

Are there postoperative benefits of fascia Iliaca blocks performed in ED for patients with a neck of femur fracture?

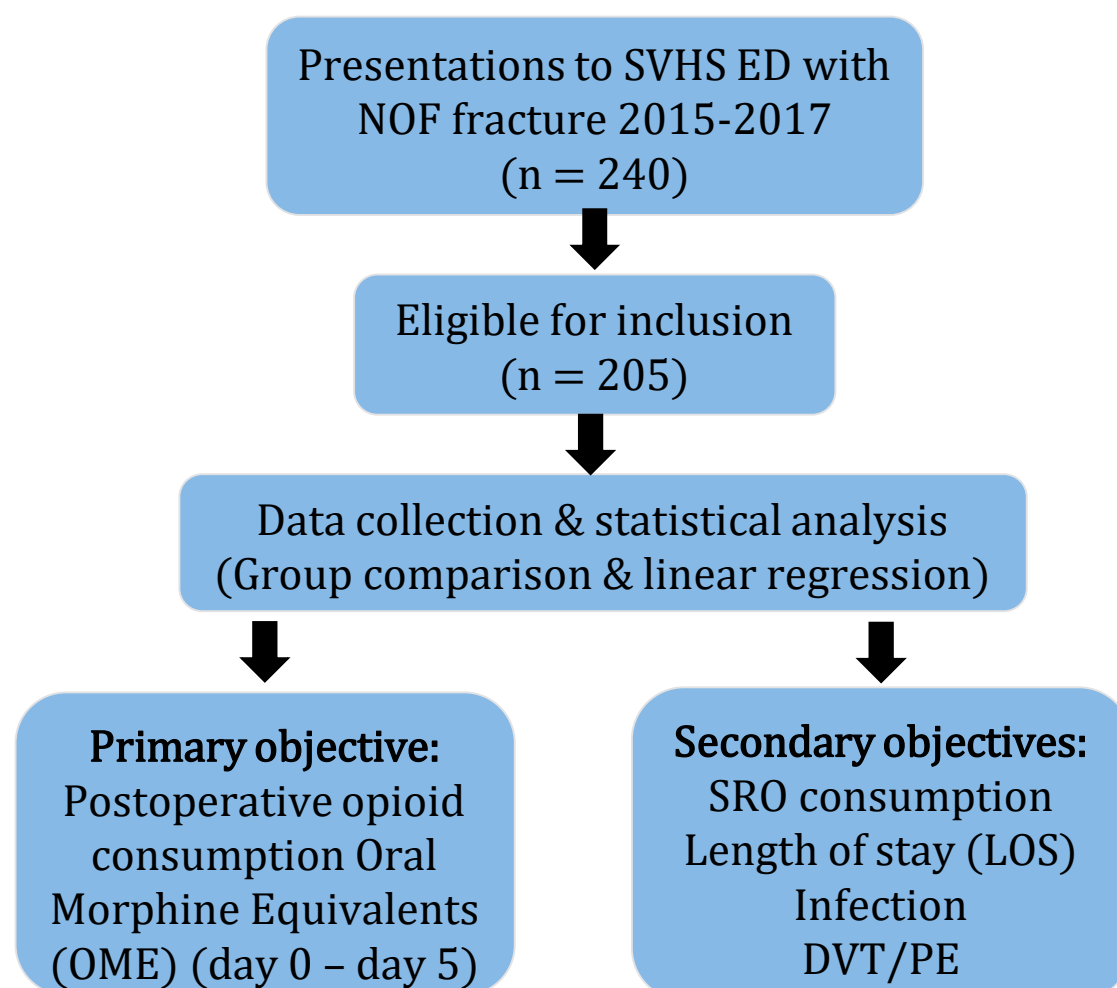
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Introduction

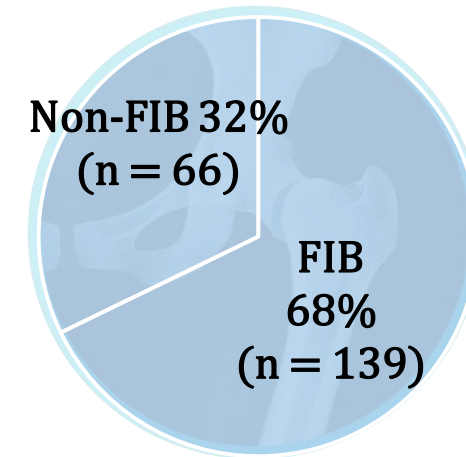
- Early surgical fixation of fractured neck of femur (NOF) is associated with lower morbidity and mortality.¹
- Guidelines recommend preoperative regional analgesia to minimise opioid adverse effects.^{1,2} There is no guidance for postoperative management.
- Single shot fascia iliaca block (FIB) in the Emergency Department (ED) has been demonstrated to be superior to opioid analgesia in the ED.³
- Our objectives were to:
 - Identify whether the benefits of a preoperative single shot FIB extended into the postoperative period.
 - Explore the impact of postoperative slow release opioids (SRO) on total opioid consumption.

Methods

- Single centre, retrospective analysis of clinical data from St Vincent's Hospital Sydney (SVHS). Ethics approval (2018/ETH00021)



Results



71% female
Mean age 79 years

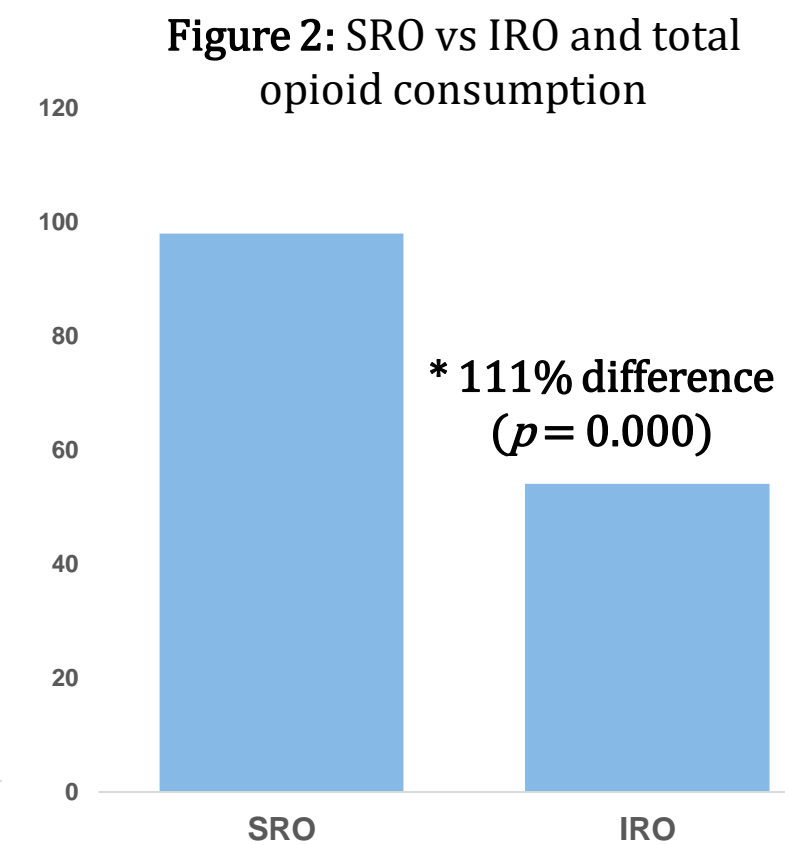
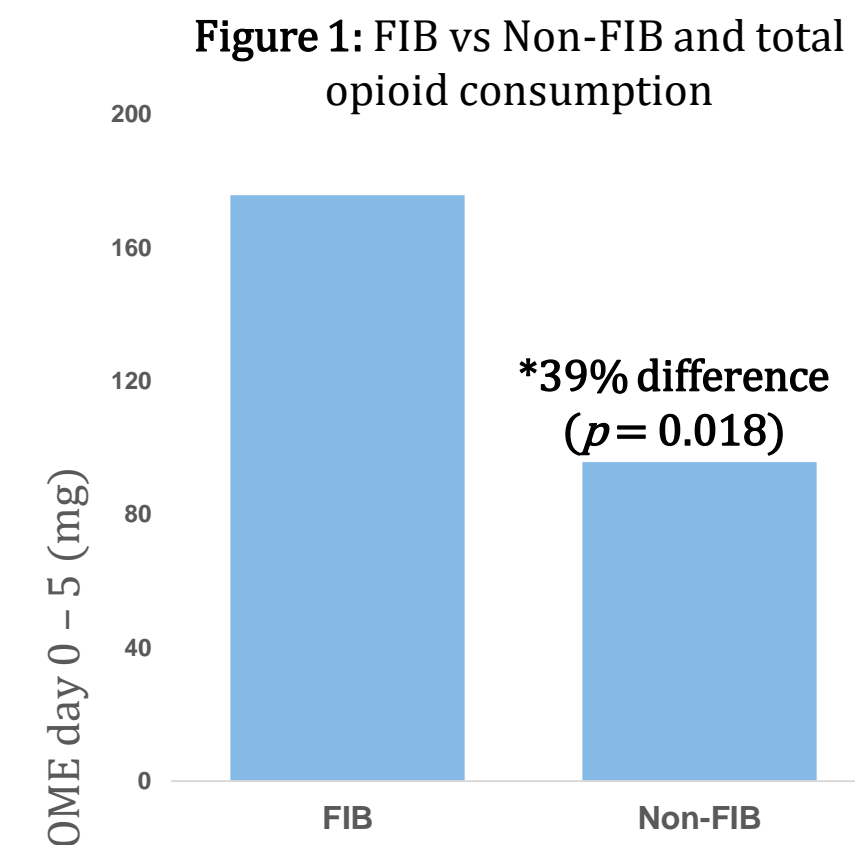


OME (day 0 – day 5)
Mean = 149mg

- Patients that received a FIB in ED had higher initial pain score ($p < 0.0001$)
- Preoperative FIB was associated with 39% increase in opioid consumption ($p = 0.018$).
 - This effect was lost if a repeat FIB performed in theatre prior to surgery.
- Postoperative SRO were associated with a 111% increase in opioid consumption ($p = 0.000$) when compared to immediate release opioid (IRO) only.
- No association between FIB and LOS or infections. Incidence of DVT/PE was too low to detect an association.

Discussion

- Preoperative FIB was associated with **increased** postoperative opioid consumption.
 - Conflicting evidence in literature on postoperative analgesia benefits of preoperative FIB.³
- Potential explanations for this observation:
 - Cohort that received a FIB in ED had higher initial pain score which may reflect higher analgesic requirement persists into postoperative period.
 - 'Rebound pain' – phenomenon of increased analgesic requirements following blockade recession.⁴
- Postoperative SRO were associated with more than double total postoperative opioid consumption.
 - This supports existing evidence that SROs are associated with increased total opioid consumption.⁵



Conclusion

- We were unable to detect a postoperative benefit from a preoperative FIB
- Preoperative FIB and SRO were both associated with an increase in postoperative opioid consumption
- Continuous infusion via FIB catheter commenced in ED and continued postoperatively may provide superior analgesia and limit opioid related adverse effects
- Large prospective trials are required to inform guidelines on optimal postoperative analgesia and perioperative regional techniques

References

- ¹Australian and New Zealand Hip Fracture Registry (ANZHFRR) Steering Group. Australian and New Zealand Guideline for Hip Fracture Care: Improving Outcomes in Hip Fracture Management of Adults. Sydney: Australian and New Zealand Hip Fracture Registry Steering Group; 2014.
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- ³Guay J, Kopp S. Peripheral nerve blocks for hip fractures in adults. Cochrane Database of Systematic Reviews 2020, Issue 11. Art. No.: CD001159.
- ⁴Barry, G. S., Bailey, J. G., Sardinha, J., Brousseau, P., & Uppal, V. (2021). Factors associated with rebound pain after peripheral nerve block for ambulatory surgery. *British journal of anaesthesia*, 128(4), 862–871.
- ⁵Chevillat, A., Chen, A., Oster, G., McGarry, L., & Narcessian, E. (2001). A randomized trial of controlled-release oxycodone during inpatient rehabilitation following unilateral total knee arthroplasty. *The Journal of bone and joint surgery. American volume*, 83(4), 572–576.

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