



Ministry of higher education

And scientific research

University of diyala

College of medicine

Elective Repeated Cesarean Section {ERCS}



Supervised by :

Dr Azal Sadiq

Done by :

Mahmood Ali Ismael

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
وَفَوْقَ كُلِّ ذِي عِلْمٍ عَلِيمٌ
صَدَقَ اللَّهُ الْعَظِيمُ

Acknowledgement

All praise is to Allah and may my lord bless this project.

I owe great many thanks to the great people who helped and supported me to complete this project.

My deepest thanks to Dr.Azal Sadiq my teacher and supervisor for guiding me in my research by correcting the mistakes and giving valuable opinions in many aspects in both scientific facts and literature ones . I hope all the best and success to her in her career future.

Abstract

When vaginal delivery might endanger the mother or the baby, a c-section, also known as a caesarean delivery, is a surgical technique that delivers one or more babies through an incision in the mother's abdomen.

Aim of Study : To discuss the causes and timing of elective repeated cesarean section in women attending Al-Batool teaching hospital in Diyala, Iraq.

Methods : We collected a sample of 100 women who had elective repeated cesarean section in Al-Batool teaching hospital , We collected every sample that had second cesarean from 37 to 40 weeks and we excluded the emergency cases.

Results : We noticed that 78.0 % of women , elective repeated caesarean section done for them at 37 weeks , 4 % done at 38 , 2 % done at 39 , and 16 % of them done at 40 weeks.

Discussion : we noticed that the majority of elective repeated CS done at 37 weeks instead of 40 weeks gestation which is recommended , to increase chance of VBAC .

Conculsion : higher percentage of elective repeated caesarean section done at 37 weeks , which is against the clinical protocols .

Abbreviations

- 1-VBAC..... Vaginal birth after cesarean
- 2- ERCS Elective repeated cesarean section
- 3- IUGR Intrauterine growth restriction
- 4- CPD Cephalo-pelvic disproportion
- 5- RDS Respiratory distress syndrome
- 6- TOLAC Trial of labor after cesarean
- 7- ERCD Elective repeated cesarean delivery
- 8- NICU Neonatal intensive care unit
- 9- TTN Transient tachypnea of newborn

Introduction

When vaginal delivery might endanger the mother or the baby, a c-section, also known as a caesarean delivery, is a surgical technique that delivers one or more babies through an incision in the mother's abdomen (1). Obstructed labor, twin pregnancies, maternal hypertension, breech births, and issues with the placenta or umbilical cord are some of the causes for the procedure (2).

Caesarean sections are often performed, and different countries report different rates of these operations. According to a World Health Organization survey of 150 countries, 18.6% of births in 2014 took place via caesarean section, with a rate of 40.5% reported for the Latin American and Caribbean (3). Repeat cesarean birth rates have increased proportionately, reaching 83% in Australia and over 90% in the US after a previous cesarean (4).

Indication of Elective Cesarean section:

- 1-Repeat CS .
- 2-Placenta previa.
- 3- vesicovaginal fistula repair .
- 4-HIV (poor controlled) .
- 5-Active herpes .
- 6-Fetal macrosomia > 4500 gm .
- 7-Uterine surgery eg. Hystrotomy , myomectomy .
- 8-Severe IUGR Severe IUGR , Breech .
- 9-Multiple pregnancy .
- 10-Transverse lie.
- 11- Cancer of the Cervix or tumor obstructing the birth canal.

risks of Cesarean section:

bleeding, the need for blood transfusions, infection, injury to the bladder and intestines, and blood clots in the legs (known as "deep venous thrombosis") increases with repeated elective caesarean births. Due to adhesions and the potential for bladder or bowel injury during surgery, the difficulty of doing surgery rises when a woman has more caesarean deliveries. If the placenta forms over the uterine scar in subsequent pregnancies, there may be issues with the placenta or trouble conceiving (5). raising the possibility of placenta praevia, where the placenta covers the uterus' interior entrance entirely or partly. On rare occasions, the placenta may continue to grow into the uterus's muscular wall (placenta accreta or placenta percreta). These issues might make labor harder and raise the possibility of heavy bleeding. Breathing problems in newborns who have cesarean delivery are referred to as "transient tachypnoea of the baby" (6).

Benefits of Cesarean Section:

- 1-reduce the risk of urinary incontinence.
- 2-avoidance of labour pain.
- 3-alleviation of fear and anxiety related to labour or birth and reduced worry about the health of the baby.
- 4-unexpected stillbirth
- 5-the risk of complications of labour such as clinical chorioamnionitis, fetal heart rate abnormalities and cord prolapse
- 6- risk of puerperal sepsis is minimized
- 7-pre-operative good preparation. (7).

Vaginal Birth After Cesarean:

In their subsequent pregnancies, they have the option of trying a vaginal birth after caesarean (VBAC) or having an elective repeat caesarean (ERC). It has been claimed that between 56% and 80% of women who undergo a VBAC will give birth vaginally. Many nations have seen a decline in the percentage of women who attempt a VBAC (8) (9).

VBAC rates have fallen precipitously, and now more than 90% of women who have had a previous cesarean will give birth via repeat cesarean (10).

Risks and Benefits of VBAC:

Following a prior cesarean delivery, vaginal birth is linked to lower rates of maternal morbidity and difficulties in following pregnancies ,no abdominal surgery, short recovery period , lower risk of infection , less blood loss (December 2017 ACOG) .

while some women's want to give birth vaginally. However, women who have had uterine surgery in the past, like as a cesarean delivery, are more likely to experience uterine scar rupture, which can happen before the labor or during a VBAC. this potentially fatal situation might endanger both the mother and the unborn child's lives. When labor does not begin naturally and a medical induction is necessary, choosing to have a vaginal delivery is made more difficult (11).

more than 20,000 women who had a previous cesarean between 1987 and 1996 were at risk of uterine scar rupture. The birth rate for uterine scar rupture was 4.5 per 1000 women (91 of 20,095 women) (12). Prostaglandin agents have been linked to an increased risk of uterine rupture, which results in perinatal death, according to a large retrospective study from Scotland that examined more than 36,000 women who had previously undergone a cesarean section and 4600 of whom underwent labor induction using prostaglandins (13).

Aim of Study

To discuss the causes and timing of elective repeated cesarean section in women attending Al-Batool teaching hospital in Diyala, Iraq.

Patients and methods

This is cross sectional study. We collected a sample of 100 women who had elective repeated cesarean section in Al-Batool teaching hospital in the period from July 2022 to October 2023. We collected every sample that had second cesarean from 37 to 40 weeks and we excluded the emergency cases.

We collected the information using prepared written questionnaire and by direct interview with the mothers. We asked questions about the cause of cesarean and weeks of gestation. The privacy and confidentiality of the participants were preserved.

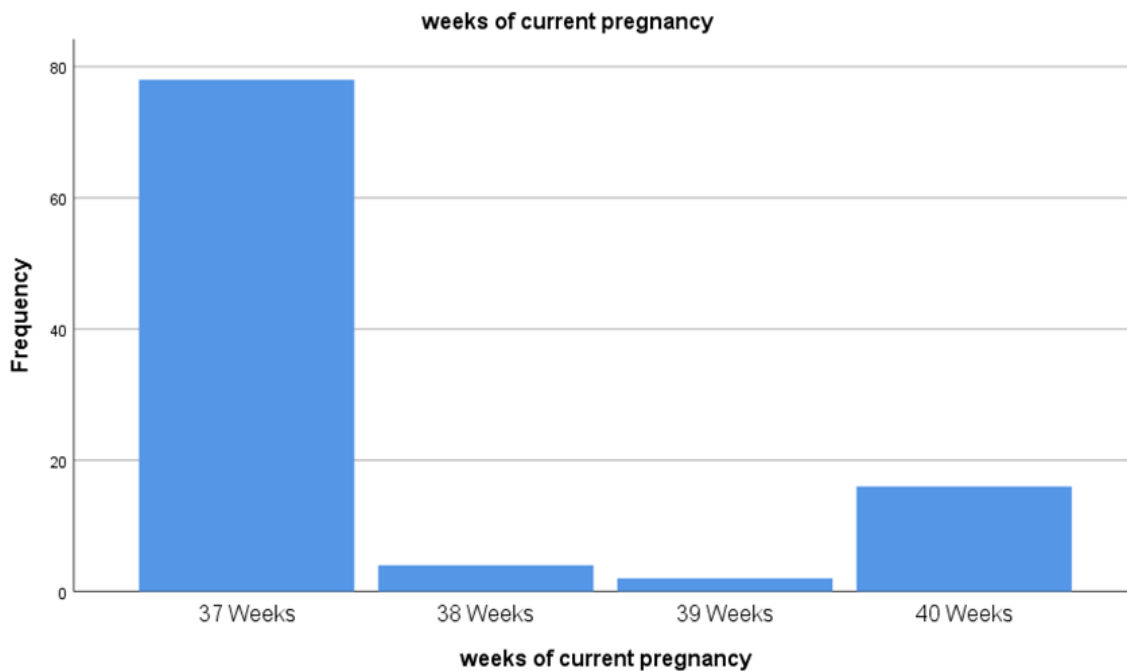
Results

100 pregnant women was included in this cross-sectional study , the gestational age is demonstrated in table no.1

		Frequency	Percent	Valid Percent
Valid	37 Weeks	78	78.0	78.0
	38 Weeks	4	4.0	4.0
	39 Weeks	2	2.0	2.0
	40 Weeks	16	16.0	16.0
	Total	100	100.0	100.0

Table no.1 Weeks of gestation

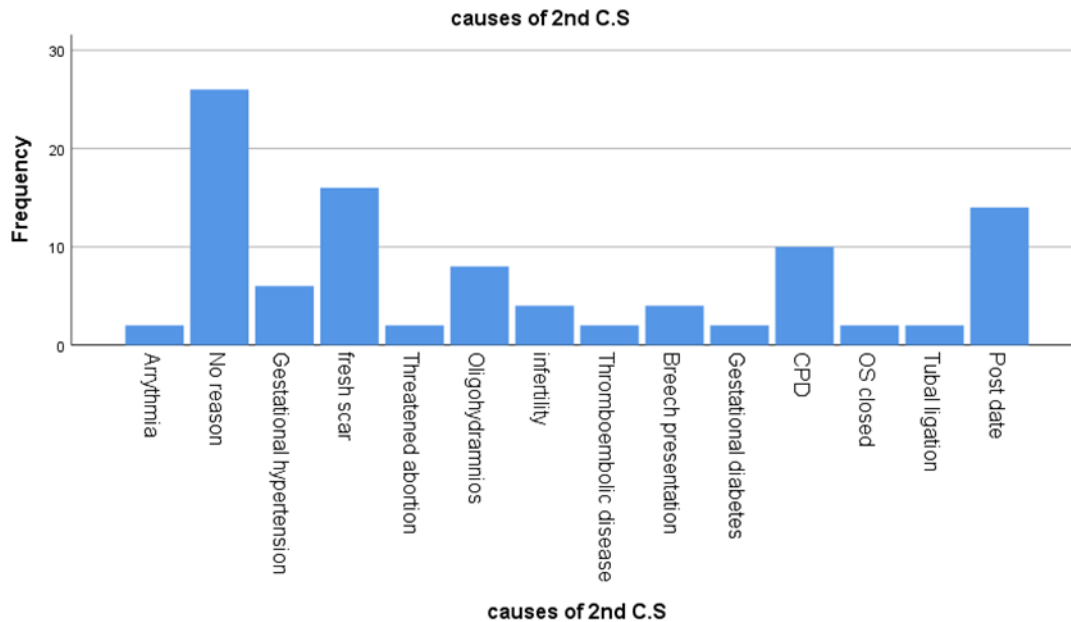
We noticed that 78.0 % of women , elective repeated caesarean section done for them at 37 weeks , 4 % done at 38 , 2 % done at 39 , and 16 % of them done at 40 weeks.



Graph no 1 : Weeks of gestation

		Frequency	Percent	Valid Percent
Valid	Arrhythmia	2	2.0	2.0
	No reason	26	26.0	26.0
	Gestational hypertension	6	6.0	6.0
	fresh scar	16	16.0	16.0
	Threatened abortion	2	2.0	2.0
	Oligohydramnios	8	8.0	8.0
	infertility	4	4.0	4.0
	Thromboembolic disease	2	2.0	2.0
	Breech presentation	4	4.0	4.0
	Gestational diabetes	2	2.0	2.0
	CPD	10	10.0	10.0
	OS closed	2	2.0	2.0
	Tubal ligation	2	2.0	2.0
	Post date	14	14.0	14.0
	Total	100	100.0	100.0

Table no. 2 : Causes of 2nd CS



Graph no 2 : Causes of 2nd CS

26 % were done for no reason , 16 % were done for fresh scar and only 14 % were done for postdate.

Discussion

CS carry a high risk of maternal and fetal morbidity and mortality , so should be done only if indicated , and when benefit is more than risk.

In our study 100 women was included , we noticed that the majority of elective repeated CS done at 37 weeks instead of 40 weeks gestation which is recommended , to increase chance of VBAC .

Only 14 % of cases is due to postdate which is very low percentage , and this is the main cause of increasing rate of CS .

While the indication for fresh scar which is 16 % , there is no contraindication for VBAC , when the period between last pregnancy and current pregnancy is less than 1 year , that mean no fresh scar term .

We noticed in our study that , there is an indication , such as , CS for tubal ligation , thromboembolic disease , threatened abortion , oligohydramnios , and arrhythmia which were on no scientific bases.

We recommend in order to decrease rate of CS and there complications , strict application of real indication of CS in a scientific bases to give the woman a chance of VBAC , and good counselling to the patient , and if there is no maternal and fetal risk , CS should be done after 40 weeks.

C. Kirby etal (1985) , found that : Infants of elective repeat cesarean deliveries are at risk for developing persistent pulmonary hypertension of the newborn and constitute a group of patients with a potentially preventable course of events (14).

Barbara V Parilla etal (1993) found that : Iatrogenic RDS continues to occur in the setting of elective repeat cesarean delivery and is associated with a failure to adhere to clinical protocols (15).

Bruce L Flamm etal , (1994) , found that : Labor after previous cesarean delivery has a 75% success rate, with a risk of uterine rupture of less than 1%. Neither repeat cesarean delivery nor trial of labor is risk-free. With careful supervision, trial of labor eliminates the need for a large proportion of repeat cesarean operations (16).

Brenda Hook et al (1997) , found that : Infant born by ERCS are at increased risk for developing respiratory problems compared with those born by TOL . However TOL is associated with increased rate of suspected and proven sepsis . This appears to be limited to infants delivered by CS after a failed TOL (17).

Nicholas S. et al (2005) found that : The decision to undergo scheduled cesarean delivery appears to negatively impact immediate neonatal outcomes (18).

Alan TN Tita et al , (2009) , found that : Elective repeat cesarean delivery before 39 weeks of gestation is common and is associated with respiratory and other adverse neonatal outcomes_(19).

S. Bartolo et al, (2016), found that : For women eligible for TOLAC, the rate of ERCD is high and not in agreement with guidelines. Some characteristics of women are associated with ERCD, but the main determinants are at the unit level, which suggests that non-medical reasons are involved in the decision process (20).

Reihaneh P. et al (2018) found that : Elective CS at 38–9 weeks' gestation is associated with a higher rate of TTN and NICU admission in comparison with elective CS performed after 39 completed gestational weeks (21).

Conclusion

According to our study results , higher percentage of elective repeated caesarean section done at 37 weeks , which is against the clinical protocols .

And a higher percentage of no real indication for the repeated elective caesarean section .

Both two facts contributed to an increasing rate of non-indicated caesarean section

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