

## **PARAVERTEBRAL CATHETERS AND POST-OPERATIVE ANALGESIA FOLLOWING OPEN ABDOMINAL AORTIC ANEURYSM REPAIR**

Logan Atkinson, S Jessula, S Stewart, K Kwofie, M Lee, M Smith, P Casey, Christine Herman

### **VASCULAR SURGERY**

---

**BACKGROUND:** Abdominal Aortic Aneurysm (AAA) repair is associated with high Morphine Equivalent (MEQ) intake in the post-operative period. Our objective is to compare MEQ after AAA repair across analgesic modalities: Standard Analgesia (SA), Paravertebral Analgesia (PA) and Epidural Analgesia (EA).

**METHODS:** A retrospective cohort study was performed in all elective open AAA from 2005-2016 at the QEII comparing MEQ on post-operative day (POD) 1, 2 and 3, time in intensive care and adverse events amongst different analgesic modalities. A multivariable zero inflated poisson regression was used to determine associations between analgesic modality and MEQ while multivariable logistic regression was used to compare analgesic modality with discharge from intensive care (ICU) within one day and rate of adverse events.

**RESULTS:** The final cohort included 355 patients. 117 patients underwent PA, 65 EA and 173 SA. Compared to SA, PA and EA were associated with decreased odds of receiving opioids on POD1 (OR 0.05; 95%CI, 0.01-0.40 and OR 0.01; 95%CI, 0.00-0.09 respectively) and POD2 (OR 0.26; 95%CI, 0.09-0.76 and OR 0.05; 95%CI, 0.02-0.014 respectively). If patients did receive opioids both PA and EA were associated with decreased consumption on POD1 (IRR 0.44; 95%CI, 0.26-0.63 and IRR 0.17, 95%CI 0.11-0.26 respectively). Compared to SA, PA was associated with earlier discharge from ICU (OR 2.75; 95%CI, 1.17-6.45). Both EA and PA had similar rates of adverse events (OR 0.44; 95%CI 0.08-2.44).

**CONCLUSIONS:** PA is associated with decreased MEQ and earlier discharge from ICU compared to SA. Paravertebral analgesia is a safe and effective analgesic modality in patients undergoing retroperitoneal approach for abdominal aneurysm repair.