History of LLETZ in Pregnancy and Management of Cervical Shortening
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The prevention of preterm birth is a significant public health issue as it is the largest cause of neonatal and early childhood mortality. Surviving children have an increased incidence of disability (cerebral palsy, visual/sight impairment, learning difficulties). A shortened cervical length or cervical insufficiency is associated with an increased risk of preterm birth.[1] GPs play an integral role in the management of early pregnancy and antenatal care, the identification of women with risk factors for a short cervix may help to decrease the rates of preterm birth in Australia[2].

Case Study

Emma Smith, 37yo, Gravida 0 Para 0, presents for preconception planning. She has a past medical history of a previous LLETZ procedure in 2012 for CIN III. Her last pap smear was in 2016 and was normal. She is currently smoking 3-4 cigarettes/day. **What are issues specific to Emma that should be mentioned as part of preconception counselling?**

Preconception care encompasses counselling and biomedical, behavioural and social health interventions to optimise health of women and their partners with the aim of improving health and social outcomes for themselves, in pregnancy and for their children. GPs have an important relationship with families and play an integral role in identifying modifiable and non-modifiable preconception risks and to make informed decisions about planning for pregnancy[2].

Regarding Emma's preconception counselling, it would be beneficial to include specific information regarding substance use in pregnancy including cessation of smoking and optimisation of her current health including having a repeat cervical screening test. Folic acid and iodine supplementation, weight reduction, chronic disease optimisation and genetic carrier testing should also be discussed.

Emma engages with your preconception counselling. She is motivated and with her partner, manages to quit smoking. She has a normal cervical screening test and has been taking prenatal supplements. She sees you again 5 months after her initial consult. She is pregnant at 9 weeks gestation and has had a dating ultrasound confirming a live intrauterine singleton pregnancy. The pregnancy was spontaneously conceived. **Given she has had a previous LLETZ, how would you manage her pregnancy at this stage?**

On confirmation of a viable intrauterine pregnancy, an important part of early antenatal care is identification of risk factors for preterm birth. Early screening for risk factors for cervical shortening, and intervention is key in the prevention of preterm birth[3].

Historical risk factors
- Mid trimester loss suggesting cervical insufficiency
- Previous preterm prelabour rupture of membranes < 27+0 weeks
- Previous cervical trauma (e.g. repeat TOP, miscarriage, cone biopsy, LLETZ, D+C)

Congenital / hereditary risk factors
- In utero diethylstilbestrol exposure
- Uterine anomalies (congenital cervical hypoplasia or aplasia)
- Connective tissue abnormalities (e.g. Ehlers-Danlos syndrome[4,5]

If risk factors are identified, detection of a short cervix in the mid-trimester by transvaginal ultrasound is an important predictor of spontaneous preterm birth. Ttransvaginal ultrasound has been shown to be the gold standard for measuring cervical length, especially in those women with risk factors[2]. Guidelines recommend serial ultrasound examination for those women with risk factors for cervical insufficiency. At our tertiary referral centre for those women with such risk factors, cervical screening is performed at combined first trimester screening, 16 weeks, morphology and 24 weeks gestation.

Emma is appropriately linked in with early cervical length screening. At 16 weeks gestation her cervical length is 27mm. She presents to her morphology ultrasound at 21 weeks gestation and her cervical length is 19mm. **What management should Emma be offered?**

The incidence of a shortened cervix between 16-24 weeks gestation is estimated to be 2-3%. Once sonographic evidence of cervical shortening is established (or in the presence of risk factors, even prior), referral to a tertiary centre for multidisciplinary antenatal care is recommended.[5]
After counselling in the antenatal clinical, Emma is commenced on a vaginal progesterone pessary. Multiple studies have shown that vaginal progesterone used in the context of cervical shortening and can almost halve the risk of early preterm birth and is associated with a reduction in neonatal morbidity. A dose of 200mg daily from 16 to 36 weeks' gestation is recommended. Initial serial ultrasounds (1-2 weekly) should also be planned for cervical surveillance however these should be ceased after 28 weeks' gestation[6,7,8].

Emma was linked in with her local hospital's preterm birth clinic. Her cervical length remained stable until 28 weeks' gestation. She had an otherwise uncomplicated antenatal course, ceased vaginal progesterone at 36 weeks' gestation and delivered via normal vaginal delivery at 38 weeks gestation.

References

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