

## Spontaneous preterm birth: use of transvaginal ultrasound for the cervical length

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### Objective

To determine the use of transvaginal ultrasound cervical length in fetal second trimester scanning for preventing spontaneous preterm delivery, the management and treatments for pregnancy prolongation for an improved neonatal outcome.

### Methods

We performed a retrospective study of 9081 asymptomatic women attending the routine second trimester ultrasound scanning (between 19<sup>+0</sup> and 21<sup>+6</sup> gestational weeks), examined by transvaginal sonography during 3.5 years (July 2019-December 2022). We diagnosed patients with low cervical length, defined as  $\leq 25$ mm.

### Results

64 of the 9081 women (0.70 %) showed a low cervical length. Mean age was 33.97 years (range 18-45 years). 37 patients were primigravidas and 27 were multigravida (only 6 with history of preterm labour). Most of them were singleton pregnancies (N=60). A history of cervical conisation was reported in 15 women. The patients with cervical length between 15–25 mm were treated with vaginal progesterone (N=42, group 1), while the patients with cervical length  $< 15$  mm and twin pregnancies were treated with cervical pessary and vaginal progesterone (N=22, group 2). 16 patients in the first group required a cervical pessary because of cervical shortening and 7 women in the second group required a rescue cerclage because of membranes prolapse. The mean cervical shortening in the first group was 5.82 mm and in the second group was 4.45 mm. There were 16 patients with episodes of threatened premature labour (but only 5 were finally preterm labour). There were 3 patients with late abortions  $< 23$  weeks and 18 patients with premature deliveries  $< 36^{+6}$  weeks. The remaining patients (N=43) had a spontaneous delivery at term ( $> 37^{+0}$  weeks). All of them were vaginal deliveries (N=56) except 8 caesarean section.

### Conclusion

A short cervix identified by transvaginal ultrasound is predictive of a risk of premature labor. The use of cervical length assessment in fetal second trimester ultrasound, previously of possible threatened premature labour, could be useful to select low cervical length as risk factor in asymptomatic pregnant women. The combination of vaginal progesterone and cervical pessary could be included as appropriate preterm birth prevention strategies, but further studies would be necessary to reassure it.

