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Research Article

One-Year Trend of Caesarean Rate in a Border Static Hospital in India

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Abstract

Background: Even though the caesarean section is an essential component of comprehensive obstetric and new born care for reducing maternal and neonatal mortality, higher rates do not necessarily imply better quality of care. Primary caesarean section rate is one of the main indicators of quality of care and hospital rankings are usually based on it, therefore lower rates reflect more appropriate clinical practice. The aim of this study is to describe the demographics and one-year trend of Caesarean rate in a border static hospital in India from January 2019 to December 2019.

Methods: Details of 440 deliveries occurring from January 2019 to December 2019 were collected from hospital records from statistics section of a border static hospital in India and analysed.

Results: 337 patients (76.59%) had normal vaginal deliveries whilst 103 patients (23.40%) underwent Caesarean section.

Conclusion: Antenatal Care visit is an opportune time to explain the indications and hazards associated with CS birth and women should be educated and encouraged for normal vaginal delivery rather than drifting woman towards profit driven unnecessary and unwarranted caesarean sections. The most fertile age group was between 20 - 38 years of age and patients who had normal vaginal were comparatively younger as compared to those who underwent Caesarean section. Multi gravid women had higher rates of Caesarean as compared to primigravida. Urban, educated women from well to do families had higher rates of Caesarean section as compared to rural women from lower socioeconomic strata. The rate of Caesarean section is high and there is a need to maintain a fine balance between a decision to perform a Caesarean section to reduce maternal and perinatal mortality rate and an unnecessary caesarean section causing pulling resources away from other services in an already overloaded and weak health system.

Keywords: *Caesarean Section; Normal Delivery; Rate of Caesarean Section; Quality Health Care; Institutional Delivery; Primary Caesarean Section*

Introduction

Caesarean section (CS) is the most commonly performed surgical procedure in developed countries [1]. Considering the epidemic proportion of CS, the World Health Organization (WHO) indicates that a CS rate greater than 10 - 15% is not justifiable for any region of the World [2]. Primary Caesarean Section is defined as caesarean section performed to women who have not had a previous caesarean delivery.

Aim of the Study

The aim of this study was to study the demographics and rate of Caesarean section deliveries in a border static hospital in India over a period of one year from January 2019 to December 2019.

Materials and Methods

Records of 440 deliveries conducted at a border static hospital in India during a period of one year from Jan 2019 to Dec 2019 were taken from the Statistics section. All patients were booked patients and came for regular ante natal visits at 16, 24, 32 and 36 weeks. Permission from Officer in charge of the Statistics section of the hospital and the Obstetrician was sought and record cards of the patients obtained. The demographics and the trend of Caesarean section deliveries versus normal deliveries were studied and analysed.

Results

440 patients who delivered at a border static hospital in India formed part of the study. 337 patients (76.59%) had normal vaginal deliveries whilst 103 patients (23.40%) underwent Caesarean section the age bracket of the patients constituting the study ranged from 20 years to 38 years. The age group between 23 to 30 years had the most number of deliveries (75.45%). The rate of Caesarean section in the Officers family group was 65.21% whereas in Other ranks family group it was around 18.18%. The Caesarean rate in primigravida was 31.81% whilst in multigravida it was about 68.18%.

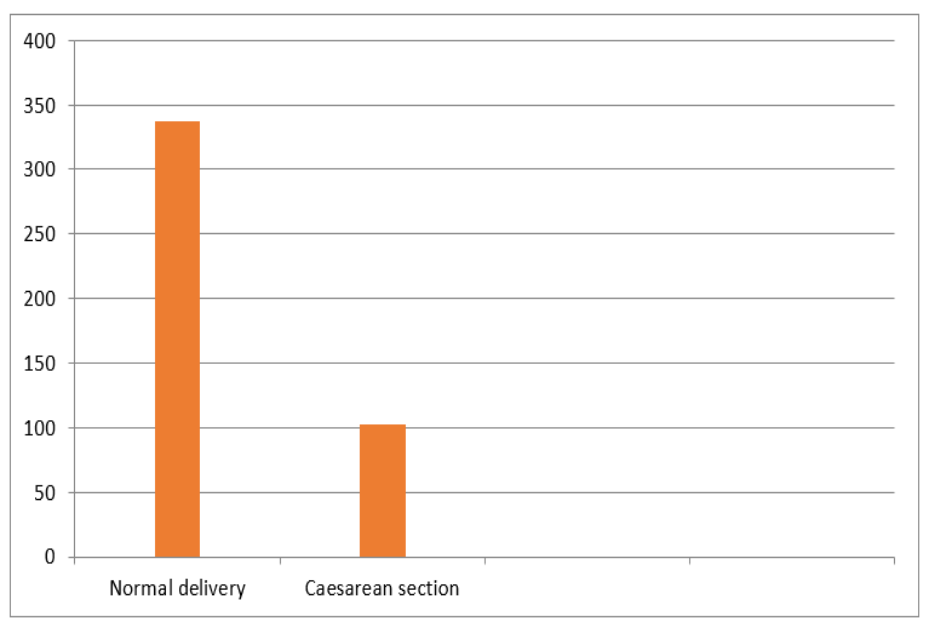

Figure 1: *Ratio of Normal deliveries as compared to Caesarean sections.*

The age bracket of the patients constituting the study ranged from 20 years to 38 years. The age group between 23 to 30 years had the most normal vaginal delivery (75.45%) (Figure 2).

The age group between 23 to 28 years had the highest number of normal deliveries (34.31%) whilst Caesarean section was most frequent (33.11%) in the age bracket between 27 - 33 years.

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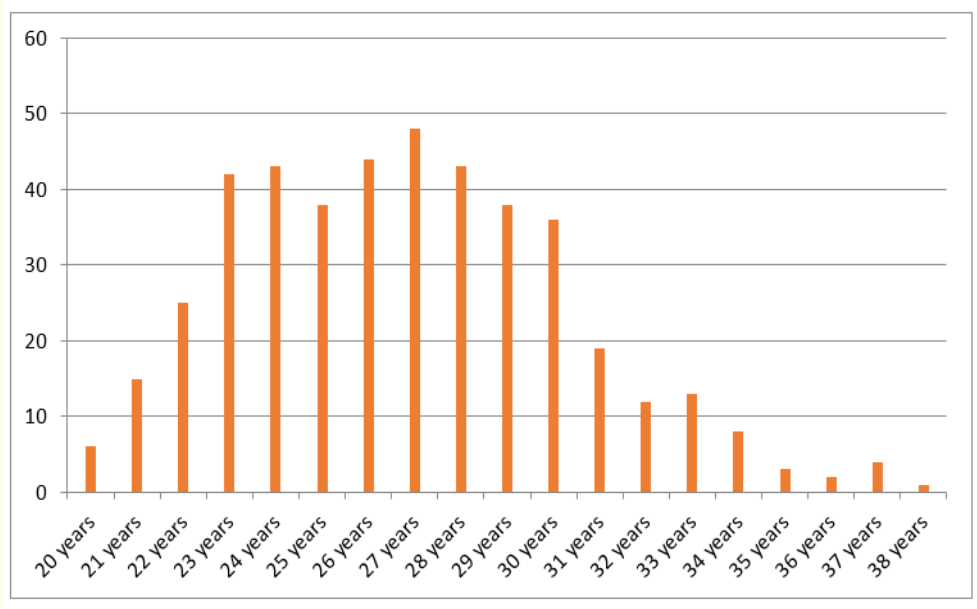

Figure 2: *Age wise number of deliveries.*

Discussion

Caesarean section rates show a wide variation across countries in the world, ranging from 0.4 to 40% and a continuous rise in the trend has been observed during the past 30 years [3]. As per recently published WHO report, Caesarean section rates higher than 10% are not associated with reductions in maternal and new-born mortality rates [4]. World-wide large disparity is observed in CS rates, highest rates being reported in Latin America and the Caribbean region followed by Northern America, Oceania, Europe, Asia and Africa [5]. In India as per District level household survey 3 CS rate is 28.1% in private sector and 12% in public sector health facilities [6] which also reveals that institutional births have increased in India, especially in private sector health facilities. This study observed a Caesarean section rate of 23.40%.

Patient's preferences, fear of vaginal delivery and social norms have been cited as reasons of the increasing trend of Caesarean sections [7]. Promoting Institutional deliveries is an important intervention of Government of India to decrease maternal morbidity and mortality which may have contributed to the increased rate of Caesarean sections. Few studies have also shown that greater maternal age as an important factor associated with caesarean births because other medical conditions like hypertension, diabetes being more prevalent at higher age group [8]. This study also shows that the most frequent age bracket where Caesarean was offered ranged from 27 - 33 years compared to the age group between 23 - 28 years where normal delivery was most frequent.

Caesarean rate has been found to be higher in urban women as compared to women from rural areas and more accessibility to medical intervention in urban areas, presence of more health facilities and insurances in urban areas can be the probable reason behind it [9]. Women from higher socioeconomic strata have shown to have higher rates of Caesarean sections as it seems to be a preferable option for woman who can afford it rather than being a procedure for safe delivery when medically indicated [10]. Woman with lower socioeconomic status may not be able to afford or may not have access to health facilities which are equipped to perform caesarean delivery hence lower rates of CS in them [11]. In this study Officers family class of urban, educated women belonging to higher socioeconomic strata had higher rates of Caesarean section (65.21%) compared to women from rural background where the rates of Caesarean was about 18.18%.

The finding of higher caesarean rates amongst mothers whose first delivery is after age of 35 years is matter of concern, since this contributes to increased further CS deliveries, considering that history of CS delivery is a relative indication for CS in subsequent delivery as is commonly said "Once a caesarean, always a caesarean [12].

A study shows that the number of antenatal care visits is associated with higher CS Birth rates [13] as greater number of ANC visits allows more interaction between the care provider and pregnant woman, which might influence her decision in favour of requesting for a CS delivery. Ultrasound imaging is an essential component of antenatal care and is recommended by WHO for safe pregnancy, detection of congenital anomalies or maternal complications at a very early stage so that the detected condition can be managed at the earliest. Antenatal Ultrasound done at least once during pregnancy was significantly associated with higher risk of CS births [14]. Obstetricians' fears of complaints and legal action have also been indicated as determinants of caesarean delivery [15].

Conclusion

Antenatal Care visit is an opportune time to explain the indications and hazards associated with CS birth and women should be educated and encouraged for normal vaginal delivery rather than drifting woman towards profit driven unnecessary and unwarranted caesarean sections.

The most fertile age group was between 20-38 years of age and patients who had normal vaginal were comparatively younger as compared to those who underwent Caesarean section.

Multi gravid women had higher rates of Caesarean as compared to primigravida.

Urban, educated women from well to do families had higher rates of Caesarean section as compared to rural women from lower socioeconomic strata.

The rate of Caesarean section is high and there is a need to maintain a fine balance between a decision to perform a Caesarean section to reduce maternal and perinatal mortality rate and an unnecessary caesarean section causing pulling resources away from other services in an already overloaded and weak health system.

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