Impact of Fascia Iliaca Nerve Block on Pain Scores and Opioid Consumption During Inpatient Admissions: A Single-Institution Retrospective Study

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Introduction / Background

Geriatric hip fractures pose challenges regarding pain management, but pain management is necessary to address delirium, immobility, and prolonged hospitalization in this population.

Opioid-based analgesia carries significant risks including respiratory depression, cognitive impairment, and falls.

Multimodal analgesia strategies can minimize opioid exposure without sacrificing pain control.

Regional blocks can offer targeted pain relief without systemic side effects. There is limited evidence currently on the durability of benefit and impact on opioid consumption specific to geriatric patients with isolated hip fractures.

Objective / Purpose

To determine whether regional nerve blocks reduce early pain scores, opioid consumption, and hospital length-of-stay in geriatric patients presenting with isolated hup fractures .

To evaluate whether the short-term analgesia benefits of nerve blocks translate into measurable improvements in downstream clinical outcomes in this high-risk population.

Methods

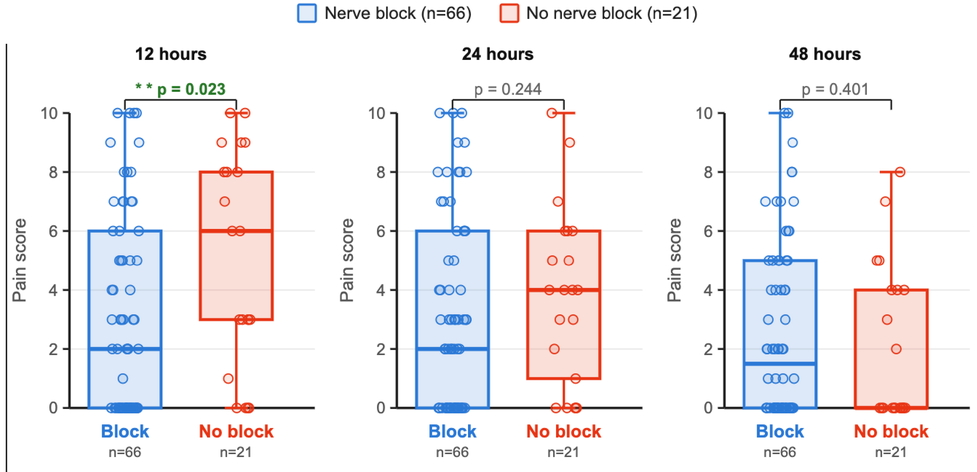
- Retrospective review of geriatric patients with isolated hip fractures at UTMB Galveston
- Patients grouped by receipt of fascia iliaca nerve block vs no nerve block
- Primary outcome: pain scores at 12, 23, and 48 hours post-procedure; daily opioid consumption (MME/day); hospital length-of-stay (LOS)
- Statistical analysis by Mann-Whitney U test for all between-group comparisons (significance threshold p<0.05)

Results

A total of 87 patients were included, 66 (76%) received a nerve block and 21 (24%) did not receive a block. Patients in the nerve block group demonstrated significantly lower pain scores at 12 hours compared to those without a block. These data did not reflect sustained differences in pain scores at 24 or 48 hours. No significant differences were found in daily opioid consumption or hospital length of stay.

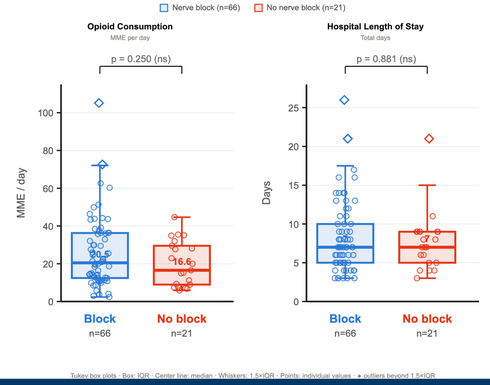
- Pain at 12 hours**: significantly** lower in nerve block group (median 2.0 vs. 6.0, p = 0.023)
- Pain at 24 hours: no significant difference (median 2.0 vs. 4.0, p = 0.244)
- Pain at 48 hours: no significant difference (median 1.5 vs. 0.0, p = 0.401)
- MME/day: no significant difference (median 20.5 vs. 16.6, p = 0.250)
- Length of stay: no significant difference (median 7 vs. 7 days, p = 0.88

Pain Scores



Tukey box plots · Box: IQR · Center line: median · Whiskers: 1.5×IQR · Points: individual values

Opioid Consumption and Length of Stay



Tukey box plots · Box: IQR · Center line: median · Whiskers: 1.5×IQR · Points: individual values · ♦ outliers beyond 1.5×IQR

Conclusion and Next Steps

Fascia illiaca nerve blocks provide a significant early analgesic benefit for approximately 12 hours in geriatric patients with isolated hip fractures. This effect did not persist beyond to the 24 or 48 hour marks and did not result in measurable reductions in opioid dosing or length of hospital stay.

Limitations for this study include retrospective design, subjective measurement of pain scores, unequal group sizes, and single-institution design. Prospective studies with larger, balanced cohorts are needed to define the role of nerve blocks in multimodal pain management.

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