Guideline

Vaginal birth after caesarean section (VBAC)

1 Scope

Local: This guideline is for use in Maternity Services only.

2 Purpose

This document is aimed at all midwives and obstetricians working in the Rosie Hospital. It describes the indications for a planned vaginal birth after caesarean section (VBAC), the risks and benefits, and makes recommendations for the care of such women both in pregnancy and in labour.

Note: Some women may choose to undergo VBAC at home, and although this is not recommended, community midwives have a professional duty to care for such women in the home setting. It therefore has relevance to community midwives, although care at home can never totally reflect the recommendations contained within this guideline (see the procedure in labour for planned VBAC section below).

3 Definitions

'VBAC' is the term used to indicate a 'vaginal birth after caesarean section'. A 'planned VBAC' is the term used to describe the situation when a woman intends a vaginal birth and therefore undergoes labour with a uterine scar, either as a result of previous uterine surgery, or caesarean section (CS) for a non-recurring cause.

A vaginal birth (spontaneous or assisted) in a woman undergoing VBAC indicates a 'successful VBAC'. Birth by emergency CS during the labour indicates an 'unsuccessful VBAC'.

ERCS is the term used for 'elective repeat caesarean section'.

'Uterine dehiscence' is defined as disruption of the uterine muscle with an intact uterine serosa.

'Uterine rupture' is defined as disruption of the uterine muscle extending to and involving the uterine serosa or disruption of the uterine muscle with extension to the bladder or broad ligament.

4 Background

There is concern nationally about rising CS rates. An increase in primary CS rates leads to more women with a history of prior caesarean delivery. Such women then need to make an informed decision in any subsequent pregnancy regarding a planned mode of delivery, either VBAC or ERCS.

For women having repeat CSs, the indication of 'previous CS' currently contributes around 44% to the repeat CS rate. Therefore planned VBAC offers a significant way in which the CS rate can be reduced. However, women choosing mode of birth after CS must be made aware of the risk and benefits of both VBAC and ERCS. This guideline therefore describes the information to be given to women and describes the care in labour to women undergoing VBAC.

5 Planned VBAC

In general, a VBAC should be considered in **all** women who have had one previous CS. **C**

A planned VBAC is appropriate if:

- a woman has had one lower segment CS, and the reason for it is absent in the current pregnancy
- there is a scar from a myomectomy (provided the uterine cavity was not opened during the operation), or a uterine perforation during a 'D and C'. If there is a history of a hysterotomy, then the decision should be made by the consultant in discussion with the woman.
- there are no other absolute contraindications present in the current pregnancy eg placenta praevia.

Generally accepted contraindications for a planned VBAC include:

- previous classical CS
- previous uterine rupture
- three or more previous CSs.

A more cautious approach is also advised in the case of a twin gestation, fetal macrosomia, **two previous CS** and a short inter-delivery interval. **C**

6 Antenatal advice regarding VBAC

All women with one previous CS and no other risk factors should be referred to the midwife-led VBAC clinic, or community midwife, early in the pregnancy when mode of delivery should be discussed. Suitability for a VBAC should be considered: the previous obstetric notes should be obtained and reviewed, where possible (for women who have delivered previously elsewhere, a letter should be written to the hospital concerned requesting details of the intrapartum care). The discussion concerning planned mode of

delivery should be evidenced in the *vaginal birth caesarean section pathway* (pilot) document and hospital notes, together with the plan if the woman labours early, or the pregnancy goes post-term. Some women may not make a decision regarding VBAC until 36 weeks of pregnancy; however, where possible, the plan for delivery should be confirmed at the 36 apointment with community midwife. The majority of antenatal care may take place in the community by the community midwife/ GP. C

Women with any additional risk factors identified should be discussed with the consultant obstetrician. Women receiving obstetric-led care who are uncertain as to mode of delivery should also be offered an appointment at the midwife-led VBAC clinic. ✓

There should be a full and documented discussion and this should include: C

- the risks and benefits of repeat CS and planned VBAC for the mother and the baby, including the risks of repeat CS in future pregnancies with planned CS
- the likely success rate of VBAC
- the risk of scar rupture with VBAC
- the implications for labour of having a scar on the uterus (including the recommended place of birth) and the need for close observation and monitoring in labour.

This discussion should be supplemented by the leaflet on VBAC.

All women planning a VBAC should be advised and encouraged to deliver in hospital. If they choose not to do so, then midwives may choose to consult and involve their supervisor of midwives for support, and should offer and recommend an appointment with a consultant obstetrician to aid effective communication. When called to the home of a woman in labour who is planning a home VBAC, community midwives should inform the Delivery Unit via the shift coordinator, who should ensure that the obstetric specialist registrar (SpR) is aware. The community midwife may also choose to discuss the case with the on-call supervisor of midwives, particularly when the woman is requesting care outside 'usual' care.

The main risk associated with a planned VBAC is the risk of scar rupture. Prospective observational studies have found varying incidences of evidence of scar dehiscence for women with a planned CS (ie even before labour had started) and for women undergoing VBAC (successful or unsuccessful). The Royal College of Obstetricians and Gynaecologists guideline (2008) on vaginal birth after caesarean section (VBAC) (*Birth after caesarean section)* states that the absolute risks of uterine rupture in women having non-augmented spontaneous VBAC is 2-8 per 1000 (ie 0.5%). This is generally quoted as around 0.5%. However, NICE (2004) quotes a background incidence of scar rupture of 1.2 per 1000 (0.12%) in women having a planned CS, even in the absence of labour (see the Trust's high risk

intrapartum procedure 2.25: uterine rupture). Serious wound dehiscence or complete scar rupture is a rare complication during VBAC, although it carries a high risk of maternal mortality and perinatal mortality/ morbidity.
A previous successful vaginal delivery appears to offer some protection against uterine rupture.

The overall chances of a successful vaginal delivery following CS are around 70%. Women may be guided in their decision-making by being informed of the factors that have been shown to reduce the chance of a successful VBAC which include:

- induced labour
- no previous vaginal birth **B**
- body mass index (BMI) greater than 30
- previous caesarean section for labour dystocia
- VBAC at, or after, 41 weeks of gestation
- birth weight greater than 4kg
- previous preterm caesarean birth
- cervical dilatation at admission less than 4cm
- less than two years from previous caesarean birth
- advanced maternal age
- non-white ethnicity
- short stature
- a male infant.

There is limited and conflicting evidence on whether the cervical dilatation achieved at the primary caesarean for dystocia impacts on the subsequent VBAC success rate. Use of an epidural does not appear to reduce VBAC success.

If a woman requests use of the birth pool for labour and/or birth, she should be informed of the risks (including the possible delay in identifying and responding to possible scar rupture) and the recommendation for continuous CTG (cardiotocograph) monitoring. However, this may be possible using telemetry monitoring, if available, which is waterproof. ✓

Women with a booked CS, where the indication is for a previous CS, who are subsequently admitted in labour should be given the opportunity to review the decision for CS and encouraged to pursue VBAC if they so wish. ✓

The use of oxytocics and/ or prostaglandins for augmentation and/or induction of labour increases the risk of scar rupture and therefore **must only** be considered after obstetric consultant involvement. If used, there should be a documented discussion of the risks involved and there should be a plan for labour including the frequency of vaginal examinations to assess progress and the agreed parameters for discontinuing/ continuing the VBAC. **C**

7 Procedure in labour for planned VBAC

Following the diagnosis of labour:

Insert a large bore venflon (16g). ✓

- Send blood for full blood count (FBC) and group and save.
- The specialist registrar should be informed of all women undergoing VBAC. He/she should need to review the woman/ case notes to confirm that a trial of labour is still appropriate. An individualised plan of management for labour should be agreed and written in the woman's notes. **B**
- Commence continuous CTG monitoring. Abnormal fetal heart rate patterns are present in 70% scar ruptures. **B**
- Take the maternal pulse regularly (half hourly) as a rising pulse rate may provide early indication of scar rupture.
- All methods of analgesia are available to women and normalizing birth is a priority (an epidural is not contraindicated). **C**
- If a woman with an effective epidural complains of pain, she should be examined carefully to exclude rupture of the uterus. In this situation, pain arises from generalised peritoneal irritation.
- If there is slow progress in labour there should be no delay in performing an artifical rupture of the membranes (ARM) in labour or concerns about the CTG. This enables examination of the liquor for meconium or blood and, to some extent, augmentation of labour.
- A woman admitted with contractions, with a uterine scar, who is not diagnosed as in labour by the midwife should be reviewed by the obstetric SpR. She should have her case discussed with the on-call consultant. ✓
- If a woman planning a VBAC presents with spontaneous ruptured membranes, further management regarding induction/ delivery should be discussed with an obstetric consultant. ✓
- If there is failure to progress in labour despite an ARM, the woman should be examined by the obstetric registrar. Syntocinon may be commenced **only** after prior discussion with the on-call consultant. ✓
- In relation to the second stage, normally birth would be expected to take place within an hour of active pushing, therefore referral for obstetric review should be made at this time if birth is not imminent. ✓
- There is no value in examining the uterine scar after delivery.
- If there is a significant post-partum haemorrhage after delivery, consider uterine rupture as a possible cause. The woman may need transfer to theatre for an EUA (examination under anaesthetic). The consultant on call should be informed. ✓

Possible significant signs of scar dehiscence include:

- maternal distress (↑ pain, anxiety, agitation)
- abnormal vaginal bleeding
- abnormal CTG
- severe lower abdominal pain; pain between contractions
- chest pain or shoulder tip pain, sudden onset of shortness of breath
- acute onset scar tenderness
- evidence of cardiovascular compromise, including isolated fetal tachycardia
- maternal tachycardia
- reduction in/ cessation of uterine activity
- haematuria
- loss of station of the presenting part.

8 Monitoring compliance with and the effectiveness of the guideline

The use and effectiveness of this guideline, will be monitored, either continuously or on an ad-hoc basis, through the following processes:

- risk management
- clinical audit
- review at VBAC meetings
- individual patient case reviews
- user/ clinician feedback
- patient complaints
- staff meetings
- observation of practice
- midwifery supervision.

Results will be fed back to the research midwife and/or author, who will consider review, and initiate change(s) to the guideline and/or practice, as appropriate.

8.1 Audit standards

1. All women suitable for VBAC (vaginal birth after caesarean section) should be encouraged to plan for a vaginal birth.
2. All women with a previous CS (caesarean section) should have the following clearly documented in the hospital notes:
    - the decision regarding planned mode delivery
    - a documented plan for place of birth, if other than on the Delivery Unit
    - a documented plan for labour if this occurs before term, or does not occur by 41 weeks
    - a documented pre-birth plan in consultation with an midwife/ obstetrician/ which includes the recommendation to undergo continuous fetal heart rate monitoring in labour
    - the offer of the leaflet on VBAC
    - the recommendation to undergo continuous fetal heart rate monitoring in labour.
3. Induction of labour, or syntocinon augmentation, for a woman planning a VBAC should only be used:
    - in consultation with an obstetric consultant
    - after a documented discussion of the risks and benefits with the woman.

9 References

Appleton B, Targett C, Rasmussen M, Readman E, Sale F, Permezel M (2000) Vaginal birth after Caesarean section: an Australian multicentre study. VBAC

Study Group. *Australian & New Zealand Journal of Obstetrics & Gynaecology,* Feb;40(1):87-91.

Dickinson J E (1998) Previous Caesarean Section. In: *High Risk Pregnancy Management Options.* (Eds. D K James; P J Steer, C P Weiner & B Gonck). W B Saunders. Ch. 15.

Dodd JM, Crowther CA, Huertas E, Guise JM, Horey D (2004) Planned elective repeat caesarean section versus planned vaginal birth for women with a previous caesarean birth. *The Cochrane Database of Systematic Reviews*, Issue 4. Art. No.: CD004224. DOI: 10.1002/14651858.CD004224.pub2.

Enkin M (2000) Labour and birth after previous caesearean section. In: *Effective Care in Pregnancy and Childbirth* (Eds. M Enkin; M Keise; J Neilson et al). Third Edition. Oxford University Press, Oxford. Ch. 38.

Lieberman E (2001) Risk factors for uterine rupture during a trial of labor after cesarean. *Clinics of Obstetrics & Gynecology*, Sep;44(3): 609-21.

MIDIRS (2008) Caesarean section and VBAC, Informed Choice leaflet for professionals no. 17. Available from http://www.infochoice.org.

Mozurkewich EL, Hutton EK (2000) Elective repeat cesarean delivery versus trial of labor: a meta-analysis of the literature from 1989 to 1999. *American Journal of Obstetrics & Gynecology*, Nov,183 (5):1187-97.

NICE (2004) *Caesarean Section.* Clinical Guideline. National Centre Collaborating Centre for Women's and Children's Health. RCOG, London.

RCOG (2008) *Birth after caesarean section*. RCOG, London.

Sims EJ, Newman RB, Hulsey TC (2001) Vaginal birth after cesarean: to induce or not to induce. *American Journal of Obstetrics & Gynecology*, May; 184(6): 1122-4.

Singh T; Justin CW; Haloob RK (2004) An audit on trends of vaginal delivery after one previous caesarean section. *Journal of Obstetrics and Gynaecology,* 24 (2): 135-138.

Smith G C, White I R, Pell J P, Dobbie R (2004) Predicting caesarean section and uterine rupture among women attempting vaginal birth after prior caesarean section. *PLoS Med,* 2: 871-8.

Thomas J & Paranjothy S (2001) *The National Sentinel Caesarean Section Audit Report*. RCOG Clinical Effectiveness Unit. RCOG Press, London.

Waldman R, Mielcarski E (2001) Vaginal delivery after cesarean section: is the risk acceptable? *Journal of Midwifery & Women's Health*, Sep-Oct; 46(5): 272-3.

Zelop CM, Shipp TD, Repke JT, Cohen A, Lieberman E (2000) Effect of previous vaginal delivery on the risk of uterine rupture during a subsequent trial of labor. *American Journal of Obstetrics & Gynecology*, Nov; 183(5): 1184-6.

10 Associated documents

- *vaginal birth caesarean section pathway*

Equality and diversity statement

This document complies with the Cambridge University Hospitals NHS Foundation Trust service equality and diversity statement.

Disclaimer

It is **your** responsibility to check against the electronic library that this printed out copy is the most recent issue of this document.

Document management

Document control / change history					
Issue	**Author(s)**	**Owner**	**Date**	**Circulation**	**Comments**
Draft 1	F Hoveyda & J Hurley	Women's Services (Maternity)	Oct 2003	Polices & Procedures Group (Maternity); Obstetric Divisional Group	
Draft 2	J Ford	As above	July 2006	F Hoveyda, Intrapartum Lead Consultant; DU Forum; Polices & Procedures Group (Maternity); Obstetric Divisional Group	Changes made re: home VBAC, SpR review if not in labour & need to review notes if previous CS.
Draft 3	J Ford	As above	June 2009	F Hoveyda, Intrapartum Lead Consultant; P Brett, Consultant Midwife; DU Forum; Policies & Procedures Group (Maternity); Obstetric Divisional Group	Expanded to include recommendations of RCOG 2007.
Draft 4	J Butler	As above	July 2010	Policies & Procedures Group (Maternity); Perintal Services Management Group	Minor revisions re the MW-led VBAC clinic and introduction of VBAC pathway.

Approved by:	Perinatal Services Management Group, 7 September 2010		
Author(s):	J Butler & J Ford		
Owning department:	Maternity Services		
File name:	2.24 Vaginal delivery after CS Version4 Sept 2010.doc		
Version number:	4	Review date:	September 2013
Local reference:	HR 2.24	Media ID:	1705