The Angle Labor Pain Questionnaire demonstrates good to excellent test-retest reliability and performance for pain measurement during PRETERM LABOR

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Background and Hypothesis

- Women's experiences of preterm labor pain remain a "black box"

  - Most (80%) labor analgesia trials (Cochrane Review 2018) excluded preterm labor and the remaining trials combined pain findings with term labor in analyses

- This is despite:

  - Low rates of epidural use during preterm labor (less than ½ the rate expected based on term labor)

  - Very high rates of childbirth-related PTSD after preterm childbirth which are also associated with delivery pain

- Research aimed at better understanding, managing and treating preterm labor pain is best conducted using pain tools validated for this purpose

> **Hypothesis:** The Angle Labor Pain Questionnaire (A-LPQ) will demonstrate adequate Test-retest reliability (ICC >0.7) and good overall performance during early active preterm labor

Methods: Single group, two-test research design

Sixty women in early, active preterm labor (≥24 to <37 weeks) without pain relief

Primary outcome: Test-retest reliability using ICC

Secondary outcomes: Sensitivity to change and responsiveness, content validity, & convergent validity with other pain tools

TEST 1
1) Angle Labor Pain Questionnaire (A-LPQ)
2) Numeric Rating Scale (NRS)
3) Verbal Rating Scale (VRS)
4) Pain Mastery Scale (PMS)
5) Angle Pictorial Pain Mapping and Ranking Tool (A-PPMRT)

20 min

TEST 2
1) Repeat Test 1 scales (*A-LPQ* other order, *NRS, VRS, PMS, A-PPMRT*)
2) *Patient Global Impression of Change Scale (PGICS)*

Results (*n*=60)

Participant Baseline Characteristics

- 50% of women were nulliparous

- 62% had moderate to late preterm pregnancies ($\geq$32 to <37 weeks); 38% had extremely to very preterm pregnancies ($\geq$24 to <32 weeks)

- 50% reported moderate pain; **25% reported severe or agonizing pain**

Primary Outcome

- A-LPQ summary and subscale scores showed **good to excellent test-retest reliability** (ICC's 0.82-0.92, *p*<.001) and **acceptable to excellent internal consistency** ($\alpha\geq$0.71)

Secondary Outcomes

- Supported A-LPQ sensitivity to change (standardized mean response: trivial to small effect sizes), high responsiveness (Guyatt's Responsiveness Index), content validity (between markers and A-LPQ subscales, *p*<.05) and convergent validity (*p*<.001)

Discussion & Conclusions

- Our results support A-LPQ use for measurement of preterm labor pain during early active labor. We are also first to explore & describe the nature & variability of preterm labor pain

- Our previous research supports A-LPQ use during term labor. The current study opens the door to comparative studies between preterm and term labor pain

- Finally, a comparison of findings from both studies (identical methods) challenges the commonly held belief that women in preterm labor have less pain than those in term labor

- Women with preterm labor reported the most extreme levels of pain at a rate 3xs that of women in term labor

Thank you for listening!