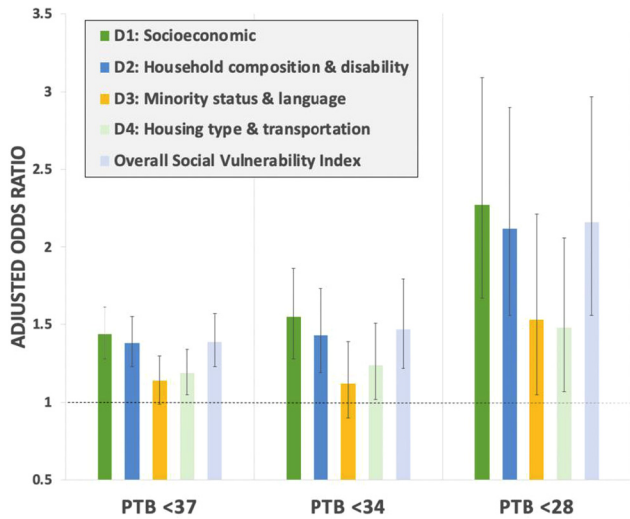


Figure. Multivariable logistic regression results. Shown for each model is the adjusted odds ratio* for PTB <37, <34, and <28 weeks' gestation by each individual social vulnerability index (SVI) domain and the overall SVI. Error bars represent the 95% CI for each model.



*all initial models control for Black race, smoking during pregnancy, male fetus, chronic hypertension any diagnosis of diabetes mellitus, transvaginal cervical length <25mm, and multiple gestation. After backwards selection, all co-variables with $p < 0.20$ remained in final models.

15 Long-term development of children born to women with twin pregnancies treated with pessary or progesterone



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OBJECTIVE: To compare the effectiveness of cervical pessary and vaginal progesterone in improving long-term development outcomes of children born to women with twin pregnancy and mid-trimester short cervix.

STUDY DESIGN: We followed children born to women randomized to pessary or progesterone at ≥ 24 months of age (NCT02623881; NCT04295187) (Dang et al. 2019)

RESULTS: We randomized 300 women to pessary or progesterone. In the pessary group (N=150), eight women had both twins died, five women had either twin died, and two women (2 sets of twins) were lost to follow-up. Corresponding figures in the progesterone group (N=150) were six, five, and one, respectively. Among women eligible

for follow-up, response rates were 85.7% (120 women, 237 children) and 79.7% (114 women, 224 children). Mean age of children at follow-up was 37.7 ± 3.9 months and 37.2 ± 3.7 months. Mean height and weight of children were comparable. The composite of poor outcome was found in 10.5% children in the pessary group versus 15.8% in the progesterone group (relative risk 0.66; 95% confidence interval 0.43-1.01; Table 1). Among surviving children, mean ASQ-3 scores were not significantly different. In children born to women with CL ≤ 28 mm, pessary significantly reduced the poor composite outcome and the risk of abnormal ASQ-3 in the skill of communication, fine motor, problem solving, personal-social (Table 2).

CONCLUSION: We could not prove that pessary, compared to progesterone, reduces the risk of abnormal developmental outcomes in children born to women with twin pregnancies and mid-trimester short cervix. However, pessary substantially improves the development outcomes in children born to women with a CL ≤ 28 mm.

Table 1. Ages & Stages Third Edition (ASQ-3) scores and proportion of children with abnormal scores or perinatal death per randomized women

Variable	Pessary (n = 237)	Progesterone (n = 224)	RR [95%CI]	p-value
ASQ-3 mean scores				
Communication	54.54 \pm 8.32	52.47 \pm 11.22	2.07 (0.25, 3.88)	0.125
Gross motor	57.30 \pm 4.90	55.95 \pm 7.35	1.35 (0.20, 2.50)	0.076
Fine motor	46.36 \pm 12.39	44.91 \pm 13.90	1.45 (-0.97, 3.86)	0.397
Problem solving	55.16 \pm 7.97	53.49 \pm 10.22	1.67 (-0.01, 3.36)	0.087
Personal social	52.04 \pm 8.01	49.87 \pm 10.71	2.17 (0.43, 3.91)	0.083
Composite outcome of abnormal ASQ-3 or perinatal death of at least one child				
	31/296 (10.5)	47/298 (15.8)	0.66 [0.43-1.01]	0.06

Values are number of patients (%).
RR, Relative risk; CI, confidence interval

Table 2. Intention to treat analysis; Ages & Stages Third Edition (ASQ-3) proportion of children with abnormal scores or perinatal death per randomized women with CL ≤ 28 mm

Abnormal ASQ-3 scores – n (%)	Pessary (n=94)	Progesterone (n=70)	RR [95%CI]	p-value
Deceased children	3 (3.2)	1 (1.4)	2.23 [0.24-21.03]	0.47
Surviving children	91 (96.8)	69 (98.6)	0.98 [0.94-1.03]	0.47
Communication	0 (0.0)	10 (14.5)	-	<0.001
Gross motor	0 (0.0)	2 (2.9)	-	0.156
Fine motor	0 (0.0)	10 (14.5)	-	<0.001
Problem solving	0 (0.0)	6 (8.7)	-	0.004
Personal social	0 (0.0)	11 (15.9)	-	<0.001
Abnormal ASQ-3 scores – n (%)	0 (0.0)	13 (18.8)	-	-
Composite abnormal ASQ-3 scores – n (%)	3 (3.2)	14 (20.0)	0.16 [0.05-0.53]	<0.001

Values are number of patients (%).
RR, Relative risk; CI, confidence interval

16 Survival without severe neonatal morbidity in very preterm twins according to planned mode of delivery



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