



C-Obs 27

Measurement of cervical length in pregnancy for prediction of preterm birth

Introduction

Ultrasound measurement of cervical length is increasingly being performed. The clinical usefulness of this tool is yet to be fully evaluated. This document highlights some of the contemporary issues around this topic.

Statement

- Accurately measured ultrasound cervical length has an inverse relationship with the risk of preterm birth, mainly because cervical shortening represents the final common pathway for preterm birth.
- Cervical length is most accurately measured by transvaginal ultrasound examination with an empty bladder. Pressure is minimised to the point just before the image becomes blurred and the closed portion measured with the shortest of three measurements being that used in many research studies.
- In interpreting the length of a cervix correctly measured transvaginally, use is made of published charts of cervical length in relationship to gestation (1). However, a useful guide is that the 5th centile for cervical length is approximately 25mm at between 20 and 30 weeks gestation.
- The risk of preterm birth increases with other observations such as internal os dilatation, “funneling” and observed shortening with spontaneous Braxton Hicks contractions or fundal pressure. However, the predictive value of these observations is less than the relationship of simple cervical length with preterm birth. Consequently, the use of provocation by fundal pressure or Valsalva manoeuvre is not required in assessing cervical length.
- The strength of cervical length in the prediction of preterm birth risk varies according to the presence of other risk factors, for example the presence of a multi-fetal gestation.
- In the absence of risk factors, women with an isolated short cervix in the 2nd trimester and singleton pregnancy are still more likely to deliver at term rather than preterm. For example, if the background risk of birth before 34 weeks is 4% but cervical length is measured as less than 25 mm (10th centile) at less than 20 weeks, 79% will still give birth after 34 weeks (2).
- There is currently no clinical utility in the routine measurement of cervical length in the 3rd trimester.

- The value of identifying short cervical length is limited by a lack of proven therapeutic interventions. Currently:
- Cervical cerclage may be useful for women with singleton pregnancies and short cervical length, especially in the presence of identified risk factors eg: prior preterm birth or prior mid-trimester miscarriage (2, 3). Current information regarding usefulness of cervical cerclage for singleton pregnancies with other risk factors including Mullerian anomaly, multiple dilatation and evacuation procedures, prior cervical surgery or diethylstilboestrol exposure is limited. In these cases clinicians will need to assess the specific circumstances and available evidence before making individual recommendations. Berghella et al found *no* benefit from cervical cerclage in twin pregnancies where short cervical length was identified (3).
- Progestogen therapy was shown to be effective in prolonging gestation beyond 34 weeks' in a screened general population in whom the cervical length is found to be less than 15mm at 18-22 weeks' gestation (4).
- Antibiotics, non-steroidal anti-inflammatory agents or other tocolytic agents. The benefits of these therapies remain uncertain and it may be preferable to offer these treatments only to women with a short cervical length within the context of properly conducted randomised controlled trials.
- Lifestyle interventions such as cessation of paid work, abstinence from coitus, rest at home or in hospital have not been adequately evaluated by randomised controlled trials. Clinicians should consider all available evidence and the specific circumstances of a patient, before making lifestyle recommendations.

In cases of threatened preterm labour, a threshold of 30 mm has been consistently reported to exclude preterm labour, but there is no threshold of cervical length that establishes the diagnosis. In women with contractions and cervical length less than 30 mm, additional testing (such as fetal fibronectin) may help predict the patient's risk of preterm delivery within the next several days (5).

References

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