

Vaginal Hysterectomy: Dispelling the Myths

To the Editor:

I would like to make some additional comments regarding the article published in the *Journal of Obstetrics and Gynaecology Canada*, May 2007, as well as the letter to the editor by Dr Abrahams published in the October 2007 issue of the JOGC. Both the article and the letter remind us of what differentiates gynaecologic surgeons from general surgeons. Unfortunately, our training programs in Canada and throughout the world are failing to encourage and perpetuate the art of performing hysterectomy vaginally. The recent Cochrane review mentioned in this article confirms the safety of the approach. Most minimally invasive surgical training programs concentrate on the laparoscopic approach to hysterectomy and fail to include the vaginal approach. Lack of training and reluctance to perform vaginal hysterectomy unless the uterus is normal size with some prolapse are the main factors.

I commend the authors for presenting an excellent case for the vaginal approach when considering hysterectomy for benign pathology. The article clarifies that many of the contraindications to vaginal hysterectomy described by gynaecologists are unsubstantiated.

I disagree, however, with the comments by Dr Abrahams, as well as by Dr Lefebvre, suggesting that if a posterior colpotomy is not possible, a vaginal hysterectomy cannot be performed, and it would have to be converted to either a laparoscopic or laparotomy approach.

I had the opportunity to work in the Louisiana State University charity hospitals in the early 1970s, where all vaginal hysterectomies performed on uteri 12–14-week size or under were performed using the Doderlein-Kronig technique through an anterior colpotomy. Very few, if any, of these patients had uterine descent and almost all of these patients had uterine fibroids. In patients with uteri larger than 14 weeks, one would then have to do a posterior colpotomy in order to access and clamp the uterine arteries before using a morcellation technique.

In my experience, the majority of vaginal hysterectomies can be performed using one or both of these techniques, with or without morcellation, with minimal morbidity and excellent, quick recovery.

I would encourage the resurrection of the art of the vaginal hysterectomy within a minimally invasive surgical training

program. This would necessitate the identification and utilization of “vaginalists” in the preceptorship program, which I hope would lead to better training and ultimately to gynaecologists who are more comfortable performing these procedures.

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Sonographic Measurement of the Lower Uterine Segment Thickness: Is it Truly Predictive of Uterine Rupture?

To the Editor:

We read with great interest the article published in the February 2008 issue of the JOGC by Dr Cheung, reporting a case of a uterine rupture, which occurred despite a normal sonographic lower uterine segment (LUS), measured near term.¹ The author questions the ability of this measurement to predict uterine rupture.

Although several studies have shown that sonographic evaluation of the LUS can predict uterine rupture, the best measuring technique (number of layers that need to be included, abdominal vs. vaginal) and the cut-off values to be used remain controversial. A large prospective study demonstrated that abdominal measurement of the full LUS thickness had a strong negative predictive value.² However, the incidence of a defective scar was unusually high in this population (4%), and one could question the predictive value of this technique for symptomatic uterine rupture. Measuring only the myometrial layer is expected to be more representative of the LUS thickness. This has been investigated both by vaginal and abdominal approaches, but in smaller studies with no evaluation of reproducibility.^{3,4} Moreover, as mentioned by Dr Cheung, other risk factors must be taken into account, such as the interdelivery interval and the type of closure of the uterus.^{5,6} In the current case, the interdelivery interval was less than 24 months, and the number of layers used for uterus closure at the time of prior Caesarean section was not reported.¹ The combination of an interdelivery interval of less than 24 months with a single layer closure has been associated with a likelihood of uterine rupture more than four times higher than in women with double layer closure and a longer interdelivery interval.⁶

We strongly believe that there is a need to find a consensus on the measuring technique and cut-off value of the LUS thickness and to further investigate its role in estimating the

risk of uterine rupture among other predicting factors. In contrast to the author's view, we think that collecting only case reports of uterine rupture could lead to a biased analysis by ignoring cases with favourable outcomes. Moreover, we believe there is still much interest in the possibility of a safer trial of labour in women who have had Caesarean section. Between our two tertiary centres, more than 500 women with prior Caesarean section consult the ultrasound clinics for the evaluation of the LUS every year. Therefore, in our opinion, Canadian centres performing LUS thickness measurement on a regular basis should pool all relevant data on women requesting a trial of labour in order to assess the independent predictive effect of LUS thickness adjusted for other potential confounding factors, such as prior vaginal delivery, prior uterine closure, and interdelivery interval.

Combined with careful intrapartum management,⁷ we believe that well-studied parameters for measurement of LUS thickness could lead to appropriate guidelines for the management of women contemplating a vaginal birth after Caesarean section with minimal rates of uterine rupture and lower rates of maternal and neonatal morbidity than are associated with elective repeat Caesarean sections.^{8,9}

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REFERENCES

1. Cheung VY. Sonographic measurement of the lower uterine segment thickness: is it truly predictive of uterine rupture? *J Obstet Gynaecol Can* 2008;30(2):148–51.
2. Rozenberg P, Goffinet F, Phillippe HJ, Nisand I. Ultrasonographic measurement of lower uterine segment to assess risk of defects of scarred uterus. *Lancet* 1996;347(8997):281–4.
3. Asakura H, Nakai A, Ishikawa G, Suzuki S, Araki T. Prediction of uterine dehiscence by measuring lower uterine segment thickness prior to the onset of labor: evaluation by transvaginal ultrasonography. *J Nippon Med Sch* 2000;67(5):352–6.
4. Cheung VY. Sonographic measurement of the lower uterine segment thickness in women with previous caesarean section. *J Obstet Gynaecol Can* 2005;27(7):674–81.
5. Bujold E, Bujold C, Hamilton EF, Harel F, Gauthier RJ. The impact of a single-layer or double-layer closure on uterine rupture. *Am J Obstet Gynecol* 2002;186(6):1326–30.

6. Bujold E, Mehta SH, Bujold C, Gauthier RJ. Interdelivery interval and uterine rupture. *Am J Obstet Gynecol* 2002;187(5):1199–202.
7. Hamilton EF, Bujold E, McNamara H, Gauthier R, Platt RW. Dystocia among women with symptomatic uterine rupture. *Am J Obstet Gynecol* 2001;184:620–4.
8. Hansen AK, Wisborg K, Ulbjerg N, Henriksen TB. Risk of respiratory morbidity in term infants delivered by elective caesarean section: cohort study. *BMJ* 2008;336:85–7.
9. Sobande A, Eskandar M. Multiple repeat caesarean sections: complications and outcomes. *J Obstet Gynaecol Can* 2006;28(3):193–7.

In Response

To the Editor:

I thank Dr Meyer and colleagues for their interest in the article.¹ Ensuring a safe trial of vaginal birth after previous Caesarean section (VBAC) is a major role of obstetrical care providers when caring for women with previous Caesarean section (CS). Over the years, I have been measuring the lower uterine segment (LUS) when evaluating women for trial of VBAC. Despite my effort to share my experience on LUS measurement through abstract presentations^{2–4} and journal publications,^{1,5–7} it is still not a popular practice in Canada to apply LUS measurement in the management of women with previous CS. Understandably, the main reasons for this are the lack of consensus on the measuring technique and the lack of supportive well-designed studies and unbiased data. The purpose of reporting this case was not to discourage obstetrical care providers from using LUS measurement in managing VBAC, but rather to illustrate the complexity of applying LUS measurement in the clinical setting and to stimulate the interest of obstetrical care providers in using this measurement in VBAC management. I am grateful to see that these messages are understood by Dr Meyer and colleagues.

I am also pleased to know that Dr Meyer and colleagues are supportive of measuring only the myometrial layer as the LUS thickness, despite the lack of scientific evidence in evaluating the various measuring techniques. I concur that finding a consensus on the measuring technique and assessing the predictive effect of LUS thickness for other confounding variables would promote the value of LUS measurement in managing VBAC. In this case report, the patient had a two-layer uterine closure and, therefore, the issue of the type of uterine closure with respect to uterine rupture was not emphasized in this article.

I agree entirely with Dr Meyer and colleagues about the need for a well-designed multicentre study that has the ultimate aim of developing a Canadian consensus and guideline for using LUS measurement in the management of VBAC. While desperately looking for newer information on this subject, I encourage obstetrical care providers to share their

experience through case reports and case series based on the simple principle that some evidence is better than none. Therefore, the idea of combining available data from all Canadian centres is undoubtedly an extremely valuable exercise.

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REFERENCES

1. Cheung VYT. Sonographic measurement of the lower uterine segment thickness: is it truly predictive of uterine rupture? *J Obstet Gynaecol Can* 2008;30(2):148–51.
2. Cheung VYT. Sonographic measurement of the lower uterine segment thickness in patients with previous cesarean delivery. Presented at the 61st Annual Clinical Meeting of the Society of Obstetricians and Gynaecologists of Canada; June 2005; Quebec City, Quebec.
3. Cheung VYT, Constantinescu OC, Ahluwalia BS. Sonographic evaluation of the lower uterine segment in patients with previous cesarean section. Presented at the 60th Annual Clinical Meeting of the Society of Obstetricians and Gynaecologists of Canada; June 2004; Edmonton, Alberta.
4. Cheung VYT, Constantinescu OC, Ahluwalia BS. Measurement of the lower uterine segment thickness: Technique and interobserver variability. Presented at the 60th Annual Clinical Meeting of the Society of Obstetricians and Gynaecologists of Canada; June 2004; Edmonton, Alberta.
5. Cheung VYT. Sonographic measurement of the lower uterine segment thickness in women with previous caesarean section. *J Obstet Gynaecol Can* 2005;27(7):674–81.
6. Cheung VYT. Sonographic appearance of previous cesarean scars in pregnant women as 3 macroscopic types. Author reply. *J Ultrasound Med* 2005;24:395.
7. Cheung VYT, Constantinescu OC, Ahluwalia BS. Sonographic evaluation of the lower uterine segment in patients with previous cesarean delivery. *J Ultrasound Med* 2004;23:1441–7.