

Full Length Research Paper

Vaginal birth after one caesarean section: A review of the practice at Nnewi, southeast Nigeria

¹Ikechebelu J.I, ¹Mbamara S.U and ²Afuba A.N.

¹Department of Obstetrics/Gynaecology, Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria.

²Faculty of Medicine, Nnamdi Azikiwe University Nnewi Campus, Nnewi, Nigeria.

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This study was carried out to determine the incidence, predictive factors, and the outcome of the practice of vaginal birth after one previous caesarean section at Nnamdi Azikiwe University Teaching Hospital, Nnewi Southeast Nigeria. Data was retrieved from case records of patients who underwent trial of vaginal birth after caesarean section from January 2001 to December 2005. There were 2062 deliveries out of which 379 were caesarean sections thereby giving a caesarean section rate of 18.4%. A total of 105 patients had trial of vaginal birth after one previous caesarean section and 56 (53.3%) ended in repeat caesarean section while 49 (46.7%) had successful vaginal birth. The indications for the repeat caesarean section include poor progress in labour (43.1%), fetal distress (17.2%) and scar dehiscence/ruptured uterus (10.4%). Spontaneous onset of labour (56.0%), patient age of between 25-29 (51.6%), low social class (57.90%) and non recurrent indication in the previous caesarean section like malpresentation (62.5%) were the factors with positive predictive value on the out-come of trial of vaginal birth after one previous caesarean section. There was poor outcome in women above 35 years and higher (44% vs 20%) success rate among women who went into spontaneous labour compared to those who had induction of labour. No maternal or perinatal death was recorded. Trial of vaginal birth after one previous caesarean section is possible in low resource areas. The outcome would be improved with proper patient selection.

Keywords: Vaginal birth, caesarean section, morbidity, outcome, Nnewi, Nigeria.

INTRODUCTION

Caesarean section is one of the frequently performed surgical procedures in current obstetrics (Skoczynski et al., 2004). The caesarean section rate has increased to an alarming extent in the last decades (Skoczynski et al., 2004; McDorman et al., 2005). Repeat caesarean section is the single most common contributor to this rise or high incidence of caesarean section (National Center for Health statistic, 1991). Because of improved safety of caesarean section most Obstetricians appears to have lost sight of the fact that caesarean section is a major operation associated with numerous complications.

Trial of vaginal birth after caesarean section (VBAC) represents one of the most significant changes in obstetric practice in the recent time. Because of the documented safety, effectiveness and success rate of

trial of VBAC, it is now advocated that women without contraindications to vaginal delivery but with one previous lower segment caesarean section should be offered trial of vaginal birth after caesarean section (SOGC 2005).

Induction/augmentation of labour are not absolutely contraindicated in trial of VBAC (SOGC 2005; McDonagh et al., 2005). However, women with history of previous caesarean section who require induction/augmentation have a higher rate of repeat caesarean section compared with similar women with spontaneous labour (McDonagh et al., 2005; Udoma et al., 2005). The use of misoprostol in induction of labour is associated with incidence of scar separation that appears unacceptable in standard obstetric practice (Abderrahim et al., 2001). It has also been noted that the rate of hysterectomy, febrile morbidity, thromboembolic complication are less in trial of VBAC than in elective repeat caesarean section. There is also less blood loss with successful VBAC and a shorter hospital stay with more rapid recovery and return to full activity (Abderrahim et al., 2001). Uzoigwe and Rosemary

*Corresponding author E-mail: jikechebelu@yahoo.com; Tel: 234-(0)803-404-4189.

Table 1. Age distribution of patients and the outcome of trial of VBAC

Age	All patients who tried VBAC	Successful VBAC No. (%)
15–19	0	0 (0%)
20–24	5	3 (60.0%)
25–29	43	23 (53.5%)
30–34	36	13 (36.1%)
35–39	18	8 (44.4%)
40–44	3	2 (66.7%)
Total	105	49 (46.7%)

reported a case of spontaneous VBAC in a woman with 2 previous caesarean section who was booked for an elective caesarean section (Uzoigwe and Rosemary, 2005). However, the woman should be involved in the decision, and consent either formal or informal be obtained from her. Also the facilities and the man – power for emergency operation should be readily available.

The contraindications to trial of VBAC include the presence of inverted T – incision on the uterus or unknown uterine incision and uterine rupture. Careful case selection and close observation in labour will improve successful maternal and fetal outcome. The fear and aversion of women to operative delivery has driven women to patronize or resort to TBA to their detriment. There is therefore a need to regularly audit the outcome of VBAC to note its outcome, success rate, complications and predictive factors.

METHOD

This is a five year retrospective audit of cases of trial of VBAC that were done in NAUTH Nnewi, Southeast Nigeria. The folder numbers of the case files of patients who underwent trial of vaginal delivery within the years of audit was collected from the labour ward register and Obstetric operative theatre register and the case notes were retrieved from the medical records department for analysis. The data extracted from the case records of patients who underwent trial of VBAC from January 2001 to December 2005 include sociodemographic factors, the indications for the previous caesarean section, outcome of the trial of VBAC, reason(s) for the termination of the trial of VBAC. The data extracted were analyzed using SPSS for windows version 15.0. Statistical comparison was done using Chi – Square (X^2). The level of significance was accepted when p-value is equal to or less than 0.05.

RESULT

A total of 2062 deliveries took place within the period under review. Out of these 2062 deliveries 376 were via

caesarean section thereby giving a caesarean section rate of 18.4%. There were 105 cases of trial of vaginal birth after one previous caesarean section (VBAC). Forty nine (46.7%) of the women who underwent trial of VBAC had successful vaginal birth while fifty six (55.2%) ended in repeat caesarean section. The age range of the patients was 20 – 44 years with the mean age of 30.6 ± 4.5 years (see table 1). Seventy (66.7%) of the women were booked while 30 (33.3%) were unbooked. About 70% of the women were admitted as emergency at either advanced stage of labour or as a referral from other hospitals and maternity homes. The common indications for the previous caesarean section before the trial of VBAC and its outcome are shown in table 2. Spontaneous onset of labour, (51.6%), low educational factor (57.9%), and non - recurrent indications for the previous caesarean section (62.5%) were the factors that contributed positively to the successful outcome of trial of VBAC see tables 2 – 4. The commonest indications for the termination of trial of VBAC are poor progress in labour 43.1%, fetal distress 17.2% and scar dehiscence 10.4%. The outcome was poorer among women above 30 years (55.7%) as shown in table 1 and those without previous vaginal deliveries (table 5). The women who went into labour spontaneously had a success rate of 44% while 80% of those who underwent induction of labour, ended up in repeat caesarean section. The birth weight of the babies ranged from 1.2 to 4.0kg with a mean of 2.6kg.

DISCUSSION

There were a total of 2067 deliveries during the study period. Three hundred and seventy six of these deliveries were via caesarean section. This gives a caesarean section rate of 18.4%. This is higher than the 15% proposed by WHO as the highest acceptable caesarean section rate based on the rates for countries with the lowest perinatal mortality (Ezechi et al 2004). It is a known fact that Nigerian women have strong aversion for caesarean section not because of the associated fetal and maternal risks but because of the general believe that abdominal delivery is a mark of reproductive failure

Table 2. Indications for the previous Caesarean section and the outcome of trial of VBAC

Indication	All patients who tried VBAC	Successful VBAC No. (%)
Prolonged labour	12	5 (4.7%)
Fetal distress	11	6 (5.7%)
Poor progress in labour	14	8 (7.6%)
Malpresentation	16	10 (9.5%)
CPD	12	7 (6.7%)
PIH	5	2 (1.9%)
Obstructed labour	4	2 (1.9%)
Multiple pregnancy	1	1 (1.0%)
Previous C/S	8	2 (1.9)
Others	22	7 (6.7%)
Total	105	49 (46.7%)

Table 3. The parity distribution of the women

Parity	All patients who tried VBAC	Percentage (%)
1	0	0
2	59	56.2
3	20	19.1
4	14	13.3
≥5	12	11.4
Total	105	100.0

Table 4. The educational status of the women versus the outcome of trial of VBAC

Educational status	All patients who tried VBAC	Successful VBAC No. (%)
No formal education	3	1 (33.3%)
Primary	8	7 (87.5%)
Secondary	59	30 (50.9%)
Tertiary	35	11 (31.4%)
Total	105	49 (46.7%)

$\chi^2=9.25$; df =3; p= 0.026

Table 5. The number of previous vaginal deliveries and the outcome of trial of VBAC

No of vaginal deliveries	All patients who tried VBAC	Successful VBAC No. (%)
0	79	37 (46.8%)
1	12	7 (58.3%)
2	9	4 (44.4%)
≥3	5	1 (20.0%)
Total	105	49 (46.7%)

$\chi^2=2.10$; df =3; p=0.55

(Ezechi et al 2004). Women with caesarean delivery are considered by others to be infidel, "not woman enough", and are usually objects of social ridicule. These make any attempt at reducing the incidence of caesarean section a key factor in the reduction of maternal and perinatal mortality.

About one third the numbers of patients who had caesarean sections during the period of review underwent trial of vaginal birth after caesarean section. Forty nine (46.7%) had successful vaginal delivery while 56 (53.3%) were delivered by repeat caesarean section. The success rate of 46.7% found in this study is similar to the reports from other centers (Aisien and Oronsaye 2004; Adanu and McCarthy 2007; Adjahoto et al., 2001; Abdel, 2000). However, this success rate is different from reports from other centers where success rates in excess of 70% have been reported. In Lagos, Nigeria, 73% success rates was reported while 75% success rate was reported from Ayub Abbottabad (Hassan 2005; Triphathi et al., 2006; Ola et al., 2001). This low rate of successful trial of VBAC may be due to the fact that NAUTH is a referral center to which many bad, poorly selected cases are referred from other peripheral hospitals, health centers and traditional birth attendants (TBAs). The aversion of our women to repeat caesarean section, may have driven them to patronize TBAs, and facilities lacking adequate skilled - man power and or facilities. It may also be due to poor compliance to antenatal visits by patients and also easy recourse to repeat caesarean section by the doctors especially in emergency cases.

It is ironical that there is no significant association between the outcome of trial of vaginal birth after caesarean section and the history of previous vaginal delivery ($X^2 = 2.0388$; $df = 3$, $p > 0.05$), fetal weight ($X^2 = 5.3783$; $df = 5$, $p > 0.05$), and the type of onset of labour ($X^2 = 1.0428$, $df = 1$, $p > 0.05$) These findings contrasts with previous reports where spontaneous onset of labour, birth weight of less than 4kg, and gestational age of less than 40 predicts successful trial of VBAC (Ola et al., 2001). This lack of association could be because most of the patients were admitted as emergency after having tried VBAC in a peripheral center where the patient selection would have been poor. Also their labour would have been either unsupervised or supervised by unskilled and untrained personnel who only ask them out when the situation is bad. Remarkably some of the patients would have undergone trial of VBAC even when they ought not to have attempted it in the first place. This strong aversion for caesarean section (Ezechi et al., 2004) and their erroneous believe that there is a likelihood of repeat caesarean section if they labour in a center with operative facility drive them to unorthodox places for trial of VBAC. Some women who had their antenatal care in our facility and received proper counseling absconded to places without maternity services on the mention of possible caesarean section before returning to NAUTH when things were not

progressing as they expected. These factors made the case selection to be very poor.

The fact that there is good perinatal outcome and no maternal mortality in this study is worthy of note since all the labour were monitored clinically with no advanced fetal monitoring facility. The labours were monitored clinically using parthograph while only pinnard stethoscope was used in monitoring the fetal condition. This shows that trial of VBAC is a possibility in low resource area like ours.

We strongly advocate the universal practice of trial of VBAC despite the low success rate recorded in this analysis. Proper patient selection, adequate antenatal care, patient counseling and patient involvement in decision making and facilities for operative deliveries are important prerequisites for the practice of trial of VBAC.

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