

Emergency Cervical Cerclage: Dose the Technique Matter? A Single Institute Experience

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INTRODUCTION

Cervical insufficiency (painless cervical dilatation) with the inability of the uterine cervix to retain a pregnancy in the second trimester,¹ affects 1% of all pregnancies and 8% of women with recurrent mid-trimester losses.² Emergency cerclage (EC) could be a salvage measure in the case of premature cervical dilatation with exposed fetal membranes in the vagina² and can be considered up to 26+6 weeks of gestation.³ Reported techniques so far, describe pushing the fetal membranes using Foley's catheter or swabs before insertion of cerclage.⁴ It is a surgically challenging operation, that could fail in cases of the presence of bulging fetal membranes through a cervical dilation that is narrower than the diameter of the dilated membranes.⁴ Additionally, handling the membranes could increase complications such as rupture fetal membranes.^{2,4}

AIMS AND OBJECTIVES

1. Primary objective: To propose a novel technique for EC.
2. Secondary objective: To study intra- and postoperative complications of EC carried out at a tertiary institute and report gestational age at delivery of women who underwent EC.

METHOD

A retrospective analysis was carried out using electronic patient records between December 2020 to October 2022.

Only women with painless cervical dilatation, a singleton pregnancy between 16+0 to 26+6 weeks, the ability to provide written consent for the procedure and the absence of infection or vaginal bleeding were included.

The EC technique starts by gently pushing the anterior vaginal wall and bladder upward and away from the membranes till the anterior lip of the cervix is identified. The cervix is traced, applying holding instruments circumferentially in a 360-degree manner to apply traction in opposing directions, thus relieving cervical spasm. An exaggerated Trendelenburg position is then adopted and the amniotic fluid is allowed to flow back inside the uterus, thus allowing for the membranes to be reduced manually or using a catheter. Two circumferential cerclages using monofilament are inserted.

RESULTS

Figure 1: Women who met the inclusion criteria

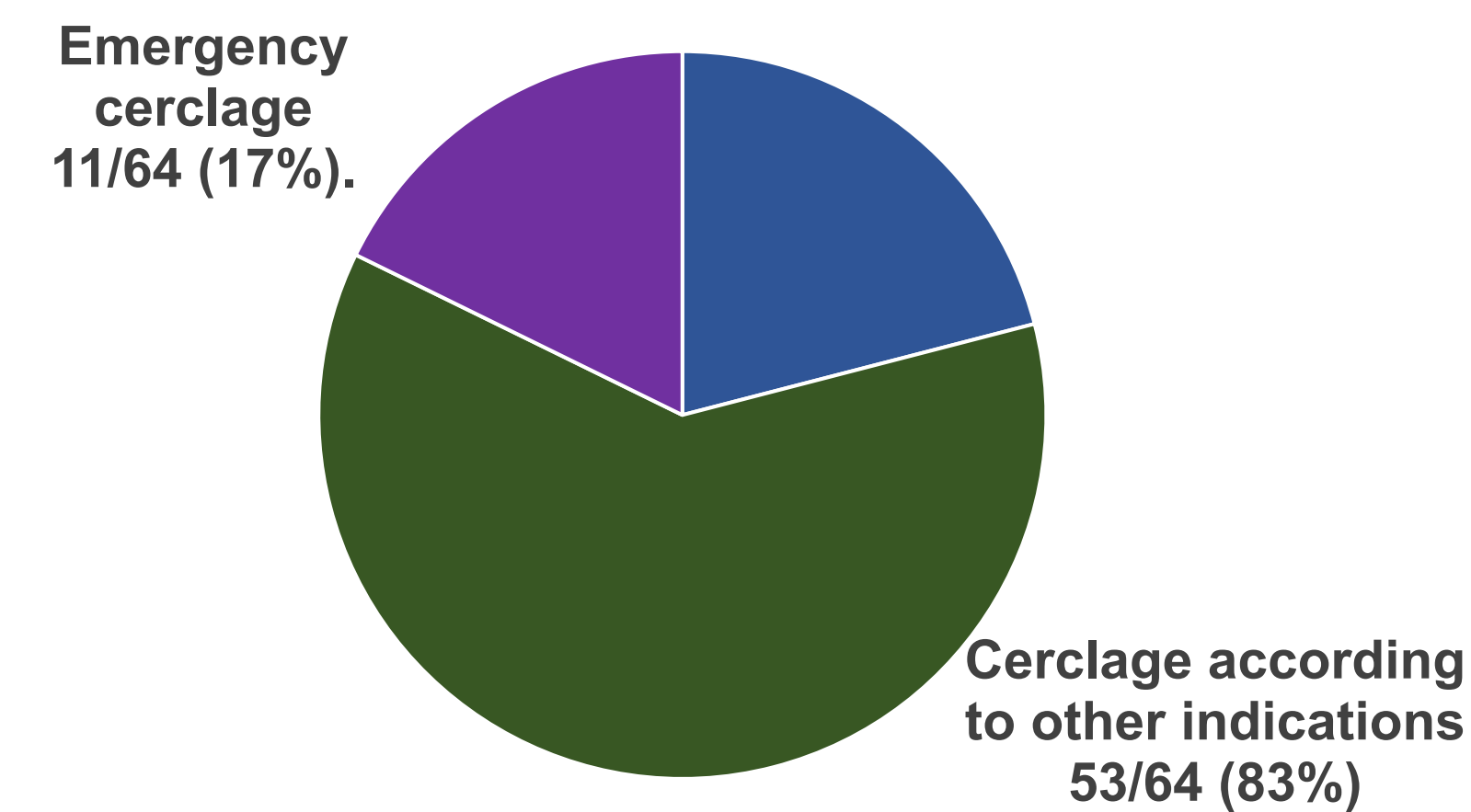


Figure 2: Gestational age at insertion of EC

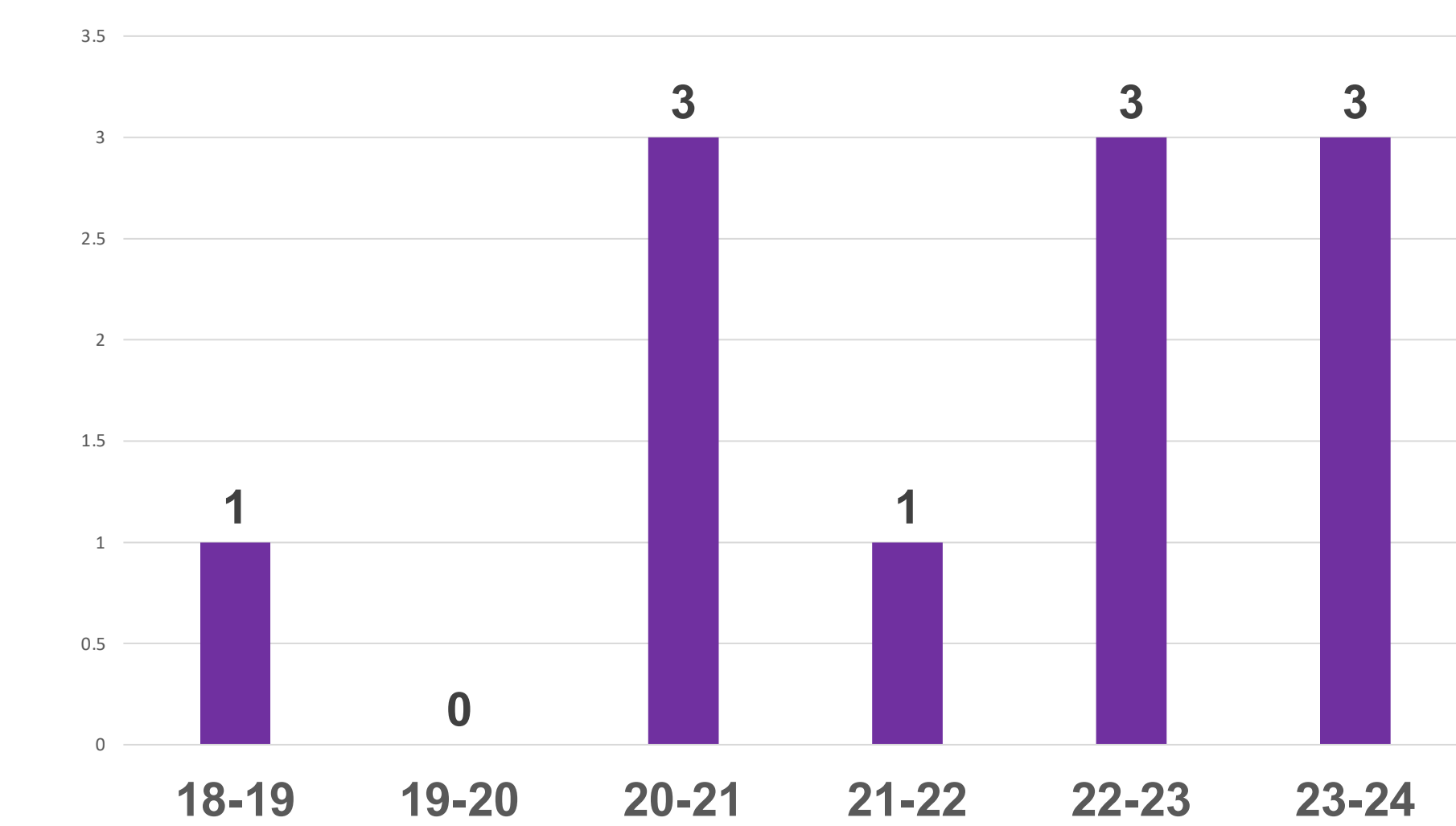


Figure 3: Gestational age at delivery

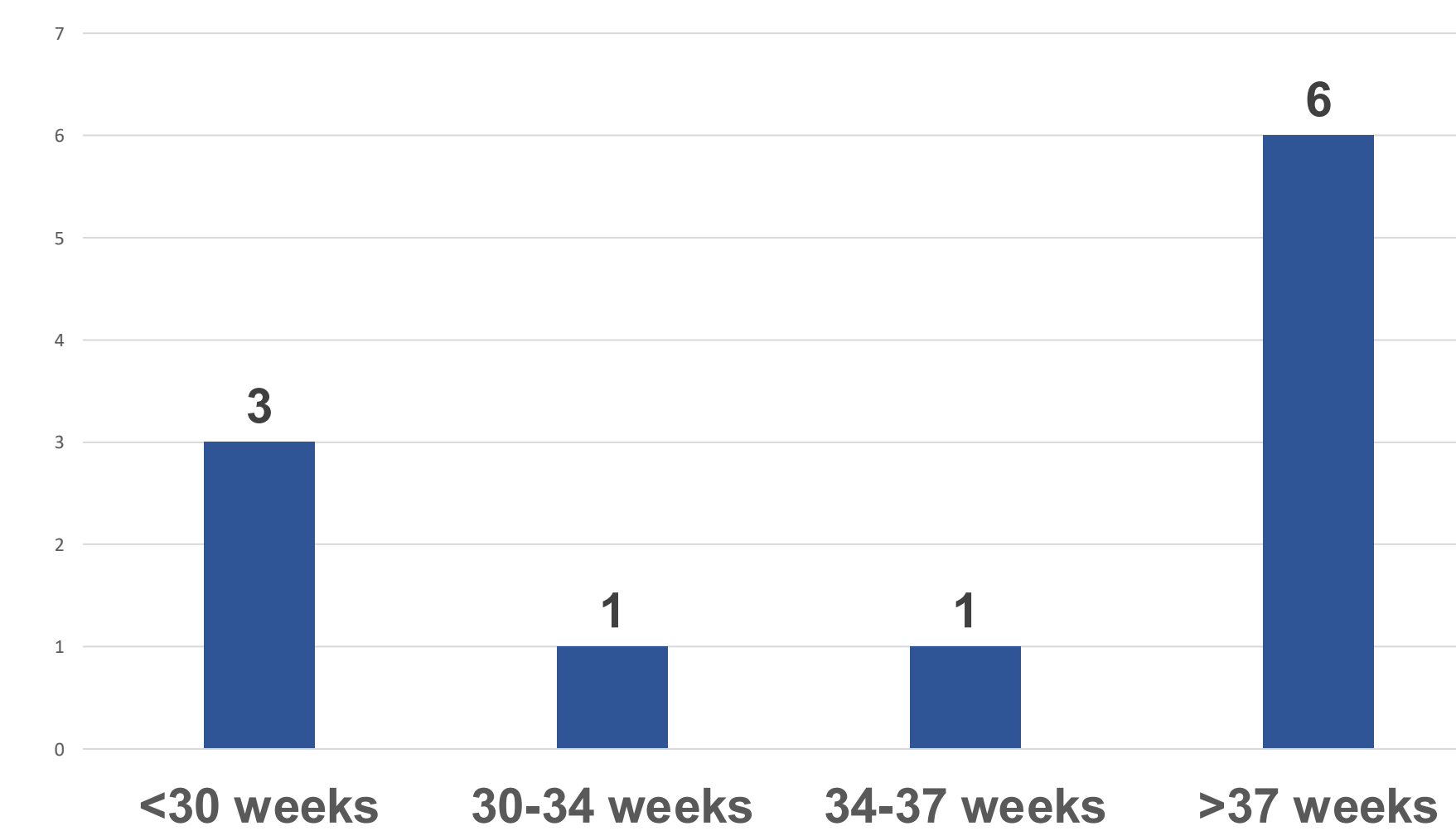


Figure 4: Postoperative complications

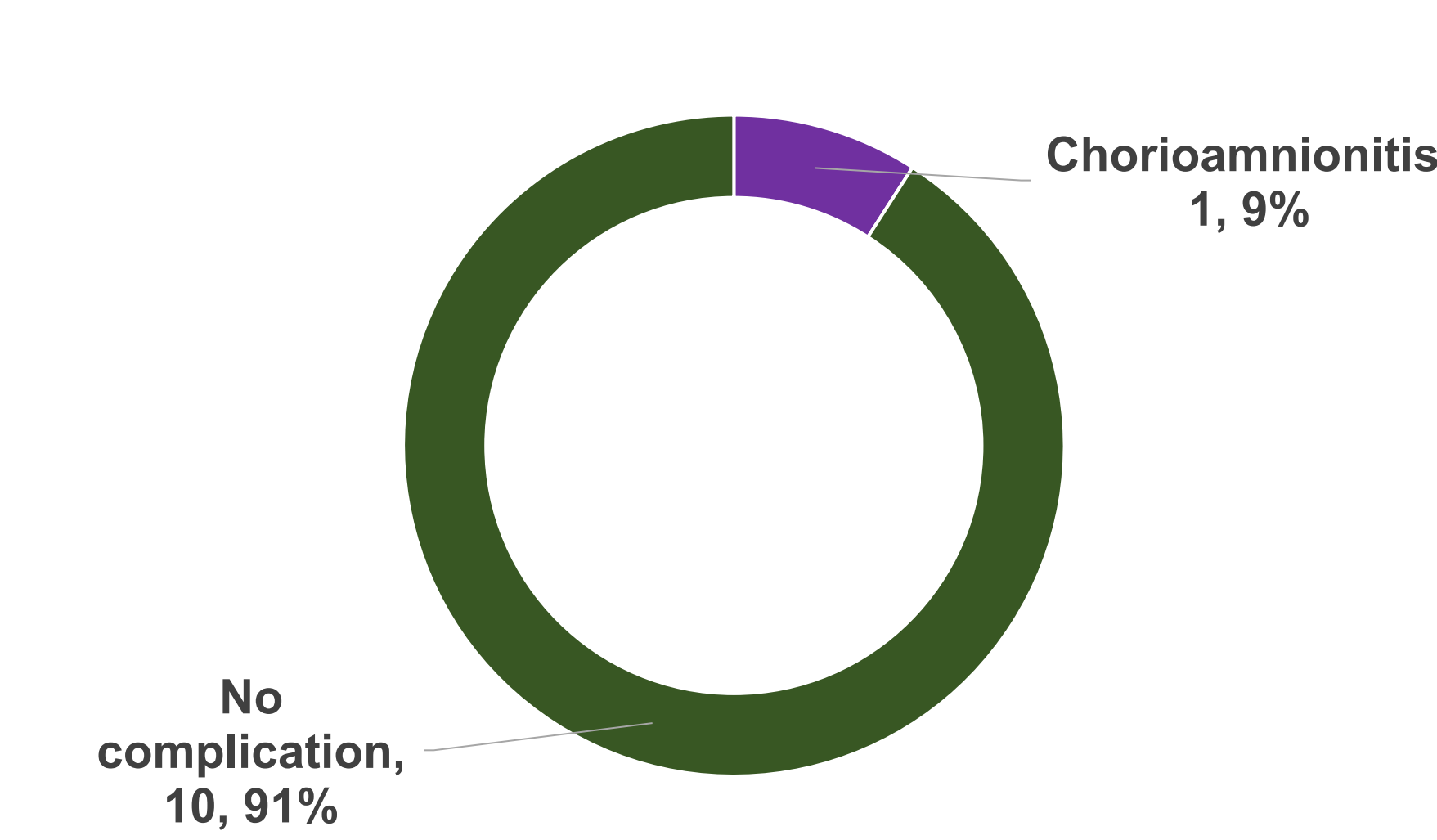


Image 1: Pre-operative ultrasound image showing dilatation of the cervix with bulging membranes with amniotic sludge.

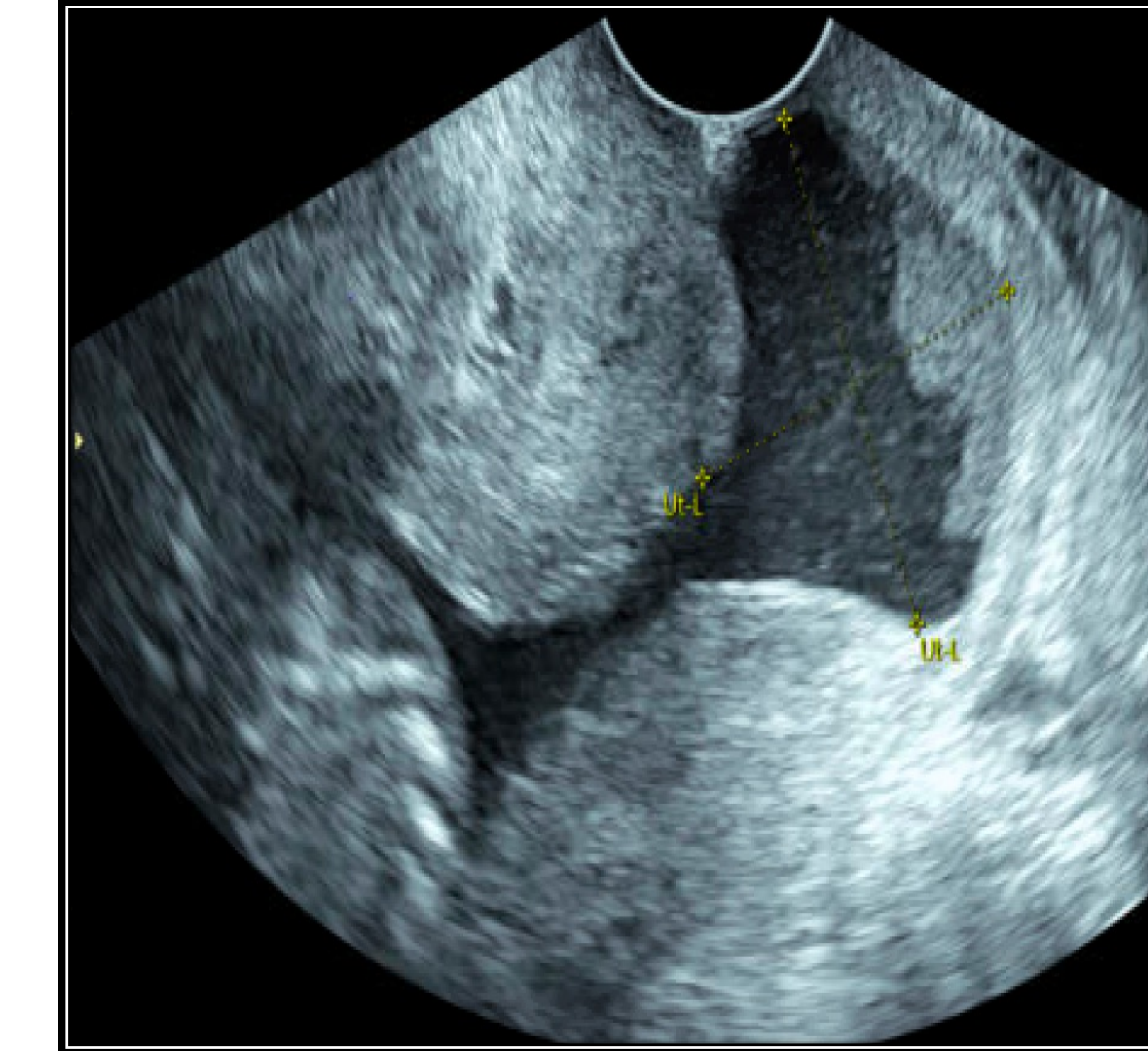


Image 2: Post-operative (5 weeks after procedure) image showing closed cervix which is 3.4 cm in length. The gestational age at delivery was >34 weeks.



Summary of results:

- Out of 64 patients who underwent cervical cerclage by the main author at this tertiary centre, 17% (11/64) met the criteria for emergency cervical cerclage outlined above.
- BMI >30 kg/m² and/or smoking were reported in 64% of the women (7/11).
- 90% (10/11) of emergency cerclages were performed between 20 and 24 weeks.
- None of the patients included in this cohort sustained any rupture of fetal membranes or intraoperative complications.
- Only one woman had overt post-operative chorioamnionitis which resulted in removal of the cerclage.
- 55% of the cohort (6/11) delivered after 37 weeks, 64% (7/11) delivered after 34 weeks and 73% (8/11) delivered after 30 weeks.

CONCLUSION

The use of this EC modification, which concentrates on manipulating and pulling the constricted cervix instead of pushing the full tense membrane inwards, could potentially allow performing this procedure even with advanced bulging fetal membranes. The outcome of the operations and pregnancies is favourable and promising. Thus, larger robust studies would be clinically useful to further evaluate the outcome of this intervention in reducing the incidence of preterm birth.

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