Factors Promoting Vaginal Birth After Caesarean Section;

A retrospective observational study

Protocol of Thesis

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Introduction

There has been an increase in cesarean section over the past 20 years which is not uniform but associated with wide variation between and within countries ***(Sachs et al., 1999).***

The optimum delivery management of the woman who has undergone a previous cesarean delivery has been debated for over 100 years ***(Kerr, 2005).***

Fear of catastrophic complications associated with TOLAC (Trial of labor after cesarean section) may be a reason providers avoid encouraging it for their patients. In spite of these concerns, it is important to remember that a successful uncomplicated TOLAC has many short- and long-term benefits and, in a Markov model, when the likelihood of success was ≥47 percent, TOLAC was more effective and less expensive than ERCD (Elective repeated cesarean delivery) . Cost-effectiveness increases in patients who undergo multiple subsequent vaginal deliveries ***(Gilbert et al., 2013; Wymer et al., 2014).***

Planning the route of delivery for the woman who has had a previous cesarean delivery should be addressed early in her prenatal care, and can begin preconceptionally. The decision for TOLAC or ERCD should be made by the woman in consultation with her healthcare provider. With either approach, women who have undergone a prior cesarean delivery are at risk for serious maternal and perinatal

complications and should be counseled about the risk and significance of these complications. . Importantly, individual patient factors that affect the risks and benefits for each delivery route should be discussed. This is especially important for women who are potentially at higher risk of uterine rupture and its attendant sequelae. The decision should also be based on the estimated success rate and consideration of factors known to affect TOLAC success rates. Between 1990 and 2009, the success rate for women in the United States who attempted TOLAC ranged from 39 to 70 percent. The success rate varies among institutions and providers and is affected by various antepartum, intrapartum, and nonmedical factors ***(Guise et al., 2010 & Uddin and Simon, 2013).***

Similarly, a woman's decision regarding route of delivery is influenced by a variety of factors in addition to obstetrical/perinatal risks, success rate, and availability. Women report that their healthcare providers' recommendations and preferences exert a strong influence on their decision whether or not to pursue TOLAC ***(Bernstein et al., 2012).***

Other factors underlying women's preference for TOLAC include prior successful vaginal delivery, future pregnancy plans, family obligations making a speedy return to normal activities postpartum desirable, the desire to experience a natural birth, and desire for their partners' involvement in labor and birth. Factors identified as advantages of scheduled ERCD include scheduling convenience, ease of sterilization at the time of delivery, fear of failed trial of labor and

emergency cesarean delivery, and avoidance of labor pain ***(Shihady et al., 2007; Guise et al. 2010).***

Failed TOLAC is associated with higher morbidity than successful TOLAC or ERCD. The highest rate of maternal and neonatal morbidity occurs with uterine rupture, which can be fatal.

Unlike most medical decisions where a patient is comparing risks and benefits, the pregnant patient must compare risks and benefits for both herself and her fetus and the risks and benefits for the two individuals sometimes do not align a decision that increases maternal risk may be associated with fetal benefit. It should also be noted that most pregnant women are willing to tolerate a high degree of risk to themselves in exchange for zero or near zero risk for their child ***(Sharma et al., 2011).***

A number of predictive models, screening tools, and nomograms have been developed to identify women with a prior cesarean delivery who have a high or low likelihood of successful TOLAC, but none have been proven to be clinically useful. Current screening tools use a combination of obstetric factors, such as maternal demographics (age, race, ethnicity, body mass index [BMI]); the indication(s) for the prior cesarean delivery; the type and number of prior hysterotomy incisions; previous vaginal deliveries, either before or after the cesarean delivery; cervical favorability (e.g., Bishop score at the time of admission) and intrapartum interventions. One review concluded that currently used scored screening tool models incorporating various combinations of the

above predictive factors reasonably predicted successful TOLAC, but were unable to consistently identify women at risk for failed TOLAC ***(Sharma et al., 2011).***

Aim of the work

To assess or evaluate the factors which lead to the success of vaginal birth after cesarean section.

Research Question

In women with previous one cesarean section presented in labor, what are the factors which increase the success rate of vaginal birth after cesarean section?

Research Hypothesis

Women with previous one cesarean section presented in labor, vaginal birth after cesarean section may be successful.

Patients and Methods

Study Site & population:

This study will be conducted at Ain Shams University Maternity hospital for the patients who had been delivered after previous one cesarean section presented in labor during the period of the last year (2014).

Women fulfilling the following inclusion and exclusion criteria will be recruited for the study:

Inclusion criteria

- Age: 18-39 years old
- Previous one cesarean section
- Gestational age: 37 completed weeks or more.

Exclusion criteria

- Previous uterine scars other than cesarean section.
- More than one previous cesarean section.
- Fetal factors (e.g. macrosomia, intra uterine growth restriction, multiple pregnancies, fetal demise, malpresentation)
- Maternal medical factors (e.g. hypertension, diabetes mellitus, and cardiac diseases).
- Previous uterine rupture.
- Placenta previa.

Study design:

- Type of the study: Retrospective observational.

Study Methodology:

After identifying patients fulfilling the criteria of the study, All patients will be subjected to the following:

- Personal history:

- Age, duration of marriage.
- Gestational age (by last menstrual period, ultrasound or expected date of delivery).
- BMI

- Obstetric history:

- Parity.
- History of prior vaginal delivery either before the cesarean section or after it.
- Indication of previous cesarean section.
- Time elapsed from the cesarean section till this delivery.
- Sitting of previous cesarean section.
- Type of previous cesarean section(elective or emergency)
- Intrapartum or postpartum complication.
- Fetal birth weight.

- Abdominal Examination :

- Fundal level.
- Fetal position
- Fetal size.
- Abdominal scares.
- FHS.
- Tender scar.

- Vaginal Examination:

- Cervical dilatation ,effacement, position, texture
- Presenting part.
- Station of Presenting part.
- Intact or rupture of membranes.

-Intrapartum management :

- Progress of labour.
- FHR monitoring.
- Admission-delivery time.
- Intrapartum complications (rupture uterus ,blood transfusion or IUFD)

-Mode of delivery:

- Vaginal delivery (spontaneous, forceps, ventose)
- Cesarean section, indication.

-Postpartum Data:

- Postpartum complications.
- Blood transfusion.
- Fetal outcome, fetal weight, Apgar score.

All cases of patients fulfilling the criteria of the study in the past year (2014) will be searched up from the archives of the hospital and data will be collected.

All collected data were tabulated and subjected to the proper statistical analysis.

Outcome measures:

Primary outcome

- Success or failure of vaginal birth after caesarean section

Secondary outcome

- Fetal outcome: Apgare score, weight
- Maternal complication: rupture uterus, blood transfusion

Statistical analysis:

The collected data will be coded, tabulated, and statistically analyzed using SPSS program (Statistical Package for Social Sciences) software version 17.0.

Descriptive statistics will be done for numerical parametric data as mean±SD (standard deviation) and minimum & maximum of the range and for numerical non parametric data as median and 1^{st}& 3^{rd} inter-quartile range, while they are done for categorical data as number and percentage.

Inferential analyses will be done for quantitative variables using independent t-test in cases of two independent groups with parametric data and Mann Whitney U in cases of two independent groups with non-parametric data.

Inferential analyses are going to be done for qualitative data using Chi square test for independent groups. The level of significance will be taken at P value <0.050 is significant, otherwise is non-significant. The p-value is a statistical measure for the probability that the results observed in a study could have occurred by chance.

Protocol Approval

Before the beginning of the study and in accordance with the local regulation followed, the protocol and all corresponding documents will be declared for Ethical and Research approved by the council of OB/GYN Departments, Ain Shams University.

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العوامل المؤثره على الولاده الطبيعيه عقب الولاده القيصريه الاولى, دراسه رصدية استعاديه.

رساله

توطئة للحصول على درجه الماجستير
فى أمراض النساء والتوليد

مقدمه من

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المقدمة

هناك زياده فى عمليات الولاده القيصريه على مدار العشرون عاما الماضين واسبابها ليست موحده ولكنها مرتبطه بالتنوع المختلف بين وداخل البلاد.

ونتيجة للخوف من المضاعفات الكارثية الناتجة عن الولادة الطبيعية عقب الولادة القيصرية فقد يكون هناك سببا محفزا لتجنب التشجيع عليها للحالات المعنية بها التشخيص. وعلي الرغم من هذه الاعتبارات فمن الضروري تذكر أن نجاح اختبار الولادة الطبيعيه عقب الولادة القيصرية قد يكون لديه فوائد علي كلا من المدي القصير والبعيد ،وفي نموذج ماركوف عندما كان احتمال النجاح بنسبة ٤٧%، فقد كان اختبار الولادة بعد اجراء عملية الولادة القيصرية أكثر فاعلية واقل تكلفة من عملية التكرار الاختياري للولادة القيصرية. فالفاعلية من حيث التكلفة قد تزداد في حالات من النساء اللائي يقمن بالفحوص المهبلية المتتالية.

يتم التخطيط لمسار الولادة القيصرية للنساء اللائي قد أجرين عملية ولادة قيصرية حيث يجب اجراء متابعة لهن في وقت مبكر بفترة الرعاية الأبوية. حيث يمكن البدء بها علي نحو نظري. أما قرار الولادة الطبيعية عقب الولادة القيصرية الأولي أو التكرار الاختياري للولادة القيصرية يجب عمله من خلال التشاور مع الشخص مقدم الرعاية الصحية.ومن خلال وجهة نظر كليهما ،بالنسبة للنساء اللائي سبق لهن أجراء ولادة قيصرية سيكن عرضة للخطر للعديد من المشكلات عند الولادة وعقب الولادة مباشرة ولذلك يجب ابلاغهن بتلك المخاطر ومدي اهمية تلك المضاعفات. ومن الهام جدا مناقشة الموروثات الجنية للمريض والتي تؤثر علي مدي المخاطرة والتي لها فائدة لمسار عملية الولادة القيصرية. وعلي نحو الخصوص للنساء اللائي يحتمل أن يكن ذوي مخاطرة عالية أثر تمزق الرحم أو يعانين من العدوي المصاحبة.فالقرار يجب أن يقدر علي اساس معدل النجاح واعتبار العوامل المعلومة للتأثير في معدلات نجاح اختبار الولادة بعد اجراء عملية الولادة القيصرية. ففي الفترة بين ١٩٩٠ و٢٠٠٠م كان معدل النجاح للنساء بالولايات المتحدة الأمريكية اللائي قمن باختبار الولادة بعد اجراء