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RESEARCH

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PREVALENCE OF VAGINAL DELIVERY AFTER CESAREAN IN A HIGH-RISK MATERNITY

Prevalência de parto vaginal após cesárea em uma maternidade de alto risco

Prevalencia de entrega vaginal después de cesárea en una maternidad de alto riesgo

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ABSTRACT

Objective: to estimate the prevalence of vaginal delivery after cesarean section in a high-risk maternity and to identify maternal and neonatal complications. **Method:** this is a cross-sectional, quantitative and retrospective study, carried out with 44 women who had a normal delivery with previous cesarean section, through the analysis of medical records, descriptive analysis was carried out with absolute and simple frequencies. **Results:** the prevalence of vaginal delivery after cesarean section was 13%. Complication occurred in 13.6% of women, but there was no uterine rupture and in 4.5% of neonates. **Conclusions:** the favorable outcomes prove the safety of this procedure for the mother and the newborn and serve as a stimulus for professionals to encourage pregnant women with a previous cesarean to consider the vaginal route as a safe possibility for the next delivery. **Descriptors:** Obstetric nursing; Natural childbirth; Humanizing delivery; Pregnancy high risk; Vaginal birth after cesarean.

RESUMO

Objetivo: estimar a prevalência de parto vaginal após cesárea em uma maternidade de alto risco e identificar as complicações maternas e neonatais. **Método:** trata-se de um estudo transversal, quantitativo e retrospectivo, realizado com 44 mulheres que tiveram parto normal com cesárea prévia, por meio da análise dos prontuários realizou-se a análise descritiva com frequências absolutas e simples. **Resultados:** a prevalência de parto vaginal após cesárea foi de 13%. Ocorreu complicação em 13,6% das mulheres, porém não houve rotura uterina e em 4,5% dos neonatos. **Conclusões:** os desfechos favoráveis comprovam a segurança deste procedimento para a mãe e para neonato e servem de estímulo para que os profissionais incentivem as gestantes com cesárea anterior a considerarem a via vaginal como uma possibilidade segura para o próximo parto.

DESCRITORES: Enfermagem obstétrica; Parto normal; Parto humanizado; Gravidez de alto risco; Nascimento vaginal após cesárea.

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RESUMEN

Objetivo: estimar la prevalencia del parto vaginal después de una cesárea en una maternidad de alto riesgo e identificar complicaciones maternas y neonatales. **Método:** se trata de un estudio transversal, cuantitativo y retrospectivo, realizado con 44 mujeres que tuvieron un parto normal con cesárea previa, a través del análisis de registros médicos, se realizó un análisis descriptivo con frecuencias absolutas y simples. **Resultados:** la prevalencia del parto vaginal después de una cesárea fue del 13%. La complicación ocurrió en el 13.6% de las mujeres, pero no hubo ruptura uterina y en el 4.5% de los recién nacidos. **Conclusiones:** los resultados favorables demuestran la seguridad de este procedimiento para la madre y el recién nacido y sirven de estímulo para que los profesionales alienten a las mujeres embarazadas con una cesárea previa a considerar la vía vaginal como una posibilidad segura para el próximo parto.

Descriptores: Enfermagem obstétrica; Parto normal; Parto humanizado; Embarazo de alto riesgo; Parto vaginal después de cesárea.

INTRODUCTION

In Brazil, cesarean sections are still perceived by health professionals and the population as the safest way of birth due to improved surgical techniques, the supposed safety offered by anesthesia, and also due to fear of childbirth, since it is seen by women as an unbearably painful and risky process for the baby.[1]

In 1985, the World Health Organization (WHO) advocated that cesarean rates should be less than 15%, and it is recommended only for pregnant women with obstetric complications.[2] Statistics from 150 countries showed a global cesarean rate of 18.6% of births between 1990 and 2014. Brazil has the second highest cesarean rate in the world at 55.6%, surpassed only by the Dominican Republic, with 56%.[3]

The Ministry of Health, through Ordinance No. 020 of 2013, defined that the maternity hospitals of reference to high-risk pregnancy, must prove cesarean surgery rate less than or equal to 30% or present a plan to reduce cesarean surgery rates by 10% per year until it reaches the rate established by the WHO.[4]

The high rate of unnecessary elective cesarean sections in the country is a result of factors such as convenience, adequate scheduling between obstetricians and pregnant women, the relative practicality of the surgical procedure, as well as women's hesitation and fear of the pain of a vaginal delivery.[5] However, it is often observed that when a woman expresses the desire to have a vaginal delivery after a previous cesarean section, the team responsible for childbirth care establishes justifications to make the cesarean section acceptable to the woman. Thus, the cesarean culture contributes to the high rates of this delivery route in the country.[1]

However, vaginal delivery after a prior cesarean section, also known as VBAC (Vaginal Birth After Cesarean), can be a safe and acceptable option for women.[6]

Evidence shows that VBAC can be considered safe, indicating success rates of approximately 70% and complication rates of less than 1%.[7] Thus, VBAC becomes a sound and reliable alternative for achieving control of cesarean rates.

Women who experience this type of delivery are classified in group 5 according to Robson.[8] In 2001, Robson proposed a classification system that groups pregnant women according to their obstetric characteristics, in order to identify the weight of each group in the population. Through this classification, it is possible to evaluate, monitor and compare the rates of normal and cesarean deliveries over time in one health care facility and also in different facilities. The system developed by Robson uses four criteria into which all pregnant women fit: obstetric history, type of pregnancy, mode of delivery, and gestational age at the time of delivery. After collecting the data from the pregnant woman, she is classified into one of 10 subgroups. Women with prior cesarean sections are classified in group 5, a very important set when analyzing overall cesarean rates, as they directly influence the cesarean rates of a given service.[8]

WHO has the expectation that Robson classification can collaborate with hospitals in trying to reduce the number of cesarean sections by identifying, analyzing and targeting interventions to specific groups that are relevant in each location, and evaluating the effectiveness of strategies designed to improve the quality of care, clinical care practices and outcomes by groups, as well as drawing the attention of health services managers to the importance of these data and their use.[8]

Given these considerations, this study aimed to estimate the prevalence of VBAC in a high-risk maternity hospital and to identify maternal and neonatal complications.

METHOD

Quantitative, cross-sectional, retrospective study conducted in a public high-risk maternity hospital in northern Paraná.

Data collection occurred between November and December 2017, through an instrument filled out from the analysis of the records in the hospital records of the selected women.

In 2015, 1047 deliveries were performed in the maternity hospital studied, 338 of which were vaginal. Thus, 338 records of women who had had normal deliveries were analyzed, and 44 women with prior cesarean sections were identified, characterizing the study sample. There were no losses or exclusions.

The study variables were: sociodemographic characteristics: age (≤ 34 years, ≥ 35 years), race (white, black, brown), paid work (yes, no), marital status (single, married, divorced); obstetric characteristics: number of pregnancies (second, three or more), number of prenatal visits (≤5, ≥6), gestational age in weeks at the time of delivery (≤36, ≥37); delivery characteristics: oxytocin use (yes, no), condition of the perineum after delivery (intact, episiotomy, episiotomy + laceration, laceration); newborn characteristics: weight in grams (≤2499, ≥2500), Apgar score at 1st (≤7, ≥8) and 5th minutes (≤7, ≥8); Complications at delivery: maternal (yes, no); neonatal (yes, no).

The collected data were tabulated and reviewed in Microsoft Office Excel® 2010 and descriptive analysis was performed by calculating absolute and relative frequencies. The project was approved by the Ethics Committee on Research Involving Human Beings of the Universidade Estadual de Londrina (UEL), under the CAAE 59411516.7.0000.5231.

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RESULTADOS

Of the 338 normal deliveries that occurred in 2015, the prevalence of VBAC was 13.0%, corresponding to 44 women.

Brief characterization of the population showed that the age of women ranged between 21 and 42 years, 32 (72.7%) were less than or equal to 34 years, most were white (70.4%), married (65.9%), without paid work (63.5%). Regarding obstetric characteristics, most were multiparous (52.3%), with six or more prenatal visits (90.9%) and full-term pregnancy (70.5%) (Table 1).

Table 1 - Sociodemographic and obstetric characteristics of women with vaginal delivery after cesarean section in a high-risk maternity hospital in the year 2015. Londrina, PR, Brazil, 2019

Features	n	%
Sociodemographic		
Age		
≤ 34 years old	32	72,7
≥ 35 years old	12	27,3
Race		
White	31	70,4
Black	8	18,1
Brown	5	11,5
Marital Status		
Single	14	31,8
Married	29	65,9
Divorced	1	2,3
Paid work		
Yes	16	36,5
No	28	63,5
Obstetric		
Number of gestation		
Two	21	47,7
Three or more	23	52,3
Number of prenatal visits		
≤ 5 appointments	4	9,1
≥ 6 appointments	40	90,9
Gestational age in weeks at the time of delivery		
≤36 weeks	13	29,5
≥37 weeks	31	70,5

Oxytocin was used in 26 deliveries (59.1%). Perineal integrity was present in 21 women (47.7%); however, episiotomy was performed in 11 women (25%).

Most newborns weighed 2500g or more (79.5%) and had good vitality at birth (Table 2).

Table 2 - Characteristics of deliveries and newborns of women with normal delivery after cesarean section in a high-risk maternity hospital in the year 2015. Londrina, PR, Brazil, 2019

Features	n	%
From birth		
Use of oxytocin		
Yes	26	59,1
No	18	40,9
Perineum conditions after delivery		
Intense	21	47,7
Episiotomy	8	18,2
Episiotomy + laceration	3	6,8
Laceration	12	27,3
From the newborn		
Weight		
≤2499g	9	20,5
≥2500g	35	79,5
Apgar 1st minute		
≤ 7	3	6,8
≥ 8	41	93,2
Apgar 5th minute		
≤ 7	1	2,3
≥ 8	43	97,7

Puerperal complications were identified in six women (13.6%), four cases of bleeding (three puerperal and one atony), one case of inflammation at the site of the episiotomy, and one woman presented puerperal psychosis.

Regarding neonatal complications, two cases (4.5%) were observed, and the neonates required respiratory support and had to be admitted to the Neonatal Intensive Care Unit (Table 3).

Table 3 - Maternal and neonatal complications in normal delivery after cesarean section in a high-risk maternity hospital in the year 2015. Londrina, PR, Brazil, 2019

Complications	n	%
Maternal		
Yes	6	13,6
No	38	86,4
Neonatal		
Yes	4	9,1
No	40	90,9

DISCUSSION

The prevalence of 13.0% of VBAC found in this study was higher than that of a study conducted in Anápolis-GO which found a rate of 6.01%.[9] International studies show countries such as Finland, Norway and the Netherlands with high rates around 38-55%, and Australia and the United States with 12%.[10-12]

It is noteworthy that VBAC is a safe delivery practice as long as some criteria are met, such as: the mother should not have previously undergone a cesarean section with longitudinal incision, there is a minimum interval of 18 months between the last cesarean section and the current delivery, there is no history of uterine iteractivity, the hospital has a surgical team on call for a possible emergency procedure.[7]

The literature points out that the chance of successful VBAC is higher in women younger than 35 years, lower BMI, white, higher education, with a history of previous vaginal delivery and previous VBAC.[13-15]

A qualitative European study found that maternity hospitals with high rates of VBAC had attitudes that encouraged VBAC, and these attitudes encouraged women to make this choice; in contrast, in low-rate maternity hospitals, doctors held attitudes against VBAC, which negatively influenced women to decide for this type of delivery.[16]

Thus, care that encourages VBAC should be practiced, as this type of care can positively influence the increase of VBAC rates without increasing maternal and neonatal morbidity.[17,18]

Studies have shown that women had a positive experience after VBAC, with an impact on physical and emotional well-being, being a therapeutic experience and less shocking when compared to cesarean section.[18,19]

Oxytocin was used in 59.1% of the deliveries in the study, corroborating another study that found a rate of 52.2%.20 Considering pregnancy as a physiological process, these rates are considered high.

A cohort study of 331 pregnant women pointed out that it is possible to induce labor after a cesarean section, emphasizing that this practice led to an increase in labor duration, however, not changing maternal and neonatal complication rates.[15]

Although most women presented perineal integrity (47.7%), perineal trauma stands out as a common problem that compromises women's basic activities in the puerperium. They are defined as any injury that occurs in a woman's genitalia, whether spontaneous, in the form of laceration, or due to a surgical incision called episiotomy. There is a conception that episiotomy would be necessary to protect the pelvic floor from possible lacerations during the expulsive period, so that there is no compromise of the genital tract integrity,[21] however, a study in Spain found an increased risk of anal sphincter lesion in patients with low-risk deliveries and instrumental deliveries when episiotomy was performed.[22]

However routine episiotomy has progressively been shown to be an unnecessary procedure and very harmful to the woman, because in addition to lack of evidence of its effectiveness, episiotomy can trigger in the woman feelings of pain, discomfort, shame of her partner (by the scar in the genital region), fear of resuming sexual activity.[23]

The liberal or routine use of episiotomy is a practice frequently used inappropriately, therefore the WHO recommendation is to restrict the use of episiotomy, not exceeding a rate of 10%.[2] Nevertheless, in this study a rate of 25% was observed, considered high when compared to other studies. A study in Belo Horizonte found an episiotomy rate of 8.4%,[24] and another in Rio de Janeiro found a rate of 20.6%.[25]

It is estimated that about 70% of women who give birth vaginally will suffer some degree of perineal trauma and almost all will require sutures to help the injured tissue to heal.[21] It is noteworthy that the high rates of laceration found in this study are probably related to the lithotomy position adopted by all women during the expulsive phase of labor, thus persistence in the use of practices not recommended by scientific evidence may lead to an increase in unnecessary interventions, with an impact on maternal and fetal health.[26]

The maternal complications (13.6%) found in this study, such as hemorrhage, episiotomy inflammation and puerperal psychosis were not related to VBAC. Another study on VBAC also found a 15.1% complication rate of postpartum hemorrhage.[15]

It is noteworthy that in VBAC the feared complication is uterine rupture. A study shows that there is an increased risk of uterine rupture in patients with previous cesarean section when labor is induced pharmacologically.[27] The risk of uterine rupture is actually associated with the use of prostaglandins and oxytocin together, and not the latter in particular, with 19.4% of cases of uterine rupture occurring after the administration of these two drugs together.[28] In the service where the study was carried out, the protocol is not to use prostaglandins in women with previous cesarean sections. This study found no association between the use of oxytocin in labor induction and uterine rupture. Another study also showed a low incidence of uterine rupture in this type of delivery.[9]

Regarding neonatal complications, a low prevalence (9.1%) of newborns with complications was observed, which may presume an association with prematurity, since the six cases of fetal complications were premature.

CONCLUSION

The prevalence of high-risk pregnant women who delivered vaginally with a previous cesarean section is still low. Possibly this low prevalence is still associated with historically constructed factors about cesarean sections, such as the quality of training of labor professionals, the non-evidence-based practice, the physician's role, payment for procedures, the population's perception of cesarean sections as the safest way of birth, practicality, convenience and other cultural reasons.

The results show that VBAC was not associated with the occurrence of maternal complications or unfavorable perinatal outcomes. The safety of VBAC was evidenced, as it found no situations in which uterine rupture occurred during labor and most women did not experience any complications.

Although the neonates had good fetal vitality and the incidence of neonatal complications was low, it is very important that high-risk pregnant women have their deliveries in high complexity reference maternity hospitals, so that they have at their disposal technological and specialized assistance, aiming at the safety of the mother-child binomial.

As a limitation of this study, it is noteworthy that the method used only allowed the analysis of the information recorded in the medical records regarding the VBAC, which made it impossible to verify the perceptions of professionals and women. It is considered the possibility of developing another study with another approach to know these perceptions. And as for external validity, the data represent the practice of local childbirth care and probably cannot be generalized to other contexts.

It is also expected to contribute to the reflection on the need to develop a plan to reduce cesarean rates, considering the cesarean classification groups according to Robson. It is noteworthy that vaginal delivery after cesarean section, is called group 5 of this classification, and this is one of the groups responsible for the high rates of cesarean sections in institutions. However, we demonstrate that VBAC is an effective strategy in reducing these rates.

The positive data signal the safe practice for this type of delivery. Thus, we hope to encourage health professionals to use this mode of birth care more frequently, and that they encourage pregnant women with previous cesarean sections to consider the vaginal route as a prudent possibility.

REFERENCES

1. Guimarães, A. Parto sem Medo.1ºed. São Paulo: Mulheres que decidem. 2016.
2. Organização Mundial de Saúde (OMS). Assistência ao parto normal: um guia prático [Internet]. Saúde materna e neonatal. Unidade de maternidade segura. Saúde reprodutiva e da família. Genebra: OMS, 1996.
3. Betrán AP, Ye J, Moller A-B, Zhang J, Gülmezoglu AM, Torloni MR. The Increasing Trend in Caesarean Section Rates: Global, Regional and National Estimates: 1990-2014. PLoS One [Internet] 2016 [cited 2019 Ago 05]; 11(2). Available from: https://doi.org/10.1371/journal.pone.0148343
4. Ministério da Saúde (BR). Portaria n° 1.020, de 29 de maio de 2013. Institui as diretrizes para a organização da Atenção à Saúde na Gestação de Alto Risco e define os critérios para a implantação e habilitação dos serviços de referência à Atenção à Saúde na Gestação de Alto Risco, incluída a Casa de Gestante, Bebê e Puérpera (CGBP), em conformidade com a Rede Cegonha. Diário Oficial [da] República Federativa do Brasil, 2013; seção 1, p. 72. Brasil. [acesso 05 ago 2019]. Disponível: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt1020_29_05_2013.html
5. Mascarello KC, Hortal BL, Silveira MF. Maternal complications and cesarean section without indication: systematic review and meta-analysis. Rev. saúde pública [Internet]. 2017 [cited 2019 mar 04]; 51(105). Available from: https://doi.org/10.11606/S1518-8787.2017051000389
6. ACOG. Practice Bulletin No. 184 Vaginal Birth After Cesarean Delivery. Obstet. Gynecol. 2017. Available from: file:///C:/Users/Usu%C3%A1rio/Downloads/Practice_Bulletin_No__184__Vaginal_Birth_After.48.pdf
7. Rezai S, Labine M, Gottimukkala S, Karp S, Sainvil L, Isidore G et al. Trial of Labor after Cesarean for Vaginal Birth after Previous Cesarean Section Versus Repeat Cesarean Section; A Review. Obstet Gynecol Int J [Internet]. 2016 [cited 2019 Feb 25]; 4(6). Available from: http://dx.doi.org/10.15406/ogij.2016.04.00135
8. Organização Mundial da Saúde (OMS). Declaração da OMS sobre Taxas de Cesáreas. Genebra: OMS; 2015.
9. Moraes AVS, Vieira GJ, Vieira RS, Marques RM, Carvalho THT. Via de parto em secundigestas com gestação única e a termo, após uma cesárea prévia. Rev. Educ. Saúde [Internet]. 2016 [acesso em 29 maio 2019]; 4(2). Disponível: http://periodicos.unievangelica.edu.br/index.php/educacaoemsaude/article/view/2012.
10. Markus L, Sanderson B. Australia's mothers and babies 2017—in brief. Canberra: Aust Inst Health Welf. Canberra: AIHW. 2019.
11. Martin JA, Hamilton BE, Osterman MJK, Driscoll AK, Drake P. Births: Final Data for 2016. Natl Vital Stat Rep. [Internet]. 2018 [cited 2020 jul 14]; 67(1). Available from: https://pubmed.ncbi.nlm.nih.gov/29775434/
12. Project EP. Core indicators of the health and care of pregnant women and babies in Europe in 2015. European Perinatal Health report. [Internet]. 2018 [cited 2020 jul 14]. Available from: https://www.europeristat.com/images/EPHR2015_Euro-Peristat.pdf
13. Korb D, Goffinet F, Seco A, Chevret S, Deneux-Tharaux C, Group ES. Risk of severe maternal morbidity associated with cesarean delivery and the role of maternal age: a population-based propensity score analysis. CMAJ. [Internet]. 2019 [cited 2020 jul 14]; 191(13). Available from: https://pubmed.ncbi.nlm.nih.gov/30936165/
14. Mooney SS, Hiscock R, Clarke IDA, Craig S. Estimating success of vaginal birth after caesarean section in a regional Australian population: validation of a prediction model. Aust N Z J Obstet Gynaecol. [Internet]. 2019 [cited 2020 jul 14];59(1). Available from: https://pubmed.ncbi.nlm.nih.gov/29672825/
15. Wu Y, Kataria Y, Wang Z, Ming W-K, Ellervik C. Factors associated with successful vaginal birth after a cesarean section: a systematic review and meta-analysis. BMC pregnancy childbirth. [Internet]. 2019 [cited 2020 jul 14];19(1). Available from: https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-019-2517-y
16. Lundgren I, Morano S, Nilsson C, Sinclair M, Begley C. Cultural perspectives on vaginal birth after previous caesarean section in countries with high and low rates - A hermeneutic study. Women and birth [Internet]. 2020 [cited 2020 jul 10]; 33(4). Available from: doi:10.1016/j.wombi.2019.07.300
17. Zhang T, Liu C. Comparison between continuing midwifery care and standard maternity care in vaginal birth after cesarean. Pak J Med Sci. [Internet]. 2016 [cited 2020 jul 10]; 32(3). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4928428/
18. Keedle S. V, Burns E, Dahlen H. The journey from pain to power: a meta-ethnography on women's experiences of vaginal birth after caesarean. Women and birth [Internet]. 2018 [cited 2020 jul 10];31(1). Available from: https://pubmed.ncbi.nlm.nih.gov/28655602/
19. Lyckestam Thelin I, Lundgren I, Nilsson C. To challenge oneself as a childbearing woman-the lived experience of vaginal birth after caesarean section in Sweden. Int J Qual Stud Health Well-being. [Internet]. 2019 [cited 2020 ju 10];14(1). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6507961/
20. Monguilhott JJC, Bruggemann OM, Freitas PF, D'orsi E. Nascer no Brasil: the presence of a companion favors the use of best practices in delivery care in the South region of Brazil. Rev. saúde pública [Internet]. 2018 [cited 2019 nov 7];52. Available from: http://www.scielo.br/pdf/rsp/v52/0034-8910-rsp-S1518-87872018052006258.pdf
21. Santos RCS, Riesco MlG. Implementação de práticas assistenciais para prevenção e reparo do trauma perineal no parto. Rev Gaúcha Enferm. [Internet]. 2016 [acesso 07 nov 2019]; 37(esp). https://dx.doi.org/10.1590/1983-1447.2016.esp.68304
22. Pato-Mosquera M, García-Lavandeira S, Liñayo-Chouza J. El desgarro intraparto del esfínter anal¿ Puede prevenirse? Ginecol. Obstet. Méx. 2017;85(1).

23. Dengo VAR, Silva RS, Souza SRRK, Aldrighi JD, Wall ML, Cancela FZV. A episiotomia na percepção de mulheres. Cogitare enferm. [Internet] 2016 [acesso 05 nov 2019]; 21(3). Disponível em: http://dx.doi.org/10.5380/ce.v21i3.44060

24. Sousa AMM, Souza KV, Rezende EM, Martins EF, Campos D, Lansky S. Practices in childbirth care in maternity with inclusion of obstetric nurses in Belo Horizonte, Minas Gerais. Esc. Anna Nery Rev. Enferm. [Internet]. 2016 [cited 2018 Aug 20];20(2). Available from: http://www.scielo.br/pdf/ean/v20n2/en_1414-8145-ean-20-02-0324.pdf

25. Sales JL, Quitete JB, Knupp VMAO, Martins MAR. Assistência ao parto em um hospital da baixada litorânea do Rio de Janeiro: desafios para um parto respeitoso. Rev pesq: cuid fundam (Online). 2020 [acesso 2018 may 19];12. Disponível em: http://dx.doi.org/10.9789/2175-5361.rpcfo.v12.7092

26. Souza MRT, Farias LMVC, Ribeiro GL, Coelho TS, Costa CC, Damasceno AKC. Factors related to perineal outcome after vaginal delivery in primiparas: a cross-sectional study. Rev esc enferm USP. [Internet]. 2020 [cited 2018 may 19];54. Available from: http://dx.doi.org/10.1590/S1980-220X2018043503549

27. Grobman WA, Gilbert S, Landon MB, Spong CY, Leveno KJ, Rouse DJ, et al. Outcomes of induction of labor after one prior cesarean. Obstet Gynecol [Internet]. 2007 [cited 2018 may 29]; 109(2). Available from: https://pubmed.ncbi.nlm.nih.gov/17267822/

28. Macones GA, Peipert J, Nelson DB, Odibo A, Stevens EJ, Stamilio DM, et al. Maternal complications with vaginal birth after cesarean delivery: a multicenter study. Am. j. obstet. Gynecol. [Internet]. 2005 [cited 2018 may 29]; 195(5). Available from: https://doi.org/10.1016/j.ajog.2005.04.002.

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