

Association of heart rate variability with preoperative anxiety and postoperative pain after scheduled cesarean delivery: *A prospective observational study*



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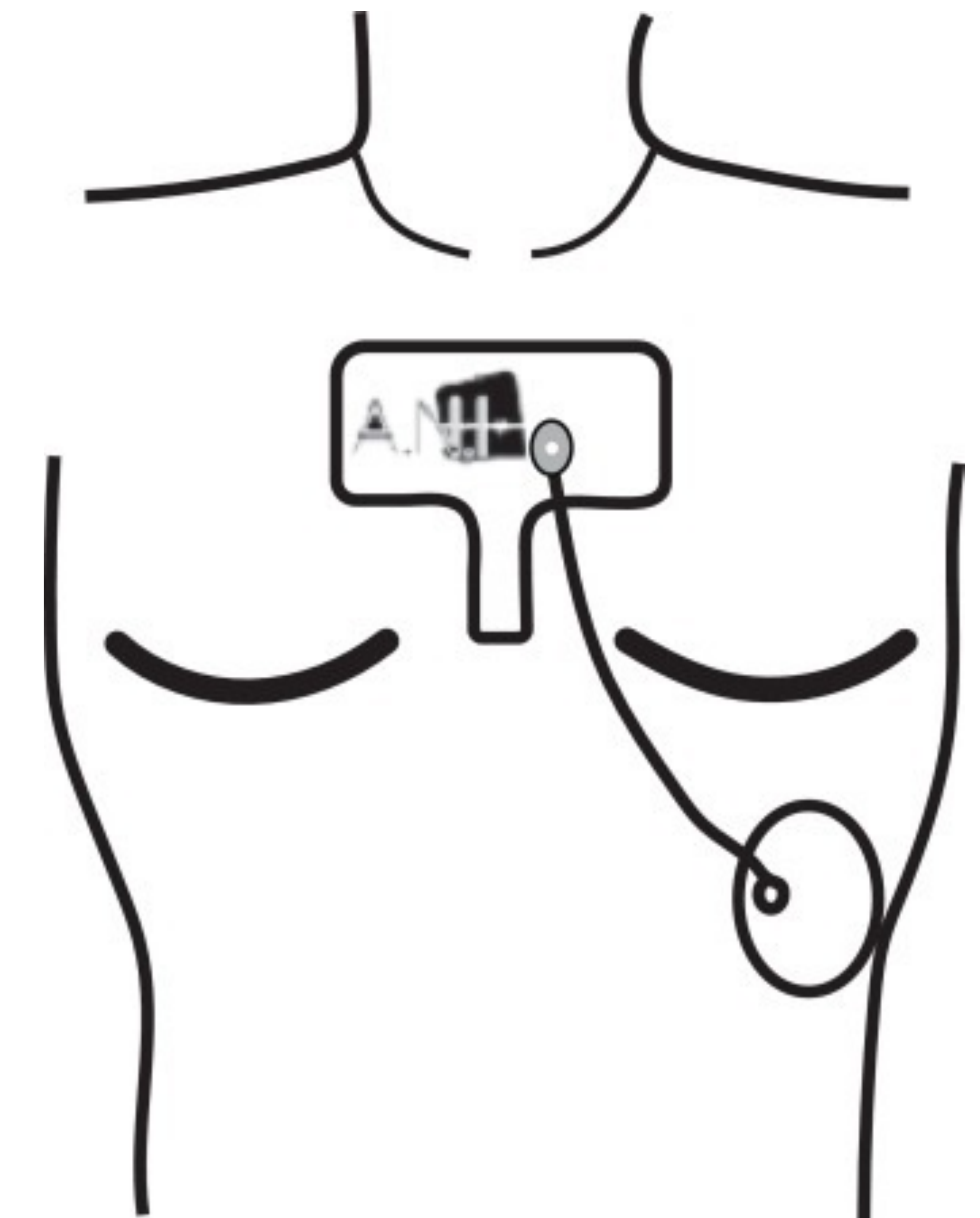
Introduction

- Analgesia Nociception Index (ANI) is a non-invasive measure of heart rate variability.
- Anxiety is associated with reduced heart rate variability in the non-obstetric population.¹
- We hypothesized that ANI is significantly associated with pre-operative anxiety in patients scheduled for cesarean delivery.



Methods

- Preoperative anxiety was measured with validated questionnaires
- ANI was measured continuously both pre- and intra-operatively
- Post-operative pain was collected at 24h and 48h
- **Primary outcome:** association between number of changes in ANI and preoperative anxiety score analyzed using Poisson Regression
- **Secondary outcomes:** association between ANI score and postoperative pain, or post-operative opioid consumption
- **Sensitivity analysis** at for number of changes with magnitude ≥ 10 , ≥ 20 , ≥ 30 , ≥ 40



Results

- N= 72 patients. Mean(SD) preoperative anxiety score was 21.7(4.3).
- No significant association between ANI score and preoperative anxiety.
- No significant association between ANI score and postoperative pain, or post-operative opioid consumption.

Conclusion

- In patients scheduled for cesarean delivery, heart rate variability measured using ANI was not predictive of preoperative anxiety scores, postoperative pain, or postoperative analgesic requirements.

References

1. Pan PH et al. Anesthesiology 2006;104:417-25



Cutoff	p-value: Anxiety and number of changes
≥10	0.092
≥20	0.087
≥30	0.57
≥40	0.85