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ABSTRACT

OBJECTIVE: To determine whether 17-alpha-hydroxyprogesterone caproate (17P) reduces the incidence of preterm birth (PTB) in women with a history-indicated cerclage.

STUDY DESIGN: Retrospective cohort study of women who received a cerclage for a prior PTB, analyzed based on exposure to 17P. The primary outcome was delivery prior to 35 weeks. Secondary outcomes were PTB < 37, 32, 28 and 24 weeks, interval between cerclage placement and delivery, gestational age at delivery & birth weight.

RESULTS: Of 94 women with a history-indicated cerclage, 15 received 17P and 79 did not. Baseline characteristics did not differ between the two groups. There was no difference in PTB < 35 weeks or in secondary outcomes between the two groups.

CONCLUSION: 17P does not appear to have an effect on preterm birth < 35 weeks in women with a history-indicated cerclage.

BACKGROUND

- 17-alpha-hydroxyprogesterone caproate (17P) and cerclage placement have individually been shown to be effective for prevention of recurrent preterm birth (PTB).
- We studied whether the addition of 17P would have a prolonging effect on gestation in women who have had a cerclage placed for a history of PTB.

MATERIALS & METHODS

- Retrospective cohort study of women with a history-indicated McDonald cerclage placed for a prior PTB.
- Exclusion criteria: multiple cerclages within the same pregnancy, multiple gestations, lethal anomalies and intrauterine fetal demise.
- Primary outcome: PTB < 35 weeks.
- Secondary outcomes: PTB < 37, 32, 28 and 24 weeks, interval between cerclage placement and delivery, gestational age at delivery, and infant birth weight.
- Data was analyzed using chi-square and Fischer's exact for categorical variables and Mann-Whitney U test for continuous variables (SAS 9.1).

RESULTS

- 94 women with a history-indicated cerclage were identified. 15 received 17P and 79 did not.
- The recurrent PTB rate < 35 weeks was 19.2%.
- The overall recurrent PTB rate (< 37 weeks) was 37.2%.

TABLE 1: Demographic and clinical characteristics

Variable	17P n = 15 (%)	No 17P n = 79 (%)	P
Age* (years)	32.1 (29.6, 37.1)	32.5 (29.4, 34.7)	0.60
Race: Black	10 (66.7)	48 (60.8)	0.51
Smoker	2 (13.3)	8 (10.1)	0.66
Number of prior PTBs*	1.0 (1.0, 2.0)	1.0 (1.0, 2.0)	0.99
Gestational age of earliest prior PTB* (wks)	24.0 (22.0, 31.0)	22.0 (21.0, 25.0)	0.11
>1 D&C	4 (26.7)	17 (21.5)	0.74
History of cervical conization	1 (6.7)	8 (10.1)	0.99
Mullerian anomaly	1 (6.7)	3 (3.8)	0.51
Gestational age at cerclage placement* (wks)	14.0 (13.0, 14.4)	13.0 (12.0, 14.0)	0.21

*Results noted as median with interquartile range in parentheses.

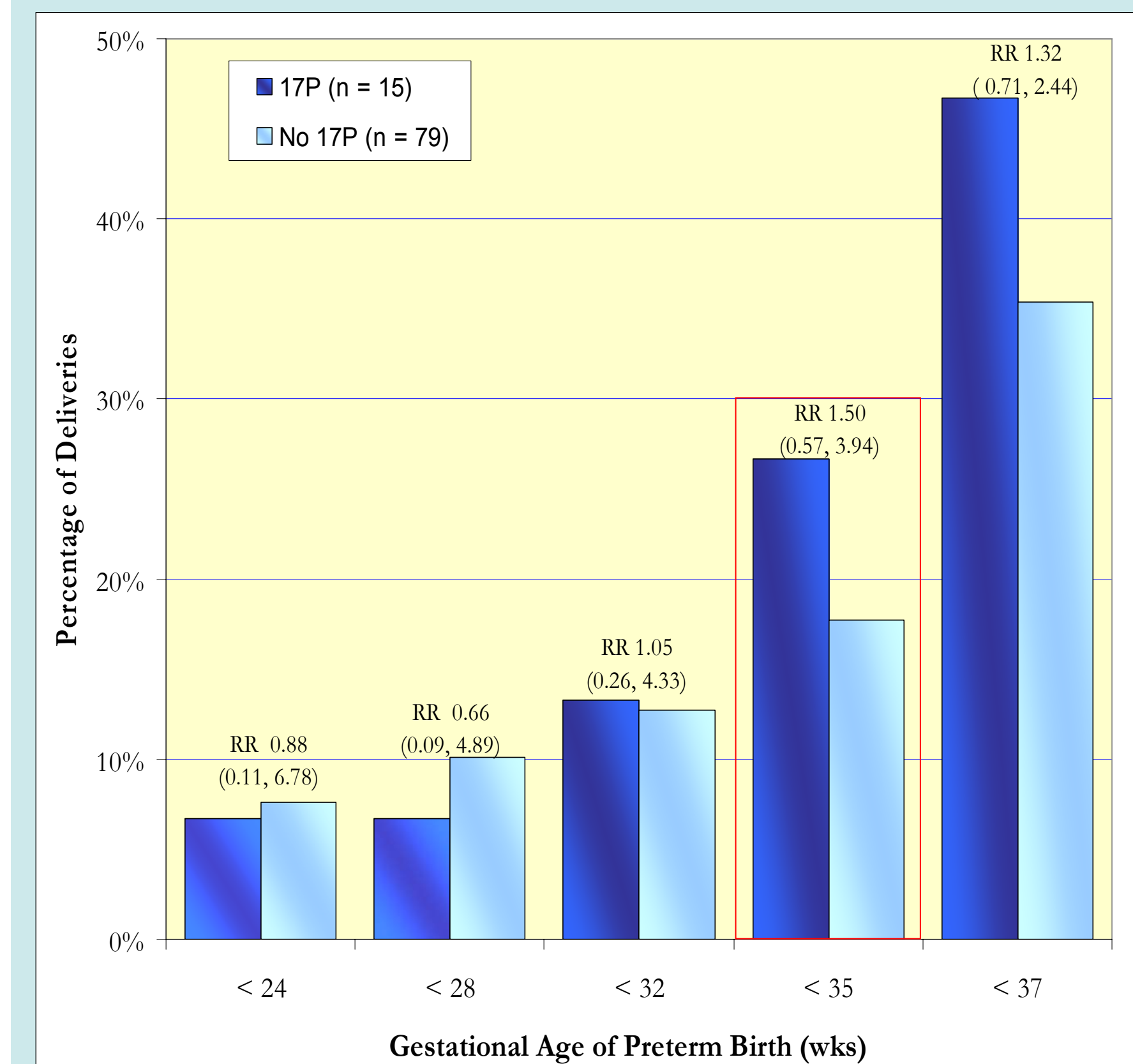
TABLE 2: Effect of 17P on cerclage interval, gestational age & birth weight*

Outcome	17P n = 15	No 17P n = 79	P
Interval between cerclage placement and delivery (days)	175.0 (128.0, 187.0)	172.0 (155.0, 183.0)	0.52
Gestational age at delivery (wks)	37.9 (34.0, 39.1)	37.8 (36.0, 39.3)	0.95
Infant birth weight (grams)	2948.0 (2155.0, 3351.0)	3172.5 (2517.5, 3490.0)	0.37

*Results noted as median with interquartile range in parentheses.

RESULTS (cont.)

FIGURE: Effect of 17P on PTB in women with a history-indicated cerclage



CONCLUSIONS

- 17P did not decrease the incidence of PTB < 35 weeks in women treated with both 17P and a cerclage versus only the cerclage.
- In women with a history-indicated cerclage, 17P was not associated with a prolonging effect on gestation as compared to the cerclage alone.