

Universal cervical length screening after 24 weeks is not useful (Winner of the SIMP Award, in memory of Professor J. Francesco Branconi)

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Objective. To evaluate the accuracy of a single cervical length (CL) measurement performed after 24 weeks of gestation in predicting spontaneous preterm birth (sPTB) in asymptomatic singleton pregnancies at low anamnestic risk for sPTB.

Materials and Methods. Retrospective, single-centre cohort study. Data regarding maternal demographics, medical and obstetrical history, and pregnancy outcome of 2905 patients were collected. 1667 patients had CL measured at 24+0 to 27+6 weeks of gestation and 2363 patients at 28+0 to 32+0 weeks. 1125 patients were present in both gestational age windows. The predictivity of CL for sPTB was evaluated through logistic regression analysis. results were adjusted for confounding factors.

Results. sPTB occurred in 64 patients (2.19%). A shorter CL and a lower BMI were significantly associated with sPTB. In the 24⁺⁰-27⁺⁶ weeks group, sPTB occurred in 33 patients (1.98%). CL had a moderate predictive value for sPTB (ROC curve analysis: AUC 0.71, CI 0.61-0.81). In the 28⁺⁰-32⁺⁰ weeks group, sPTB occurred in 54 patients (2.29%). CL had a low predictive value for sPTB (ROC curve analysis: AUC 0.6, CI 0.53-0.66).

Conclusions. The predictive value of CL for sPTB in asymptomatic, low-risk patients after 24 weeks of gestation is low. CL assessment in this population should not be performed.

The predictive value of CL for sPTB in asymptomatic, low-risk patients between 24 and 28 weeks of gestation is moderate. Further research should focus on interventions to prevent sPTB in this population. The predictive value of CL for sPTB in asymptomatic, low-risk patients after 28 weeks of gestation is low. CL assessment in this population should not be performed.

24 ⁺⁰ -27 ⁺⁶ weeks of gestational age				
	Preterm birth = 33	Term birth = 1634	OR (C.I. 95%)	p-value
Age	32.8(28 - 36)	33.6 (30 - 37)	0.98 (0.92 - 1.03)	0.41
BMI	22.64 (18.90 - 25.30)	23.72 (20.20 - 25.69)	0.96 (0.88 - 1.04)	0.70
Ethnicity				
White	29 (1.97%)	1442 (98.03%)	reference	
Black	1 (3.45%)	28 (96.55%)	2.58 (0.47 - 14.22)	0.28
South Asian	2 (3.03%)	64 (96.97%)	1.90 (0.50 - 7.12)	0.34
East Asian	0 (0%)	31 (100%)	0.78 (0.04 - 13.58)	0.86
Mixed	5 (1.43%)	69 (98.57%)	1.06 (0.20 - 5.60)	0.95
Cervical length	29 (22 - 38)	37 (34 - 41)	0.91 (0.89 - 0.93)*	<0.01
Progesterone	8 (5.44%)	25 (1.64%)	3.57 (1.61 - 7.93)	<0.01
28 ⁺⁰ -32 ⁺⁰ weeks of gestational age				
	Preterm birth = 84	Term Birth = 2407	OR C.I. 95%	p-value
Age	32.6 (28 - 38)	33.6 (30 - 37)	1.01 (0.99 - 1.02)	0.46
BMI	21.84 (19.49 - 23.38)	23.43 (20.20 - 25.34)	0.91 (0.84 - 0.99)	0.02
Ethnicity				
White	44 (2.16%)	1993 (97.84%)	reference	
Black	2 (4.26%)	45 (95.74%)	2.46 (0.66 - 9.22)	0.18
South-Asian	5 (3.48%)	111 (96.52%)	1.81 (0.67 - 4.88)	0.24
East Asian	2 (3.28%)	59 (96.72%)	1.88 (0.51 - 6.97)	0.34
Mixed	2 (1.94%)	101 (98.06%)	1.1 (0.3 - 4.03)	0.88
Cervical length	30.5 (24 - 37)	36 (32 - 40)	0.92 (0.89 - 0.94)*	<0.01
Progesterone	11 (5.53%)	43 (1.99%)	2.98 (1.53 - 5.8)	<0.01