Management of women with a mid-trimester short cervix

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Objective
Women with a short cervix in the second trimester of pregnancy are at a higher risk of giving birth preterm. All women who have a second trimester anomaly scan in our Department, they also have an ultrasonographic cervical assessment as a screening for prematurity. Moreover, women with a short cervix are referred to our tertiary referral center for further management. The aim of this study was to examine the results following the application of different management protocols in women with a mid-trimester short cervical length.

Methods
First Department of Obstetrics and Gynaecology is a tertiary referral Centre for high risk pregnancies. All women with a singleton pregnancy and a cervical length ≤ 25 mm during a seven year period were given two management options. The first was the placement of a vaginal pessary in combination with 200 mg vaginal progesterone every night from diagnosis to 37 weeks. The second was the administration of either 200 mg of micronized progesterone, or 80 mg of progesterone gel every night and close follow-up with serial transvaginal scans to assess for further cervical length changes. When the cervix shortened <15 mm until 26 weeks, they were offered cervical cerclage, based on the assumption that cervical changes were no more reversible by the progesterone. The cerclage was done under epidural anaesthesia with a modified McDonald technique. Following cerclage women were given antibiotics (cefuroxime 750 mg iv every 8 hours and metronidazole 500 mg every 12 hours for two days, followed by roxithromycin 300 mg per os, for 8 days), as well as rectal suppositories of diclofenac 50 mg or ibuprofen 500 mg (two doses). All women following cerclage stayed hospitalized for at least two days and the white blood count (WBC) and C-reactive protein (CRP) levels were checked. Then they were discharged home with instruction of having plenty of rest and avoiding intercourse. All women following cerclage continued the vaginal progesterone use. Exclusion criteria were a maternal age <18 years, major fetal anomaly, placenta praevia, active vaginal bleeding, a cerclage in situ and symptoms of preterm labor. Women with ballooning membranes (beyond the external os) were also excluded from the pessary placement. All women signed an informed consent form before entering the study. The primary efficacy variables were preterm delivery rate (<34 and 32 weeks) and pregnancy prolongation. The secondary outcomes were mean gestational age at birth and birthweight.

Results
245 women were found to have a cervical length ≤ 25 mm. One of these was excluded because did not met inclusion criteria for analysis due to a very short cervix at the initial evaluation (10 mm) as she declined of receiving either a stitch or a pessary. 144 out of 245 had a pessary placement in combination with vaginal progesterone, 25 out of the remaining 100 women, were managed with cervical cerclage because of a cervical length <15 mm at the initial evaluation, while 76 received vaginal progesterone. Of the latter, 37 women had a cervix <15 mm during the follow-up visits and they were also managed with cerclage, thus only 38 women remained to the only progesterone group. The patients' characteristics are shown in table 1. The preterm delivery rate before 34 and 32 weeks was 10.4 and 6.3% respectively for the pessary group, 20 and 12% for the cerclage group, 13.5 and 8.1% for the progesterone + cerclage group, and 10.5 and 5.3% for the progesterone only group. The mean latency period was 15, 14.4, 15.3 and 16 weeks for the pessary, the cerclage, the progesterone+cerclage and the progesterone only group, respectively. These results were not significantly different. No difference was also observed among the 4 groups regarding the secondary outcomes. Table 2 presents the pregnancy outcome in the 4 groups.

Conclusion
The application of the two different management protocols with 4 different interventions in women with a mid-trimester short cervix resulted in a similar perinatal outcome irrespective of the intervention that was implemented.