

Once a cesarean, always a cesarean? Obstetricians' approach to counseling for trial of labor after cesarean



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BACKGROUND: Despite no observed increase in obstetrical complication rates, cesarean delivery rates are increasing worldwide. A significant proportion of planned cesarean deliveries are performed for patients with 1 previous cesarean delivery who opt for an elective repeat cesarean delivery rather than a trial of labor after cesarean delivery. The facilitation of informed decision-making by healthcare professionals may influence patient choices and could affect the trial of labor after cesarean delivery uptake rates.

OBJECTIVE: This study aimed to assess how obstetricians in the Middle Eastern region approach counseling of patients with a previous cesarean delivery concerning birth choices in the current pregnancy.

STUDY DESIGN: This was a prospective survey-based study. An online survey of obstetricians in the 2 largest state maternity hospitals in Doha, Qatar, was conducted with participation offered voluntarily. The survey gathered background demographic data and investigated the obstetrician's awareness of factors that could influence the success of the trial of labor after cesarean delivery and the obstetrician's approach to counseling women. The data collected were transferred to SPSS (version 23.0; IBM Corp, Armonk, NY) for analysis. Descriptive statistics were performed, and nonparametric analysis of continuous variables and chi-squared analysis of discrete variables were cross-referenced with gender, length of time of specialist qualification, and personal family experience of cesarean delivery.

RESULTS: Most respondents had training in the Middle East and generally practiced obstetrics in this region, and >80% of the respondents had more than 5 years of experience in the specialty. The obstetrician's gender or length of experience did not significantly influence the attitude to the assessment of risks and benefits. Furthermore, there was little consensus among the group about factors that were the most and the least important for the success of the trial of labor after cesarean delivery. The group emphasized the importance of the patient's wishes in choosing the mode of birth. If a relative contraindication to the trial of labor after cesarean delivery was present, half of the obstetricians would emphasize the various negatives of the approach to the patient during counseling. Most participants favored a dedicated trial of labor after cesarean delivery clinic to reduce cesarean delivery rates. The participants did not feel that supporting the trial of labor after cesarean delivery would be improved with legal department support.

CONCLUSION: Obstetricians had different approaches in the counseling for trial of labor after cesarean delivery, and this can influence the patients' acceptance of the trial of labor after cesarean delivery, thereby affecting cesarean delivery rates.

Key words: approach to counseling, cesarean delivery rates, counseling for trial of labor after cesarean delivery, knowledge and attitudes, patient counseling, vaginal birth after cesarean delivery

Introduction

With the increasing cesarean delivery (CD) rates, the focus in obstetrics is in reducing preventable CDs, of which the

biggest proportion is composed of elective repeat CDs (ERCDs) for women with a previous single abdominal delivery.¹ To reduce CD rates, efforts need

to be directed at improving the trial of labor after CD (TOLAC) uptake. The TOLAC uptake rates show a noticeable regional difference with rates as low as

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Why was this study conducted?

Increasing cesarean delivery (CD) rates with a large proportion being elective repeat CDs are potentially “preventable.” However, patient counseling could help reduce these increases. Of note, there is a noticeable difference in the practice of CD in the Middle Eastern region. As such, this study aimed to investigate how obstetricians approach counseling for trial of labor after CD (TOLAC) cases in the Middle Eastern region (eg, knowledge and attitudes). Possible factors that could affect the obstetricians’ approach, were investigated to inform future interventions at reducing CD rates.

Key findings

There was a noticeable difference in the knowledge and approach to patient counseling in the Middle Eastern region. Furthermore, there is a difference in the weight given to different predictors of success with vaginal birth after CD (VBAC). Moreover, there was a self-reported bias in counseling (ie, emphasizing negatives if there are relative contraindications to VBAC). Obstetrician’s gender, length of experience with CD, or personal experience with CD did not significantly influence the attitude to the assessment of risks and benefits.

What does this add to what is known?

Patient counseling has been shown to affect CD rates, and this study showed that there is a noticeable difference in the knowledge and attitudes toward counseling for TOLAC in the Middle Eastern region, which needs to be addressed to improve the quality of care. An investigation of the factors that could influence the counseling approach has been initiated and need a further in-depth study to inform educational interventions for physicians to optimize patient counseling in these scenarios.

20% in the United States² and as high as 70% in the Netherlands.³ In Taiwan, vaginal births after CDs (VBACs) are very low at >5%.⁴ In Europe, the TOLAC rates vary considerably among different nations, ranging from 14.8% to 52.2%.⁵

Many complex factors may influence TOLAC uptake, and these may include the obstetricians’ attitudes and practice, patient attitudes, caregiver financial incentives related to the mode of delivery, and organizational support.⁶ Among these factors, there is increasing evidence that the obstetrician’s attitude affects the approach to patient counseling and in supporting the patient’s choice in considering TOLAC.^{7–9} Furthermore, caregiver (obstetrician) factors may be subject to regional difference as attitudes can be affected by cultural factors and regional and institutional practice guidelines.^{10,11}

In Europe, a large multicenter trial has been conducted to investigate ways to improve TOLAC rates and the homogeneity of TOLAC uptake. The study used

interventions in the form of evidence-based education of clinicians and collaborative decision-making between the patient and the caregiver.¹² Although the clinician training interventions in the trial did not significantly alter VBAC rates, the authors noted that there was a difference in the attitudes and perceptions of clinicians toward TOLAC between high and low uptake countries and that changing clinical practice was a slow process.

The subject of clinician views on TOLAC remains relatively unexplored in the Middle East. Furthermore, it may not be accurate to extrapolate findings from European studies to this region, with its unique cultural and demographic factors, including traditional approaches to healthcare decision-making with the importance of family involvement, preference for large family sizes, and the cosmopolitan composition of the population because of economic immigration.¹³ In addition, the CD rate in the Middle East is as high as 36.7%, with more than a quarter

of the ERCDs (26.8%) being performed for women who refused TOLAC, making this a key area to investigate.¹⁴ Therefore, this study was conducted to investigate the Qatari obstetricians’ knowledge and attitudes about TOLAC to initiate the investigation of this subject to ultimately inform interventions to reduce CD rates.

Materials and Methods

Approvals for the medical staff survey were obtained in the 2 state maternity hospitals where the surveys were conducted. A 26-item online survey exploring views about TOLAC was designed and piloted in September 2019 within a group of obstetricians based outside the study hospitals. After this pilot exercise, the final version of the survey was produced for use in this study. A sample size of 123 participants (95% confidence interval) was calculated using OpenEpi Center for disease Control, Atlanta, Georgia.¹⁵

The online survey link was disseminated via email and smartphone messages to 180 specialists and consultant obstetricians across the 2 largest national state hospitals: Women’s Wellness and Research Center (a 291-bed tertiary care teaching hospital) and Al Wakra Hospital (a 260-bed facility), both under the Hamad Medical Corporation, which is the state provider of health services in Qatar.

Participation was voluntary, and responses were anonymous. The survey was kept open for the entire month of October 2019, and an email reminder was sent each week during the study period to all invitees.

The survey consisted of initial questions relating to the relevant background and demographic information of the participant (main geographic region of training and practice, level of obstetrical experience, gender, and family experience of repeat CDs or uterine rupture). This was followed by questions designed to test the participants’ knowledge relevant to TOLAC (risk of scar rupture and factors to consider from the history before offering TOLAC). Subsequent questions explored the participant’s approach to patient participation on shared

decision-making (importance of patient's views, counseling patient, and their view of patient's understanding of clinical risk). Subsequently, the survey went on to question the obstetrician on their management approach to pregnant women with 1 previous CD needing delivery using 2 clinical scenarios. The first clinical scenario (scenario A) was of a postdated pregnancy where the patient had 1 previous uncomplicated CD, with a Bishop score of 3, where the participant was asked if they would offer the patient an ERCD, an induction of labor (IOL) with prostaglandins, or a mechanical IOL or allow more time to await spontaneous labor. The second clinical scenario (scenario B) gave the same management choices for the participant to select how they would manage a pregnancy where the patient has a poorly controlled gestational diabetes mellitus with an estimated fetal weight of 2900 g at term and a previous history of 1 vaginal delivery followed by an uncomplicated CD. The survey concluded with questions seeking the participant's views on organizational support for TOLAC.

The response data collected were transferred to SPSS (version 23.0; IBM Corp, Armonk, NY) for analysis. Descriptive statistics and nonparametric analysis of continuous variables and chi-squared analysis of discrete variables were performed. Participant response results for giving importance to patient's views, stressing TOLAC negatives during patient counseling, perception of patients' understanding of clinical risk, usefulness of a TOLAC clinic, likelihood of using prostaglandins for IOL, likelihood of using oxytocin for augmentation, estimation of success rates for TOLAC with and without contraindications, and estimation of legal protection (no claim) were cross-referenced with gender, length of time of specialist qualification, and family experience of CD using nonparametric tests (Mann-Whitney *U* tests).

Results

A total of 66 obstetricians responded to the invitation and participated in the survey, completing the online

TABLE 1

The demographics of the 66 qualified obstetricians who competed the online questionnaire relating to the practice of the trial of labor after cesarean delivery

Group characteristics	
Characteristic	n (%)
Gender	
Male	31 (47.0)
Female	35 (53.0)
Region of clinician's training and qualification	
MENA region	35 (53.0)
Europe	18 (27.2)
Asia	11 (16.7)
Other	2 (3.0)
Main region of clinician's clinical practice	
MENA region	38 (57.6)
Europe	19 (28.7)
Asia	8 (12.1)
Other	1 (1.5)
Previous family experience of cesarean delivery by participating clinician	
	38 (57.6)
Length of specialist qualification of participating clinician (y)	
<5	13 (19.7)
5–10	23 (34.8)
10–20	21 (31.8)
>20	9 (13.6)

MENA, Middle East and North African.

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questionnaire and giving a survey response rate of 36.6%. The demographics of the group are outlined in [Table 1](#). There were 31 male and 35 female participants, and 45.4% of participants had been qualified as a specialist or consultant for more than 10 years. More than half of the respondents had qualified and practiced obstetrics only in the Middle East and North African (MENA) region.

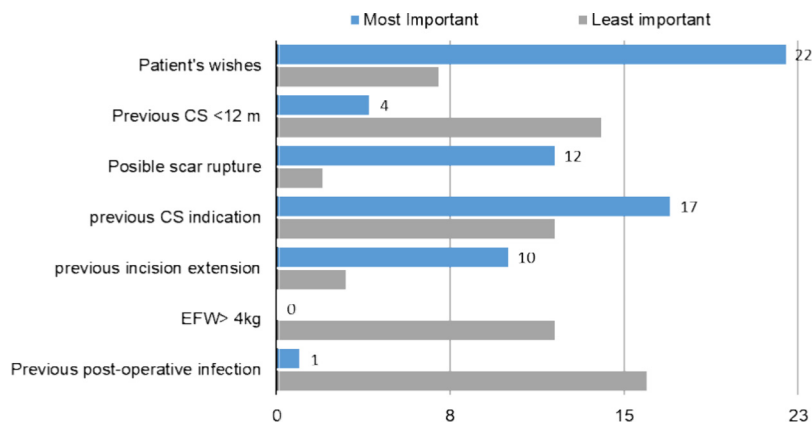
Knowledge and attitudes toward collaborative decision-making

Of note, 53% of respondents identified the risk of uterine rupture with TOLAC in 1 of 200 cases. The Figure outlines what the 66 respondents considered the most and the least important features in the assessment of a case of TOLAC. The

low number of agreements on every condition indicated no uniformity of opinion. There was a significant difference between the most and the least important features (chi-squared analysis, 50.3; $P < .0001$). ([Figure 1](#))

In addition, 57.6% of respondents showed awareness of TOLAC success calculators [Table 2](#). outlines the attitudes and approach to various aspects of practice in managing cases of TOLAC, showing the findings concerning shared decision-making; although the participants place importance on patient views, their perception of the patient's understanding of clinical risk was low. Of note, 43.9% of participants felt that responsibility for TOLAC uptake was shared equally between patients and obstetricians, whereas similar numbers of the remainder

FIGURE 1
Participants' perceptions of most and least important factors in assessing patient suitability for trial of labor after cesarean delivery



Chi-squared analysis, 50.3; $P < .0001$.

CD, cesarean delivery; EFW, estimated fetal weight.

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chose mainly patients (22.7%) and mainly obstetricians (28.7%). Among other aspects of counseling (stressing negatives during a discussion, cutoffs of estimated success at which the physician would support TOLAC), the results showed that most modal responses were either 0% or 100% and the range of opinion was usually from 0% to 100%. This indicated firm views on many aspects of practice; however, the wide range of opinions indicated that there was no conformity of opinion.

Management approach and organizational support

Most participants (59.6%) reported that TOLAC counseling should be performed in the third trimester of pregnancy and in supported dedicated TOLAC clinics as a means to improving VBAC rates.

The response results to the effects of local guidelines and legal organizational support on VBAC counseling are shown in Table 2, which also shows that participants tended to avoid prostaglandins

but would be more willing to use oxytocin for labor augmentation in TOLAC.

Table 3 outlines the responses to 2 clinical scenarios A and B (detailed in the Materials and Methods section). In both cases of a woman with a previous single CD needing delivery, most respondents (69.7% and 50.1%) chose mechanical IOL as the option they would be most likely to consider rather than proceeding to an ERCD. Responses to both scenarios showed no significant difference when gender (male vs female), length of time specialist training had been completed, and family exposure to CD were analyzed using chi-squared analysis.

Additional analyses were performed using nonparametric tests (Mann-Whitney U test). Gender (male vs female), length of time since specialist training had been completed, and family members having had a CD were compared with the following results: participant response results for giving importance to patient's views, stressing TOLAC negatives during patient counseling, perception of patients' understanding of clinical risk, usefulness of a TOLAC clinic, likelihood of using prostaglandins for IOL, likelihood of using oxytocin for augmentation, estimation of success rates for TOLAC with and without

TABLE 2

The attitudes and approach of the 66 obstetricians toward various aspects of practice in managing cases of trial of labor after cesarean delivery

Clinicians' attitudes and approach toward managing TOLAC cases	Median	Mode	Range
Parameter			
Give importance to patient's views on choosing VBAC	83.5	100	7–100
Would stress negatives during VBAC counseling if relative contraindication to TOLAC present	51	50	0–100
Perceive that patients understand clinical risk	34	50	0–100
Feel TOLAC clinic help in enhancing uptake	74	100	0–100
Estimated success rate of TOLAC (with no contraindications), at which would recommend TOLAC	60	70	0–100
Estimated success rate of TOLAC (with no contraindications), at which would "not" recommend TOLAC	50	75	0–100
Likely to induce using prostaglandins	38	0	0–100
Likely to augment labor using oxytocin in TOLAC	72	100	0–100
Feel legal protection would offer assistance with decisions	60	0	0–100

TOLAC, trial of labor after cesarean delivery; VBAC, vaginal birth after cesarean delivery.

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TABLE 3**Responses on the management choices selected by participants for the 2 clinical scenarios put together in the survey for the 66 obstetricians**

Selected management choice	Clinical scenario A (1 previous CD, postdated pregnancy, and Bishop score of 3 needing delivery)	Clinical scenario B (1 previous vaginal birth followed by 1 CD and gestational diabetes mellitus needing delivery at term with no fetal macrosomia)
Elective CD	11 (16.7)	17 (25.8)
IOL using cervical balloon	46 (69.7)	39 (59.1)
IOL using prostaglandin	2 (3.0)	6 (9.1)
Waited until 42 wk—CD	7 (10.6)	NA
Waited until 40 wk—CD	NA	4 (6.1)

Responses to both case 1 and case 2 scenarios showed no significant difference when gender (male vs female), length of time specialist training had been completed, and family exposure to CD were analyzed using chi-squared analysis.

CD, cesarean delivery; IOL, induction of labor; NA, not available.

Mohan. *Obstetricians' approach to trial of labor after cesarean delivery counseling*. *Am J Obstet Gynecol Glob Rep* 2022.

contraindications, and estimation of legal protection (no claim). In these analyses, there was no significant difference noted. Thus, gender, length of time in practice, and family exposure to CD did not significantly influence the obstetricians' attitudes to the assessment of risks and benefits.

Comment

Principal finding

The main finding of the study was that there was a lack of uniformity of opinions around the most and least important factors while considering TOLAC and in attitudes toward the management of TOLAC. Moreover, these differences were shown to be independent of the participants' gender, length of experience, and personal family experiences of CD.

The study results have to be considered in the local context: Qatar has a high CD rate of 36.7 %; this represents an area requiring exploration to inform efforts at reducing cesarean births.¹⁴ This high rate is despite the fact that Qatari women have traditionally had a preference for larger family size,¹⁶ which would have been thought to increase commitment to vaginal births by patients and clinicians where possible. Of note, 45.8% of Qatari women cite obstetricians as their primary source of information about labor and

delivery¹³; therefore, counseling by the clinician is an important aspect of care, and this is evaluated further below.

Clinical and research implications

Knowledge and attitudes toward collaborative decision-making. A Cochrane review established that the information that women are given about TOLAC is a crucial part of the informed decision-making process and has to be reliable and adequate.¹⁷ Although participants in the current study showed accurate knowledge of risks of uterine rupture with TOLAC, there was little consensus among obstetricians on the importance of factors to consider, such as aspects of previous history, before offering TOLAC. Obstetricians themselves do not agree on factors that are important for decision-making, the information conveyed to the woman will be variable at best and possibly unreliable at worst. Furthermore, a recent systematic review of factors that can affect the decision-making for CD has shown that the physician's personal beliefs are a major factor in the ultimate choice of mode of delivery and may reflect limitations, preferences, and/or skill levels.¹⁸ Here, clinicians showed some propensity to stress the negatives of TOLAC if they noted that a relative contraindication was present, possibly reflecting the effect of their own risk or success perception, personal

convenience, and/or potential of their lack of skill. In addition, this demonstrated a "persuasive" rather than the recommended "supportive" approach to TOLAC counseling.¹ This is an important consideration as how risks and benefits are presented to a patient can influence the patient's ultimate choice of TOLAC or ERCD.¹⁹

The OptiBirth trial¹² was a recent cluster randomized trial in Europe that incorporated an evidence-based intervention to enhance VBAC rates, underpinned by the premise that the woman's involvement, engagement, and empowerment in the decision-making process were central. Its results demonstrated that this patient-centered approach showed promise at increasing TOLAC uptake. Shared decision-making, based on mutual trust, in TOLAC cases has been recommended.¹⁰ Therefore, the available evidence supports the central role of patient engagement and involvement in TOLAC uptake. However, the study findings indicated that although physicians in this region placed importance on women's choice, they did not seem convinced that the women understood the concept of clinical risk. Therefore, less than half (43.9%) of the respondents felt that responsibility for TOLAC uptake was shared equally between patients and

physicians. This clinician perception has significant implications for the level of engagement and extent of collaborative decision-making. Furthermore, this issue of health literacy and patient choice for women in the Middle East requires further investigation to address this.

Management approach and organizational support. Generally, there is no consensus concerning the optimal timing for the shared decision-making for TOLAC. Some feel that discussions should take place early, perhaps in the immediate postnatal period after the primary CD, so that there is plenty of time for reflection and consideration.⁹ However, others proposed that the decision should defer to later stages in the pregnancy, presumably as the pregnancy progress is apparent and the absence of additional risk factors is known. Furthermore, the timing of decision-making may be influenced by organizational, logistic, or cultural factors that need to be investigated further. The findings of this study indicated that obstetricians in the Middle Eastern region chose to defer TOLAC counseling to the third trimester of pregnancy (59.1%). This may be influenced by the fact that local care pathways require booking for IOL or CD at the 36-week visit, which may act as a cue to the initiation of the decision-making about the mode of delivery.

There was general support for the idea of dedicated TOLAC clinics from the results of this study, which is also supported by some evidence.²⁰ A systematic review in 2018 has shown that antenatal care through dedicated TOLAC clinics was associated with higher rates of vaginal birth among women with 1 previous CD.²¹ Therefore, this is an area for local healthcare planning bodies to consider as one where effective interventions could be applied and for which support already exists among the clinician body.

Survey results demonstrated that obstetricians in the Middle Eastern region would be more inclined to use prostaglandins for IOL if local guidelines allowed this but seemed ambivalent

concerning organizational legal support helping encourage them to induce labor in TOLAC cases. Organizational support has been identified as an important factor in increasing TOLAC uptake.¹⁰ This may include protection from litigation, and research shows that fear of litigation and risk-averse practice can significantly affect TOLAC rates.²²

There seemed to be no significant difference among the group in their management approach to the clinical scenarios presented, but interestingly, 43.9% of the group stated that they would manage these cases differently if outside the Middle East. This may point to regional, organizational, or cultural differences as possible contributory influences and may also potentially represent clinician anxiety or defensive practice.

Strengths and limitations

This study investigated the knowledge and attitudes of obstetricians toward counseling for TOLAC in the MENA region, and the study strength lay in initiating an investigation of TOLAC counseling quality, which is an important factor in reducing the proportion of CDs. However, this study was limited by a low response rate for the survey, a known weakness of survey methodology.²³ This led to a smaller sample size than the required power calculation, and therefore, further exploration would be recommended after this initial study. Although the study aimed to investigate the attitudes to TOLAC counseling in a Middle Eastern context, not all respondents had training or practiced obstetrics in the MENA region, and the views of the non-Arab clinicians could have influenced the results; however, it is notable that the healthcare workforce in the Middle Eastern region is diverse and is composed of a large proportion of expatriate workers.²⁴

Conclusions

Qatar presents as a region of the world, which has a high CD rate in a population that traditionally favors a large family size.¹⁶ This study represented a starting point toward investigating the

questions on effective interventions at reducing CDs by evaluating 1 aspect: clinician attitudes toward TOLAC counseling, which is known to be a major determinant for TOLAC uptake rates.

Further research is needed to investigate organizational and cultural factors that contribute to the clinicians' attitudes toward the larger picture of low TOLAC uptake in the Middle Eastern region. This can inform interventions to reduce overall CD rates.

Glossary

CD: Cesarean delivery
 ERCD: Elective repeat cesarean delivery
 IOL: Induction of labor
 MENA: Middle East and North Africa
 TOLAC: Trial of labor after cesarean delivery
 VBAC: Vaginal birth after cesarean delivery

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