Research Article

Vaginal birth after previous caesarean section (VBAC) - Newer insights

Vijay Chandrakant Pawar[1], Chandrika S. Kodla[2], Kishor Bhosale[3], Mangala Shinde[4]

[1]Assistant Professor, [2]Medical Officer cum Lecturer, [3]Registrar, [4]Professor and HOD, Department of Obstetrics and Gynecology, Dr. V. M. Government Medical College, Solapur, Maharashtra, INDIA.
Email: drvijaypawar@gmail.com

Abstract

Objective: To study incidence, prognostic factors, complications and outcome of VBAC (vaginal birth after cesarean section) **Methods:** In this prospective, observational and analytic study, 489 women with previous cesarean section who had undergone successful trail of labor were analysed using Chi square test at Dr VM GMC hospital in department of obstetrics and gynecology during the period from 1st November 2011 to 31st August 2013. **Result:** Success rate of VBAC was (67.2%), maternal age, prior antenatal care, prior vaginal delivery, neonatal weight and interconceptional period were all statistically significant predictors of successful VBAC. **Conclusion**: VBAC can be successfully tried in all women with prior cesarean section by careful section by careful selection and employing simple predictive factors.
Keywords: Vaginal Birth after previous LSCS, VBAC.

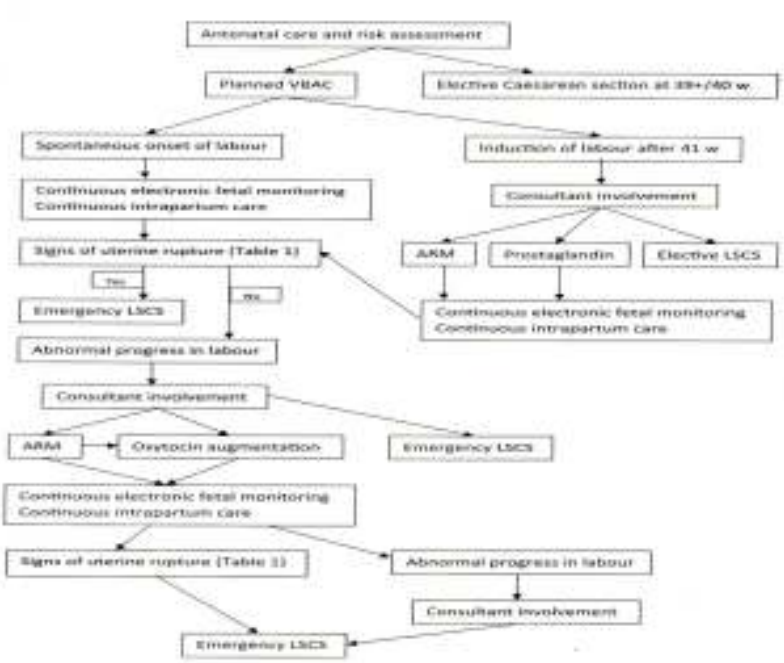
*Address for Correspondence:
Dr. Vijay Chandrakant Pawar, T-16, Arjun Tower, Kotnis nagar, Vijapur Road, Solapur-413004, Maharashtra, INDIA.
Email: drvijaypawar@gmail.com
Received Date: 05/05/2015 Revised Date: 15/05/2015 Accepted Date: 17/05/2015

Access this article online	
Quick Response Code:	Website: www.statperson.com
	DOI: 19 May 2015

INTRODUCTION

The introduction of a low transverse incision by Kerr[1] in 1926 was the largest boost for the advocates of vaginal delivery after cesarean in the early decades of 1900. In present day old dictum has been changed to, "Once a Cesarean Section, not necessarily a Cesarean Section next time, but Always a Hospital Delivery under close obstetric supervision."[5-14]. While worldwide, success rate of trial of labor after cesarean is about 75-80%, while risk of uterine rupture in such trial is 0.5-1%, the Current Study is also an endeavor with the objective in mind of estimating risks and trends in VBAC in our hospital. VBAC is associated with decreased maternal morbidity and decreased risk of complications with future pregnancies and births. With a VBAC, women can avoid complications of multiple cesarean sections including infection, blood transfusions, bowel and bladder injury and placental complication[15]

How to site this article: Vijay Chandrakant Pawar, Chandrika S. Kodla, Kishor Bhosale, Mangala Shinde. Vaginal birth after previous caesarean section (VBAC) - Newer insights. *International Journal of Recent Trends in Science and Technology* May 2015; 15(1): 156-160 http://www.statperson.com (accessed 21 May 2015).



AIMS AND OBJECTIVES

To study incidence, prognostic factors, complications and outcome of VBAC

MATERIAL AND METHODS

This was a prospective, observational and analytic study. All women with previous cesarean section for non-recurrent indications admitted in labor room of our hospital in department of obstetrics and gynecology during the period from 1st November 2011 to 31 st August 2013 were studied.

Inclusion Criteria

All women admitted in the labor room of our hospital between the year November 2011 to August 2013, with gestational age between 37-42 weeks and previous lower segment cesarean section for non-recurrent indications.

Exclusion Criteria

The following cases will be excluded from the study: Previous Classical cesarean section, Previous two or more lower segment cesarean sections, H/O postoperative wound infections and puerperal sepsis following previous lower segment cesarean section. Contraindications to vaginal delivery like major degree of CPD, placenta praevia, transverse lie, Previous uterine surgeries like myomectomies, utriculoplasty, Malpresentations, Inter-delivery interval less than 18 months, Patient not willing for trial of labor.

Methodology

All patients admitted in labor rooms for trial of labor. Informed consent was taken. Pelvic assessment was done to assess the adequacy of pelvis. Emergency preparedness measures like availability of surgeon, anesthetist, the operating room personnel and sufficient blood was always ensured. **Statistical Analysis :**P value was calculated by applying chi-square test with the help of Epi Info, Version 6 software; and relative risk was also calculated using the same software.

RESULTS

In our study, total 727 patients with previous one cesarean section, singleton gestation in vertex presentation and having adequate pelvis underwent trial of labor. Out of those 489 patients i.e. 67.26% delivered vaginally. [Including vacuum assisted delivery in 74 patients i.e.10.18%] and 238 patients i.e. 32.74% required repeat cesarean section.

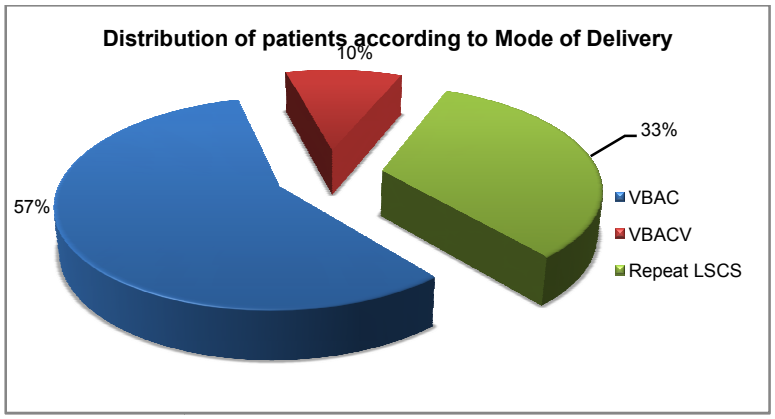


Table 1: Patient profile

Parameters	No of women with successful VBAC(n=489)	P VALUE
Age <30years	448	
Age>30years	41	>0.05
Registered patient	463	
Emergency patient	26	<0.001
Spontaneous onset of labour	387	
Induced abour	102	<0.01
Weight of baby <3kg	415	
Weight of baby >3kg	74	<0.05
Interconception period>2yr	478	
Interconception period<2yr	11	<0.001

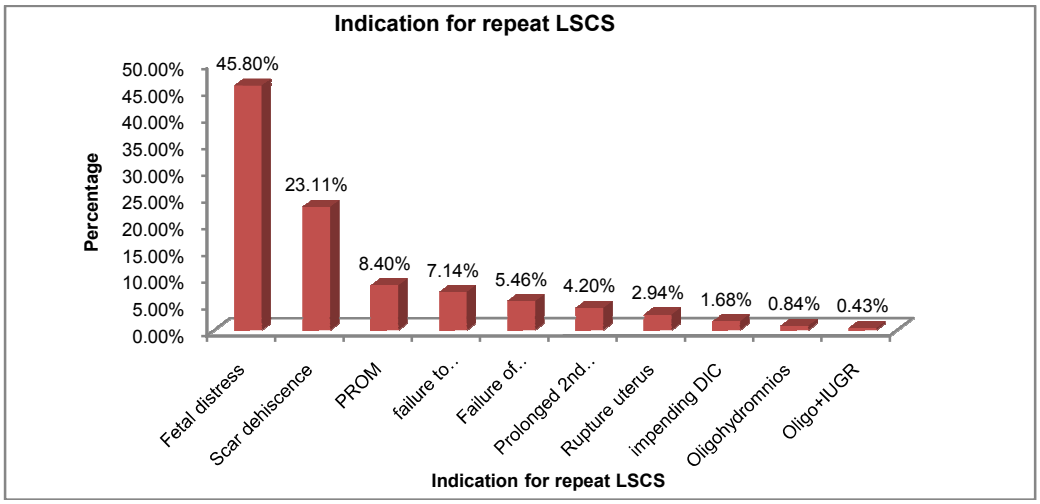


Table 2: Maternal complications following vaginal delivery

Sr. No.	Complication	No
1.	Need of blood transfusion	18
2.	Cervical tear	07
3.	Perineal tear	04
4.	Puerperial pyrexia	03
5.	Atonic PPH	03
6.	Scar rupture	01

When compared maternal complications following delivery in successful VBAC and repeat LSCS group, overall rate of need of blood transfusion, wound infection, puerperal pyrexia, atonic PPH, blood loss, respiratory infections, postoperative morbidity and hospital stay was more in repeat cesarean section group.

Table 3: Comparing Neonatal Morbidity

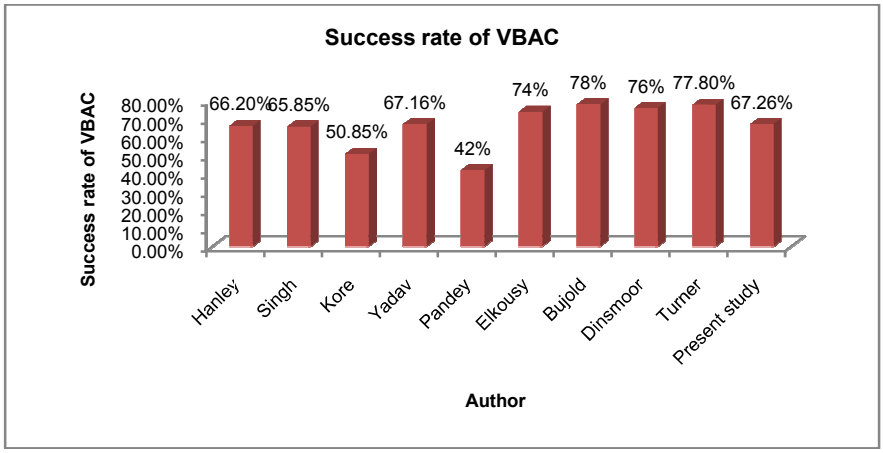
Sr. No.	Cause of NICU admission	Successful VBAC	Vacuum assisted deliveries	Repeat C.S.	Total
1.	PNA	6	3	11	20 [50%]
2.	MAS	4	1	4	9 [22.50%]
3.	RDS	2	0	6	8 [20%]
4.	PNA+LBW	0	0	1	1 [2.50%]
5.	LBW	1	0	0	1 [2.50%]
6.	PJ	1	0	0	1 [2.50%]
	Total	**14**	**4**	**22**	**40 [100%]**

The most common cause for NICU admission in both vaginal as well repeat cesarean section group was perinatal birth asphyxia (PNA) [50%], followed by meconium aspiration syndrome (MAS) [22.50%], respiratory distress syndrome (RDS) [20%], low birth weight and physiological jaundice (PJ).

DISCUSSION

In the study in Chaudhari DR, Shinde SM *et al* 2006[16], the success rate of VBAC is 84.80% in women with H/O prior vaginal delivery which is comparable with the success rate of VBAC in present study i.e. 84.96%.

We found breech as the second most common cause of indication of previous cesarean section i.e. in 14.17% of patients. The results are comparable with study by Vardhan S. Bandhu HC [13.9%][17], K. Pathania, H.K. Premi *et al* [11.32%] (18), S.Mittal, S.Kumar *et al* [18.83%][19]. The rate of successful VBAC in patients with indication for previous LSCS as breech is nearly 85% in our study.



In present study, the success rate of VBAC is 67.26% which is comparable to the success rate of many national and international studies such as Maryellan Hanley 1990 [66.20%][20], V. K. Singh 1995 [65.85%][21], Kamlesh Yadav 2000 [67.16%][22], Elkousy 2003 [74%][23].

CONCLUSIONS

VBAC trial of labor after one cesarean section should be undertaken in selected patients in well equipped hospitals. Vaginal delivery is much safer than repeat cesarean section. The significance of vaginal delivery is emphasized because of its minimum post-partum morbidity, minimum anesthetic and operative risks, financial liabilities, less hospital stay, emotional and psychological satisfaction to mother. Antenatal screening, Proper selection, appropriate timing, suitable method by individualized approach and competent staff are the key factors to achieve greater degree of success

REFERENCES

1. Kerr JM. The technique of cesarean section with special reference to the lower uterine segement incision. Am J Obstet Gynecol, 1926;12:729
2. American College of Obstetricians and Gynecologists. Guidelines for vaginal delivery after a previous cesarean birth (Committee opinion 64)1988; Washington DC: Author.
3. American College of Obstetricians and Gynecologists (1994). Guidelines for vaginal delivery after a previous cesarean birth (Committee opinion 143, replaces #64 October 1988). Washington DC: Author.
4. Kobelin CG. Intrapartum management of vaginal birth after cesarean section. Clinical Obstetrics and Gynecology, 2001; 44:588-593.
5. Leung A Leung E and Paul R. Uterine rupture after previous cesarean delivery: Maternal and fetal consequences. American Journal of Obstetrics and Gynecology, 1993; 169:945-950.

6. Devine JB, Ostergard D, and Noblett K. Long-term complications of the second stage of labor. Contemporary OB/GYN, 1999; 44(6):846-848.
7. Forsnes EV, Browing JE and Gherman RB. Bladder rupture associated with uterine rupture. Journal of Reproductive Medicine, 2000; 345:240-242.
8. Kattan SA. Maternal urological injuries associated with vaginal deliveries: Change of pattern. International Urology and Nephrology, 1997; 29:155-161.
9. Webb JC, Gilson G and Gordo L. Late second stage rupture of the uterus and bladder with vaginal birth after cesarean section: A case report and review of the literature. Journal of Maternal – Fetal Medicine, 2000; 9:362-365.
10. American College of Obstetricians and Gynecologists (1999b). induction of labor (ACOG practice bulletin 10). Washington, DC:Author.
11. American College of Obstetricians and Gynecologists (1999c). Induction of labor with misoprostol (Committee opinion 228). Washington, DC:Author.
12. American College of Obstetricians and Gynecologists (2000). Response to Searle's drug warning on misoprostol (Committee opinion 248). Washington, DC:Author.
13. Clark SL, Scott JR, TF, Schlappy DA, McClellan F and Burton DA. Is vaginal birth after cesarean less expensive than repeat cesarean section? America Journal of Obstetrics and Gynecology, 2000; 182:599-602.
14. Flamm BL. Vaginal birth after cesarean: Reducing medical and legal risk. Clinical Obstetrics and Gynecology, 2001; 44:622-629.
15. Esposito MA, Menihan CA and Malee MP. Association of interpregnancy interval with uterine scar failure in labor: A case-control study. American Journal of Obstetrics and Gynecology, 2000; 183:1180-1183.
16. Devendra R Chaudhary[1], Shubhangi M Shinde[2]. Clinical Profile and Outcome of Labor in Cases Following Previous Cesarean section. International Journal of Health Sciences and Research, December, 2012; Vol.2: Issue-9.
17. Vardhan Shakti, Behera RC, Sandhu GS, Singh Anita, Bandhu HC. Vaginal Birth after Cesarean Delivery. J Obstet Gynecol India, July- August 2006; Vol.56,No.4:pg 320-323
18. Kushla Pathania, HK Premi, Tara Gupta, Anoopa Sood. Delivery following previous cesarean section (A Prospective Study). The Journal of Obstetrics and Gynecology of India, august, 2000; Vol. 50: No. 4.
19. Suneeta Mittal, Sunesh Kumar, PN Anandlakshmi, Vimala N. Vaginal Birth after cesarean delivery: variables affecting outcome. JK Science, January-March, 2003; vol.5:No.1.
20. Maryellen L. Hanley, John C. Smulian, Marian F. Lake, David A. McLean, Anthony M. Vintzileos, Analysis of repeat cesarean delivery indications: Implications of heterogeneity, AMJOG, Volume 175, Issue 4, Pages 883-888Revised ACOG Guidelines on VBAC, August 2010; American college of Obstetrics and Gynecology- Practice Bulletin # 115.
21. V.K. Singh et lal, Trial of labour in patients with previous cesarean section,Indian Journal of obstetrics and gynecology 1995,pg 640-646.
22. Kamlesh Yadav. Outcome of Labor following previous lower segment cesarean section. J. Obst. and Gyn. India, 2000;50:52-53.
23. Elkousy (U of Penn). The effect of birth weight on vaginal birth after cesarean delivery success rates, A J O G, 2003; 188,824.

Source of Support: None Declared
Conflict of Interest: None Declared