

Cervical Suture: A single centre experience

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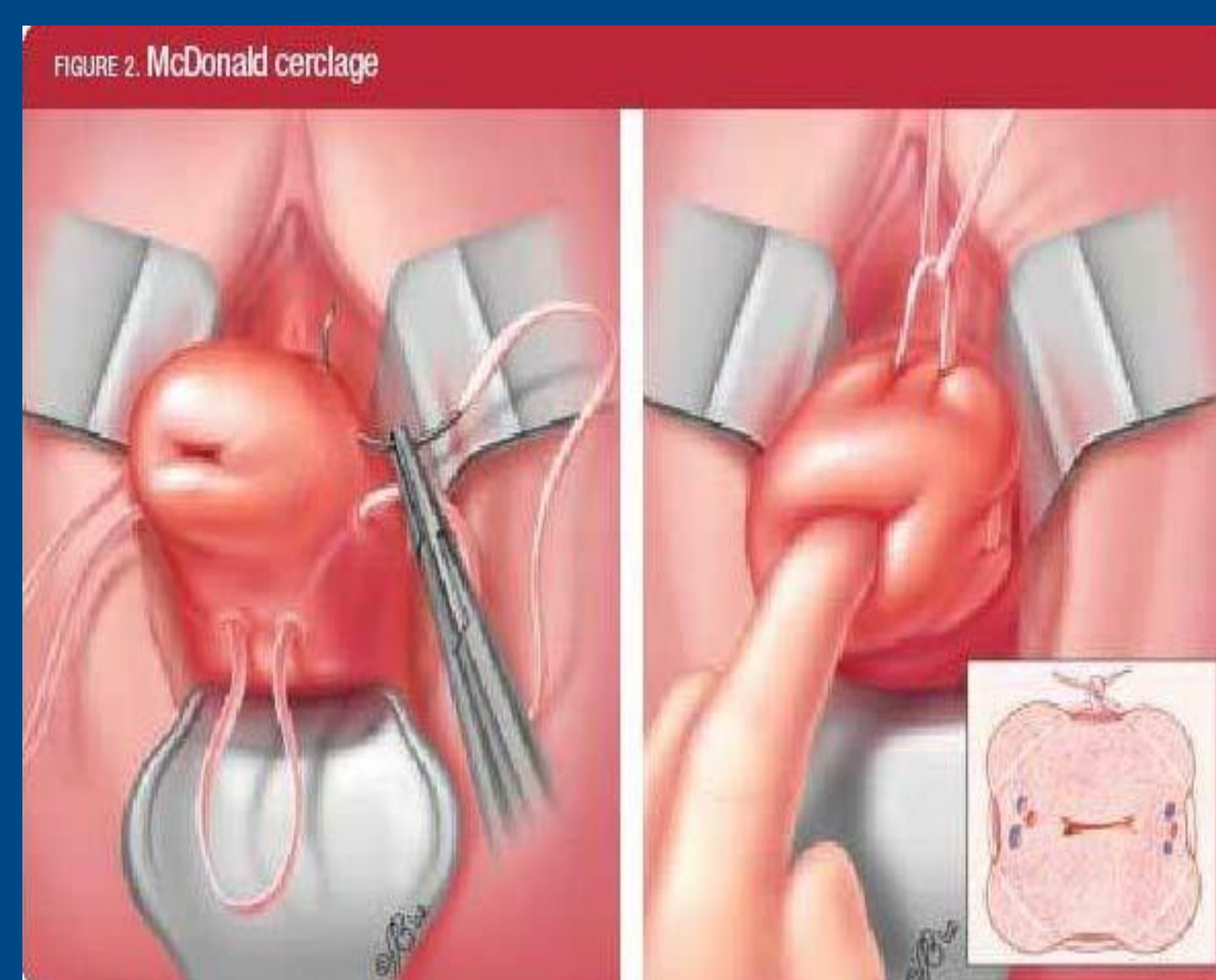
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Introduction

Preterm delivery is the main cause for neonatal mortality and morbidity worldwide. One cause for extreme prematurity and previable delivery is cervical incompetence. Women at risk of preterm delivery can be identified by measuring cervical length on ultrasound from as early as 12 weeks gestation. Use of progesterone and cervical sutures can prolong pregnancy in those at risk of preterm birth in those with a short cervix or history of cervical incompetence. At present there is no standard means of screening for cervical incompetence.

Aim

Our aims were to identify our centre's experience of use of cervical sutures, contrasting elective suture use with semi-elective and rescue sutures.



Method

Women who had an attempted cervical suture insertion were identified from theatre records from 2010-2013. Case notes were reviewed retrospectively. "Index" pregnancy was identified as the first attempt to insert a cervical suture in an pregnancy. Cervical sutures were categorised as "elective" when there was no evidence of cervical change prior to insertion, "semi-elective" when cervical sutures were attempted following shortening / funnelling of the cervix was identified on transvaginal ultrasound scanning. Rescue sutures were classified as where cervical dilatation was said to have occurred prior to insertion.

Data was subsequently collected on 26 patients.

Parameters recorded included:

- Maternal Age
- Maternal BMI
- Ethnicity
- Household smoking exposure & smoking status
- Previous LLETZ/Cone/Laser
- Previous SGA infant
- Previous PTB
- Previous previable delivery >12 weeks gestation
- Natural/ Assisted Conception
- Cervical length at 20 weeks (if performed)
- Cervical dilatation at time of insertion of suture
- Technique used
- Membranes ruptured during suture placement
- Gestation and mode of delivery
- Live birth/ Stillbirth

Results:

26 patients were identified. 25 sutures were attempted in singleton pregnancy and 1 in a DCDA twin pregnancy. 10/25 (40%) of women had a previous history of preterm birth. Elective cervical sutures were used in 11/26 (42.3%) cases, Semi-elective sutures in 7/26 (26.9%) cases, Rescue sutures in 8/26 cases (30.8). 19/26 (73.1%) of pregnancies resulted in a live birth, of which 11/11 (100%) Elective sutures, 6/7 (85.7%) of Semi-elective sutures and **only 2/8 (25%)** Rescue sutures resulted in live birth (p 0.0005).

There were a total of 15 women who received non-elective sutures, of which, information regarding colposcopy was available for 9 patients. 2/9 (22.2%) underwent cervical laser therapy for cervical abnormality, and none had received either LLETZ or Cone biopsy. Smoking exposure in pregnancy was recorded in 14/15 women, and smoking exposure was found in 5/14 (35%) women. 2/14 (14.3%) women had previous SGA infants, and 2/14 (14.3%) had previous preterm deliveries or previable deliveries. Information was missing for one woman. 4/13 (30.8%) of women in this group had a previous diagnosis of PCOS and similarly, 4/13 (30.8%) women had assisted conception.

A sonographically short cervix was demonstrated in 9/15 (60%) women, with the remainder being diagnosed clinically. Cyclogest pessaries were also used in 6/13 cases (46.2%). Two women had intraoperative rupture of membranes and were conservatively managed. No women who had rescue sutures delivered after 37 weeks gestation in this cohort. Of those who had semi-elective sutures, mean gestation at delivery was 34+4.

6 women subsequently had further pregnancies, and all had repeat elective sutures. Of these, 1 woman lost a DCDA twin pregnancy.



Conclusion

Survival to viability in the "rescue" cervical suture group was significantly poorer in comparison to both "elective" and "semi-elective" groups. This data supports the use of early cervical length screening in high risk cases to identify shortening of the cervix prior to cervical dilatation. Further studies are required to identify optimal timing of serial cervical length. It is hoped that earlier identification of shortening of the cervix and timely insertion of cervical sutures may improve birth outcomes for those at risk of cervical incompetence.