International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622

www.gynaecologyjournal.com
2021; 5(3): 156-159
Received: 12-03-2021
Accepted: 15-04-2021

Aloy Okechukwu UGWU
Senior Registrar, Department of Obstetrics and Gynecology, Lagos University Teaching Hospital, Lagos, Nigeria

Ayotunde Ayodeji Oluwole
Associate Professor, Department of Obstetrics and Gynecology, College of Medicine, University of Lagos, Lagos Nigeria & consultant obstetrician and gynaecologist, Department of Obstetrics and Gynecology, Lagos University Teaching Hospital, Lagos Nigeria

Salimat Abisoye YUSUF-AWESU
Senior Registrar, Department of Obstetrics and Gynecology, Lagos University Teaching Hospital, Lagos, Nigeria

Rasheed A Olatunji
Registrar, Department of Obstetrics and Gynecology, Lagos University Teaching Hospital, Lagos, Nigeria

Eunice Tomilola Odeniran
House officer, Department of Obstetrics and Gynecology, Lagos University Teaching Hospital, Lagos, Nigeria

Corresponding Author:
Aloy Okechukwu UGWU
Senior Registrar, Department of Obstetrics and Gynecology, Lagos University Teaching Hospital, Lagos, Nigeria

Pregnancy outcome in women with one previous caesarean delivery in Lagos University Teaching Hospital: A five-year review

Aloy Okechukwu UGWU, Ayotunde Ayodeji Oluwole, Salimat Abisoye YUSUF-AWESU, Rasheed A Olatunji and Eunice Tomilola Odeniran

DOI: https://doi.org/10.33545/gynae.2021.v5.i3c.918

Abstract
Background: Women in developing countries have aversion for caesarean delivery. Those with one previous caesarean section sometimes have the option of proceeding with a trial of labour or planned repeat caesarean section (CS) in a subsequent pregnancy. While each option has its own attendant risks and benefits, decision making on the route of delivery should be individualised considering indication for the previous CS, obstetrics risk factors, patient's choice, facilities and expertise available.
Aim: This study aims to determine the pregnancy outcome in women with one previous caesarean section in Lagos University Teaching Hospital.
Method: This was a retrospective study of pregnancy outcome in women with one previous caesarean section managed in Lagos University Teaching Hospital between January 2010 and December 2014. Information was obtained from the case notes, labour ward and theatre records. Those women with previous classical caesarean section or prior uterine surgery were excluded. The collected data were analysed using SPSS software version 23.
Result: There were 498 women fulfilling the eligibility criteria for this study out of 9,740 deliveries during the study period. The success rate of vaginal birth after caesarean section (VBAC) was 24.30%, elective caesarean section was 17.1% and emergency caesarean section was 58.63%. There were 11(10.8%) cases of scar dehiscence and 67(65.7%) cases of failure to progress in labour. No significant maternal and perinatal morbidity was observed in our study population. VBAC rate was significantly higher in women who had prior vaginal deliveries, especially in those with previous VBAC.
Conclusion: In carefully selected cases, trial of scar (TOS) after a prior caesarean is safe and often successful. A prior vaginal delivery, particularly, a prior VBAC is associated with a higher rate of successful VBAC.

Keywords: Caesarean delivery, subsequent pregnancy, Lagos University Teaching Hospital

Introduction
Caesarean delivery is defined as the birth of a fetus through incisions in the abdominal wall (laparotomy) and uterine wall (hysterotomy) after the age of viability [1]. it does not include removal of the fetus from abdominal cavity in the case of rupture of the uterus or in the case of an abdominal pregnancy [1, 2]. Decision on the best route of delivery following a previous CS has been a subject of debate for ages as many obstetricians believe that a scared uterus may increase the risk of adverse pregnancy outcome in labour such as uterine rupture, uterine dehiscence maternal and perinatal morbidity and mortality [2, 3]. When considering women with one previous CS, it's necessary to take cognisance of the woman's preferences, indication for previous Caesarean, past obstetric history and facilities available for the obstetrician [2, 3].
The merits of vaginal birth following a caesarean abound: it affords the parturient the opportunity of self-fulfilment following a successful outcome, secondly it reduces the risks and morbidity associated with abdominal delivery-both anaesthetic risk and risk of surgery itself-thromboembolism, surgical site infection, increase cost of health care, less hospital stay. It therefore becomes imperative to assess the possibility of a vaginal birth following a previous caesarean delivery in pregnant women who meet the criteria [3, 4]. This is even more important in low and middle income countries where greater premium is placed on large family size, and a sizeable percentage of the obstetrics population still have aversion for caesarean section [3, 5].
VBAC is currently been accepted in contemporary obstetric practice because of the significant improvement made so far on the type of uterine incision, choice of anaesthesia and development of more potent antibiotics, therefore, the phrase 'once a caesarean always a caesarean" no longer

applies [4, 5]. This study therefore aims to determine the pregnancy outcome in women with one previous section at Lagos University Teaching Hospital.

Materials and method

This was a retrospective study of pregnancy outcome in women with one previous caesarean section managed in LUTH between January 2010 and December 2014. Information was obtained from the case notes, labour ward and theatre records. Data was extracted from case files retrieved from medical records using a well-structured proforma. Data obtained was analysed with the SPSS statistical tool version 23. Categorical variables were presented as frequencies and percentages. Maternal outcome was measured in terms of type of delivery (Vaginal birth after Caesarean section, Elective repeat caesarean section, or Failed Vaginal birth after caesarean section.), occurrence of scar dehiscence (complete or partial), visceral injury, postpartum haemorrhage, uterine rupture, morbidly adherent placenta, hysterectomy, and maternal death.

Perinatal outcomes measures included Apgar levels, neonatal ICU admissions, and neonatal death.

Results

Table 1: Socio-demographic characteristics of the study participants. N=498

Age In Years	Number of patients (n)	Percentage (%)
Mean ± SD 36±2.03		
20-30 years	217	43.6%
31-40 years	252	50.6%
>40 years	29	5.8%
Marital Status		
Married	482	96.8%
Single	16	3.2%
Social Class		
1	14	2.8%
2	46	9.2%
3	151	30.3%
4	225	45.2%
5	62	12.4%

Table 2: Mode of Delivery of the Participants in the Index Pregnancy. N=498

Outcome	Number	Percentage (%)
Successful VBAC	**121**	24.30%
Spontaneous	119	23.90%
Induced	2	0.40%
Caesarean Section	377	75.73%
Emergency C/S	**292**	58.63%
Failed VBAC	156	31.32%
Other obstetrics indications (placenta praevia, Breech)	136	27.31%
Elective C/S	**85**	17.1%
Recurrent indication	2	0.40%
Non Recurrent	83	16.67%
Patient request	1	0.200%

Table 3: Previous vaginal delivery as a positive predictor of successful VBAC. N=45 successful VBAC

Previous Vaginal delivery	Yes	No	Total	P- value
Yes	35	10	45	0.004
No	65	101	166	
Total	100	111	211	

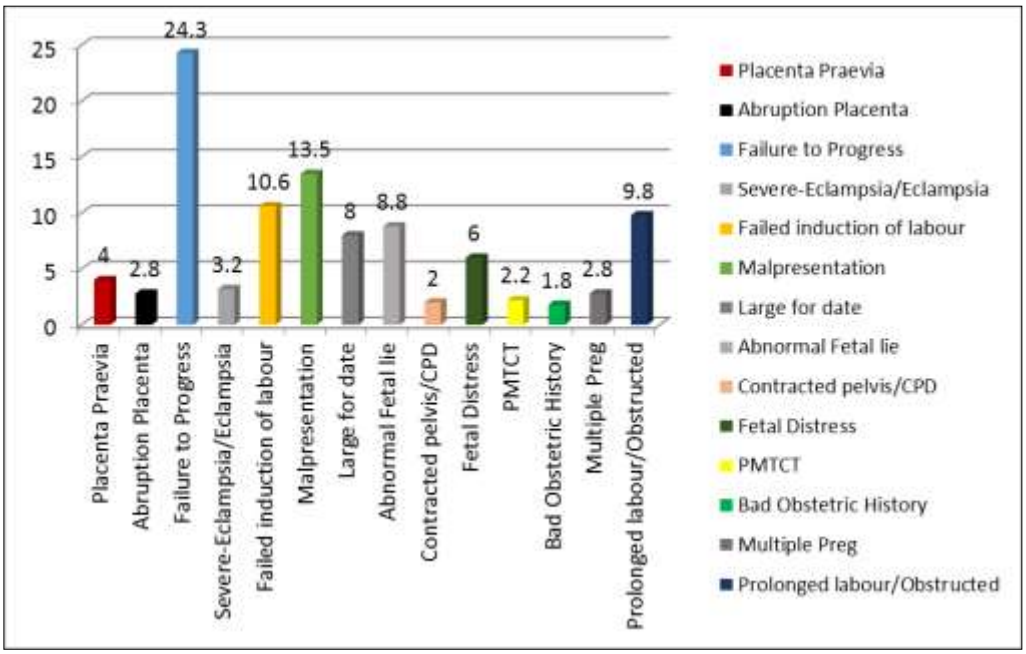

Fig 1: Indications of Previous Caesarean Section

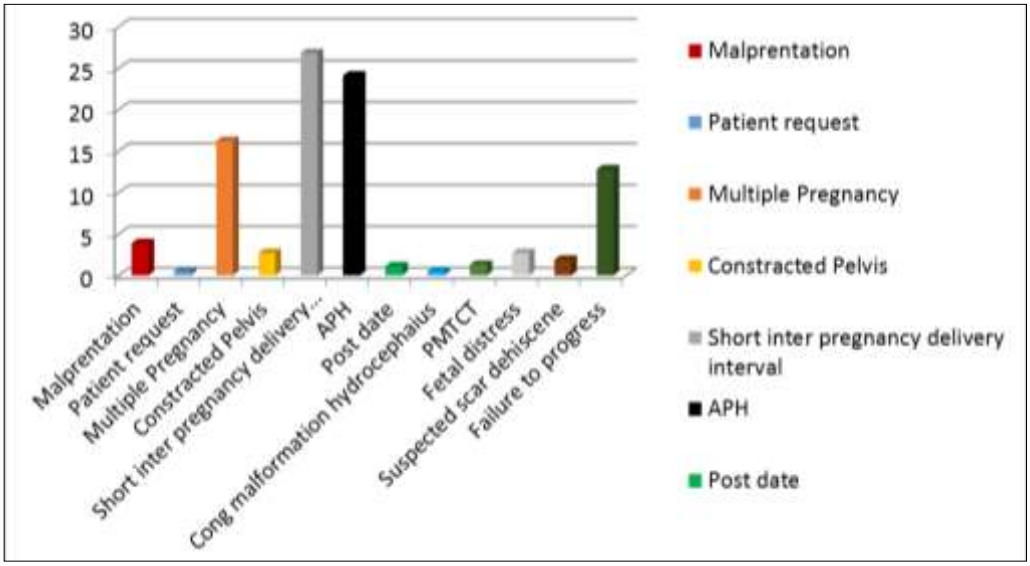

Fig 2: Indications for Repeat C/S. N=377

Table 4: Baby weight versus mode of delivery in index pregnancy

Baby weight in grams (g)	Caesarean section	%	Successful VBAC	%	Failed VBAC	%
<2500 g	41	12.7%	44	36.4%	7	6.9%
2500-3999 g	217	82.8%	77	63.6%	95	93.1%
>4000 g	17	4.5%	0	0	0	0

Total CS- elective C/S and failed VBAC= 377
Total successful VBAC= 121

Table 5: Causes of failed VBAC. N=102

Causes	Number	Percentage
Suspected scar dehiscence	11	10.8%
Failure to progress	67	65.7%
Fetal distress	24	23.5%

Discussion

Women with previous caesarean sections constitute a high risk group in obstetrics, because their pregnancy is associated with increased risk of maternal and fetal morbidity and mortality, during pregnancy, delivery and postpartum [2, 3, 4]. currently, women who will be allowed a VBAC must have fulfilled a certain criteria which included prior history of previous vaginal delivery with an average sized baby, women with inter-pregnancy interval of at least 15 months or inter-delivery interval of at least 24 months, non-recurrent indication in the previous delivery and no history of puerperal infection in the previous CS [2, 3, 6].

In our study, 121(24.3%) women had successful VBAC, of which 119(23.9%) were spontaneous, whereas 2(0.4%) had induction of labour. Eighty-five women (17.1%) had elective repeat CS. This finding was similar to that Iyoke *et al*. [6] done at a university Teaching hospital in the south eastern Nigeria. The similarity may be due to the homogeneity of the ethnic groups used in both studies.

Eleven patients (10.8%) had their labour terminated because of suspected scar dehiscence, 24 patients (23.5%) had fetal distress while 67 (65.7%) had failure to progress in labour. Cesarean section was significantly higher in women with no vaginal delivery prior to the previous caesarean section compared to those who had previous vaginal delivery. The common indications for repeat CS were ante partum haemorrhage (APH) 24.1%, short inter delivery interval 26.8% and twin gestation 26.2%. Previous vaginal delivery, spontaneous onset of labour, average size baby, previous lower segment CS and other nonrecurring indications (such as; breech, placenta praevia), are better predictors of successful VBAC in our study, this is similar to other report in literature [2, 3].

VBAC rate was higher in participants with prior spontaneous vaginal deliveries especially in those with previous VBAC. This finding correlates with the study by Lekshmi *et al*. [7] who also found that previous vaginal delivery including previous VBAC is the greatest predictor for successful VBAC in their study population.

We also found that success rate for VBAC was more for average sized babies 63.6%. This is also in agreement with study by Lekshmi *et al*. who also found that there is reduced chance of success for vaginal delivery when estimated fetal weight exceeds 4kg [7]. Although it has not been conclusively proven that increasing fetal size increases the risk of uterine rupture with VBAC, however, it has been reported that for women attempting VBAC who had no previous vaginal deliveries, the relative risk of rupture doubled if birthweight was >4000g [1, 6, 7, 8, 9, 10].

We reported no significant maternal and perinatal morbidity our study. This may be because the patients were carefully selected for VBAC and also adequate monitoring of labour using partograph and electronic fetal monitoring was utilised through-out.

We conclude that in carefully selected cases, TOS is safe and often successful in women who had CS for non-recurrent indication. A prior vaginal delivery, particularly, a prior VBAC is associated with a higher rate of successful VBAC.

References

1. Prior Caesarean Delivery. Cunninghams FG, Gant NF, Leveno KJ, Gilstrap LC, Hauth JC, Wenstrom KD. Editors. Obstetrics haemorrhage. In: Williams's Obstetrics. 23rd edition. USA: McGraw-hills 2010, 565-576.
2. Babah OA, Owie E, Ohazurike EO Akinajo OR. Trends, pattern and outcome of caesarean section at Lagos University Teaching Hospital, Lagos, Nigeria: A ten-year review. East African Medical Journal 2018;95(4):20-27.
3. ACOG Practice Bulletin No. 205: Vaginal Birth after Cesarean Delivery. Obstet Gynecol 2019;133:e110.
4. Mittal M, Kandoria M, Sood R, Chauhan M, Rao R. Outcome of pregnancy in women with previous one cesarean section. IJRCOG 2018;7(8):3257-3262.
5. Kietpeerakool C, Lumbiganon P, Laopaiboon M, Rattanakanokchai S, Vogel JP, Gülmezoglu AM. Pregnancy outcomes of women with previous caesarean sections: Secondary analysis of World Health Organization Multi country Survey on Maternal and Newborn Health. Scientific Reports 2019;9(1). doi:10.1038/s41598-019-46153-4
6. Iyoke CA, Ugwu GO, Ezugwu FO, Lawani OL, Onah HE. Risks associated with subsequent pregnancy after one caesarean section: A prospective cohort study in a Nigerian obstetric population. Niger J Clin Pract 2014;17(4):442-8.
7. Lekshmi B, Pooja RV, Ramakone M. Pregnancy Outcome in Women with Previous One Cesarean Section. J Clin Diagn Res 2014;8(2):99-102.
8. Ventura LWR, Redondo CE. Obstetric outcomes in the second birth of women with a previous caesarean delivery: a retrospective cohort study from Peru. Rev Bras Ginecol Obstet 2013;35(4):148-52.
9. Ezechi OC, Kalu EE, Njokanma FO, Ndububa CA, Nwokoro CA, Okeke GCE. Trial of labour after previous caesarean delivery: a private hospital experience. Annals of African Medicine 2005;4(3):113-117.
10. Al-Shaikh G, Al-Mandeel H. The outcomes of trial of labour after caesarean section following induction of labour compared to spontaneous labour. Arch Gynecol Obstet 2013;287(6):1099-103.