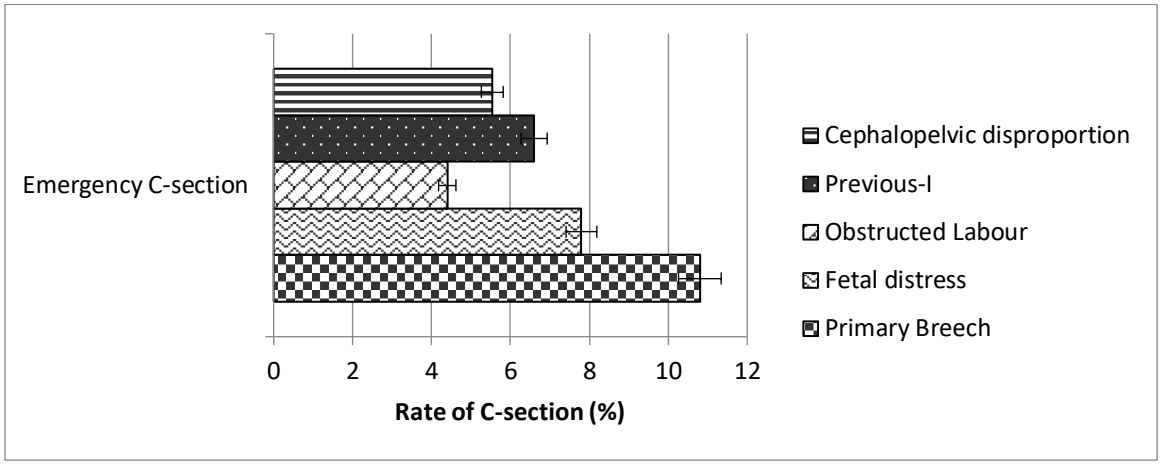

Fig. 1: Indication for an emergency C-Section (in %age)

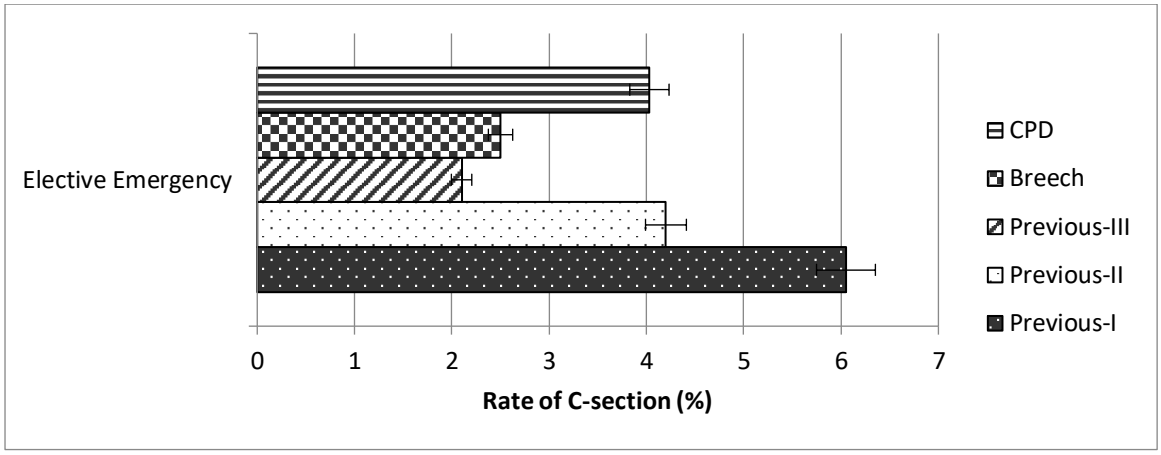

Fig. 2: Indication for an elective C-Section (in %age)

DISCUSSION

Results revealed in our study that CS rate has slightly increased over the years from 8.9% to 12.5% at DHQ teaching hospital D. I. Khan. Almost similar rate of CS i.e. 9.0% to 15.5% from 1980 to 1995 had been report by Thomas et al. 2000[9] in England. But in contrast to our results in another study conducted in Pakistan by Sajjad et al. 2014[10] in military hospital, the rate of CS recorded was 45.5% which is much more higher than ours. This difference in rate could be due to the social background of patient booked in civil hospitals as compared to the military hospital where most of the patients are from army background and they have more awareness about alternative mode of deliveries like CS. Similarly in some other studies conducted in advanced countries the rate of CS is reported to be quite high, for example

in specialist private practice in South Africa rate has been reported as 60.4% Naidoo and Moodley 2009[11], whereas overall highest rate in the world is 46% in China, similarly 40% in Italy and over 25% in many European, Latin American and Asian countries11. The main reason of higher rates of CS in advanced countries is the reluctant behavior of woman towards natural birth[12]. The other major reason of high rate of c section in these countries is maternal age, over the last two decades social behavior has changed and most of the women are now opt for delayed childbirth and limited number of pregnancies[9].

It has been noted that due to financial constraints of local population, patient influx is more towards our hospital as compared to the expensive private clinics because usually private set ups have high rate of CSs,[11]. Although, most of the emergency cases are generally referred to our hospital, even then the CS rate has remained low. This low rate of CS in our hospital (Obs and Gyne unit) can well be related to strict adherence to the partograph in the labour suit and secondly, all the decision of CS are taken on consultant level. In addition to that weekly meetings are being conducted at unit level to keep the check on CS rate and yearly data are being evaluated statistically to further lower the CS rate.

The low rate of CS could also be well explained on the basis that DHQ Hospital D.I Khan where current study has been conducted is basically located in less educated and comparatively poor part of the country. Most of the patients booked here come from rural background where traditionally they get marry at early ages. Moreover, socially they still do not like surgical procedures like CS rather they prefer risk oriented vaginal delivery.

In our study, emergency CSs were performed mainly due to primary breach followed by fetal distress, obstructed labour, cephalo pelvic disproportion and previous-I. Similar observation was made by Rosenberg et al. 1982 where they listed cephalo pelvic disproportion, slow progress and breach presentation as the three most important clinical indications for CS. In accordance with our study[10] also reported that patients with previous CS were more prone to have subsequent CS. We have also recorded that in case of both emergency and elective CS; previous CS was the main reason. Primary CS has major contribution in determining the future obstetric course of a woman[13]. Like our results, Bruce D et al 2002[14] also reported that Main reasons for emergency sections were either failure to progress or fetal distress.

Overall in current study the rate of emergency CS was higher than elective CS. Same is the case in rest of the world where emergency CS rate is two third as compared to one third of CS that are performed electively[14]. Although our results showed that CS rate in our hospital is comparatively lower than reported rate all over the world. But still there is need to put efforts to keep it in check by following recommended guidelines because mode of delivery has great impact on women's health.

CONCLUSION

We concluded from our findings that rate of CS was low at our unit but still it needs to be closely monitored and audited so as to take measures to keep the check on CS rates. Assisted vaginal breech delivery should be encouraged to reduce CS rate for this indication.

ETHICS APPROVAL: The ERC gave ethical review approval

CONSENT TO PARTICIPATE: written and verbal consent was taken from subjects and next of kin

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CONFLICT OF INTEREST: No competing interest declared.

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