

# Cervical preparation prior to second-trimester surgical abortion and risk of subsequent preterm birth

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Received 14 June 2016

Revised 17 November 2016

Accepted 21 November 2016

## BACKGROUND

Dilatation and evacuation, or D&E, is the safest method of second-trimester surgical abortion. It has a lower rate of immediate complications than the alternative of medical induction, causes less pain and bleeding, and is also faster, cheaper, and preferred by the majority of women.<sup>1</sup> In addition to elective pregnancy termination, D&E has a role to play in the effective management of second-trimester miscarriage and pre-viable preterm prelabour rupture of membranes.

However, access to D&E in the British National Health Service (NHS) is inadequate. Although no recent published data is available, it is common knowledge amongst abortion service providers that only one hospital in the country provides D&E to 24 weeks' gestation, and only a very small minority of hospitals provide any D&E service at all. As a result, many women are not offered this option for termination, particularly women choosing a termination because of a seriously abnormal antenatal fetal diagnosis,<sup>2</sup> or those with complex medical problems that require inpatient care.<sup>3</sup>

## BARRIERS TO IMPROVED ACCESS TO D&E

There are probably multiple barriers to improved access to D&E in the NHS, but in my experience many doctors are concerned about the potential for damage to the cervix, which could result in reduced cervical integrity for subsequent pregnancies. D&E requires greater cervical dilatation than first-trimester termination procedures and hence poses a greater risk of injury<sup>4</sup> that could increase the risk of subsequent pregnancy complications, in particular preterm birth (PTB).

The concern regarding PTB is a legitimate one. In a recent meta-analysis published in the *American Journal of*

*Obstetrics and Gynecology*, Saccone *et al.*<sup>4</sup> concluded that prior surgical evacuation of the uterus may be an independent risk factor for PTB, and advised caution in the use of surgical evacuation for abortion. In a large meta-analysis, the authors found that those with a history of prior surgical abortion had a significantly higher risk of PTB [5.4% vs 4.4%; odds ratio (OR) 1.52, 95% confidence interval (CI) 1.08–2.16], compared to controls (i.e. women without a history of surgical abortion), and furthermore, women who had a history of D&E had a higher risk of PTB compared to those who had undergone vacuum aspiration, which is the method used for first-trimester surgical abortion in the vast majority of cases (5.5% vs 3.6%; OR 1.54, 95% CI 1.38–1.73). While these ORs are relatively small, one must bear in mind that each year in England and Wales alone around 15 000 women undergo second-trimester abortion.<sup>5</sup>

## CERVICAL PREPARATION PROTOCOLS

In 2015, the Royal College of Obstetricians and Gynaecologists (RCOG) released guidance entitled *Best Practice in Comprehensive Abortion Care*,<sup>6</sup> in which it outlined standards of care, including suitable regimens for cervical ripening, also known as cervical preparation, prior to D&E. Cervical preparation involves the administration of agents to soften or dilate the cervix pre-operatively. This reduces the need for rigid dilatation, which is known to have the potential to cause trauma to cervical tissue.<sup>7 8</sup> Following their meta-analysis, Saccone *et al.*<sup>4</sup> also encourage the use of cervical ripening before evacuation as well as better surgical methods. The RCOG states that acceptable regimens for cervical ripening include the medical agents misoprostol and mifepristone, or osmotic dilators, and provides a wide range of



**To cite:** Lyus R. *J Fam Plann Reprod Health Care* 2017;**43**:70–71.

acceptable duration of exposure to these agents, including intervals as short as 2 hours (for misoprostol) or 3 hours (for osmotic dilators).

The RCOG guidance and the variety of options it presents would be an appropriate approach to reducing the risk of cervical injury at D&E and subsequent PTB if we lacked other data from which more specific conclusions could be drawn. However, such data are available. Four papers, between them examining over 1500 patients, have looked specifically at D&E and subsequent pregnancy outcomes, including PTB, and found no, or very little, clinically significant impact on subsequent pregnancy morbidity. In all four of these studies cervical preparation involved osmotic dilators used overnight (and in some cases over 2 nights).<sup>9–12</sup> While the studies are retrospective, they give us good reason to believe that such a regimen substantially mitigates or eliminates the increased risk of PTB after D&E.

However, we have no equivalent data to reassure us, or our patients, about other cervical preparation protocols such as medical agents, or osmotic dilators used for a just few hours on the day of the termination, although these are both permitted by the RCOG guidance. At the very least, it would be reasonable to hypothesise that women undergoing D&E with these alternative protocols could account for a proportion of the increased risk of PTB after D&E that was observed in the Saccone *et al.* study. In my opinion, the constellation of data on D&E and subsequent pregnancy outcomes makes a compelling case for revision of the RCOG guidance to require the use of osmotic dilators overnight prior to second-trimester D&E, at least until evidence is produced that is similarly reassuring for alternative protocols.

It is known that alternative, shorter protocols can be used with comparably low rates of immediate complications, but it is not acceptable to draw conclusions about long-term complications from these surrogate outcomes, when more specific data are available. The need for more directive guidance is pressing. Many UK providers continue to use same-day cervical preparation protocols for D&E<sup>13</sup> right up to 24 weeks' gestation.<sup>14</sup> Thousands of women each year are undergoing surgical abortion with protocols that may be associated with an increased risk of PTB, when alternatives with more reassuring data supporting their use are available.

## CONCLUSIONS

“Abortion is not a complex procedure”, the RCOG writes in the preface to its guidance.<sup>6</sup> I agree with that sentiment, but the data about cervical preparation prior to D&E and subsequent risk of PTB are somewhat complex, and guidance should reflect the complexity and detail of the available data. Furthermore, by ensuring that D&E is consistently practised in the

safest manner possible, concerns about the safety of the procedure may be allayed. Then, one hopes, more doctors might be willing to provide an important service that they currently deny to their patients.

**Competing interests** None declared.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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