VBAC VAGINAL BIRTH AFTER ONE PREVIOUS LOW SEGMENT CESAREAN SECTION

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Preamble

Guidelines outline recommendations, informed by both the best available evidence and by midwifery philosophy, to guide midwives in specific practice situations and to support their process of informed decision-making with clients. The midwifery philosophy recognizes the client as the primary decision maker in all aspects of her care and respects the autonomy of the client (1).

The best evidence is helpful in assisting thoughtful management decisions and may be balanced by experiential knowledge and clinical judgment. It is not intended to demand unquestioning adherence to it's' doctrine as even the best evidence may be vulnerable to critique and interpretation.

The purpose of practice guidelines is to enhance clinical assessment and decision-making in a way that supports practitioners to offer a high standard of care. This is supported within a model of well-informed, shared decision-making with clients in order to achieve optimal clinical outcomes.

Background

The College of Midwives of British Columbia (CMBC) supports registered midwives in providing primary care for women planning a vaginal birth after one previous low-segment caesarean section (VBAC).

Current evidence supports women to choose vaginal birth after caesarean section, despite a somewhat increased risk of uterine rupture, a complication with serious consequences for mother and newborn.

> *"Vaginal birth after Cesarean does not increase the risk of mortality to the mother or infant; morbidity may be slightly increased."* (2)

Definitions

UTERINE DEHISCENCE

Scar dehiscence is the breakdown and reopening of the old cesarean scar. Most dehiscences involve minor tearing around the scar, are asymptomatic and heal well. Many go undetected.

UTERINE RUPTURE

A true uterine rupture in a VBAC is a scar dehiscence that is large enough to need surgical repair. It is almost always symptomatic, with the most common first indicator being non-reassuring fetal heart rate. Maternal shock from blood loss is also possible

Incidence of Uterine Rupture

- Rupture of the uterus[i] prior to labour is a rare event and usually involves a classical scar rather than a low-segment scar.
- The reported rate of true catastrophic uterine rupture ranges from 0.09 to 0.8% (1 in 900 to 1 in 125 births) (3).
- Previous caesarean section is a factor in somewhat less than half of all reported cases of uterine rupture.

[i] A true uterine rupture in a VBAC is a scar dehiscence that is large enough to need surgical repair. It is almost always symptomatic, with the most common first indicator being non-reassuring fetal heart rate. Maternal shock from blood loss is also possible.

- Uterine rupture, reports of which often include asymptomatic dehiscence that are of no clinical significance, occur in 0.5 – 3.3 % (1:500 to 1:30) of all VBAC trials. This rate is similar to the rate of ruptures reported for elective repeat caesarean sections (0.5 – 2%) (3).
- The rate of catastrophic rupture, where the life of mother and infant are in serious jeopardy, is more difficult to determine as this event is often included with the more common and much less worrisome, dehiscence.
- The rate of uterine rupture with 2 previous caesarean sections is higher than with one; however, women may still attempt VBAC if no other contraindications exist, *in hospital only* and after *antenatal consultation with an obstetrician* (4).

The midwife should inform her client wishing to attempt a VBAC, of the risk of uterine rupture. A copy of this guideline or an alternate written client handout should be offered.

> *"To put these rates (of rupture) into perspective, the probability of requiring an emergency caesarean section for other acute conditions (fetal distress, cord prolapse, or antepartum hemorrhage) in any woman giving birth is approximately 2.7 percent – or up to 30 times as high as the risk of uterine rupture with a planned vaginal birth after caesarean"* (5).

SIGNS AND SYMPTOMS OF UTERINE RUPTURE

Midwives must be aware of the signs and symptoms that may indicate *partial or complete uterine rupture in labour:*

- Sudden non-reassuring fetal heart rate (i.e. tachycardia or decelerations)
- Unusual abdominal/uterine pain
- Cessation of contractions or incoordinate uterine activity
- Unexplained vaginal bleeding
- A sudden onset of maternal tachycardia and hypotension
- Excessive fetal movement
- Fetal parts may be easily palpated through the abdominal wall
- Presenting part may be higher than previously palpated

SIGNS THAT MAY OCCUR WITH IMPENDING UTERINE RUPTURE INCLUDE:

- Inadequate progress (of cervical dilation or descent) despite good contractions
- Incoordinate uterine activity
- Restlessness and anxiety
- Lower abdominal pain or suprapubic tenderness between contractions

Antenatal preparation

In preparation for an attempted VBAC, the midwife should:

(a) Obtain a copy of the previous OR record and read the surgical report, to ensure there is nothing in the history which precludes the client from attempting a VBAC;
(b) Document the type of incision from the previous surgery on Antenatal I and II; for example: "Operative Report reviewed, LSCS with double layer closure…no post-operative concerns."
(c) Discuss the client's desire for VBAC with another midwife, as per the CMBC's Indications for Discussion, Consultation and Transfer of Care. Document this discussion in the antenatal records.
(d) Create opportunities antenatally to review and discuss concerns related to the previous caesarean section;
(e) Consider anesthesia consult;
(f) Have a thorough informed choice discussion regarding VBAC (see below) and document this.

An informed choice discussion regarding VBAC should include:

(a) Discussing the possibility of / offering a repeat caesarean section;
(b) Signs and symptoms of uterine rupture;
(c) Review of hospital policies regarding labour management, OB consult, etc.
(d) Documentation of the discussion on the antenatal record.
(e) Offering the client a copy of this guideline, the CMBC guideline, or a similar, written handout on VBAC.

Contraindications

The SOGC (6) lists the following as contraindications to VBAC:

(a) Previous classical or inverted “T” uterine scar;
(b) Single-layer closure of the uterus after the previous caesarean section;
(c) Previous hysterotomy or myomectomy entering the uterine cavity;
(d) Previous uterine rupture;
(e) Presence of a contraindication to labour, such as placenta previa or malpresentation;
(f) The woman declines TOL after caesarean section and requests ERCS.

Labour Management

Labour management for VBAC should include:

(a) Regular assessment of labour progress and maternal health, with particular awareness of the signs of impending uterine rupture;
(b) Regular assessment of fetal health according to the CMBC’s Guidelines for Fetal Health Surveillance in Labour. More frequent monitoring may be considered, based on the midwife’s assessment of the length, strength and frequency of contractions;
(c) Reasonable progress in effacement, dilation and descent every 2-4 hours in active labour;
(d) Close observation of blood loss in the hour immediately following delivery of the placenta.

Signs or symptoms of uterine rupture in a VBAC client are indications for immediate transport to hospital and/or physician consultation. Transfer of care will be required unless rupture is ruled out on consultation. If uterine rupture is suspected at home, the midwife initiating transport should ask the hospital to prepare for an emergency cesarean section.

At BCWH

BCWH guidelines (7) indicate that:

(a) a woman attempting VBAC should be admitted in active labour, not before;
(b) an obstetrician should be notified when the woman is admitted in labour;
(c) further consultation is at the discretion of the care provider;
(d) women attempting VBAC may not be admitted to SRMC;
(e) fetal health should be assessed by continuous fetal monitoring (EFM);
(f) on admission, start a saline lock if IV access is predicted to be difficult;
(g) epidural is a reasonable choice for analgesia, as the dosage used in the epidural solutions at BCWH are diluted and will not mask the pain of uterine rupture;

At Home

Under certain circumstances, the College of Midwives of British Columbia supports women’s ability to attempt a home birth in the case of VBAC.

The following conditions preclude women from being candidates for vaginal birth at home:

- Greater than 2 previous caesarean births
- History of caesarean section at or before 26 weeks
- History of impaired uterine scar healing
- Inter-pregnancy interval of less than 6 months
- Ballotable head in active labour
- Prolonged active phase of labour

When planning a VBAC at home, the time it will take to travel to a hospital with caesarean section capabilities must be considered in the light of the small window of time in which one must initiate a caesarean when there is a uterine rupture. Despite the relatively small risk, true uterine rupture is a major obstetrical complication with potentially grave consequences for both mother and newborn. Being able to access a caesarean section quickly is very important. The following must be taken into account when planning to attempt a VBAC at home:

- Services available at the nearest hospital
- Distance to hospital
- Road and weather conditions

Midwives should discuss this additional risk with their clients and advise them of their destination hospital's ability to respond to emergency situations.

The midwife must initiate transport arrangements from home if:

- There are concerns about maternal or fetal well-being,
- The first stage of labour is prolonged, or
- There is minimal progress in the first hour of active second stage pushing or within two hours of full dilation.

Induction and Augmentation of Labour

The following are acceptable methods of labour induction or augmentation for women attempting VBAC (6)(8):

(a) Oxytocin augmentation
(b) Foley catheter induction
(c) Oxytocin induction (with caution: the risk of uterine rupture increases to 8:1000) (9).

Prostaglandins are associated with a high risk of uterine rupture. Generally, they should not be used as an induction agent. Misoprostol should not be used (8).

REFERENCES

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(5) Enkin M, Keirse M, Neilson J, Crowther C, Duley L, Hodnett E, Hofmeyr J. A Guide to Effective Care on Pregnancy and Childbirth. 2nd ed. Oxford: Oxford University Press; 2000.

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(7) Children's and Women's Health Centre of British Columbia. Guidelines for Vaginal Birth After Caesarean Section. GU0200, 2006.

(8) American College of Obstetricians and Gynecologists. Induction of Labor for Vaginal Birth After Caesarean Delivery. Committee Opinion No. 342.

(9) National Collaborating Centre for Women's and Children's Health. Clinical Guideline: Ceasarean Section. April 2004.