Vaginal Birth After Caesarean Section in Low Resource Settings: The Clinical and Ethical Dilemma

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Abstract

Vaginal birth after Caesarean section (VBAC) has long been practised in low resource settings using unconventional methods. This not only poses danger to the woman and her baby, but could also have serious legal and ethical implications. The adoption of this practice has been informed by observational studies with many deficiencies; this is so despite other studies from settings in which the standard of care is much better that show that elective repeat Caesarean section (ERCS) may actually be safer than VBAC. This raises questions about whether we should insist on a dangerous practice when there are safer alternatives. We highlight some of the challenges faced in making this decision, and discuss why the fear of ERCS may not be justified after all in low resource settings. Since a reduction in rates of Caesarean section may not be applicable in these regions, because their rates are already low, the emphasis should instead be on adequate birth spacing and safer primary operative delivery.

Résumé

L'accouchement vaginal après césarienne (AVAC) est pratiqué depuis longtemps au moyen de méthodes non conventionnelles au sein de pays ne disposant que de faibles ressources. Cela entraîne non seulement des risques pour la femme et son enfant, mais peut également donner lieu à de graves conséquences sur les plans juridique et éthique. L'adoption de cette pratique est soutenue par des études observationnelles comptant de nombreuses carences. Cette pratique perdure malgré la publication d'autres études (issues de milieux au sein desquels les normes de diligence sont beaucoup plus élevées) qui indiquent que la tenue d'une césarienne itérative planifiée (CIP) pourrait en fait être plus sûre que l'AVAC, ce qui soulève des questions quant à la nécessité d'insister sur la mise en œuvre d'une pratique dangereuse, compte tenu de l'existence de solutions de rechange plus sûres. Nous soulignons certains des défis à relever pour la prise d'une décision dans de telles situations et traitons des raisons pour lesquelles les craintes quant à la tenue d'une CIP pourraient ne pas être justifiées après tout au sein des milieux ne disposant que de faibles ressources. Puisqu'une réduction des taux de césarienne pourrait ne pas être possible dans ces régions (car ces taux y sont déjà faibles), l'accent devrait plutôt être placé sur l'espacement adéquat des grossesses et sur la tenue d'un accouchement opératoire plus sûr dans le cadre de la première grossesse.

Key Words: Vaginal birth after Caesarean section, elective repeat Caesarean section, low resource settings.

Competing Interests: None declared.

J Obstet Gynaecol Can 2015;37(10):922–926

INTRODUCTION

The purpose of any obstetric intervention is to reduce morbidity and mortality, and to increase maternal satisfaction while ensuring patient safety. Vaginal birth after Caesarean section continues to elicit controversy. This is partly because the practice is informed by observational studies rather than randomized controlled trials, which would be difficult to justify ethically. Indeed, a recent Cochrane review did not find any RCT available to provide reliable evidence to guide the current practice.[1] Despite numerous reports on the safety of VBAC, women who attempt it are at an increased risk of major maternal morbidity which cannot be predicted accurately.[2] In order to optimize the safety of VBAC, several professional bodies have insisted on stringent criteria to be adhered to by units offering VBAC.[3–5] However, the ideal intrapartum care is still unclear, although these efforts at least ensure maternal safety within reason. Even though the practices may not be evidence-based, they are founded on sound clinical principles and experiential knowledge.

It is unfortunate that VBAC continues to be encouraged in low resource settings, in units that barely meet any of these criteria. The basis of these unsafe practices is evident from numerous observational studies that have reported

high rates of successful VBAC in sub-Saharan Africa with "minimal adverse outcomes."[6–9] Some of these studies have concluded that VBAC is safe even without facilities for intrapartum maternal and fetal monitoring. Such conclusions are misleading. As noted in one of the papers, "the price paid (by the fetus, mother, and obstetrician) for vaginal delivery after previous Caesarean section in this resource-poor setting can be very expensive."[6]

We explore here some of the challenges faced in decision-making for women who may desire VBAC in limited resource settings. We critically analyze issues concerning patient safety that may arise from offering VBAC to patients using nonconventional birth plans. In order to encourage the safe practice of VBAC, we suggest ways that can be used to minimize morbidity while ensuring safety in these settings. Bearing in mind the heterogeneity of health institutions in low resource settings, we will focus on units that do not have the necessary capacity and resources for one-to-one midwifery care and continuous fetal monitoring during labour, as would be the practice in an ideal context.

What is a successful VBAC?

The success rate associated with VBAC is typically cited as 70% to 80%, regardless of the setting in which the studies were undertaken, and is the rate commonly cited to all patients contemplating VBAC.[3–9] However, success cannot merely be measured by the proportion of women achieving a vaginal birth. There are many aspects that need to be taken into account.

First, it is wrong to generalize findings from published studies to inform clinical practice globally. All the studies reporting on success rates of VBAC were carried out in tertiary institutions or within university affiliated hospitals.[6–9] In most developing countries, tertiary institutions tend to be concentrated in major cities and account for a very small fraction of a country's total deliveries. These institutions differ greatly from the usual district hospitals in terms of human resources, because they attract some of the best and most experienced staff including midwives and obstetricians. These institutions also tend to be training centres, having many middle grade staff who provide 24-hour coverage with the necessary support systems in place. Therefore, VBAC in such institutions can be justified even though the institution may not have access to continuous electronic fetal monitoring. This is in direct contrast to most peripheral institutions, which are located mainly in rural areas with little back-up in the event of an emergency. Bearing in mind the heterogeneity of the health care delivery systems, one cannot use findings from one institution to inform practice in another. Contextualization of evidence, expertise, and patient values or expectations is vital in the implementation of a VBAC program.

Second, the studies do not define what is meant by successful VBAC. Does a successful VBAC only refer to the delivery of a baby vaginally in a woman with a previous Caesarean section? In our opinion, VBAC should only be considered successful if the woman has managed to deliver a healthy baby vaginally without any complications, has returned home, has had no complications in the puerperium, and is satisfied with the entire process. If a woman delivers vaginally but has a postpartum hemorrhage that necessitates multiple transfusions, or develops endometritis one week after VBAC, or delivers an asphyxiated baby with impaired neurodevelopmental outcome, then that VBAC cannot be regarded as successful despite the baby having been born vaginally. In those circumstances, the mother and/or the baby has suffered severe consequences that could have been avoided had the woman opted for an ERCS. While one may argue that these are events that could occur regardless of the mode of delivery, it is known that the prevalence of these complications is further increased in women attempting VBAC.[2,10,11]

Third, most of these studies were observational in nature and are therefore prone to bias, a factor that was not appropriately addressed in most of them. There is a tendency to underreport complications and to over-report favourable outcomes, especially in an environment where the culture of incident and adverse event reporting is nonexistent.[12] Most institutions in sub-Saharan Africa do not have reliable record-keeping systems, and the quality of most retrospective chart reviews is variable.[12,13]

The only reliable way to study this would be to perform retrospective data collections as the events occur. Furthermore, these studies[6-9,12,13] do not mention how the process of selecting women for VBAC was developed. It is not clear whether the women were given a choice between VBAC and ERCS. It is possible that in some circumstances the decision to attempt VBAC was influenced by the attending physician. There is also little description of whether the women were satisfied with the outcomes in relation to their values and expectations.

Finally, we cannot conclude that VBAC is safe simply by examining a cohort of women who undergo the practice.

ABBREVIATIONS

ERCS	elective repeat Caesarean section
RCT	randomized control trial
VBAC	vaginal birth after Caesarean Section