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Consequences of cervical pessary for subsequent pregnancy

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Objective

To evaluate the effect of cervical pessary, as a strategy to prevent preterm birth (PTB), on the outcome of subsequent pregnancy and maternal quality of life 4 years after the index twin pregnancy.

Methods

Between 2009 and 2012, the ProTWIN trial randomized women with a multiple pregnancy to pessary use vs standard care for the prevention of PTB. The trial showed no benefit in unselected women with a twin pregnancy, but showed a 60% reduction in poor perinatal outcomes in favor of the pessary group in the subgroup of women with a mid-trimester short cervix (cervical length < 38 mm). All women were invited to participate in a follow-up study 4 years after their participation in the ProTWIN trial. In this follow-up study, maternal quality of life was assessed using the EQ-5D-3L questionnaire and women were asked separate questions about subsequent pregnancies. Results were compared between women who were randomized to the pessary vs the control group in the ProTWIN trial by calculating relative risk (RR) and 95% CI. Subgroup analysis was performed for women with a mid-trimester short cervix (cervical length < 38 mm).

Results

Of the 813 women included in the ProTWIN trial, 408 (50.2%) participated in this follow-up study, comprising 228 randomized to the pessary group and 180 to the control group in the original trial. The median interval between participation in the ProTWIN trial and participation in this follow-up study was 4.1 (interquartile range (IQR), 3.9-7.1) years. Ninety-eight (24.0%) participants tried to conceive after their participation in the ProTWIN trial. Of those, 22 (22.4%) women did not have a subsequent pregnancy (no difference between pessary and control groups), seven (7.1%) women had at least one miscarriage but no live birth, and 67 (68.4%) women had at least one live birth (35 in the pessary vs 32 in the control group; RR, 0.93 (95% CI, 0.8-1.07)). In two women, the pregnancy outcome was unknown. Preterm delivery (< 37 weeks of gestation) of the first live birth occurred in three women in the pessary vs one woman in the control group (all singleton; RR, 2.57 (95% CI, 0.28-23.44)). No differences were found between the pessary and control groups in the subgroup of women with mid-trimester short cervix, but the numbers analyzed were small. The median health state index score was 0.95 (IQR, 0.82-0.95), with no difference between the pessary and control groups.

Conclusion

Our findings suggest that there are no long-term effects of pessary use on the outcome of subsequent pregnancies and maternal quality of life. Data on obstetric outcome were limited due to the small numbers.