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Incidence and complications of Caesarean Section in Babylon Teaching hospitals

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ABSTRACT

Caesarean section (C-section) is a surgical procedure in which one or more incisions are made through a mother's abdomen to deliver one or more babies. It is usually performed when a vaginal delivery would put the baby's or mother's life at risk. A descriptive study was done in two hospitals (Babylon Maternity and Children Teaching Hospital and Al - Imam Al - Sadiq Teaching Hospital). The study was conducted on 100 deliveries by CS from 1st of March 2024 to 31 of March 2024. The information was obtained from medical records and patient charts of both hospitals to record C-section percentage and their indications and complications. In conclusion, the percentage of C-section in both hospitals to total deliveries was high in comparison to World Health Organization (WHO).

Keywords: C-section, surgical procedure, Indications, Common Complications.

Introduction:

Cesarean section considers the most common surgical procedure done for women in childbearing age for delivery the baby. Now around the world, the cesarean birth deems the more birth method that chosen for delivery the fetus from the women or her family whether the condition requires to do this birth method or not (1). Despite the recommendations emphasized by the World Health Organization with regard to making the rate of caesarean section is 15% of all births.

However, there are 37 out of 60 developed countries in which caesarean section rates exceed the rate advocated by the World Health Organization. The rate of

caesarean sections in Canada and the United Kingdom is approximately 25%, while in the United States 32%, in Brazil 46% and the rate of CS in China 40% (2) (3).

In Iraq, the rate of cesarean section has begun to increase if compared with the percentage of normal vaginal delivery, during the year 2009 in public sector the percentage of cesarean birth was 24.5% elevated to become 25.8% through 2010, while in private sector for the same years the rate of Cs was very high where 75.8% in 2009 and elevated to reaching about 79.5% in 2010 (4).

There are many potential complications that women may experience after performing a caesarean section and they may sometimes express the most common adverse consequences, including post-operative blood loss, infection and wound complications and venous thromboembolic events, as well as complications from anesthesia drugs (5).

Notwithstanding these complications resulting from the caesarean section, it may interpret the increased desire for act a caesarean section as a way for birth the fetus to save the mother and the child life and prevent them from being exposed to bruises and injuries during childbirth. At the same time, health professionals, parents and family are opting for a caesarean section for reasons of convenience and better control of the timing of delivery (6). On the other hand, the health systems in most countries of the world suffered from heavy workloads, including dealing with women undergoing caesarean sections (7) when the world health organization (WHO) announced on 11 March, 2020 that the new coronavirus (COVID-19), which is an acute respiratory syndrome a life-threatening global pandemic (8).

In this period, the impact of COVID-19 on the health status of pregnant women has become worrisome for health professionals from several aspects such as the fear of complications that a pregnant woman infected with corona may be exposed to it and there may be a possibility of transmitting the virus to the fetus from the mother, in addition to the high number of patients in health institutions (9).

Regular prenatal check-ups that are approved to assess the health condition of mother and baby have been affected by the epidemic, which has made a pregnant woman more at risk of poor perinatal health care and may lead to a series of negative pregnancy outcomes on the mother and fetus (10) .

Health education can play an important role to increase knowledge, and change attitude and behavior of pregnant women using applicable theories and models. The aims of antenatal health education are to increase women's trust in their own capability to deliver, to improve knowledge and attitude about normal vaginal delivery, and to assist pregnant women in developing personal birth plans which provide a way map for save birth as normal as possible in spite of if complications happened (11). The aim of this article is to highlight on the cesarean section and the more recurrent and common complications that may face the women who undergoing for this type of delivery.

The causes of high cesarean section percentages may be due to:

- 1- Fear from the pain during labor in a normal delivery.
- 2- Some women choose C-section to give birth on the day to bring luck.
- 3- Many people believe that this procedure is less risky for the mother.
- 4- Hospital factors may explain some increasing C- section such as hospital size, shorter length of hospital stay.
- 5- Believe of people that cesarean delivery at 40 weeks of gestation reduces fetal mortality. While planned vaginal delivery could occur at up to 42 weeks of gestation.

Indications of Cesarean Section

There are many obstacles that women face during childbirth and thus impede the delivery of the child through the vagina. Predominating, these reasons are dangerous and critical therefore the vaginal delivery will be life-threatening for the mother in some clinical scenarios (12).

Maternal indications for cesarean delivery includes several health condition which is lead to this matter such as prior cesarean delivery maternal request (elective cesarean section), pelvic deformity or cephalo-pelvic disproportion, previous perineal trauma, prior pelvic or anal/rectal reconstructive surgery, herpes simplex or HIV infection, cardiac or pulmonary disease, cerebral aneurysm or arteriovenous malformation, pathology requiring concurrent intra-abdominal surgery and perimortem cesarean . As well as, the indications related to anatomy of woman uterine organ that is involve abnormal implantation of the placenta (such as

placenta previa, placenta accreta), placental abruption, prior classical hysterotomy, prior full-thickness myomectomy, history of uterine incision dehiscence, invasive cervical cancer, prior trachelectomy, genital tract obstructive mass and permanent cerclage.

Other indications of cesarean birth which related to fetal health status, this condition includes, non-reassuring fetal status (such as abnormal umbilical cord Doppler study) or abnormal fetal heart tracing, umbilical cord prolapse, failed operative vaginal delivery, malpresentation, macrosomia, congenital anomaly, thrombocytopenia and prior neonatal birth trauma.

Study conducted at Al-Najaf governorate to measure the effect of type of C/S for 600 women, whether it is elective or emergency & the effect of risk factors on the incidence of intra-operative minor & major surgical complications, the results of this study express the indications of cesarean section as following recurrent C/S (32.8%), prolonged/obstructed labor (19.1%), fetal distress (10.6%), breech (5%), preeclampsia/eclampsia (8.5%), diabetes mellitus (1%), cephalo-pelvic disproportion (9.1%), antepartum hemorrhage (4.8%) and postdate (8.8%) .

Common Complications of Cesarean Section

Caesarean section has a complication that vary in its severity, there are the usual and simple complications such as pain at the site of the wound and bleeding after birth, which may cause problems if it exceeds the limit, that there are other complications that include adhesions in the pelvic area that affect the menstrual regulation of cycle, there are also complications of anesthesia and serious complications which lead to life threatening (13).

One of the common minor complications after cesarean section is wound infection, wound infection and endometritis often occur after cesarean delivery frequently for many women. In a study examining the effectiveness of vaginal cleansing, endometriosis after surgery decreased from 8.7% to 3.8% with cleansing (18), a clinical study indicated the use of azithromycin as antibiotic drug saw a reduction in the wound infection from 6.6% to 2.4% with the additional antibiotic, as well as a serious adverse events lower from 2.9% to 1.5%. However, there are approximately up a million women undergoing a cesarean birth every year, these

percentages yet a represent a large number of women suffering from wound infection complications.

Through intra-operative phase, there are some complications which may happen for woman such as bleeding & lacerations in different rate related to the type of surgery, for elective cesarean birth the rate approximately 6% while 15% for urgent cesarean section (14).

Among babies with full term, the risk of newborn respiratory distress syndrome that presupposed dealing with it by oxygen therapy is higher for birth by cesarean section (35.5 with a pre-labor C/S versus 12.2 with a C/S during labor versus 5.3 with vaginal delivery) per 1000 live births.

On other hand, the intraoperative complications after doing the cesarean delivery among women with ruptured membrane over long time and several intra-vaginal examinations were more chance to exposure to infection and damage or stretching of the lower maternal segment organs such as uterus or bladder.

Caesarean section is very necessary in some cases for both the mother and the fetus, but it is considered one of the surgical interventions that accompanies many complications and health risks (15). In the period after the cesarean section, a woman may be exposed to many health problems, including wound infection due to failure in sterilization procedures and this matter may develop into septicemia and formation the blood clots that would play a role in the develop the pulmonary embolism and death.

In addition, a caesarean section may lead to complications in the future, including a high risk of ectopic pregnancy and some problems associated with the formation of the placenta and its location in the uterus. However, the cesarean birth can lead to increase the rate of morbidity and mortality among infants and mothers together around the worlds when this surgical intervention done without clear need or appropriate indications (16).

In Iraq a study done to identify the incidence of the cesarean section related maternal mortality, the results of this study showed the maternal mortality rate related to cesarean birth was three times higher than maternal mortality related to normal vaginal birth (17).

METHOD

The following data was collected from a total of 100 cases at (Babylon Maternity and Children Teaching Hospital and Al - Imam Al - Sadiq Teaching Hospital). between the 1st of March and the 31 of March 2024. The process was executed using a questionnaire with ethical approval from the mothers. It included questions about the indications of Caesarean section, whether it was elective or emergency and if there were any complications.

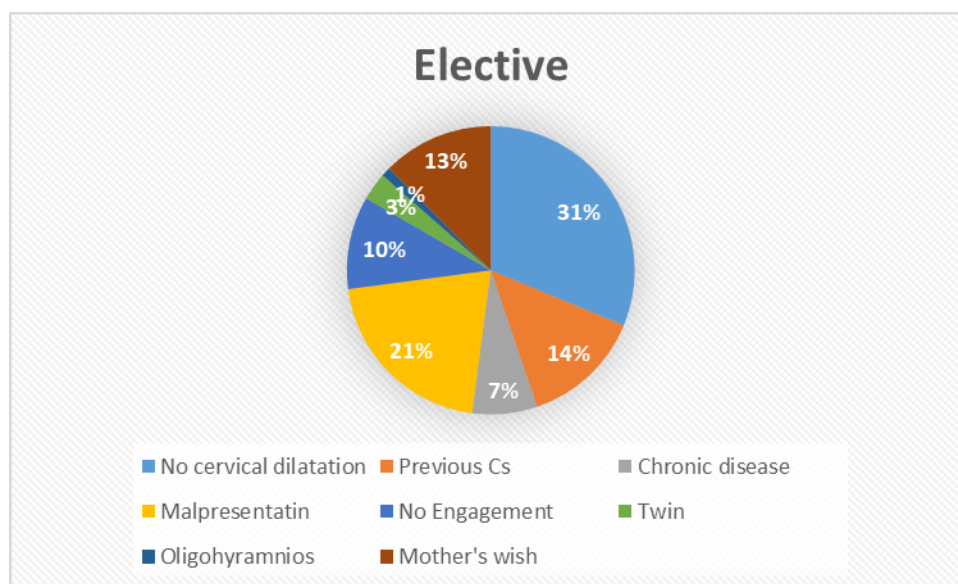


Figure (3.1) indications of those who have had elective caesarean section.

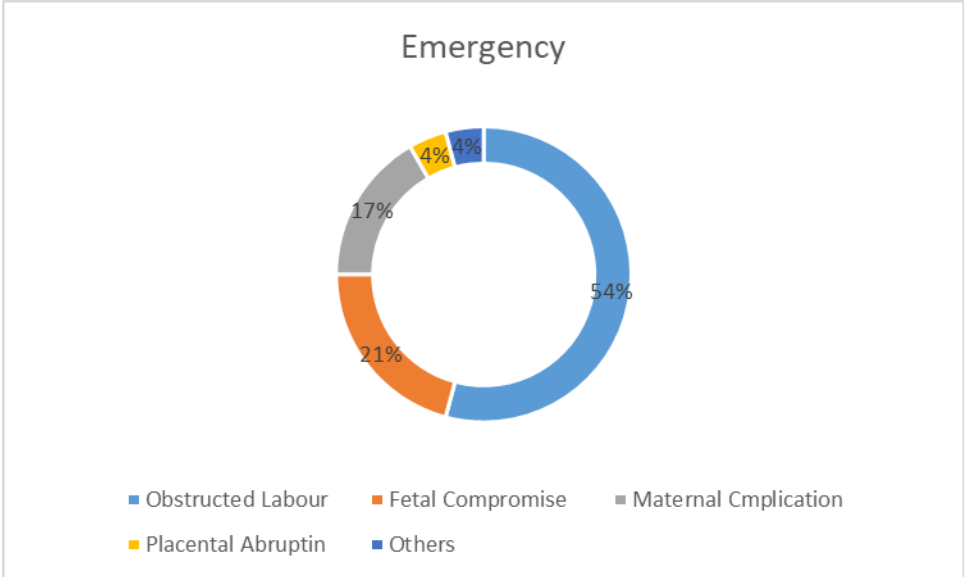


Figure (3.2) indications of those who have had emergency caesarean section.

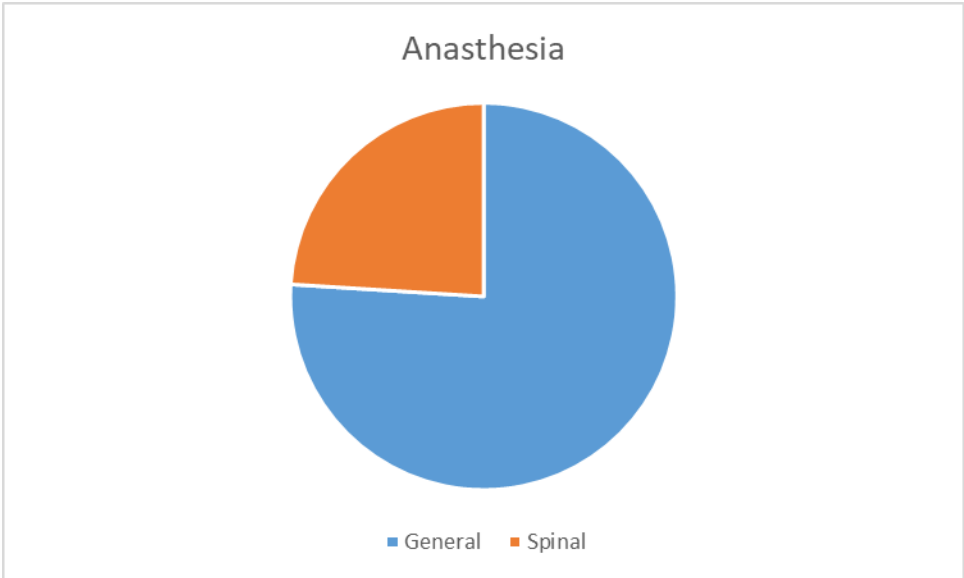


Figure (3.3) distribution of those who have had general or spinal anesthesia.

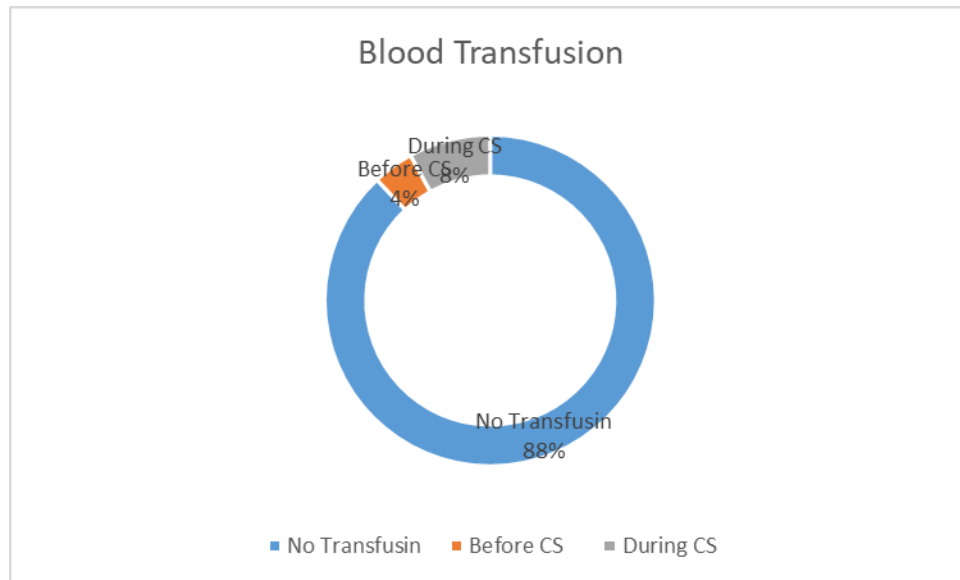


Figure (3.4) distribution of those who have had blood transfusion.

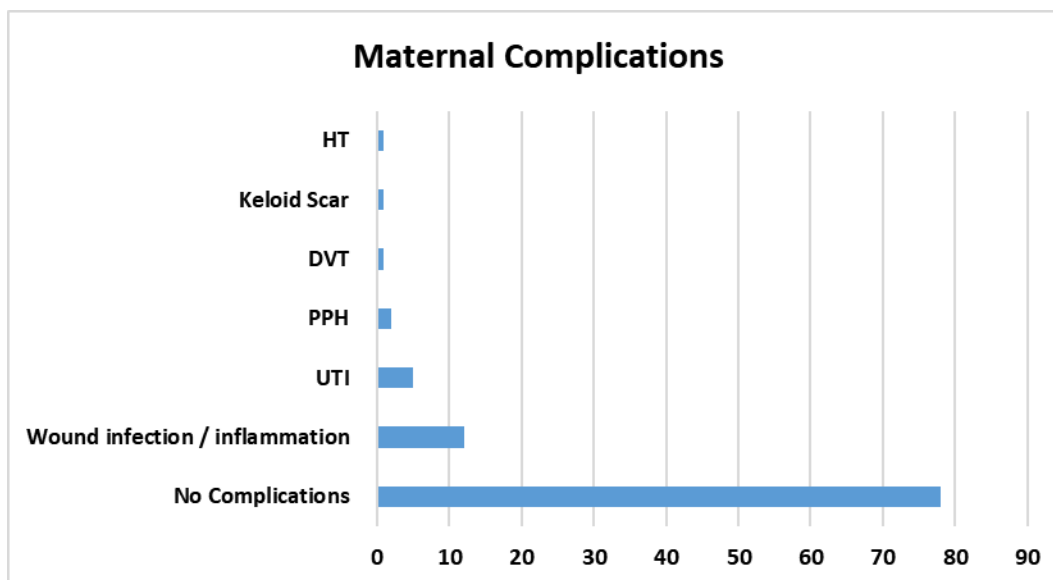


Figure (3.5) distribution of those who have had Complications.

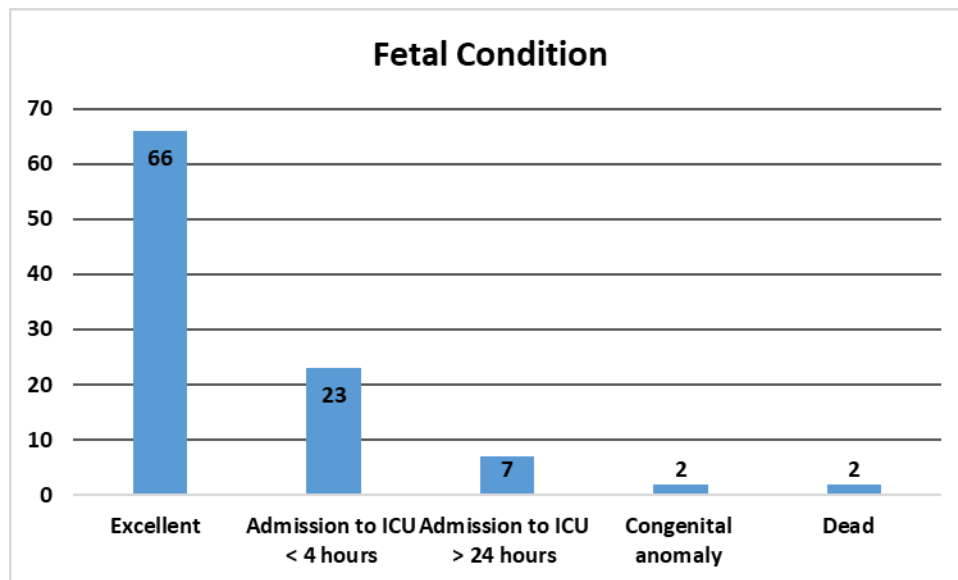


Figure (3.6) distribution of Fetal condition after caesarean section.

RESULTS

The mean age of the participants was 25 ± 5 years. Nearly 24.6% of them had high school diploma or associate degrees and the majority (75.4%) of the women were housewives. Half of the study group were primiparous. A very limited number of participants ($n=24$) had previous vaginal deliveries and three-fourth ($n=76$) had had previous elective cesarean sections. 59% of them had had elective CS and 41% of them had had emergency CS. 76% of them had had general anesthesia and 24% of them had had spinal anesthesia. 78% of them did not have complications and 22% of them had complications most of these complications were wound infection / inflammation.

DISCUSSION

In this study, the percentage of C-sections was high in comparison with WHO. WHO holds that cesarean rates should not exceed 15%. Because beyond 15%, maternal and neonatal morbidity rises in parallel with further increase C-sections (Stapleton et al., 2013).

A study by Karlstrom et al. showed that one - third of cesarean sections were optional. Fear and anxiety about child's health and previous history of elective cesarean section were reported as the main reasons for elective cesarean sections (19).

The result of this study does not agree with Tamim et al. (2007) which mentioned that C-section rate as high as 26.4% was reported from nine hospitals in Beirut Lebanon. Also, it does not agree with Khawaja et al. (2004) which found that Cesarean section rate in Egypt 1987 to 1988 (13.9%) increase to 22% in 1999 to 2000. The result agrees with Barber et al. (2011), who mentioned that the cesarean delivery rate increased from 26% to 36% between 2003 and 2009.

RECOMMENDATIONS

- 1- In the absence of maternal or fetal indications for cesarean delivery, a plan for vaginal delivery is safe and appropriate and should be recommended.
- 2- Cesarean delivery on maternal request should not be performed before a gestational age of 39 weeks.
- 3- Cesarean delivery on maternal request should be not recommended for women desiring several children.
- 4- Registration should be observed by the ministry of health and certain regulations are mandatory.

CONCLUSION

A cesarean delivery is a surgical procedure that is an alternative to a natural birth, which involves incision in the mother's abdomen and uterus to hold the baby outside women body. Although cesarean delivery has become a common procedure, it should be avoided before the mother reaches the 39th week of pregnancy to allow the child a suitable time to grow in the womb. In the majority of cases, physicians prefer a vaginal delivery rather than a cesarean delivery as it is the safest option for both mother and child, except in the presence of complex health conditions that necessitate prior agreement on caesarean section.

Therefore, the World Health Organization has always called for the need to reduce cesarean delivery rates around the world and to adopt vaginal birth as a method Safer to give birth. A cesarean delivery is always accompanied by many complications. These complications may occur in the operating room or after a caesarean section, or it may be delayed to negatively affect the woman's health in the future.

In this study, the percentage of C-sections was high in comparison with WHO. WHO holds that cesarean rates should not exceed 15%. Because beyond 15%, maternal and neonatal morbidity rises in parallel with further increase C-sections.

The most common indications were due to absence of cervical dilatation and fetal malpresentation and the least was due to oligohydramnios. About 78% had no complications, about 12% had wound infection at the site of incision of CS and about 5% had UTI.

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