REGIONAL ANALGAESIA IN MANAGING MAJOR CHEST TRAUMA: CURRENT PRACTICE IN A LONDON MAJOR TRAUMA CENTRE

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INTRO

Rib fractures are a major cause of morbidity and mortality in trauma(1). Adequate analgesia is paramount, as uncontrolled pain leads to hypoventilation with its attendant complications(2). Regional anaesthesia (RA) is the standard of care; it is often underutilised.

Provided no contraindication, NHS England stipulates that RA is provided within 6 hours of radiological diagnosis(3). Preliminary evidence suggests that early vs late analgesia has been shown to reduce mortality and length of stay(4).

This audit evaluates current practice at a London major trauma centre.

METHODS

Data were obtained from the Trauma and Audit Research Network database for patients admitted to the Royal London Hospital in the 3 months commencing October 2018 with ≥ 3 rib fractures or chest drain. Electronic notes were used to report time from diagnosis to consideration and performance of RA. We recorded data on choice of analgesia, service delays and complications.

RESULTS

37 patients were admitted over the 3-month period; 28/37 male, aged 68.8yrs (55.6-79.8), ISS 24 (17-34). We excluded 4 patients who did not have valid identifiers; a further 3 had unsurvivable injuries. 44% had a contraindication to RA.

In 11/30 RA was considered within 6h, rising to 18/30 in total (range 0->140h), with 7/30 eventually receiving RA.

Some received sequential procedures: initial failure, or single-shot temporization followed by catheter. Reasons for non-provision are documented in Figure 1. In all 7 patients who received RA it was delayed >24h from diagnosis.

WE DON'T PROVIDE TIMELY RA FOR CHEST TRAUMA BECAUSE:

CONTRAINDICATION

NOT REFERRED

PAIN CONTROLLED

NOT DOCUMENTED/OTHER

SERVICE CAPACITY

SUMMARY

RA considered in 60% and delivered in <25%, none within 24h

- Adequacy of early pain control often undocumented.
- Risk-benefit documentation lacking for relative contraindications- balance of risk of suboptimal analgesia versus risk of block complication is complex, and risk of complications may be overestimated by clinicians. A local guideline is being developed by the trust's multidisciplinary rib fracture working group.
- There may be a role for some of the newer chest wall blocks(5), especially in those patients with contraindications to epidural, but epidural/PVB remains the gold standard.
- Shortage of anaesthetic/theatre capacity only documented in a few cases, but may be a factor in more, and is the most likely cause for delays in provision.
- Expanding service capacity and improving out-of-hours provision may help- again, newer blocks may have a role.

References