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# Background

- QST (quantitative sensory testing) measures response to noxious stimulus to predict future response
- There is a correlation between pain with local anesthetic infiltration (LAI) and post-cesarean pain
- No study has explored pain with local anesthetic infiltration and labor pain

Patient-reported pain during local anesthetic infiltration (LAI) prior to neuraxial procedure predicts pain and analgesic requirements during labor

**Primary Outcome:** Correlation between LAI pain and average pain during labor with an epidural

**Secondary Outcomes**: Difference in LAI pain between patient demographics, labor and epidural characteristics

# Hypothesis

## Outcome







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# Study Aim

Determine if patient-reported pain during LAI prior to neuraxial procedure predicts pain and analgesic requirements during labor

## Methods

- 4-year retrospective observational analysis (2020-2023)
- Inclusion criteria: parturients receiving labor epidural analgesia and undergoing vaginal delivery
- LAI pain recorded during routine care (NRS 0-10) extracted from patient records

Age ( Gesta Race Wł Βl As AlA Ot Ur Ethni Nc Hi Ur Prima En Sp Ot Inter



## Patient Demographics

	LA pain 0-3 N=2868	LA pain 4-7 N=1919	LA pain >7 N=434	Total N=5221	p
years)	33±5	33±5	32±6	33±5	
ational age (wks)	39±2	38±2	38±2	39±2	
(%)					
nite	31	28	18	29	
ack	2	1	2	2	
sian	31	32	30	31	<
AN/Pac. Islander	1	2	2	2	
ther	26	29	40	28	
nknown	9	8	9	9	
icity (%)					
on-Hispanic	68	66	53	66	
spanic	23	26	38	25	
nknown	9	8	9.2	8	
ary language (%)					
nglish speaking	86	85	74	85	
oanish only	11	11	21	12	
ther	4	4	4	4	
r <b>preter (%)</b>	11	12	22	12	<





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	LA pain 0-3 (N=2868)	LA pain 4-7 (N=1919)	LA pain >7 (N=434)	Total (N=5221)	p-value
Pain before epidural (NRS)	5±3	6±3	6±3	5±3	<0.001
Avg pain after epidural (NRS)	1±2	1±2	1±2	1±2	0.282
Time of epidural to delivery (h)	7 [4-11]	7 [4-11]	8 [4-12]	7 [4-11]	0.241
Required Clinician Boluses (%)	N=2336, 82%	N=1549,81%	N=348, 80%	N=4233,81%	0.805
Number clinical boluses	1 [1-3]	1 [1-3]	1 [1-3]	1[1-3]	0.805
Failed block (%)	7	7	9	7	0.642

## Results









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# Conclusions

- Pain with LAI prior to neuraxial block placement is not a reliable predictor of labor pain in parturients who undergo vaginal delivery with epidural analgesia
- a higher proportion of severe pain compared to mild pain on local anesthetic infiltration.
- Study limitations
  - Single center study
  - No consistent script
  - Variable time when LAI pain interrogated
  - Missing patient data due to clinical care needs

Hispanic patients, Spanish speaking patients, and patients that requested use of a translator had

1.Anesth Analg. 2005;101(4):1182-1187. 2.Acta Anaesthesiol Scand. 2007;51(5):582-586. 3. J Anaesthesiol Clin Pharmacol. 2023;39(2):273-278.

