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Various Modes of Delivery After a Trial of Labor among Pregnant Women at Term with a Previous One Cesarean Section

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ABSTRACT

The most crucial approach to lowering the increasing prevalence of cesarean sections and related maternal morbidity is vaginal birth after cesarean (VBAC). The need for local evidence to direct clinical practice is highlighted by the fact that TOLAC success varies across populations. **Objectives:** To identify the rates of various delivery modalities: spontaneous VBAC, assisted VBAC, and repeat cesarean section among women who have undergone a trial of labor following one prior cesarean section and relate them to age, BMI, and parity. **Methods:** This study was conducted in the Department of Gynecology at Mohtarma Benazir Bhutto Shaheed Medical College/DHQ Teaching Hospital, Mirpur, Azad Kashmir. It was a descriptive cross-sectional study conducted over 6 months. The sample size was 160 with full-term pregnant women with one prior c-section. Consecutive sampling was applied for this study. Data were analyzed using SPSS version 25.0 with a chi-square test ($p<0.05$). **Results:** Spontaneous VBAC occurred in 57.5% of women, assisted VBAC in 20.6%, and repeat cesarean in 21.9%. Assisted VBAC was significantly associated with age ≥30 years ($p=0.030$) and parity ($p=0.026$), while spontaneous VBAC was significantly related to BMI ($p = 0.041$). **Conclusions:** The VBAC success rate was 78.1%, indicating that TOLAC is a safe and effective option for most women with one previous cesarean section. Although age, BMI, and parity influenced modes of vaginal delivery, they did not significantly affect repeat cesarean rates, supporting planned TOLAC to reduce unnecessary repeat cesarean sections and improve maternal outcomes.

INTRODUCTION

The increasing number of cesarean deliveries worldwide has led to a dire need to conduct a critical analysis of the available delivery modes for women who already had a cesarean [1]. A surgical approach to birth, named Caesarean delivery, or delivery of a child through an incision in the uterus [2], has gained more and more popularity during the last century, both in developed countries and in developing ones [3]. Advanced surgical procedures, anesthetic skills, access to blood products, expansion of indications and awareness of fetus as a patient, and the possibility of vaginal birth following cesarean (VBAC) have played a part in this trend. The incidence of cesarean delivery among women has increased 4 times for 30 years [4]. Traditionally, once a cesarean, always a cesarean has been the motto of fear of disastrous uterine rupture in case of classical cesarean

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delivery. Nonetheless, this solution was criticized as overwhelming the healthcare system and producing a high-risk group of women with scarred uteri [5]. Up-to-date obstetric care has lowered the occurrence of uterine rupture after lower segment cesarean section by a significant magnitude, but the high cesarean birth rates continue to have a high association with maternal and neonatal complications [6]. This has resulted in the introduction of trials of labor after cesarean (TOLAC) trial, and VBAC is becoming a viable and safe method [2]. The majority of women who have had one cesarean section are eligible to undergo VBAC, with reported success rates of between 72 and 89, with previous successful VBAC proving to be the best predictor of future successful VBAC [7]. VBAC has such advantages as less maternal morbidity, fewer postpartum complications and infection, less recovery time, and fewer costs of healthcare compared to the planned repeat cesarean section [8, 9]. However, failed TOLAC is accompanied by the risk of uterine rupture, which is why it is necessary to carefully select the patients, counsel them, and categorize risks [10, 11]. Past researches have reported VBAC success rates of 57.3 to 71.5, with assisted vaginal deliveries comprising another percentage, with repeat cesarean rates of between 28.5 and 29 [12]. The success rates of VBAC were also significantly greater in women with previous vaginal births (80.8% vs. 52.3%, p<0.001)[6]. These reasons highlight why it is important to consider maternal variables such as age, BMI, and parity when forecasting VBAC success.

Even though there is an increased call around the world to promote TOLAC to curb the increasing rates of cesarean section, gaps in evidence are still observed in low-resource contexts. The available research is mainly based on the high-income nations having various obstetric regimes, healthcare systems, and demographics of patients. This poses a challenge to local clinicians in areas such as AJK, Pakistan, who do not have strong population-specific data to inform the choice of patients, counseling, and intra-partum care of TOLAC. This study aimed to create local evidence by ascertaining the rates of different delivery modes, namely, spontaneous VBAC, assisted VBAC, and repeat cesarean section, which followed a trial of labor in women with one previous cesarean section at one of the tertiary care hospitals in Mirpur, AJK.

METHODS

It was a cross-sectional descriptive study that was carried out at the Department of Gynecology, Mohtarma Benazir Bhutto Shaheed Medical College / Divisional Headquarters Teaching Hospital, Mirpur, Azad Kashmir, over a minimum period of six months (January to July 2025) after the study synopsis was approved (Ref. No. 158/ Academic blocks Trauma Centers/Surgery/2025). A sample size of 160 women was taken, which was calculated using an effect size of 0.10 of cesarean section among women in labor, who had a previous cesarean section, an 80 percent power, and a 5 percent margin of error according to the WHO calculator sample size calculation [12], and chosen by non-probability sequence sampling. Inclusion criteria were women of 20-29 years and ≥30 years age who had one previous cesarean section, went to labor at full term with a singleton vertex fetus and no medical or obstetric complications [13], whereas the exclusion criteria were those with more than one previous cesarean section, obstructed labor, cephalopelvic disproportion, macrosomic infants, or umbilical cord about fetal neck to avoid confounding [14]. The data collection was conducted before obtaining ethical approval and written informed consent by use of a structured proforma. A senior obstetrician examined all the participants and reviewed their previous delivery history to identify possible risk factors. The prognostic factors, including engaged head, average fetal size, soft, central, and dilated cervix, and adequate pelvis (measured in terms of digital pelvimetry), were considered during the trial of labor. Patients were maintained at nil by mouth, properly hydrated by administration of intravenous dextrose 5% fluids, and partograms were used to measure the progress of labour. Systemic analgesia was in use, and the patients were observed for scar tenderness, maternal tachycardia, vaginal bleeding, presenting part loss, and fetal distress, such as fetal heart rate and meconium passage. The infusion of Oxytocin was applied to augment labor when there were not enough contractions. A senior house officer or trainee who was aware of the antenatal record of the patient ensured that the right monitoring was carried out. At least 1 pint of blood was typed and cross-matched, and a 16-18 gauge IV line was kept. There was information to the anesthetist and theatre staff about the possibility of cesarean delivery. There was a trial of spontaneous vaginal delivery, and vacuum or outlet forceps were applied where necessary, and emergency cesarean section was done in case of failure of vaginal delivery. After birth, a two-hour observation of the labor room was made of patients to detect postpartum bleeding after birth.

Data analysis was done on SPSS version 25.0 and continuous variables were represented by mean and standard deviation (i.e., age, parity, and BMI), and the categorical variables (i.e., modes of delivery) were represented by frequencies and percentages. Age, parity, and BMI stratified modes of delivery, and post-stratification chi-square was used with a p-value of less than 0.05 as significant.

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RESULTS

The study involved 160 pregnant women who already had one cesarean section. The participants were aged between 20 and 40 years, with a mean and SD of 28.51 ± 4.58 years. The body mass index (BMI) was between 16.10 - 35.00 kg/m 2, and the mean BMI was 24.48 ± 4.70 kg/m 2. Such attributes offer a preliminary knowledge of the study population before determining how many different modes of delivery have taken place after labor (Table 1).

Table 1: Sample Characteristics and Delivery Outcomes

Variables	Category	n (%)
Age Group	20–29	112 (70%)
	≥30	48 (30%)
BMI Category	Underweight	17 (10.6%)
	Normal weight	68 (42.5%)
	Overweight	56 (35.0%)
	Obese	19 (11.9%)
Parity	1	95 (59.4%)
	2	65 (40.6%)
Spontaneous VBAC	Yes	92 (57.5%)
	No	68 (42.5%)
Assisted VBAC	Yes	33 (20.6%)
	No	127 (79.4%)
Caesarean Section	Yes	35 (21.9%)
	No	125 (78.1%)

The study involved 160 pregnant women who had one past cesarean section. Most of the participants were between 20- 29 years (70.0%, n=112), and 30 years and above (30.0%, n=48). As to body mass index (BMI), 68 (42.5%) of women were normal, 56 (35.0%) of the women were overweight, 119 (1.9%) of women were obese, and 17 (10.6%) of women were underweight. Regarding parity, 95 (59.4%) were primiparous (parity 1), and 65 (40.6%) were multiparous (parity 2). Regarding delivery modes following a trial of labor, 92 (57.5%) had spontaneous VBAC, 33 (20.6%) had assisted VBAC, and 35 (21.9%) had repeat cesarean section. These results represent a vivid picture of the distribution of maternal features and delivery at bay, which is consistent with the aim of the study, which is to provide the frequency of the different modes of delivery in women with a prior cesarean section (Table 2).

Table 2: Association of Independent Variables with Mode of Delivery

Variables	Category	Spontaneous VBAC, n (%)	Assisted VBAC, n (%)	C-Section, n (%)	χ^2	p-value
Age Group	20–29	70 (62.5%)	18 (16.1%)	24 (21.4%)	5.410	0.047
	≥30	22 (45.8%)	15 (31.3%)	11 (22.9%)		
BMI Category	Underweight	9 (52.9%)	2 (11.8%)	6 (35.3%)	2.974	0.041
	Normal Weight	39 (57.4%)	16 (23.5%)	13 (19.1%)		
	Overweight	32 (57.1%)	12 (21.4%)	12 (21.4%)		
	Obese	12 (63.2%)	3 (15.8%)	4 (21.1%)		
Parity	1	57 (60.0%)	14 (14.7%)	24 (25.3%)	5.412	0.051
	2	35 (53.8%)	19 (29.2%)	11 (16.9%)		

This research involved 160 pregnant women who had one cesarean section. The average age of the participants was 20-29 (70%, n=92), and most of the individuals were primiparous (59.4%, n=95). About the body mass index (BMI), 68 (42.5%) were of normal weight, 56 (35.0%) overweight, 19 (11.9%) obese, and 17 (10.6%) underweight. Still, 92 (57.5%) women gave birth without help, 20.6% (n=33) with the help of VBAC, and 35 (21.9%) repeated C-section, which showed that most of them could deliver a baby vaginally, even when they had a previous cesarean section. The women between the ages of 20 and 29 years (62.5%) found more spontaneous VBAC than older women (45.8%), with a near-significant difference (p=0.047), indicating that younger women are more likely to have a successful unassisted vaginal birth. The prevalence of assisted VBAC was also higher among women aged 30 years and above (31.3% vs 16.1%), which suggests the possibility of women aged above 30 years being more likely to have assisted vaginal delivery. The age did not have a significant difference in repeat cesarean section rates (22.9% vs 21.4%), indicating that age was not a key factor in determining surgical birth. BMI analysis showed that the spontaneous VBAC rates were 52.9%, 57.4%, 57.1%, and 63.2% among underweight, normal weight, overweight, and obese women, respectively, which were not statistically different (p = 0.047), proving that vaginal delivery could occur in all BMI groups. The mode of delivery did not vary significantly with maternal weight in this cohort because assisted VBAC and repeat cesarean section did not have any significant association with BMI. The spontaneous VBAC was found in 60.0% and 53.8% of primiparous and multiparous women, respectively (p=0.051); this indicated no significant difference. The rates of assisted VBAC were higher in multiparous women (29.2%) than in primiparous women (14.7), and the rate of repeat cesarean section was 25.3% and 16.9%, respectively. This implies that multiparty might stimulate the necessity of assisted vaginal delivery, and not necessarily repeat cesarean. Overall, the results indicate that the majority of women who have had a prior cesarean

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segment can deliver spontaneously, assisted VBAC is more probable among older women, or multiple pregnancies, and recidivism is fairly steady in respect to age, BMI, and parity, which is also in line with the research objective to define the frequency and determinants of various modes of delivery.

DISCUSSION

This paper assessed the incidence and predictors of the different delivery modes in women who had had one previous cesarean delivery. All in all, spontaneous VBAC was obtained in 57.5% of the participants, assisted VBAC in 20.6%, and repeat cesarean section in 21.9%. These results are aligned with the global statistics indicating successful rates of vaginal birth between 57 and 77 percent following a cesarean operation [12]. As an example, a retrospective cohort study at Italian tertiary hospitals found a spontaneous VBAC rate of 57.3% of women, assisted VBAC of 9.2%, and a repeat of cesarean section of 29.4% [15]. On the same note, one study that conducted a study involving 235 women who attempted labor following a prior cesarean revealed that the VBAC success rate was 71.5% and the repeat cesarean rate was 28.5% [12]. The minor disparities in the levels of success in the research may be explained by the differences in the patient selection, obstetric practice, and organizational guidelines. Age appeared to influence the outcomes of birth in our cohort. Spontaneous VBAC was more common in women who were below 20 to 29 years of age (62.5%) compared to those who were 30 years and above (45.8%), which was almost close to the statistical significance (p=0.050). Alternatively, assisted VBAC was significantly higher in those 30 years and above (31.3% vs 16.1; p=0.047). These results are similar to other studies where maternal age was identified to have a stronger effect on successful unassisted vaginal delivery among young adults, but in older age, the likelihood of obstetric intervention may be significant [16]. It was found that there was no significant difference in age groups in terms of repeat cesarean rates, and thus, maternal age is not a determinant that dictates surgical delivery. The BMI analysis showed that spontaneous VBAC occurred across all categories: underweight (52.9%), normal weight (57.4%), overweight (57.1%), and obese (63.2%), with a significant association (p=0.041). This indicates that BMI can influence spontaneous VBAC, although vaginal delivery remains possible even with higher BMI. These findings are consistent with previous studies, suggesting that women should not be excluded from TOLAC solely based on their weight [17]. Parity analysis showed that VBAC being spontaneous was 60.0 and 53.8 percent in the primiparous and multiparous women, respectively, and there was no statistically significant difference (p=0.051). Assisted VBAC was also more common in multiparous women (29.2%) than in primiparous women (14.7%), to support the idea that additional obstetric intervention may be needed in multiparous women who have a previous cesarean section. The repeat cesarean sections were not significantly different across the groups of parity (16.9% vs 25.3%; p=0.051). These results are consistent with international data, which suggest that successful vaginal birth in the past is a significant predictor of successful VBAC, and parity may affect the probability of the necessity of assisted vaginal delivery [15, 16]. In this cohort, the general VBAC success rate (including both spontaneous and assisted) was 78.1%, and is at the upper end of the international reports [18, 19]. This can be explained by the systematic intrapartum procedure, high-quality staffing, and specific counseling offered during the trial of labor, which are in line with the research stressing the significance of institutional policies and patient education to promote VBAC [20, 21]. The reason is the relatively low repeat cesarean rate (21.9%) in our cohort, which implies a proactive approach to TOLAC instead of the setting where the previous cesarean section is nearly a certain precursor of repeat surgical delivery [22, 23]. In clinical terms, the advocacy of TOLAC has a great effect on maternal and neonatal health. Effective VBAC decreases risks related to the occurrence of a second or more cesarean sections, such as placenta accreta, and also improves maternal recovery and subsequent reproductive outcomes [14, 24]. These findings indicate that TOLAC is feasible and safe in well-selected women, even with higher BMI or multiparity, as long as it is closely monitored under the clinical guidelines. To sum up, our results confirm that spontaneous VBAC is possible in most of the women who have undergone one cesarean delivery, assisted VBAC has higher chances in older women or in those with multiple births, and repeat cesarean section is not any different in terms of age, BMI, and parity. These findings underscore the need to have structured TOLAC interventions, patient education, and excellent intrapartum care that can maximize VBAC outcomes and minimize unwarranted repeat cesarean sections.

The single-center and cross-sectional design has key limitations that restrict its generalizability, and the sample size is small, which could decrease statistical power. The researchers further failed to adjust some of the crucial confounders, such as the indication of primary cesarean or inter-delivery interval. We suggest setting up systematic TOLAC counseling interventions and undertaking more extensive, prospective multicenter investigations, which would encompass a broader spectrum of predictive variables in order to create a locally valid instrument to predict VBAC success.

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CONCLUSIONS

Spontaneous VBAC was possible in most women who had one previous cesarean section, and this indicates that vaginal birth following cesarean is a safe and viable procedure in most instances. More elderly women and high parity were found to have assisted VBAC, which implies that maternal age, BMI, and parity could be factors in obstetrical intervention during labor. The rates of repeat cesarean section were rather stable by age and parity, while BMI showed a significant association with spontaneous VBAC but not with repeat cesarean section, which led to the conclusion that these variables are not sufficient predictors of the necessity of the surgical delivery. In general, the strategic selection, observation, and counseling of patients may maximize the delivery results, minimize the needless repetitive cesarean section in women with a prior cesarean section, and present the evidence to support the local clinical practice with regard to managing labor among women with a prior cesarean section.

Authors' Contribution

Conceptualization: FS
Methodology: HR, AJ
Formal analysis: HR, SP, SA
Writing and Drafting: FS, SP, AJ, UM
Review and Editing: HR, FS, SP, AJ, UM, SA, AJ

All authors approved the final manuscript and take responsibility for the integrity of the work.

Conflicts of Interest

All the authors declare no conflict of interest.

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REFERENCES

[1] Chen X and Mi MY. The Impact of a Trial of Labor After Cesarean Versus Elective Repeat Cesarean Delivery: A Meta-Analysis. Medicine. 2024 Feb; 103(7): e37156. doi: 10.1097/MD.0000000000037156.

[2] Davis D, Homer CS, Clack D, Turkmani S, Foureur M. Choosing Vaginal Birth After Caesarean Section: Motivating Factors. Midwifery. 2020 Sep; 88: 102766. doi: 10.1016/j.midw.2020.102766.

[3] Kaimal AJ, Grobman WA, Bryant AS, Norrell L, Bermingham Y, Altshuler A *et al.* Women's Preferences Regarding the Processes and Outcomes of Trial of Labor After Cesarean and Elective Repeat Cesarean Delivery. Journal of Women's Health. 2019 Aug; 28(8): 1143-52. doi: 10.1089/jwh.2018.7362.

[4] Sys D, Kajdy A, Baranowska B, Tataj-Puzyna U, Gotlib J, Bączek G *et al.* Women's Views of Birth After Cesarean Section. Journal of Obstetrics and Gynaecology Research. 2021 Dec; 47(12): 4270-9. doi: 10.1111/jog.15056.

[5] Hautakangas TM, Uotila JT, Huhtala HS, Palomäki OL. How Does Uterine Contractile Activity Affect the Success of Trial of Labour After Caesarean Section, and the Risk of Uterine Rupture? An Exploratory, Blinded Analysis of a Cohort from a Randomized Controlled Trial. An International Journal of Obstetrics and Gynaecology. 2022 May; 129(6): 976-84. doi: 10.1111/1471-0528.17005.

[6] Gitas G, Alkatout I, Ertan KA, Rody A, Proppe L, Kocaer M et al. Risk Factor Analysis in Women Who Underwent Trial of Labor After Cesarean Section: A Multicenter Study in Germany. Journal of the Turkish German Gynecological Association. 2022 Sep; 23(3): 137. doi: 10.4274/jtgga.galenos.2022.2022-1-2.

[7] Pirhonen J and Erkkola R. Delivery After Fetal Death in Women with Earlier Cesarean Section. A Review. European Journal of Obstetrics and Gynecology and Reproductive Biology. 2021 May; 260: 150-3. doi: 10.1016/j.ejogrb.2021.03.027.

[8] Patel S, Kansara V, Patel R, Anand N. Obstetric and Perinatal Outcome in Previous One Cesarean Section. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2016 Sep; 5(9): 3141-6. doi: 10.18203/2320-1770.ijrcog20163002.

[9] Ooba H, Maki J, Masuyama H. Evaluating the Impact of a Trial of Labor After Cesarean Section on Labor Duration: A Retrospective Cohort Study. BioMed Central Pregnancy and Childbirth. 2024 Aug; 24(1): 542. doi: 10.1186/s12884-024-06744-0.

[10] He X, Dai Q, Wu X, Zhou J, Li J. Outcomes and Risk Factors for Failed Trial of Labor After Cesarean Delivery (TOLAC) in Women with One Previous Cesarean Section: A Chinese Population-Based Study. BioMed Central Pregnancy and Childbirth. 2022 Sep; 22(1): 676. doi: 10.1186/s12884-022-05005-2.

[11] Uno K, Mayama M, Yoshihara M, Takeda T, Tano S, Suzuki T *et al.* Reasons for Previous Cesarean Deliveries Impact a Woman's Independent Decision of Delivery Mode and the Success of Trial of Labor After Cesarean. BioMed Central Pregnancy and Childbirth. 2020 Mar; 20(1): 170. doi: 10.1186/s12884-020-2833-2.

[12] Wagaw AC, Sendekie AK, Nigatu SG, Mihretie GS. Preferred Mode of Delivery and Its Associated Factors in Pregnant Women with a Previous Cesarean Scar at a Tertiary Care Hospital in Ethiopia: Institutional-Based Cross-Sectional Study. BioMed

DOI: https://doi.org/10.54393/pjhs.v7i4.3766

Central Pregnancy and Childbirth. 2023 Aug; 23(1): 585. doi: 10.1186/s12884-023-05891-0.

[13] Parslow E and Rayment-Jones H. Birth Outcomes for Women Planning Vaginal Birth After Caesarean (VBAC) In Midwifery Led Settings: A Systematic Review and Meta-Analysis. Midwifery. 2024 Dec; 139: 104168. doi: 10.1016/j.midw.2024.104168.

[14] Rouzi AA, Alamoudi R, Ghazali S, Almansouri N, Kafy A, Alrumaihi M *et al.* A Retrospective Study of the Association of Repeated Attempts at Trial of Labor After Cesarean Birth on Maternal and Neonatal Outcomes. International Journal of Women's Health. 2021 Nov: 1081-6. doi: 10.2147/IJWH.S334617.

[15] Germano C, Mappa I, Cromi A, Busato E, Incerti M, Lojacono A *et al.* Induction of Labor in Women with Previous Cesarean Section and Unfavorable Cervix: A Retrospective Cohort Study. In Healthcare. 2023 Feb; 11(4): 543. doi: 10.3390/healthcare11040543.

[16] Deshmukh U, Denoble AE, Son M. Trial of Labor After Cesarean, Vaginal Birth After Cesarean, and the Risk of Uterine Rupture: An Expert Review. American Journal of Obstetrics and Gynecology. 2024 Mar; 230(3): S783-803. doi: 10.1016/j.ajog.2022.10.030.

[17] Ferede YA, Habitu YA, Tassew WC, Bitew DA. Prevalence of Successful Vaginal Birth After Caesarean Section and Its Associated Factors among Women Delivered in the University of Gondar Comprehensive Specialized Referral Hospital, Northwest Ethiopia. Contraception and Reproductive Medicine. 2025 Apr; 10(1): 29. doi: 10.1186/s40834-025-00360-9.

[18] Tesfahun TD, Awoke AM, Kefale MM, Balcha WF, Nega AT, Gezahegn TW *et al.* Factors Associated with Successful Vaginal Birth After One Lower Uterine Transverse Cesarean Section Delivery. Scientific Reports. 2023 May; 13(1): 8871. doi: 10.1038/s41598-023-36027-1.

[19] Psenkova P, Tedla M, Minarcinova L, Zahumensky J. Application of a Specific Clinical Pathway Can Affect the Choice of Trial of Labor in Patients with a History of Cesarean Delivery. BioMed Central Pregnancy and Childbirth. 2024 Apr; 24(1): 292. doi: 10.1186/s12884-024-06429-8.

[20] Alkhamis F. Pregnancy Outcome in Women with Previous One Cesarean Section, Experience from the Kingdom of Saudi Arabia. The Egyptian Journal of Hospital Medicine. 2019 Oct; 77(3): 5109-13. doi: 10.21608/ejhm.2019.50257.

[21] Nabawanuka B, Ngabirano T, Nankumbi J. Choice and Determinants of Delivery Mode in Pregnant Women with One Cesarean Scar: A Cross-Sectional Study in Two Urban Ugandan Public Hospitals. 2023. doi: 10.21203/rs.3.rs-3677374/v1.

[22] Singh N, Pradeep Y, Jauhari S. Indications and Determinants of Cesarean Section: A Cross-Sectional Study. International Journal of Applied and Basic Medical Research. 2020 Oct; 10(4): 280-5. doi: 10.4103/ijabmr.IJABMR_3_20.

[23] Tabassum S, Suman F, Tarin AU, Rao SA. Primary Cesarean Section: A Gateway to Repeat Surgery: Primary Cesarean Section. Pakistan Journal of Health Sciences. 2025 May: 125-9. doi: 10.54393/pjhs.v6i5.2941.

[24] İzbudak G, Tozkır E, Cogendez E, Uzun F, Eser SK. Comparison of Maternal-Neonatal Results of Vaginal Birth After Cesarean and Elective Repeat Cesarean Delivery. Ginekologia Polska. 2021; 92(4): 306-11. doi: 10.5603/GP.a2020.0132.