

EP15.87: Prevention of Recurrent Preterm Birth: Cervical Cerclage vs Vaginal Progesterone vs Cervical Pessary (2020–2025)

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Background

Women with a history of spontaneous preterm birth are at increased risk of recurrence. Cervical cerclage, vaginal progesterone and cervical pessary are all used for prevention, but their relative effectiveness remains uncertain.

Aim: to compare maternal and neonatal outcomes across these three strategies.

Methods

Retrospective comparative study in a tertiary obstetric centre, January 2020 – December 2025. Outcomes: recurrent preterm birth (<28, <35, <37 weeks), maternal sepsis, neonatal mortality and NICU admission. Subgroup: short cervix (<25 mm). Categorical outcomes compared using Chi-square and Fisher's exact tests.

180 women received preterm birth prevention

72 with prior spontaneous preterm birth

Cerclage
n = 25

Progesterone
n = 23

Pessary
n = 24

Conclusion

Vaginal progesterone showed the most favourable pregnancy outcomes in this cohort, whereas cervical pessary was associated with poorer neonatal outcomes. Prospective studies are required to confirm these findings.

Results

Table 1. Gestational age at delivery (% within group)

Gestation at delivery	Cerclage (n=25)	Progesterone (n=23)	Pessary (n=24)
< 28 weeks	16.0%	13.0%	45.8%
28 – 34 weeks	20.0%	13.0%	8.3%
35 – 36 weeks	28.0%	17.4%	25.0%
≥ 37 weeks (term)	36.0%	56.5%	20.8%

Bands are mutually exclusive and sum to 100% within each group. Comparison of preterm birth between groups: $p = 0.059$.

Table 2. Neonatal and maternal outcomes (% within group)

Outcome	Cerclage (n=25)	Progesterone (n=23)	Pessary (n=24)
Neonatal mortality	20.0%	13.0%	45.8%
Maternal infection	40.0%	21.7%	20.8%

Maternal infection: $p = 0.24$. NICU admission was reported for the cerclage group only (72%).

Subgroup — short cervix (<25 mm). Among women with both a prior preterm birth and a current short cervix, there was no statistically significant difference between the three groups in delivery <35 weeks or in neonatal mortality.

56.5%

reached term with progesterone
(highest of the 3 groups)

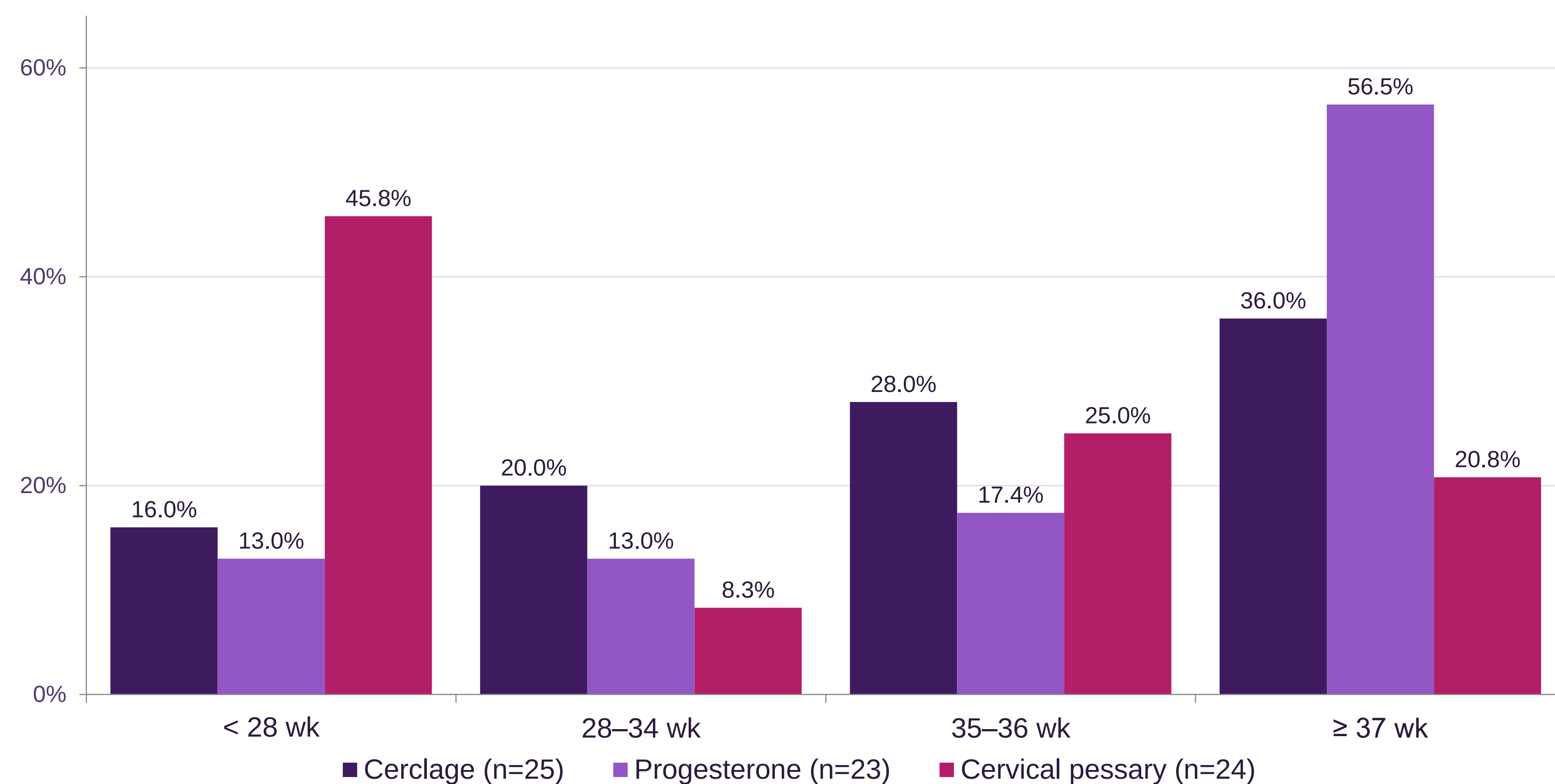
45.8%

delivered <28 weeks with
pessary
(highest of the 3 groups)

40.0%

maternal infection with cerclage
 $p = 0.24$, not significant

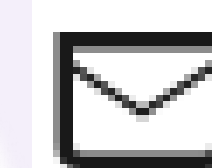
Figure 1



Gestational age at delivery by treatment group. Bands are mutually exclusive; values are percentages within each treatment group.

Limitations

- Retrospective, single-centre and non-randomised: intervention was chosen by the clinician, so confounding by indication is likely.
- Small arms (23–25 each). The $p = 0.059$ comparison is underpowered — non-significance is not equivalence.
- No adjustment for cervical length or gestation at intervention, plurality, BMI, smoking or prior obstetric history.
- Cerclage indication and type, progesterone dose and route, pessary type, and combined or crossover therapy were not recorded.
- Neonatal mortality and NICU admission are not adjusted for gestational age at delivery, which drives both.
- Maternal sepsis lacked standardised criteria, and multiple outcomes were compared without adjustment for multiplicity.



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