

External Oblique Intercostal Fascial Plane Block for Pain Control after LVAD implantation

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Introduction

- 26 million patients globally with heart failure requiring LVAD support
- Sternotomy, driveline, thoracostomy tubes main source of pain
- Pain control is critical to promote respiratory mechanics
- Obesity, anticoagulation status, position can pose additional challenges
- Alternative: EOI fascial plane block + superficial parasternal intercostal plane block (SPIP)

Case Report

53 y/o M with HFrEF <15%, biventricular non-ischemic cardiomyopathy presented with cardiogenic shock

- LVAD placed with midline sternotomy approach, 2 thoracostomy tubes, drive line, and pigtail.
- POD 1: Multimodal pain regime
- POD 2: Single-shot L EOI block
- POD 3: Repeat L EOI + b/l SPIP block
- Decreased opioid consumptions, participation in physical therapy, ambulation, incentive spirometry and atelectasis

Figures

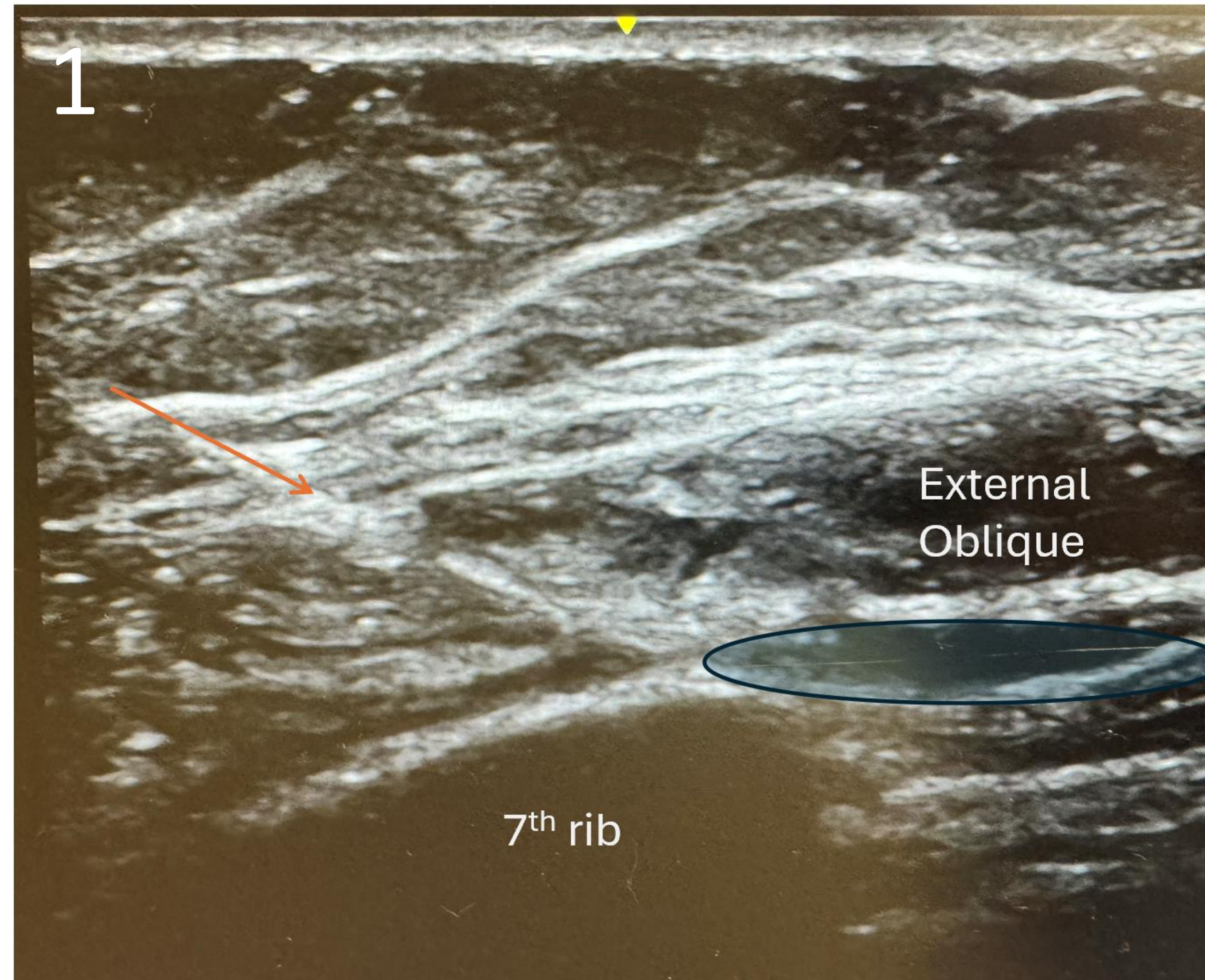
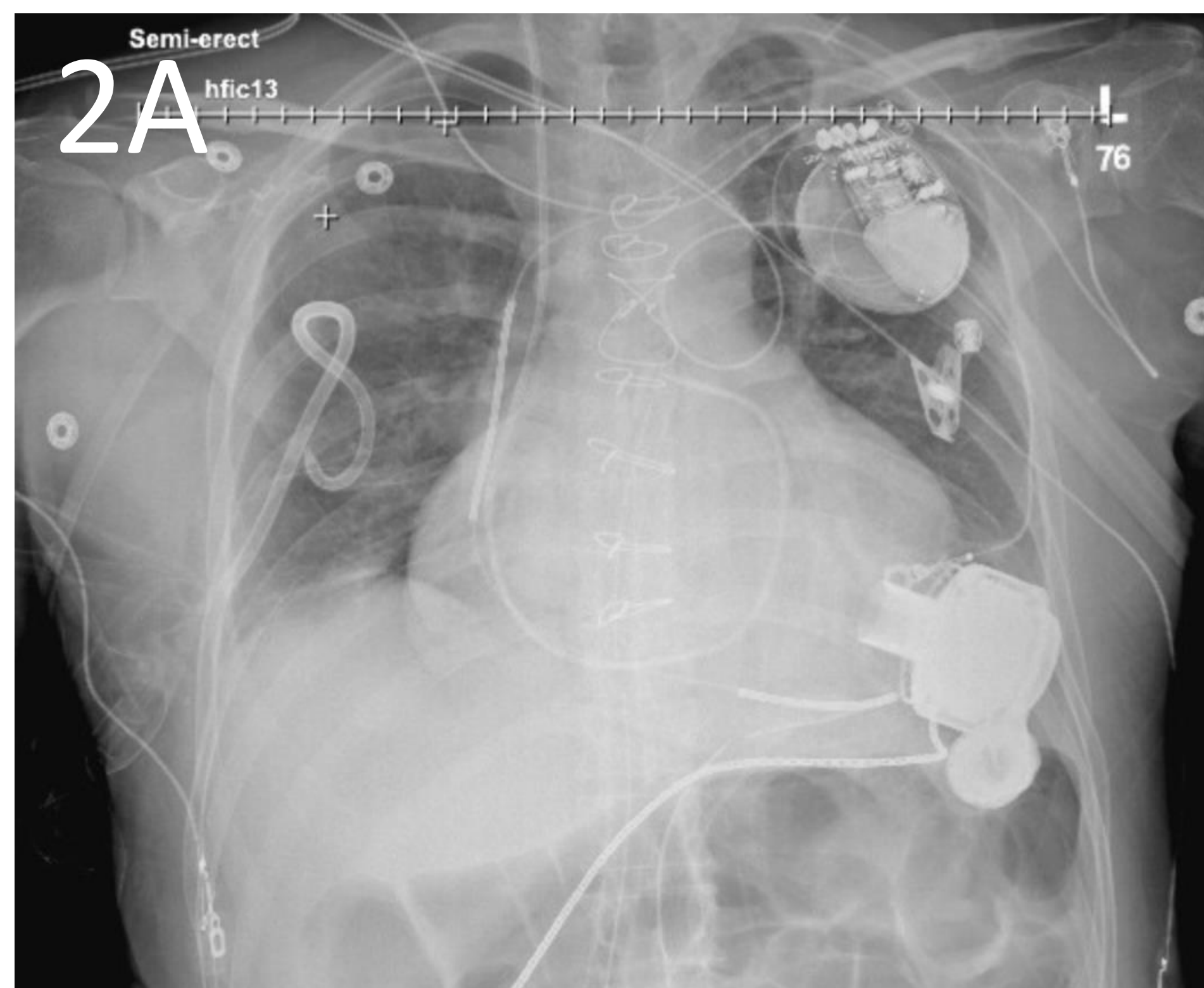
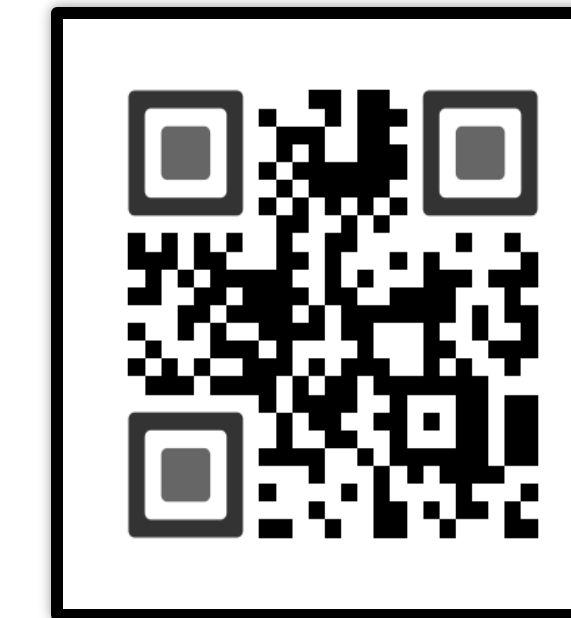


Figure 1: Ultrasound image of external oblique intercostal plane block

Figure 2A: POD1 CXR demonstrates small R PTX, mild basilar opacities

Figure 2B: POD3 demonstration resolution of R PTX, decreased basilar opacities "likely resolving atelectasis"



Discussion/Conclusion

- EOI fascial plane block targets anterior and lateral cutaneous branches, providing consistent coverage for upper lateral abdominal wall.
- Easily performed in the supine position, superficial, and addresses concerns about anticoagulation and body habitus.
- Minimizing opioid use crucial in LVAD patients due to heightened respiratory concerns.

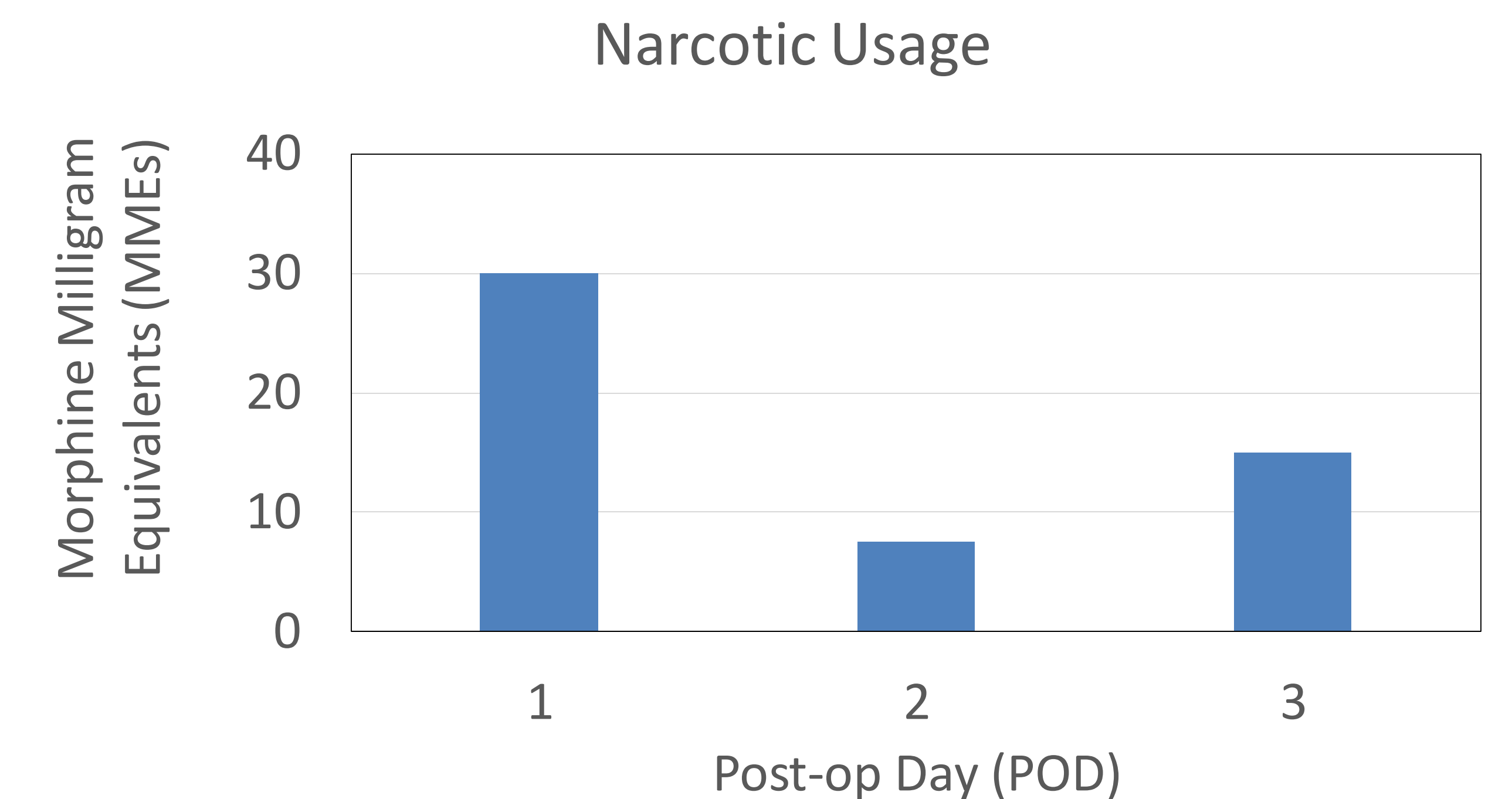


Figure 3: Narcotic usage by day. Of note, all narcotics consumed on POD 2 and 3 were before the placement of the nerve blocks with no further narcotic needs after the block each day.

References

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