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, substandard 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 mastectomies¹, analgesia for rib fractures², and analgesia post thoracic surgery³ 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

Abstracts

Abstract 44 Table 1 Patients characteristics

Patient	Age	Gender	Injuries	ASA	Catheter level	Depth in space	Remarks
1	57	Male	8.7 th -10 th	2	5 th	6 cm	
2	58	Male	8.4 th -9 th	2	5 th	1.5 cm	Single shot gives post op, catheter inserted post op
3	67	Male	8.3 rd -10 th	2	7 th	5 cm	Endotracheal intubation of catheter later up, saw catheter inserted post op
4	54	Male	1.5 th to 3 rd	2	7 th	3 cm	
5	78	Male	1.3 th to 3 rd	2	7 th	4 cm	Catheter migration and leaking occurred POD 1

Abstract 44 Table 2 Analgesia characteristics

Patient	LA Bolus	Day of catheter removal	Highest recorded pain score as measured	Optimal use (Timing)	NSAIDs use (Timing)	Others	Remarks
1	15 ml of 0.5%	A0	5/10	None	None	None	No complications for all patients
2	0.5% variable BD	POD 2 except patient 5 (POD 1)	4/10	None	Acetaminophen (POD 2)	Paracetamol	
3			4/10	None	Acetaminophen (POD 2)	Paracetamol	
4			4/10	Opioidfree (POD 2)	Acetaminophen (POD 2)	Paracetamol, Tramadol	
5			4/10	None	Acetaminophen (POD 2)	Paracetamol, Tramadol, Suppositories in view of transdermal	

duration exceeding the BD dosing. RLB confers a better safety profile (less invasive, lower risks of pneumothorax, bleeding or epidural spread) to classical blocks. Erector spinae blocks (ES) though effective⁴⁻⁵, have not been attempted for plating. Reasons for RLB catheter are: insertion point away from surgical site; ability for peri-op analgesia via a catheter; good mobility; minimal hypotension; minimal nursing care; surgical satisfaction and same benefits to ES catheters. Insertion of these catheters as part of a holistic analgesia plan, from pre-op to post-op, as well as comparing to ES blocks, should be considered.

Conclusions The RLB confers similar analgesic efficacy but also minimal interruption to surgery and reduced complications, thereby a viable option for rib fracture plating analgesia.

45 INTRAOPERATIVE EPIDURAL ANALGESIA PRACTICES AND THEIR OUTCOMES IN MAJOR ABDOMINAL SURGERIES AT A TERTIARY CARE HOSPITAL

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Background and Aims There is considerable variation in practice among anesthetists at our center regarding intraoperative epidural analgesia. We intend to investigate association between site, concentrations, and dosing of local anesthetics (LA) used intraoperatively on blood pressures, motor block, pain scores and need for rescue analgesia.

Methods Ethical approval was taken from The Aga Khan University Ethics Review Committee (Ref#2020-3692-10675). 170 patients undergoing abdominal surgeries with epidurals as primary analgesic modality at a tertiary care center over twelve months were recruited.

Results Intraoperative hypotension was reported in 46.5%. Among factors evaluated for association with intraoperative hypotension, concentration of LA used was found to be statistically significant ($p=0.02$ and 0.04). Patients who received intraoperative epidural boluses were more commonly reported

hypotensive on arrival in post anesthesia care unit (PACU) as compared to continuous infusion (17.8% vs 4.8%, $p=0.02$). Motor block was observed in 41.5% patients given continuous infusion vs 17.4% given boluses ($p=0.02$). Bupivacaine, when used for intraoperative infusion caused more motor block (43.6% vs 34.5%, $p=0.04$) and hypotension (6% vs 0%, $p=0.04$) as compared to Ropivacaine. Patients given higher concentration of local anesthetic as intraoperative infusion (0.25% vs 0.125% and 0.1%) had higher frequency of motor block (58.3% vs 38.8% and 40%, $p=0.05$). Two-thirds of the patients had moderate to severe pain on arrival in PACU, and half of

Abstract 45 Figure 1

Abstract 45 Table 1 Intraoperative hypotension and associated factors. P value <0.05 was considered significant.

	Intraoperative Hypotension	
		P value
Frequency	79 (46.5%)	-
Epidural Site		
Thoracic N=110	50 (47.2%)	0.72
Lumbar N=60	29 (48.3%)	
LA used		
No loading N=8	4 (50%)	0.88
Bupivacaine N=129	65 (50.4%)	
Ropivacaine N=33	15 (45.5%)	
Concentration of LA used for loading dose		
0.5% N=2	1 (50%)	0.02
0.25% N=101	49 (48.5%)	
0.125% N=50	21 (42%)	
0.1% N=9	1 (11%)	
Intraop epidural management		
Bolus dosing N=23	11 (47.8%)	0.89
Continuous infusion N=147	68 (46.3%)	
Concentration of LA used for infusion		
0.25% N=12	10 (83.3%)	0.04
0.125% N=113	48 (42.5%)	
0.1% N=20	8 (40%)	