

IT Digoxin caused long lasting paraplegia in 5 patients. IT or ED vasopressors or inotropes caused reversible haemodynamic changes of variable duration.

Primary causes included ampoule errors (mostly for digoxin and labetalol), syringe swaps (in cases of ephedrine, epinephrine and metaraminol) and ED-IV line confusion (for phenylephrine and mexiletine infusions). NRFit could have prevented 14 (of 34) errors.

Table 2 lists the human factor contributing to the errors.

**Conclusions** Bar coding of both ampoules and syringes would have prevented several errors. In the absence of barcode reader or human double checking, NRFit devices could have prevented 14 misconnection (syringe or IV infusion lines) mistakes. Correction of deficiencies (e.g., high risk CV drug ampoules and syringes location, standard supervision of anaesthesia residents/assistants) identified using HFACS are also fundamental. Management following neuraxial CV drugs is supportive.

#### 42 PREPARING INTRATHECAL OPIOID INJECTATE, A 'TIP' FOR SUCCESS

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**Background and Aims** The technique of drawing up opioids for spinal anaesthesia can lead to error. We identified stages in the process which could be overlooked by the anaesthetist causing inadvertent overdosing or underdosing of opioids. This error is usually made by inclusion of residual fluid in the tip of the syringe, due to withdrawing the opioid in the 1 ml syringe (figure 1a) rather than injecting (figure 1b). The tip contains 0.05–0.07 mls, of greatest significance when dealing with small and concentrated amounts of opioid. We aimed to survey the department to identify the proportion of anaesthetists that were using a technique leading to inadvertent error.

**Methods** We identified fifty-seven anaesthetists in the department and surveyed their process of drawing up drugs for intrathecal injection. The main focus of the survey was the technique used to transfer the opioid into the spinal syringe injectate including the use of the filter needle.

**Results** Data was captured from 47/57 anaesthetists, the majority consultants. 40% of the department were administering a dose error of spinal fentanyl. 35% of the department were administering a dose error of spinal morphine and diamorphine. The filter needle was used inappropriately in 14% of cases.



Abstract 42 Figure 1

**Conclusions** Precision is essential in regional anaesthesia when using small and concentrated amounts of opioid in the injectate, therefore the inclusion of the amount in the tip can lead to significant dose error. We presented the results and re-educated the department in our clinical governance meeting.

#### 43 GENERAL OR REGIONAL ANAESTHESIA FOR MICROVASCULAR FLAP SURGERY: COMPARISON OF SURGICAL COMPLICATION RATE AND DURATION OF HOSPITALIZATION

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**Background and Aims** Microvascular flap surgery is an effective method for difficult reconstructions and major defects.[1] There is an ongoing debate about the preferred method of anaesthesia for flap success.[2] We aim to evaluate the differences in the rate of microvascular flap surgery complications and duration of hospitalization between patients receiving regional anaesthesia (RA) and general anaesthesia (GA).

**Methods** This retrospective cohort study includes 54 adult patients undergoing elective microvascular flap surgery. The study was approved by the Ethics Committee of Riga Stradins University. The method of anaesthesia was chosen according to individual surgical necessity. Patients were divided into two groups – RA group (N=25) and GA group (N=29). Postoperative outcome data on surgical flap complications, duration of intensive care stay, and total duration of hospitalization was obtained.

**Results** RA and GA groups had no statistically significant differences in the rate of flap failure, infection, hematoma, or any other type of flap complication. GA group had a mean intensive care stay duration of 2.33 days (CI95% 0.62–5.25). RA group had a significantly lower mean intensive care stay duration of 0.26 days (0.06–0.57;  $p=0.002$ ). GA group had a mean hospitalization duration of 24.4 days (14.42–34.31). RA group had a comparatively lower mean hospitalization duration of 14.25 days (9.55–19.01;  $p=0.032$ ).

**Conclusions** The rate of surgical complications in microvascular flap surgery is equal for both RA and GA. Patients who receive GA have a longer mean intensive care stay and duration of hospitalization. In contrast to previous assertions, a meticulously administered regional anaesthesia might be preferred when surgically feasible.

#### 44 RETROLAMINAR PARAVERTEBRAL CATHETERS FOR RIB PLATING SURGERY – A CASE SERIES

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**Background and Aims** The ultrasound-guided retrolaminar technique to paravertebral blockade (RLB) is safe, easy and minimally invasive for use in mastectomies<sup>1</sup>, analgesia for rib fractures<sup>2</sup>, and analgesia post thoracic surgery<sup>3</sup> with reduced risks of pneumothorax and structural injury and reduced spread of injectate. Though literature described higher volume boluses followed by infusions, we present our experience with in-plane ultrasound-guided RLB catheter using moderate volume boluses twice daily (BD) for rib fixations.

**Methods** Five cases of ultrasound-guided retrolaminar paravertebral block catheter were observed between May 2019 and March 2020 in our institution who sustained multiple rib fractures and underwent surgical fixation. Details of the patients are presented in tables 1–2.

**Results** Patients' satisfaction is high – low pain scores shows that the degree of analgesia is more than adequate, with bolus