Scholars Journal of Applied Medical Sciences
Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Gynecology and Obstetrics

Caesarean Delivery in a Tertiary Care Hospital; A One-Year Survey

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DOI: 10.36347/sjams.2022.v10i11.039 | **Received:** 09.10.2022 | **Accepted:** 22.11.2022 | **Published:** 29.11.2022

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Abstract **Original Research Article**

Background: Caesarean section (CS) rates are growing worldwide. It contributes to substantial maternal and perinatal morbidity and mortality. South Asian countries including Bangladesh have recorded substantial increases in caesarean section rates over the past decade. Prolonged labour and cervical dystocia, hypertensive disorder, malpresentation were also contributing factors for caesarean section. The World Health Organization (WHO) has recognized an ideal caesarean section (CS) rate for a nation of around 10-15%. In recent times the proportion of delivery conducted by caesarean section has improved. ***Objectives:*** The aim of this study is to assess A One-year survey of caesarean delivery in a tertiary care hospital. ***Methods:*** This is an observational study. The study used to be carried out in the admitted patient's Department of Gynecology and Obstetrics, Dhaka Medical College Hospital, Dhaka, Bangladesh. In Bangladesh for the duration of the period from January 2007 to June 2008. ***Results:*** This study shows that the according to age of 250 Patients aged 20 to 40 years where, 96(38.4%) were 20-25 years, 108(43.32%) were 26-30 years, 33(13.2%) were 31-35 and 13(5.2%) were 36-40 years And according to Gestational age, 17(6.8%) were 30-35 years, 200(80.0%) were 36-40 years, and 33(13.2%) were 40+ years and according to outcome, improved were 243(90.00%) and death were 7(2.8%).***Conclusions:*** Careful monitoring of the fetus and selecting patients for CS at all levels of health care services, and consciousness among general population about the difficulties of the caesarian sections would decrease the caesarian sections.

Keywords: Caesarean Section (CS); Morbidity; Mortality; World Health Organization (WHO); Prolonged.

INTRODUCTION

Although caesarean section has come to be an increasing number of protected and frequent surgical procedures, however it is nonetheless related with sizable morbidity and mortality. Maternal mortality after caesarean area has been estimated to be between 5.81 and 6.1 per 100,000 procedures [1, 2]. About 20% to 50% of these deaths are attributable to caesarean delivery which includes anesthesia with the rest being the end result of the complication that led to the procedure [3]. Generally, post caesarean section problems are comparable to these located from any laparotomy apart from endomyometritis. These include; wound infection, thromboembolism, injury to contiguous structures i.e., bladder (0.3%), ureters (0.1%) and bowels (0.1%).

Several risk elements have been recognized that predispose patients to post caesarean wound infection. These encompass prolonged labor, prolonged rupture of membranes, a couple of vaginal examination for the duration of labor, emergency intrapartum surgery, amnionitis or previous meconium passage and length of surgery-especially when more than 1hour [4, 5]. Medical conditions such as diabetes mellitus, sickle cell disease, weight problems and anemia have additionally been proven to be related with wound infection [6]. Other risk elements consist of patients on prolonged corticosteroid therapy, immunosuppression, low socioeconomic status and abdominal wall hematoma. Perioperative antibiotic use has been validated to stop wound infection even among patients with the highest risk [7].

The following measures ought to be undertaken to minimize the wound infection rates. They are appropriate skin preparation and protection of aseptic method at some stage in the surgery, really appropriate use of perioperative antibiotics, making sure hemostasis particularly round the wound edges and manipulate of diabetes mellitus. Some elements then again are now not easy to right prior to surgical treatment e.g., Obesity [8].

Prevention of wound infection the use of the above measures is indispensable to keep away from related morbidities such as thrombophlebitis, incisional hernia, pelvic adhesion and its attendant complications. Psychological upsets and reasonably priced issues suffered by using the patients due to their prolonged hospital remain are additionally avoided [9].

The incidence of caesarean deliveries has elevated dramatically in many nations of the previous 50 years [10]. Post-caesarean section maternal morbidity rate has been said to be as excessive as 35.7% [11]. The most conventional problems of caesarean section are fever (24.6%), blood loss (4%), haematoma (3.5%) and urinary tract infections (3.0%) [12]. The recognized long-term issues are subsequent ectopic pregnancies, uterine rupture and placental ailment in future pregnancies [13], and delayed post-partum haemorrhage (PPH) with pseudoaneurysm or arteriovenous fistula [14].

Among these complications, PPH stays amajor purpose of maternal mortality world-wide [15]. In most cases, extreme PPH can be managed with conservative treatment involving vaginal packing and administration of uterotonic drugs. In instances of continual bleeding, however, surgical ligation of uterine or hypogastric vessels or haemostatic hysterectomy is performed. Surgical cure may sometimes be technically hard and might also fail to manipulate haemorrhage. In addition, surgical options lead to considerable maternal morbidity, mortality and infertility [16]. For these reasons, transcatheter arterial embolization (TAE) of the uterine arteries represents an interesting alternative treatment for intractable PPH. The use of TAE to manipulate PPH has a pronounced success rate of 90–95% [17].

Caesarean scar being pregnant (CSP) is a distinguished kind of ectopic pregnancy. Its outcome in uterine rupture and extreme haemorrhage during the gestation. Therefore, life-saving emergency hysterectomy is generally the treatment of desire when there is profuse bleeding intraoperatively or after preliminary administration [18]. When there is huge blood loss, particularly in reproductive women, the wish for maintenance of the uterus is a dilemma for the medical doctor [19].

METHODS

This is an observational study. The study used to be carried out in the admitted patient's Department of Gynecology and Obstetrics, Dhaka Medical College Hospital, Dhaka, Bangladesh. In Bangladesh for the duration of the period from January 2007 to June 2008. This study was carried out on 60 patients the find out about the population including male and female patients above 20 years of age in the Department of Gynecology and Obstetrics, Dhaka Medical College Hospital, Dhaka., Bangladesh. The medical Pediatricians, Neonatologist and the surgeon were primarily involved in the decision-making process. The choice of treatment was made by the patient after a full discussion with the multidisciplinary team consisting of pediatricians, neonatologists and pediatric endocrinologists and surgeons.

The data for this study about had been accumulated from patients' medical information and radiographs. Statistical evaluation of the results used to be got via the use of a window-based computer software program devised with Statistical Packages for Social Sciences (SPSS-24).

RESULTS

Table 1: Distribution of the study according to age (n=250)

Age in years	Number	Percentage
20-25	96	38.4
26-30	108	43.2
31-35	33	13.2
36-40	13	5.2

Table 1 demonstrated and distribution of the study according to age of 250 Patients aged 20 to 40 years. Here according to Age distribution, 96(38.4%) were 20-25 years, 108(43.32%) were 26-30 years, 33(13.2%) were 31-35 and 13(5.2%) were 36-40 years.

Table 2: Distribution of the study according to Gestational age (weeks)

Gestational age (weeks)	Number	Percentage
30-35	17	6.8
36-40	200	80.0
40+	33	13.2

Table 2 demonstrated and distribution of the study according to Gestational age (weeks). Here according to Gestational age, 17(6.8%) were 30-35 years, 200(80.0%) were 36-40 years, and 33(13.2%) were 40+ years.

Table 3: Distribution of the study according to Parity

Parity	Number	Percentage
0-1	150	60.00
2-3	92	36.8
≥4	8	3.2

Table 3 demonstrated and distribution of the study according to Parity. Here according to Parity, 150(60.00%) were 0-1 and 92(36.8%) were 2-3.

Table 4: Distribution of the study according to Antenatal check up

Antenatal check up	Number	Percentage
Regular	127	50.8
Irregular	93	37.2
None	30	12

Table 4 demonstrated and distribution of the study according to Antenatal checkup. Here according to Antenatal checkup, 127(50.8%) were Antenatal checkup, 93(37.2%) were Irregular, and 30(12.0%) were none.

Table 5: Distribution of the study according to Obstetric complication

Obstetric complication	Number	Percentage
PET	8	3.2
Eclampsia	50	20.0
APH	75	30.00
Obstructed labour	25	20.00
P/H/O cesarean sections	100	40.00
Malpresentation	30	12.00
Multiple Pregnancy	30	12.00
Pregnancy with heart disease	10	4.00
Pregnancy with diarrhoea	3	1.2
Foetal distress	25	10.00
Pregnancy with Jaundice	15	6.0

Table 5 demonstrated and distribution of the study according to Obstetric complication. Here according to Obstetric complication, PET, Eclampsia, APH, Obstructed labour, P/H/O cesarean sections, mal-presentation,, multiple pregnancy, pregnancy with heart disease, pregnancy with diarrhea, Foetal distress, Pregnancy with Jaundice were 8(3.2%), 50(20%), 75(30%), 25(20%), 100(40%), 30(12%), 30(12%), 10(4%), 3(1.2), 25(10%) and 15(6.0%) respectfully.

Table 6: Distribution of the study according to type of operation needed after laparatomy

Name of Operation	Number	Percentage
Total hysterectomy	15	6.0
Subtotal hysterectomy	22	8.8
Repair of Uretary injury	5	2.0
Repair of urinary bladder injury	10	4.0
Myomectomy	10	4.0

Table 6 demonstrated and distribution of the study according to Name of operation. Here according to operation, the Total hysterectomy, Subtotal hysterectomy, Exploration of subrectal hematoma, Repair of injury and Exploration of the broad ligament hematoma were 15(6.0%), 22(8.8%), 5(2.0%), 10(4.0%) and 10(4.0%) respectfully.

Table 7: Distribution of the study according to Hospital stay

Hospital stays (days)	Number	Percentage
4-7	21	8.4
8-14	133	53.2
15+	96	38.4

Table 7 demonstrated and distribution of the study according to Hospital stays. Here according to Hospital stays, the days 4-7 were 21(8.4%), 8-14 were 133(53.2%) and 15+ were 96(38.4%).

Table 8: Distribution of the study according to Outcome

Outcome	Number	Percentage
Improved	243	97.2
Death	7	2.8

Table 8 demonstrated and distribution of the study according to Outcome. Here according to Outcome, improved were 243(90.00%) and Death were 7(2.8%).

DISCUSSION

Cesarean section is a main abdominal surgical operation which is life saving for the mother and fetus. By imparting the alternate route of delivery, the manner presents extraordinary advantage in conditions when vaginal delivery contains a high hazard of problems and death. However maternal mortality following cesarean section is 7-10 instances greater than for vaginal delivery and additionally in economic terms, cesarean section operation is more expensive to the price of operation and longer postoperative stay [20]. During the learn about period, the frequency of cesarean part was once 64.7%. According to WHO, no location in the world is justified in having cesarean section rate increased than 10-15% [21], hence this study about suggests an exact extend cesarean section rate.

The excessive charge in our learn about is due to the fact of the truth that majority of the pregnant women of surrounding populace are delivered vaginally at home by way of ordinary start attendants, girl health visitors and GPs in non-public hospitals. Only these patients are referred to this educating health center who have one or different hazard thing and who already had a trial of labour someplace else. So, the Cesarean part charge used to be needless to say excessive in these excessive hazard and non-booked cases. In Europe and USA the frequency of cesarean section has been growing gradually over the year [22, 23]. In Brazil extra than 70% of deliveries happening in non-public clinics are via cesarean section [24]. Thus to alter the cesarean section rate and to reverse the fashion it is vital to analyze the reasons at the back of cesarean area rate.

Studies from developed countries have exposed 5-10% higher cesarean section rate in upper social class and 20% increased cesarean birth among educated women [25, 26]. However in our study, according to Antenatal checkup, 127(50.8%) were Regular, 93(37.2%) were Irregular, and 30(12%) were none. And according to Obstetric complication, PET, Eclampsia, APH, Obstructed labour, P/H/O cesarean sections, mal-presentation,, multiple pregnancy, pregnancy with heart disease, pregnancy with diarrhea, Foetal distress and Pregnancy with Jaundice were 8(3.2%), 50(20%), 75(30%), 25(20%), 100(40%), 30(12%), 30(12%), 10(4%), 3(1.2), 25(10%) and 15(6.0%) respectfully.

Due to lack of antenatal care, most of them 6.5% developed obstructed labour so when they got here to the hospital, emergency cesarean part used to be the only lifesaving option. In our learn about 59.2% operations had been completed in emergency. Our figures are comparable to these bought by using Rakhshanda Shaheen Najmi [27], Nasreen Ruby [28] and Fauquia Bano [29] as carried out in comparable circumstances. Maternal age, parity and fetal weight are the elements over which obstetricians have little or no manipulate however they have been proven to be integral determinants of cesarean section rate. In our study according to Parity, 150(60.00%) were 0-1 and 92(36.8%) were 2-3.

Most of our patients have been younger between 25-35 years of age. Primigravida are team at excessive risk, as their capability of childbirth has by no means been put to the test. Our findings are exclusive than these mentioned by way of Amtula zareen [30] and Fabio Parazzim [31]. Currently repeat cesarean part is the most essential motive of escalating section consequently implementation of a trial of vaginal transport after preceding c/section is obligatory to manage the growing cesarean section rate [32, 33]. The success rate with trial of scar relies upon on suitable determination criteria, which encompass non-recurrent preceding cesarean section, sufficient pelvic dimensions, recognized uterine scar and absence of clinical issues and fetal macrosomia. In our setup it is tough to fulfill the above- mentioned stipulations as majority of the patients with previous cesarean section come to educating hospitals in hooked up or superior labour with related scientific or obstetrical troubles barring prior antenatal surveillance. This state of affairs limits the quantity of instances that ought to be subjected to trial of labour.

In our study, according to name of operation, the Total hysterectomy, Subtotal hysterectomy, Exploration of subrectal hematoma, Repair of injury and Exploration of the broad ligament hematoma were 15(6.0%), 22(8.8%), 5(2.0%), 10(4.0%) and 10(4.0%) respectfully.

Cesarean section is favored mode of shipping of all transverse lie and the secure mode of delivery even when the infant is dead [34]. Dystocia can be due to pelvic contraction, fetal macrosomia or uterine dysfunction. Reduction in percentage of cesarean section being carried out for dystocia ought to be carried out by way of using protocol of lively administration of labour which consists of analysis of insufficient growth of labour, well timed amniotomy,

use of prespecified dose of oxytocin and supervision of labour and transport with the aid of senior staff.

Breech presentation is related with greater stage of maternal mortality and morbidly irrespective of route of transport as it is related with fetal abnormalities and untimely delivery. Vaginal transport for time period breech does no longer show up to expand morbidity and mortality if the case for vaginal delivery is nicely selected. Breech presentation was once the indication in 4.2% of our patients. A coverage of selective, deliberate vaginal transport had been advocated in a learn about through Danielian in which they had no longer considered it to be related with multiplied hazard of long- term infant morbidity [35].

This study shows that, according to Hospital stays, the days 4-7 were 21(8.4%), 8-14 were 133(53.2%) and 15+ were 96(38.4%). And according to Outcome, improved were 243(90.00%) and Death were 7(2.8%).

In ante partum hemorrhage (APH), cesarean section is lifesaving system each for the mother and the fetus. However, in creating nations it incorporates plenty increased hazard of issues than comparable operations carried out in the western world due to already present anemia, malnutrition and excessive blood stress in multiparous patients.

Limitations of the Study

The present study was conducted in a very short period due to time constraints and funding limitations. The small sample size was also a limitation of the present study.

CONCLUSION

Prevalence of cesarean section in a tertiary care clinic is excessive in contrast to WHO data. The most frequent indication of cesarean section is fetal misery and preceding cesarean section.

The rate of caesarean section is growing with time. As foremost caesarean section generally determines the women's future obstetric course, it is of top significance to supply effort for protected discount of caesarean. Individualization of the indication and cautious evaluation, following standardized guidelines and practice of evidenced-based obstetrics accompanied by means of audits in the institution, can assist us restrict the caesarean rates.

RECOMMENDATION

This study can serve as a pilot to a much larger research involving multiple centers that can provide a nationwide picture, validate regression models proposed in this study for future use and emphasize points to ensure better management and adherence.

ACKNOWLEDGEMENTS

The wide range of disciplines involved in durability and versatility of Clinical Presentation and Management of Post Caesarean Section Complication Admitted in DMCH as Referred Case research means that an Editors needs much assistance from referees in the evaluation of papers submitted for publication. I am very grateful to many colleagues for their thorough, helpful and usually prompt response to requests for their opinion and advice.

DECLARATION

Funding: None funding sources.

Conflict of interest: None declared.

Ethical approval: The study was approved by the ethical committee of Dhaka Medical College, Dhaka.

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