



EP16.153 Universal midtrimester transvaginal cervical length screening improves detection of short cervix and identification of high-risk pregnancies

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Introduction

Transvaginal cervical length (CL) measurement is an important clinical tool to identify women at high risk for preterm birth (PTB) who might benefit from interventions to prevent or delay PTB

Objective

To compare clinical characteristics and preterm birth outcomes among patients undergoing mid-trimester (18-22w) transvaginal cerclage placement at centers with universal versus non-universal

Methods

Design: Retrospective cohort from 6/2016–8/2020
Location: Centers in the U.S. (6) and Colombia (2)
Population: Singleton pregnancies classified by universal vs non-universal CL screening. Patients underwent cervical cerclage for ultrasound and physical exam indications
Exclusion: History-indicated cases or with missing data
Clinical characteristics: CL, indication, gestational age (GA) at placement, progesterone use
Outcomes: PTB <37, <34, latency to delivery adjusted for CL, indication, GA at placement, progesterone use, and prior PTB

Results: 509 singleton pregnancies: 264 (52%) were in universal and 241 (48%) in non-universal screening centers

Clinical characteristics	Universal CL Screening (N=264)	Non-universal CL Screening (N=241)	p-value
Cervical length at cerclage placement: <25 mm	253 (96%)	218 (91%)	0.003*
Cervical length at cerclage placement: <10 mm	122 (46%)	87 (36%)	0.002*
Ultrasound indicated cerclage	154 (58%)	219 (91%)	
Physical exam indicated cerclage	110 (42%)	22 (9%)	<0.001*
GA at cerclage placement, weeks, mean (SD)	12.0 (9.1)	14.6 (9.5)	0.004*
Pericerclage vaginal progesterone use	144 (54%)	83 (34%)	<0.001*

- Unadjusted PTB <37 weeks was similar (44% vs 43%, p=0.3), and PTB <34 was more frequent (34% vs 24%, p= 0.002*) in the universal CL screening group
- After multivariable adjustment, screening practice (universal CL vs non-universal CL) was not associated with:
 - PTB <37 weeks (aOR 0.9 [95%CI:0.5-1.5] p=0.7)
 - PTB <34 weeks (aOR 1.2 [95%CI:0.7-2.1] p=0.5)
 - Latency to delivery (aHR 0.96 [95%CI:0.7-1.4] p=0.8)

*statistical significance

Conclusions

- Centers performing universal CL screening treated higher-risk cerclage recipients, with shorter CL, physical exam indication, and earlier placement
- Similar adjusted PTB and latency to delivery between groups could support universal screening as a strategy for earlier risk identification and timely intervention