# An audit of continuous local anaesthetic infusion analgesic techniques

Dr.Borys Topor[1], Dr. Mark Rockett[1,2]

1 Department of Anaesthesia, Derriford Hospital, Plymouth, 2 Corresponding author (mark.rockett@nhs.net)

## Background

In many UK centres, abdominal wall field blocks such as rectus sheath and TAP blocks have largely replaced epidural analgesia for abdominal surgery. Non-inferiority of analgesia has been demonstrated in some studies, and health economic analysis favours abdominal wall catheters. However, the effectiveness of rectus sheath catheters outside a RCT in a real world setting has yet to be convincingly demonstrated. In this poster we present the findings of a prospective audit of analgesia for abdominal and thoracic surgery. The setting was a large teaching hospital in the SW of England.

## Aim and Objectives

The aim of the study was to audit all analgesic techniques using local anaesthetic delivered by infusion via a catheter for a 4 month period and assess their analgesic effectiveness and opioid related side effects.

## Methods

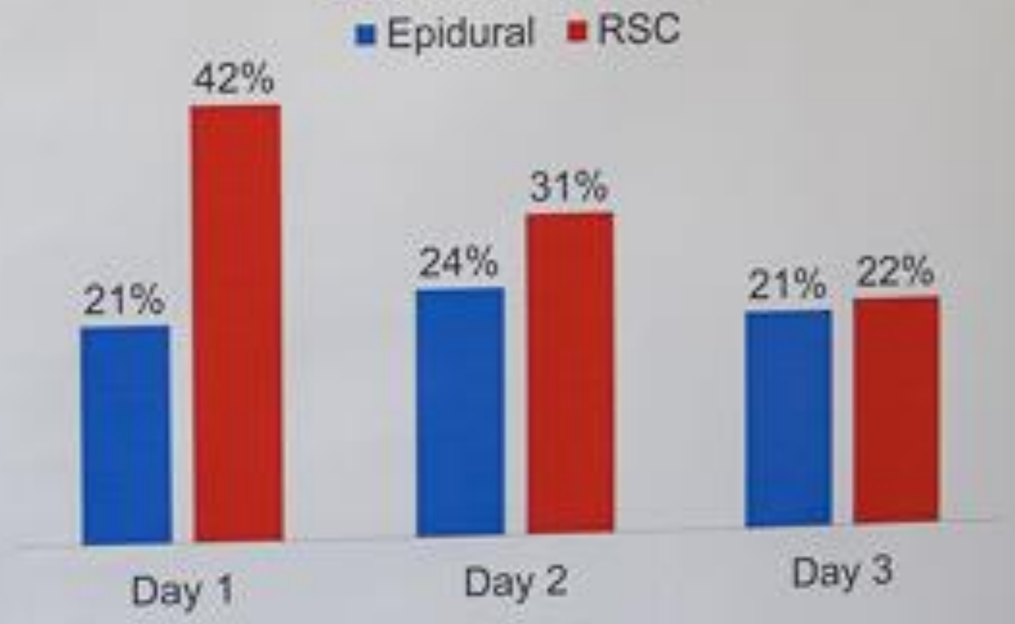
In our institution, all catheter-delivered analgesic systems are reviewed daily by the acute care team (ACT). For the first 3 days after surgery (D1-D3), all patients were assessed for pain score and opioid-related side effects including nausea and vomiting. The audit was registered with the Trust audit department and carried out in accordance with local guidelines. Data were collected from July to October 2015. Pain scores were recorded on a verbal rating scale of none, mild, moderate and severe. Moderate or severe pain were considered significant. Side effects of nausea or vomiting and other analgesics prescribed were recorded.

## Results

Over the 4 month study period, **310 catheters** were sited for continuous regional anaesthesia. There were **141 rectus sheath catheters (RSC)** and **87 thoracic epidurals**. Rectus sheath catheters were utilised most for colorectal surgery (62%) and upper GI surgery (25%). All but one case were co-prescribed strong opioids. Epidurals were used for thoracic surgery (35%), colorectal surgery (23%) and upper GI surgery (21%). We included results from thoracic incisions, even though they may not be entirely comparable with abdominal incisions.

Analgesia was superior with epidural for D1 and D2. On D1 the percentage of patients with mild or no pain was, 42% vs 21%, on D2 31% vs 24% and on D3 22% vs 21% of patients with RSC. The cumulative failure rate (patients with significant pain) for epidurals was 21% on D1, 36% D2 and 48% D3. Nausea rates were comparable on D1 (17% vs 22% with epidural), but higher with RSC on D2 and D3.

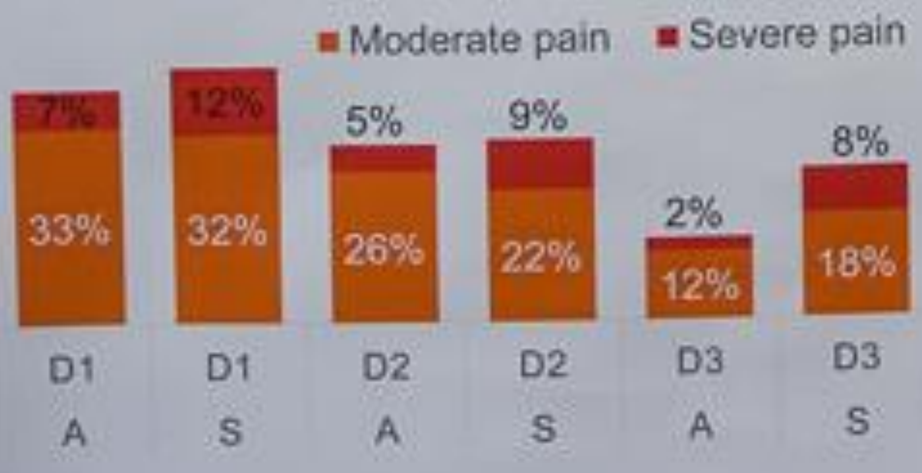
### Significant pain




### Nausea or vomiting

| | Day 1 | Day 2 | Day 3 |
|---|---|---|---|
| RSC | 17% | 17% | 18% |
| Epidural | 22% | 11% | 14% |

### Catheters sited by anaesthetists (n=47) versus surgeons (n=58)




## Conclusion

Although prospective audit is potentially subject to selection bias, the quality of analgesia delivered by epidural analgesia was consistently superior to rectus sheath. As opioids were almost always prescribed along with RSC, opioid-related side effects were more common in this group. However, side effects specific to epidurals such as hypotension were not measured. Catheters sited by anaesthetists appear to deliver marginally better analgesia on day 3.