

Analgesic regimes, pain scores and recovery trajectories following thoracic surgery

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Background

Lung resection via open thoracotomy is a painful procedure leading to the development of minimally invasive approaches such as video assisted thoracoscopic (VATS) and robot assisted (RATS) surgery. This has putative recovery benefits. The mainstay of analgesia for all these techniques remains regional anaesthesia e.g. paravertebral block (PVB) and patient controlled analgesia (PCA) in the form of opioids.

Aim

To compare pain scores and recovery trajectories for thoracotomy, VATS and RATS as well as analgesic regimens to evaluate which is the best approach for patients.

Method

- Duration: 5 weeks, from 1st August to 7th September 2018.
- Data collection at 24, 48 and 72 postoperative hours.
- Pain categorisation: severe (10-9-8-7), moderate (6-5-4), mild (3-2-1), and no pain (0). [Figure 1]

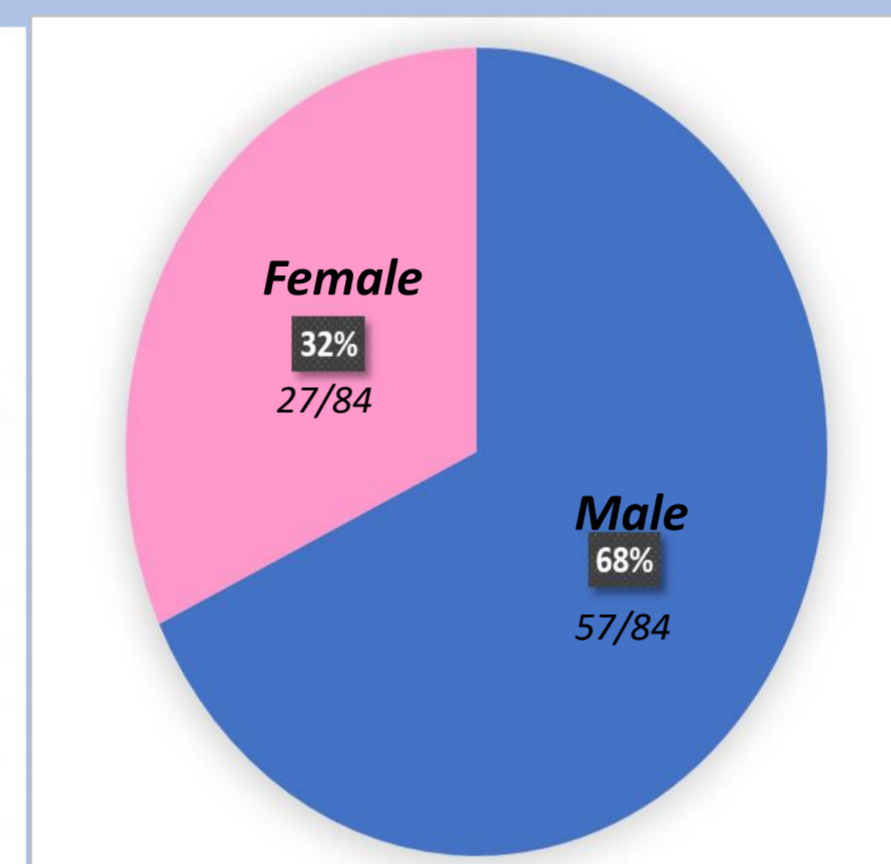
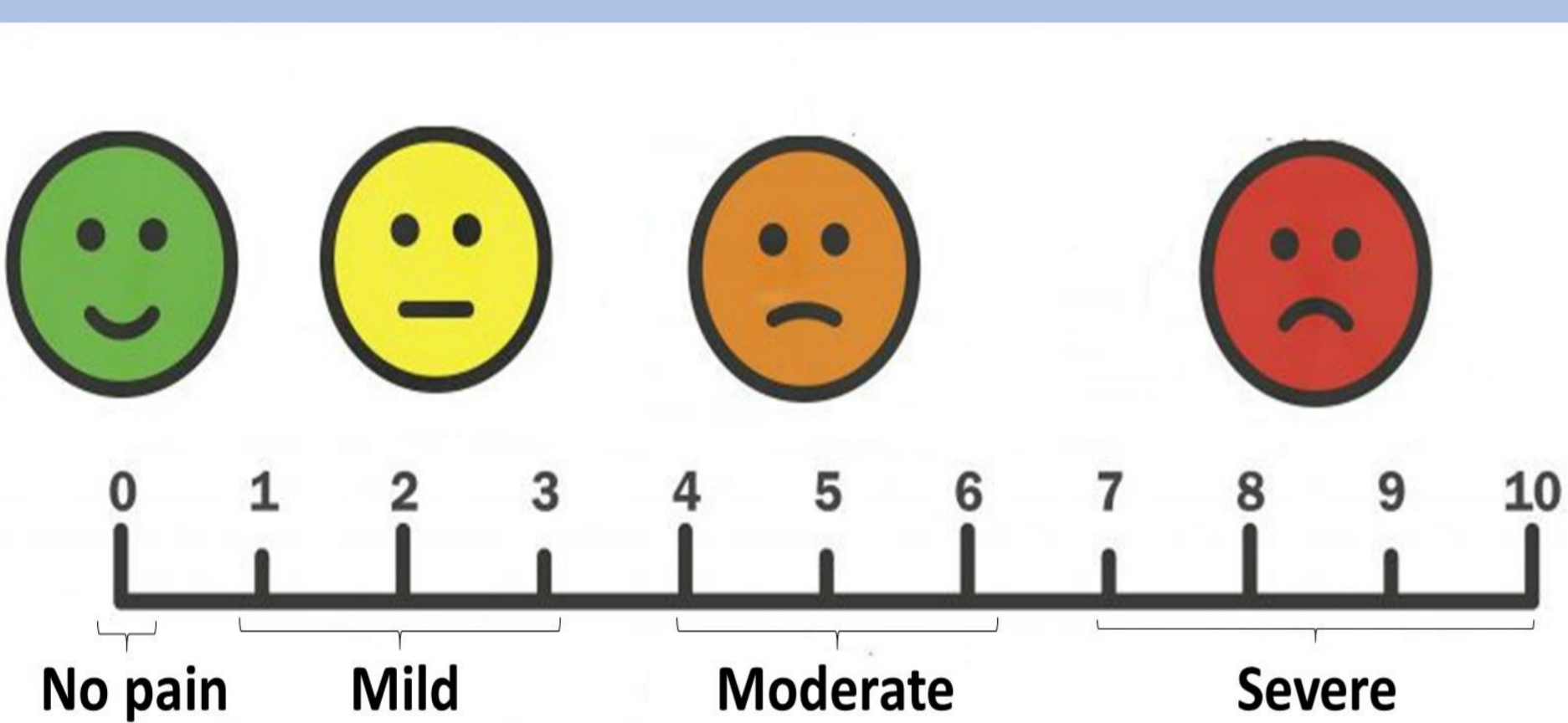


Figure 2: Gender

Results

- Eighty-four patients underwent thoracic surgery with a male predominance. [Figure 2]
- Prevalence of severe pain following lung resection was higher in the RATS group compared to VATS. [Figure 3]
- Severe pain was reduced through using paravertebral catheters. [Figures 4 - 5]
- PCA reduced severe postoperative pain. [Figure 6]

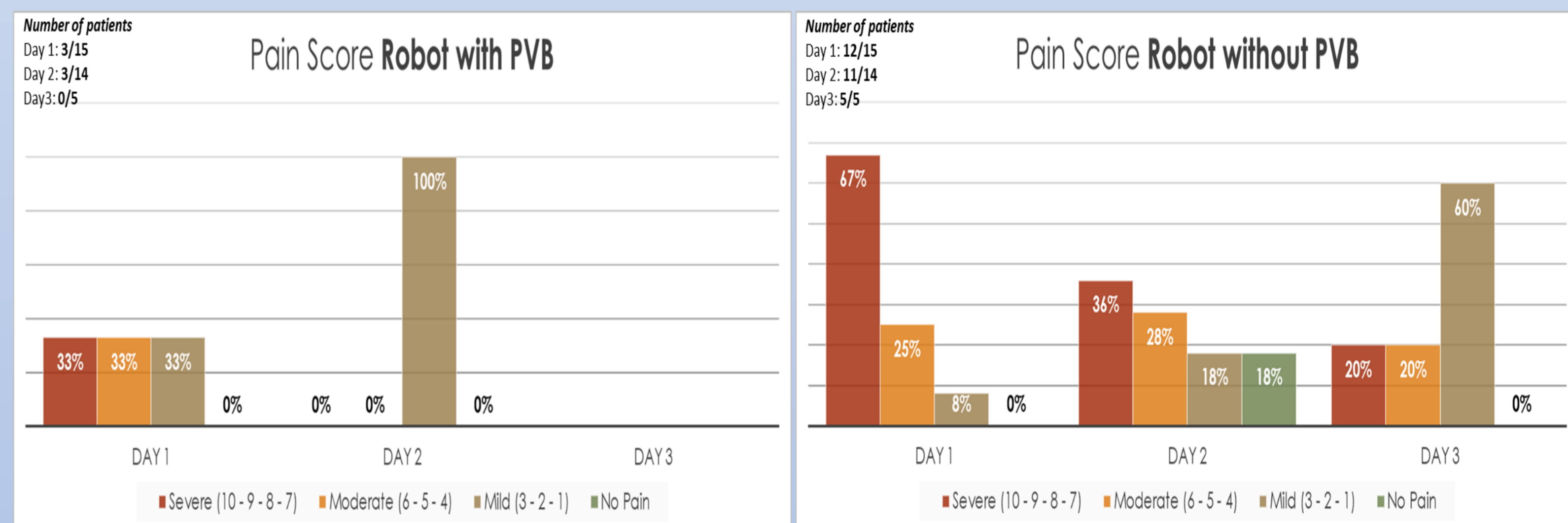


Figure 4: Different pain score after Robot surgery with or without PVB

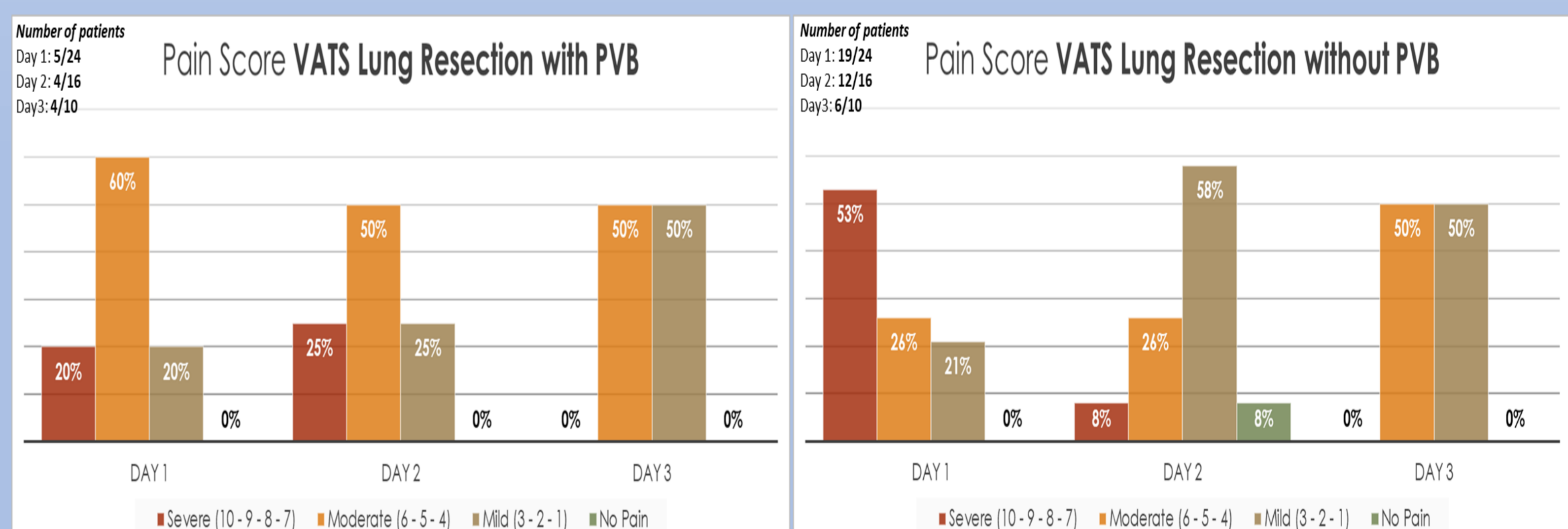


Figure 5: Different pain score after lung resection performed in VATS with or without PVB

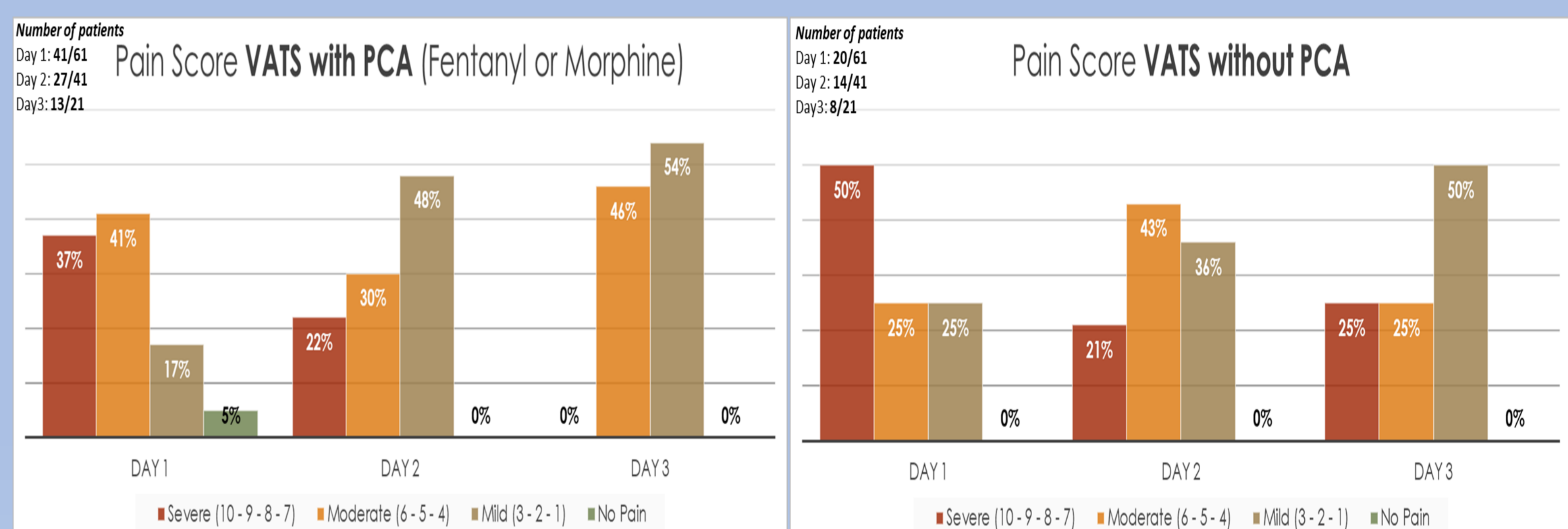


Figure 6: Different pain score after lung resection performed in VATS with or without PCA

Conclusions

Patients undergoing RATS experience a higher prevalence of severe post-surgical pain compared to patients undergoing VATS. Paravertebral catheters and PCA can reduce severe postoperative pain after both RATS and VATS. The use of preoperative opioid analgesics can predict the likelihood of severe postoperative pain. Further research is required to examine these findings in more detail with a larger sample size.

References

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