Are Women's and Obstetricians, Views on Mode of Delivery Following a Previous Cesarean Section Really OCEANS Apart?

Wong Ka Woon · Thomas James M. ·
Andrews Vasanth

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About the Author

Vasanth Andrews, consultant obstetrician and gynaecologist, working at Lewisham and Greenwich NHS Trust, London. He is an accredited minimal access surgeon and has a special interest in postnatal pelvic floor dysfunction.

Abstract

Purpose Most women with one previous cesarean section (CS) are suitable for either a vaginal birth after CS (VBAC) or an elective repeat CS. Previously, nurse-led prenatal education and support groups have failed to have an impact on the mode of delivery, which women opted for after one CS. A novel one-stop obstetrician-led cesarean education and antenatal sessions (OCEANS) has been developed to inform and empower women in their decision-making following one previous CS. The objective of our study was to evaluate how OCEANS influences the mode of delivery for women who have previously had one CS.

Study Design Two-hundred and sixty-six women who had a single previous lower segment CS were invited to attend OCEANS, which is a 1-h discussion group of women between 5 and 15 in number, facilitated by an experienced obstetrician. Data were collected prospectively on women who were invited to attend OCEANS over a 12-month period commencing on the 1st January 2012.

Results 188 (71 %) attended the group, while 20 (8 %) canceled their appointment and 58 (22 %) did not keep their appointment. Those who attended OCEANS were 38 % more likely to opt for a VBAC than those who did not attend. There was no difference in the rates of successful vaginal delivery between women who attended OCEANS and those who did not (56 vs. 61 %, $p = 0.55$).

Conclusions While nurse-led prenatal education and support groups have no impact on mode of delivery after one CS, a dedicated obstetrician-led clinic increases the rate of those opting for VBAC by 38 %. Such clinics may be a useful tool helping in empowering women in their decision-making and reduce the rate of CSs.

Wong K. W., ST2 in Obstetrics and Gynaecology ·
Thomas J. M., Consultant Obstetrician and Gynaecologist ·
Andrews V. (✉), Post CCT Fellow in Obstetrics and
Gynaecology
Ashford & St Peters' Hospitals NHS Foundation Trust,
Guildford Road, Chertsey KT16 0PZ, UK
e-mail: Vasanth_andrews@hotmail.com

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Introduction

Many women who have had one CS previously are suitable for either a VBAC or an elective repeat CS (ERCS). It is unclear as to which is the safer mode of delivery for these women [1, 2]. The National Institute for Health and Care Excellence (NICE) [3] in the UK therefore, having evaluated the evidence, recommends that after discussion of the relative risks and benefits of both modes of delivery, maternal preferences should guide their subsequent decision. However, while these guidelines relate to delivery after one CS, they fail to address the consequences of how this delivery impacts on subsequent pregnancies. Women who have had two CSs would be advised to have future deliveries by CS because of the risk of uterine rupture [4]. However, the risk of complications increases with each CS a woman has. These include placenta accreta, visceral injury, need for postoperative ventilation, intensive care unit admission, hysterectomy, and death [5, 6].

In many developed countries, the VBAC rate has been steadily declining for more than a decade and was 33 % in 2000 [7]. This may be influenced by fear of litigation and concerns that VBAC may not be as safe as was originally thought [2, 8].

A qualitative study in the UK found that pregnant women who had undergone a previous CS feel that obstetricians and midwives were very supportive but failed to provide adequate guidance to help them decide on the mode of delivery [9].

In view of the risks associated with more than two CSs, and women's concern that healthcare professionals fail to provide adequate guidance to help them in their decision-making, a bespoke obstetrician-led cesarean education and antenatal session (OCEANS) was developed to inform and empower them in their decision-making following one previous CS.

Methods

OCEANS is a 1-h discussion group where between 5 and 15 women who have had one previous CS are invited to attend. The number of women invited for each session was chosen because it was felt that if there were too few women, it may appear to be confrontational, and with more than 15 people, it would become more like a lecture than an obstetrician-facilitated discussion group. Women attending the session were given written information about the risks

and benefits of VBAC and ERCS. A consultant obstetrician went through this information and then facilitated a discussion where women could discuss their concerns and aspirations for their pregnancy and delivery.

All women who had had one previous lower segment CS and with no contraindications for a VBAC were invited to OCEANS. The aim of the study was to evaluate the preferred mode of delivery for the women who attended OCEANS. The study was carried out in a district general hospital in South East England over a 12-month period commencing on the 1st January 2012.

Statistical Analysis

Data were entered onto Microsoft® excel database analyzed with IBM SPSS version 19. χ^2 and Fisher's exact tests were used to compare independent categorical data.

Results

Two-hundred and sixty-six women who had a single previous lower segment CS were invited to attend OCEANS. One-hundred and eighty-eight (71 %) attended the group, while 20 (8 %) canceled their appointment, and 58 (22 %) did not keep their appointment. Those who attended OCEANS were 38 % more likely to opt for a VBAC than those who did not attend the class (Table 1).

The rate of successful vaginal delivery in women who attempted VBAC was 79/141 (55 %), and this was not influenced by whether they attended OCEANS or not (Table 2).

Table 1 Impact of OCEANS on mode of delivery

Attended OCEANS	VBAC attempted (<i>n</i> = 141)	Elective cesarean section (<i>n</i> = 125)
Yes <i>n</i> = 188 (%)	108 (58)	80 (42)
No <i>n</i> = 78 (%)	33 (42)	45 (58)

p = 0.02, analysed by χ^2 test

Table 2 Outcome for women who had attempted a VBAC

Attended OCEANS	CS	Vaginal delivery
Yes <i>n</i> = 108	49	59
No <i>n</i> = 33	13	20

p = 0.69, analysed by Fisher's exact test

Comment

This is the first study to evaluate how a consultant obstetrician-facilitated discussion group influences the mode of delivery following a previous CS. In this study, women attending such a session were 38 % more likely to opt for a VBAC.

Previously, an education and support program for women who had had a CS failed to influence their mode of delivery. This was a large study in Canada [10] of more than 1,200 pregnant women who were randomized to standard obstetric care or were offered a comprehensive education and support program by a nurse supported in their role by a resource person with good communication skills. Their program failed to influence women's choice of mode of delivery, and this may be because in contrast to our study, the information was given by healthcare professionals who themselves did not perform CSs.

Similarly, doctors have been evaluated in a recent large randomized controlled trial of 409 patients [11] in the US. This study demonstrated that when doctors imparted information using a video, they were able to influence the choice of treatment for their patients. This study also showed that the gender and race of a doctor did not influence patient's decision-making, but the way that data were presented was important. When doctors used qualitative terms such as "significantly less," patients were influenced in their decision-making as opposed to when presented with numerical statistics, which patients found hard to comprehend.

Other effective methods of influencing mode of delivery after one CS have been evaluated. Montgomery et al. [12] conducted a three-arm randomised controlled trial investigating routine maternity care, computer-based information and a computer-based decision analysis tool. They found that women who used the computer-based decision analysis tool were far less anxious, had less decisional conflict, greater knowledge, and were 23 % more likely to opt for a VBAC.

The limitation of our study is that there was no control group, and therefore, it is difficult to assess the impact of attending OCEANS on the mode of delivery, in relation to how such women would have decided on the mode of delivery if such a discussion group was not available. Nevertheless, the strengths of our study are the number of women investigated and that, compared to those who chose not to attend OCEANS, there was a significant difference in the mode of delivery they chose, suggesting that such obstetrician-facilitated discussion groups probably do influence women's choice on their mode of delivery.

In conclusion, ERCS leads to a significant increase in maternal morbidity and mortality in women who wish to have further children. The falling VBAC rates in developed countries may be reversed by obstetrician-facilitated discussion groups in conjunction with videos and computer-based learning and decision-making tools. Such a concerted approach may also empower women further to help in their decision-making, and reduce levels of uncertainty and anxiety, and therefore, such strategies should be implemented in maternity units.

Ethical Standards The manuscript does not contain clinical studies or patient data.

Conflict of interest The authors declare that they have no conflict of interest.

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