Our hospital is a trauma unit in North East London. We developed a standard operating procedure and training to provide SA and ESP blocks for our patients with rib fractures.

Our aim was to audit the effectiveness of these blocks in patients with rib fractures.

Methods Patients presenting with rib fractures (between May and December 2021) were assessed pre and post regional block. Pain was evaluated at rest and on movement using the Visual Analogue Scale (VAS). Patients were also judged for their ability to cough and deep breathe.

Results 9 patients had regional blocks performed. 7 patients had a SA block (one with bilateral blocks) and 2 patients had an ESP block.

Mean VAS scores were significantly reduced following regional block from 6.1 to 1.3 at rest ($p< 0.001$) and 8.6 to 4.8 on movement ($p<0.0001$). The number of patients able to deep breathe increased from 1 to 8 and the number of patients able to cough increased from 0 to 7 following regional block. No complications were observed in any patients.

Conclusions This audit data demonstrates that introducing a regional block service for rib fracture patients in a district general hospital is a potentially safe and effective method at reducing pain and improving pulmonary function.

B69 OPTIMISING LOCAL ANAESTHETIC ADMINISTRATION IN ERECTOR SPINAE PLANE CATHETERS FOR TRAUMATIC RIB FRACTURE: A QUALITY IMPROVEMENT INITIATIVE

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Background and Aims The erector spinae plane (ESP) block is safe and effective following traumatic rib fracture[1]. The optimal regimen for local anaesthetic (LA) administration remains unknown. At our institution patients receive either a continuous infusion of 0.125% bupivacaine (up to 10 ml/h, 20 ml boluses 6 hourly as required), or a patient controlled regional anaesthesia (PCRA) regimen (4 ml/h background rate, 30 ml boluses, lockout time 4h). We aimed to identify and standardise best practice.

Methods Following approval by local audit department, a retrospective case note review was performed between 1/6/21 to 30/11/21. Numerical rating pain score (0 = nil, 3 = severe) at rest and on movement, spirometry values, rescue oral opioid administration were assessed for the first 72h, and mean LA usage per day across the entire catheter duration. The impact of associated pulmonary injury on total catheter duration was also assessed.

Results 21 patient received ESP catheters. Mean catheter duration was 4.8 days (SD 1.6). The 12 patients with an associated pneumothorax, haemothorax or pulmonary contusion had a longer catheter duration (5.4 days, 95% CI 4.6 – 6.3) compared to those without (4.7 days, 95% CI 2.9 – 5.3), although this did not reach statistical significance ($p = 0.06$). No significant difference was found in any of the parameters studied (table 1).

Abstract B69 Table 1

Parameter	Continuous	PCRA	p-value
N	9	12	
Age (y)	69.9 (16.0)	67.2 (10.8)	0.65
Weight (kg)	75.7 (15.1)	83.6 (22.6)	0.38
Rest pain (0 – 3)			
D1	1.1 (0.6)	1.2 (0.6)	0.39
D2	0.9 (0.7)	1.4 (0.7)	0.12
D3	0.9 (0.6)	1 (0.7)	0.42
Movement pain (0 – 3)			
D1	1.9 (0.6)	2.1 (0.6)	0.34
D2	1.8 (0.8)	2.1 (0.5)	0.51
D3	1.8 (0.6)	1.8 (0.9)	0.95
Worst pain (0 – 3)			
D1	2.3 (0.5)	3 (1)*	0.21
D2	2.4 (0.7)	2.3 (0.6)	0.30
D3	2 (0)*	2.2 (0.8)	0.76
Spirometry (ml)			
D1	1380 (1114)	1815 (1057)	0.47
D2	1420 (683)	1707 (881)	0.56
D3	1967 (1141)	2193 (1108)	0.72
Rescue opioid dose (oral morphine equivalents, mg)			
D1	16.1 (14.4)	20.2 (23.5)	0.33
D2	21.4 (27.6)	26.0 (25.0)	0.35
D3	15.5 (16.0)	13.4 (13.9)	0.38
Mean LA/d (ml 0.125% bupivacaine)	209.2 (46.9)	203.2 (31.2)	0.73

Table 1: Continuous LA infusion vs PCRA. All data normally distributed and presented as mean (SD) and compared with unpaired t-test, except where * exists, when presented as median (IQR), compared with Mann-Whitney U test. Intention to treat analysis.

Conclusions Our local data demonstrates that both regimens provide equivalent analgesic and respiratory effect, without affecting LA consumption. This provides flexibility, allowing an individualised approach to managing these patients, taking in to account patient preference, ability to comply with a PCRA regimen, and local resources.

B70 THORACIC SURGERY PERFORMED WITH PARAVERTEBRAL BLOCK REGIONAL ANAESTHESIA ALONE IN HIGH RISK PATIENTS

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Background and Aims Thoracic surgery is traditionally performed under general anaesthesia. Increasing patient complexity with comorbidity and frailty requires consideration of detrimental impacts of general anaesthesia, and awareness of alternative approaches to enable surgery. Paravertebral block regional anaesthesia alone is an effective alternative to facilitate thoracic surgery. We present a case report from our series.

Methods We hypothesised thoracic surgery could be achieved for high risk frail, elderly, and comorbid patients with provision of paravertebral block regional anaesthesia alone. Our case description reflects the evolution of our approach to this high risk population in our dedicated thoracic surgical unit at Guy's Hospital, London, UK.

High risk patients underwent surgical thoracoscopy, diagnostic pleural tissue sampling, and evacuation of pleural effusion with placement of indwelling drains.

We developed a process to facilitate surgery with ultrasound guided paravertebral regional anaesthesia alone. The procedures were successfully completed with no requirements for supplementary analgesia, intravenous sedation, or induction of general anaesthesia.