# INCIDENCE OF VAGINAL BIRTH AFTER CESAREAN SECTION IN AL-ZAHRAA MATERNITY AND PEDIATRICS TEACHING HOSPITAL

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## INTRODUCTION

The maxim «Once a cesarean, always a cesarean» also had a role in the rise of cesarean sections [1]. Vaginal birth after cesarean (VBAC) is a big concern in obstetric medicine; pregnant women usually seek the possibility of vaginal birth after undergoing a previous cesarean section (CS) [2]. There is a global trend toward more CS, so VBAC appears as an important measure to decrease CS rates, hence improving both maternal and fetal outcomes [3]. Repeating CS is not without its risks; compared to vaginal births, they may increase the likelihood of deep venous thrombosis, infection, operation injury to nearby organs, and bleeding and blood transfusion requirements. [4] However, the predicted probability for successful VBAC is derived from multi-clinical variables incorporating maternal age, body mass index (BMI), race, prior vaginal delivery, history of VBAC, and the indication for previous cesarean delivery [5, 6]. A thorough study of those variables is very important to construct a consensus that guides the trial of VBAC and helps to counsel better pregnant ladies willing to try VBAC [2].

Objective of the study: to evaluate the incidence of VBAC at Al-Zahraa Maternity and Pediatrics Teaching Hospital and define the clinical variables significantly associated with the successful trials of labor after CS (TOLAC). The studied variables include maternal characteristics, obstetric history, and healthcare-related variables.

This study's results may contribute to similar research that shares the same aims in different health settings in many countries and helps strengthen evidence-based regarding the decision of trial of vaginal birth after CS. The findings also offer valuable insights into Iraq's local clinical practices and outcomes. Ultimately, this research aims to improve healthcare quality, support evidence-based medicine, and help counsel pregnant mothers to choose the right delivery mobility given their medical history [7].

## MATERIALS AND METHODS

### *Study design*

This observational study was conducted at Al-Zahraa Maternity and Pediatrics Teaching Hospital, a tertiary care facility specializing in maternal and pediatric care; the study period extended from October 1, 2023, to April 1, 2024. During this time, comprehensive data were collected from eligible participants to assess the incidence and outcomes of VBAC in this population.

### *Study sample*

The sample comprised all women admitted to Al-Zahraa Maternity and Pediatrics Teaching Hospital for delivery with a history of one previous CS and considered candidates for vaginal delivery. The study aimed to include a diverse cohort representative of the hospital's patient population to ensure the findings' generalizability. Women with more than one previous CS, pregnant women with contraindications for vaginal delivery, including but not limited to *placenta previa*, active genital herpes infection, and certain uterine anomalies, and non-consent to participate in the study all were excluded from the study.

### *Data collection tools*

We considered maternal age and BMI in the demographics section. The history of the participants was meticulously documented, encompassing medical and obstetrical backgrounds. The medical history included any comorbid medical conditions, such as hypertension and diabetes, which could potentially impact the outcomes of the pregnancy. Additionally, instances of antepartum hemorrhage were noted, as previous occurrences could have implications for the current pregnancy's management. The obstetrical history provided insights into the details of previous CS, including the indications and any complications that arose, which are essential for assessing the viability of VBAC. The inter-delivery interval since the last cesarean delivery was also recorded, which is relevant for determining the risk of uterine rupture. Moreover, any prior successful VBACs were noted, indicating the uterus's ability to handle labor after a CS, serving as a positive predictor for the current VBAC attempt.

Regarding the current pregnancy, the study captured data on antenatal care follow-up, highlighting the regularity and findings of care, which underscores risk management. The gestational age at delivery was documented to

assess if preterm or post-term delivery influences VBAC outcomes. The membrane status and cervical dilation at admission were documented as initial labor characteristics that could impact the course and outcome of labor. The duration of labor was also documented.

The outcome of the delivery was a critical focus, distinguishing between VBAC success, defined as a vaginal delivery following a previous CS, and VBAC failure, which necessitated a repeat CS. These outcomes were analyzed to identify contributing factors such as issues in labor progression or fetal distress.

Neonatal outcomes were also a primary concern, with birth weight serving as a measure of neonatal health and a factor in delivery mode decisions. Apgar scores at 1 and 5 minutes provided an immediate postnatal vitality indicator, potentially influenced by the delivery mode. Additionally, any neonatal complications and Neonatal Intensive Care Unit admissions were documented, as these outcomes could be associated with the labor and delivery process, including VBAC attempts.

### *Ethical considerations and official approvals*

Verbal consent was obtained from each patient before collecting data, and the information was anonymous. Names were removed and replaced by identification codes. All information is kept confidential in a password-secured laptop, and data is used exclusively for research purposes.

Kufa University College of Medicine granted administrative approvals. The scientific and ethical committees of Al-Zahraa Maternity and Pediatrics Teaching Hospital were also approved.

### *Statistical analysis*

All data were introduced into Microsoft Excel 16, and statistical analysis was conducted using IBM-SPSS (USA Chicago). Data were presented in the form of counts, percentages, mean, standard deviation (SD), minimum (Min), and maximum (Max) in tables, charts, or graphs.

The normality of the continuous variables was tested using the Shapero-Wilk test. The student t-test was used for normally distributed continuous variables with two categories. The Mann-Whitney U test used non-normally distributed continuous variables with two categories. A P value of less than 0.05 was considered statistically significant.

## RESULTS

The study includes 418 cases, all of whom had one previous CS. Of these, 150 cases (35.90%) opted for a direct repeat CS without attempting labor (due to various causes). The remaining 268 (64.1%) cases attempted a trial of labor, with varying outcomes: 164 cases (39.20% of the total study sample and representing 61.2% of TOLAC cases) successfully achieved VBAC. In comparison, 104 cases (24.90% of the total study sample) attempted TOLAC but ultimately required a repeat CS (Figure).

The distribution of age groups indicates that younger women, especially in the 20–24 age groups, were more likely to undergo a repeat CS. The mean age was significantly higher for the VBAC group (28.61 ± 4.59) than the CS group (25.49 ± 4.51). Other demographic and clinical characteristics of the enrolled population are shown in Table 1.

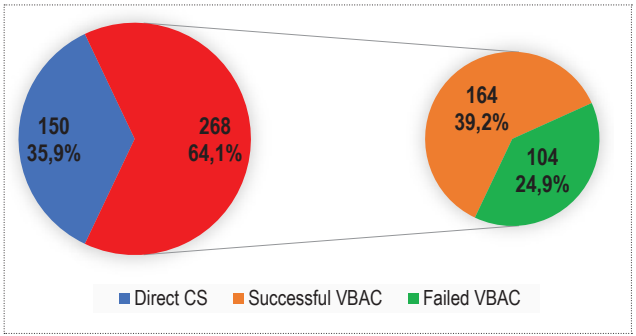


Figure. Distribution of cases according to the mode of delivery.

The leading cause for previous CS was fetal distress, accounting for 160 cases (38.3%) of the total. The second most common cause was a failure to progress during labor, with 81 cases (19.4%). Other causes are stated in Table 2.

The average length of labor for the VBAC group was 4.83 hours, while the CS group had a slightly lower mean of 4.66 hours (Table 3).

The most frequent reason for repeated CS was failure to progress, accounting for 45 cases (43.27%). The second most common cause was unfavorable cervix or closed os, observed in 21 cases (20.19%). Other causes are shown in Table 4.

## DISCUSSION

In an effort to decrease the worldwide rising in the prevalence of cesarean section, many studies criticize the role of the trial of vaginal delivery after previous cesarean sections, and this study is one of those efforts.

Kumari et al. [8] demonstrated that implementing a locally tailored clinical pathway significantly improved VBAC outcomes. Aslam et al. [9] found that TOLAC led to better maternal and neonatal outcomes than elective repeat cesarean delivery. These insights provide a strong rationale for our study at Al-Zahraa Maternity and Pediatrics Teaching Hospital to explore VBAC's feasibility and outcomes, contributing valuable data from a new demographic and healthcare setting.

The total cases of the previous CS admitted to the hospital during the study period was 418 cases; the TOLAC was conducted in 64.1% of the cases, with 39.2% (from total cases and 61.2% of TOLAC cases) having successful VBAC. Comparable results have been recorded in a similar study in Iraq – Kurdistan; Fattah et al. [10] found that the rate of successful VBAC is 42.5%. A previous study conducted by Ali et al. [11] in the same center i,e, Al Zahraa Maternity and Pediatrics Teaching Hospital, but with a smaller sample size of 226 patients, in a period between 2010 and 2011 found that the rate of successful VBAC was 25.6%.

The current study showed that successful VBAC was more likely in older patients. Eleje et al. [12] found no difference in maternal age regarding the success rate of VBAC, the same findings as Birara et al. [13]. It is important to note that the current study included cases of higher parity and high interpregnancy intervals in addition to a wider range of age compared to previous studies, and these are the causes for this difference in the results.

The current study included the majority of the cases as either overweight or obese, and there was no difference in the success

Table 1. Distribution of demographics and previous history according to the success of TOLAC

| Variables | | VBAC n = 164 | CS n = 104 | P value |
|---|---|---|---|---|
| | | n (%) | n (%) | |
| Age (years) | < 20 | 0 (0) | 1 (1) | < 0.001 |
| | 20–24 | 36 (22) | 70 (67.3) | |
| | 25–29 | 59 (36) | 12 (11.5) | |
| | 30–34 | 45 (27.4) | 11 (10.6) | |
| | ≥ 35 | 24 (14.6) | 10 (9.6) | |
| | Mean ± SD | 28.61 ± 4.59 | 25.49 ± 4.51 | < 0.001 |
| BMI (kg/m$^2$) | 18.5–24.9 | 1 (0.6) | 1 (1) | 0.442 |
| | 25–29.9 | 38 (23.2) | 27 (26) | |
| | 30–34.9 | 106 (64.6) | 70 (67.3) | |
| | ≥ 35 | 19 (11.6) | 6 (5.8) | |
| | Mean ± SD | 31.02 ± 2.37 | 30.53 ± 2.13 | 0.073 |
| Gravidity | Mean ± SD | 3.71 ± 1.56 | 2.63 ± 1.35 | < 0.001 |
| Parity | Mean ± SD | 2.62 ± 1.52 | 1.59 ± 1.33 | < 0.001 |
| Miscarriage | Mean ± SD | 0.09 ± 0.28 | 0.04 ± 0.19 | 0.132 |
| Previous history | No previous vaginal delivery | 45 (27.4) | 81 (77.9) | < 0.001 |
| | Vaginal delivery before CS | 59 (36) | 18 (17.3) | |
| | Previous VBAC | 60 (36.6) | 5 (4.8) | |
| Duration from last CS (years) | Mean ± SD | 5.17 ± 3.01 | 3.13 ± 2.38 | < 0.001 |
| Comorbidities | Diabetes | 2 (1.2) | 3 (2.9) | 0.006 |
| | Hypertension | 21 (12.8) | 2 (1.9) | |
| | None | 141 (86) | 99 (95.2) | |

Table 2. The causes for previous CS

| Cause | n | % |
|---|---|---|
| Fetal distress | 160 | 38.3 |
| Failure to progress | 81 | 19.4 |
| Breech presentation | 77 | 18.4 |
| Post date | 21 | 5.0 |
| Unknown cause | 20 | 4.8 |
| Twin pregnancy | 13 | 3.1 |
| Antepartum hemorrhage | 10 | 2.4 |
| Congenital anomaly | 10 | 2.4 |
| Preeclampsia | 7 | 1.7 |
| Oligohydramnios | 6 | 1.4 |
| Elective CS | 4 | 1.0 |
| Cephalopelvic disproportion | 3 | 0.7 |
| Second stage arrest | 2 | 0.5 |
| Transvers lie | 2 | 0.5 |
| Meconium | 1 | 0.2 |
| Rupture membrane | 1 | 0.2 |

Table 3. Duration of labor according to the success of TOLAC

| Duration of Labor in hours | VBAC | CS |
|---|---|---|
| Mean | 4.83 | 4.66 |
| Standard deviation | 1.34 | 1.68 |
| Minimum | 1 | 2 |
| Maximum | 8 | 10 |
| P value | 0.263 | |

Table 4. Causes of repeated CS after TOLAC

| Cause | No. | % |
|---|---|---|
| Failure to progress | 45 | 43.27 |
| Unfavorable cervix or closed os | 21 | 20.19 |
| Fetal distress | 16 | 15.38 |
| Meconium | 7 | 6.73 |
| Second stage arrest | 6 | 5.77 |
| Rupture membrane ± suspicion of chorioamnionitis | 3 | 2.88 |
| Scar problem (fresh, tender, or thin scar) | 3 | 2.88 |
| Antepartum hemorrhage | 2 | 1.92 |
| Preeclampsia | 1 | 0.96 |

rate of VBAC according to BMI. Tilva et al. [14] stated that a BMI of more than 25 is associated with a higher failure rate of failed TOLAC. This difference in the result is attributable to the sample collected in the current study, as most participants were overweight and obese. The same result described by Juhasz G et al. [15] states that Obese patients were almost 50% less likely to have a successful VBAC when compared to underweight patients, with an odds ratio of 0.53, 95% confidence interval of 0.29–0.98, with P = 0.043. Both of those comparable studies included a larger population sample, which may give a justification for that big difference.

The current study showed that a higher rate of gravidity and parity was associated with an increased rate of successful VBAC, a similar result found by Tilva et al. [14] and Wu et al. [16] in their systematic review and meta-analysis. The association of successful VBAC and higher parity is explained by the higher rate of previous successful VBAC, which is a major determinant of the success of the current VBAC, as suggested by Obeidat et al. [17]. This conclusion is corroborated by an earlier systematic review by Wu et al. [16]. Multiparous mothers may experience effective uterine contractions during labor, which can reduce subsequent complications [18]. Additionally, a history of vaginal delivery is linked to a lower risk of uterine rupture, thereby decreasing the necessity for cesarean section [19].

The current study found that those without a history of previous vaginal delivery had a higher rate of failure of TOLAC in comparison to those who had previous vaginal delivery before CS or had previous successful VBAC; multiple previous studies supported this result (Tambe et al. [20], Obeidat et al. [17], and Tilva et al. [14]).

The longer duration of the CS delivery was associated with a higher success rate of VBAC. This result is attributed to the maturity of the scar with time, a similar result suggested by Familiari et al. [21]

The history of previous miscarriages was not different regarding the success of TOLAC; Ali et al. found similar results [11].

The previous comorbidity, particularly diabetes, was associated with a lower success rate of VBAC, and to the contrary, hypertensive patients had successful TOLAC in the current study. At the same time, Wu et al. [16] suggested that both diabetes and hypertension adversely affected the success rate of TOLAC. The current study suggests that the presence of hypertension does not preclude TOLAC. Furthermore, additional factors should be considered before applying the relation of hypertension with a success rate (as it could be affected by other factors such as parity and previous trials of VBAC other than the presence of hypertension).

The cause of the previous CS in the current study was fetal distress; this highlights the importance of a refined selection of the patients for TOLAC, as women with small pelvis eventually required repeated CS rather than VBAC. Familiari et al. [16] and Wu et al. [13] stated that cases with previous emergency CS (particularly for fetal distress) have a higher rate of needing repeated CS rather than successful VBAC.

The duration of labor was not different for those who had successful VBAC and those who required repeated CS. This result was contrary to what Grylka-Baeschlin et al. [22] found: women with shorter labor duration were associated with higher success rates. Gitas et al. [23] found that extending the second stage of labor does not increase the rate of VBAC; in other words, those who would deliver vaginally tend to deliver earlier, and prolongation of TOLAC was not associated with a higher success rate but associated with increased fetal morbidity as suggested by Pergialiotis et al. [24]

The cause of repeated CS in the current study was mainly failure to progress (43.27%). Kassa et al. [25] found that the main indication for repeated CS is prolonged labor secondary to failure to progress. Melamed et al. [26] found that failure to progress represents 72.3% of the indication of repeated CS after TOLAC.

## CONCLUSIONS

VBAC is viable and reduces risks linked to repeated CS, with a 39.20% success rate among those attempting TOLAC. Success factors include longer intervals since the last CS and no major comorbidities. Common barriers to successful VBAC include labor progression issues and fetal distress.

### *Conflict of Interest*

All the authors declare no conflict of interest.

## ЛІТЕРАТУРА/REFERENCES


1. Cragin EB. Conservatism in obstetrics. NY Med J 1916; 104:1–3. (Level III)
2. American College of Obstetricians and Gynecologists. Vaginal Birth After Cesarean Delivery. ACOG Practice Bulletin No. 205: Vaginal Birth After Cesarean Delivery Obstet Gynecol 2019 Feb;133(2):e110-e127. DOI: 10.1097/AOG.0000000000003078
3. Hamilton BE, Martin JA, Osterman MJ, et al. Births: provisional data for 2016. [Internet] Vital Statistics Rapid Release No 2. Hyattsville (MD): National Center for Health Statistics; 2017. (Level II-3). Available from: https://www.cdc.gov/nchs/data/vsrr/report002.pdf
4. Hibbard JU, Ismail MA, Wang Y, et al. Failed vaginal birth after a cesarean section: how risky is it? Am J Obstet Gynecol. 2001; 184: 1365–73. DOI: 10.1067/mob.2001.115044
5. Landon, M. B., Hauth, J. C., Leveno, K. J., et al. Maternal and perinatal outcomes associated with a trial of labor after prior cesarean delivery. New England Journal of Medicine, 2004; 351: 2581–9. DOI: 10.1056/NEJMoa040405
6. Guise, J. M., Eden, K., Emeis, C., et al. Vaginal Birth After Cesarean: New Insights. Evid Rep Technol Asses. 2010 Mar:(191):1–397.
7. Dodd JM, Crowther CA, Grivell RM. Vaginal birth after caesarean versus elective repeat caesarean for women with a single prior caesarean birth: a systematic review of the literature. Aust N Z J Obstet Gynaecol, 2013; 53(3): 225–33. DOI: 10.1111/j.1479-828X.2004.00257.x.
8. Kumari N, Jain N, Dhar RSG. Effect of a locally tailored clinical pathway tool on VBAC outcomes in a private hospital in India. The Journal of Obstetrics and Gynecology of India. 2021;71:246–53. DOI: 10.1007/s13224-021-01446-5
9. Aslam M, Khan MA, Habib F, Sadiq H, Habib M. Outcome of pregnancy in the previous cesarean section comparing elective versus trial of labor (VBAC) at KRL Hospital, Islamabad. The Professional Medical Journal. 2023;30(07):906–11. DOI:10.29309/TPMJ/2023.30.07.7400
10. Fattah CN, Jalal H. Vaginal Birth After Previous Caesarean Section. Kurdistan Journal of Applied Research. 2017;2(2):36–44. DOI:10.24017/science.2017.2.5
11. Ali I, Neamah DA, Hussein MN. Successful vaginal birth after caesarian section and maternal outcome. [Internet] The Pharma Innovation Journal. 2019;8(7):428–33. Available from: https://www.thepharmajournal.com/archives/2019/vol8issue7/PartH/8-4-132-893.pdf
12. Eleje GU, Okam PC, Okaforcha EI, Anyaoku CS. Rates and determinants of successful vaginal birth after a previous caesarean section: a prospective cohort study. ARC J Gynecol Obstet. 2019;4(2):1–8. DOI:10.20431/2456-0561.0402001

13. Birara M, Gebrehiwot Y.
Factors associated with the success of vaginal birth after one caesarean section (VBAC) at three teaching hospitals in Addis Ababa, Ethiopia: a case control study. BMC Pregnancy and Childbirth. 2013;13(1):31.
14. Tilva KK, Jethwani D, Dhruva G.
Histopathological evaluation of endometrial curettage in cases of abnormal uterine bleeding and its correlation with patient age. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2022;11(10):2687–92.
DOI:10.18203/2320-1770.ijrcog20222463
15. Juhasz G, Gyamfi C, Gyamfi P, et al.
Effect of body mass index and excessive weight gain on success of vaginal birth after cesarean delivery. Obstet Gynecol. 2005;106(4):741–6.
DOI:10.1097/01.AOG.0000177972.32941.65
16. Wu Y, Kataria Y, Wang Z, et al.
Factors associated with successful vaginal birth after a cesarean section: a systematic review and meta-analysis. BMC pregnancy and childbirth. 2019;19:1–12.
DOI: 10.1186/s12884-019-2517-y.
17. Obeidat N, Meri Z, Obeidat M, et al.
Vaginal birth after caesarean section (VBAC) in women with spontaneous labour: predictors of success. Journal of obstetrics and gynaecology. 2013;33(5):474–8.
DOI: 10.3109/01443615.2013.782275
18. Kalok A, Zabil SA, Jamil MA, et al.
Antenatal scoring system in predicting the success of planned vaginal birth following one previous caesarean section. J Obstet Gynaecol. 2018;38(3):339–43.
DOI: 10.1080/01443615.2017.1355896
19. La Verde M, Cobellis L, Torella M, et al.
Is uterine myomectomy a real contraindication to vaginal delivery? Results from a prospective study. J Invest Surg. 2022;35(1):126–31. DOI: 10.1080/08941939.2020.1836289
20. Tambe SG, Mulay AS.
A study to evaluate feto-maternal outcome of trial of labour in previous cesarean patients: a prospective observational study at a tertiary care centre in India. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2022;11(10):2680.
DOI: 10.18203/2320-1770.ijrcog20222462
21. Familiari A, Neri C, Caruso A, et al.
Vaginal birth after caesarean section: a multicentre study on prognostic factors and feasibility. Archives of gynecology and obstetrics. 2020;301:509–15.
DOI: 10.1007/s00404-020-05454-0
22. Grylka-Baeschlin S, Clarke M, Begley C, et al.
Labour characteristics of women achieving successful vaginal birth after caesarean section in three European countries. Midwifery. 2019;74:36–43.
DOI: 10.1016/j.midw.2019.03.013
23. Gitas G, Proppe L, Ertan A, et al.
Influence of the second stage of labor on maternal and neonatal outcomes in vaginal births after caesarean section: a multicenter study in Germany. BMC Pregnancy Childbirth. 2021; May 4;21(1):356.
DOI: 10.1186/s12884-021-03817-2
24. Pergialiotis V, Bellos I, Antsaklis A, et al.
Maternal and neonatal outcomes following a prolonged second stage of labor: A meta-analysis of observational studies. European Journal of Obstetrics & Gynecology and Reproductive Biology. 2020;252:62–9.
DOI: 10.1016/j.ejogrb.2020.06.018
25. Kassa Mamo N, Melese Siyoum D.
Factors associated with successful vaginal birth after cesarean section among mothers who gave birth in Ambo town, Oromia, Central Ethiopia, a case-control study. African Health Sciences. 2022;22(4):357–67.
DOI: 10.4314/ahs.v22i4.41.
26. Melamed N, Segev M, Hadar E, et al.
Outcome of trial of labor after cesarean section in women with past failed operative vaginal delivery. American journal of obstetrics and gynecology. 2013;209(1):49.e1–e7. DOI: 10.1016/j.ajog.2013.03.010

## INCIDENCE OF VAGINAL BIRTH AFTER CESAREAN SECTION IN AL-ZAHRAA MATERNITY AND PEDIATRICS TEACHING HOSPITAL

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**Background**. As we approach the centennial of the maxim «Once a cesarean, always a cesarean,» the debate over the safety and viability of vaginal birth after cesarean (VBAC) continues. With cesarean section (CS) rates climbing globally, there is a revitalized interest in VBAC as a means to reduce maternal and neonatal morbidities associated with repeated cesarean operations.
**Objective of the study**: to evaluate the incidence of VBAC at Al-Zahraa Maternity and Pediatrics Teaching Hospital (Iraq) and identify risk factors those influence the success or failure in trials of labor after cesarean section (TOLAC).
**Materials and methods**. This observational study conducted at Al-Zahraa Maternity and Pediatrics Teaching Hospital from October 2023 to April 2024 involved women who had undergone one previous CS. During this time, comprehensive demographic and medical data were collected from participants to assess the outcomes of TOLAC in this population. Obtained data were analyzed using various statistical tools to identify trends and outcomes associated with TOLAC attempts.
**Results**. Among 418 study participants, 268 (64.1%) attempted TOLAC, with a VBAC success rate of 39.20% (from the total study sample representing 61.2% of TOLAC cases). Statistical analysis revealed that older women, those with a longer interval since their last CS, and those with a history of previous vaginal delivery or previous VBAC demonstrated higher success rates. Common impediments to successful VBAC included labor progression issues and fetal distress.
**Conclusions**. VBAC is viable and reduces risks linked to repeated CS, with a 39.20% success rate among those attempting TOLAC. Success factors include longer intervals since the last CS and no major comorbidities. Common barriers to successful VBAC include labor progression issues and fetal distress.

**Keywords**: labor, vaginal delivery, cesarean section, vaginal birth after cesarean.

## ЧАСТОТА ВАГІНАЛЬНИХ ПОЛОГІВ ПІСЛЯ КЕСАРЕВОГО РОЗТИНУ В ПОЛОГОВІЙ ТА ПЕДІАТРИЧНІЙ НАВЧАЛЬНІЙ ЛІКАРНІ АЛЬ-ЗАХРАА

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**Обґрунтування**. Уже майже століття існує висловлювання «Один раз кесарів розтин – завжди кесарів розтин», однак дебати щодо безпеки та життєздатності вагінальних пологів після кесаревого розтину (КР) тривають. Зі зростанням частоти КР у всьому світі відроджується інтерес до вагінальних пологів після КР як засобу зниження материнської та неонатальної захворюваності, пов'язаної з повторними операціями КР.
**Мета дослідження**: оцінити частоту вагінальних пологів після КР у Пологовій та педіатричній навчальній лікарні Аль-Захраа (Al-Zahraa Maternity and Pediatrics Teaching Hospital, Ірак) і визначити фактори ризику, які впливають на успіх або невдачу спроб вагінальних пологів після КР.
**Матеріали та методи**. У даному обсерваційному дослідженні, проведеному в Пологовій та педіатричній навчальній лікарні Аль-Захраа з жовтня 2023 по квітень 2024 рр., взяли участь жінки з анамнезом КС. Протягом цього часу було зібрано вичерпні дані для оцінки результатів спроб вагінальних пологів після КР у цій популяції. Отримані дані було проаналізовано за допомогою різних статистичних інструментів для визначення тенденцій і результатів вагінальних пологів після КР.
**Результати**. З 418 учасниць дослідження 268 (64,1%) жінок спробували вагінальні пологи після КР. Показник успішних вагінальних пологів після КР становив 39,20% загальної вибірки дослідження та 61,2% всіх спроб вагінальних пологів після КР. Статистичний аналіз показав, що старші жінки, а також жінки з більшим інтервалом після останнього КР, з анамнезом вагінальних пологів або попередніми вагінальними пологами після КР демонструють вищі показники успіху. Найбільш частими перешкодами для успішних вагінальних пологів після КР були проблеми з прогресуванням пологів і дистрес плода.
**Висновки**. Вагінальні пологи після КР є життєздатними й знижують ризики, пов'язані з повторним КР, частота успішності становить 39,20% серед тих, хто пробує вагінальні пологи після КР. Умовами успішних вагінальних пологів після КР можна вважати більш тривалі інтервали після останнього КР і відсутність серйозних супутніх захворювань. Загальні перешкоди для успішних вагінальних пологів після КР – це проблеми з прогресуванням пологів і дистрес плода.

**Ключові слова**: пологи, природні пологи, кесарів розтин, вагінальні пологи після кесаревого розтину.