



Abstract EP009 Figure 2 Bradycardia episodes

The distribution of bradycardia episodes onsets

Conclusions Age, female gender, and history of hypertension were independent risk factors for HBEs. BIS monitoring, in contrast, was a protective factor. Despite the high incidence of HBEs, no patient in this study suffered from a neurological complication. Further study is required to ascertain the advantages of BIS monitoring during the beach chair position surgery.

EP010 REGIONAL ANAESTHESIA TO AID ENHANCED RECOVERY POST ELECTIVE TOTAL KNEE ARTHROPLASTY

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Background and Aims At University Hospital Lewisham (UHL), a 450-bed district general hospital in South East London, we have observed an increase in the use of Infiltration between the Popliteal artery and Capsule of the Knee (IPACK) blocks in the last year, with anecdotal improvement in pain outcomes. We aim to compare the effectiveness of different regional anaesthetic techniques observed, in order to enhance patients' acute pain management and recovery.

Methods Using SPSS software, we retrospectively analysed 100 patients who underwent total knee arthroplasty at UHL. The patients were identified using the Acute Pain Team's review pro-forma which includes pre-admission analgesic requirement, morphine equivalent requirements (MER) at day 1 and 2, and pain assessment using Numeric Rating Scale (NRS). We used the electronic records system for tourniquet time and time to mobilisation. We subdivided patients into three groups: 1) IPACK+adductor canal block (ACB)+local infiltration of analgesia (LIA); 2)ACB+LIA; 3)LIA only.

Results There were no statistically significant differences in MER or in time to mobilisation between the groups. Although there was a decrease in NRS score at rest and during mobilisation on day 1, we did not detect any significant difference (table 1). However, the largest proportion of the patients with ≥ 100 mins tourniquet time (table 2) and pre-admission opioid use was found in group 1 (table 3).

Abstract EP010 Table 1 Total knee arthroplasty regional techniques comparison

Table 1. Total knee arthroplasty regional techniques comparison				
	Group 1 (n=41)	Group 2 (n=34)	Group 3 (n=25)	p-value
Day 1 MER (Mean±SD)	48.04±24.82	47.64±27.36	41.96±19.98	0.584
Day 2 MER (Mean±SD)	43.65±31.12	43.38±27.12	47.00±28.61	0.875
Mobilisation time				0.080
1 st day	13 (13%)	13 (13%)	3 (3%)	
2 nd day	28 (28%)	21 (21%)	22 (22%)	
Day 1 NRS at rest (Mean±SD)	4.43±2.50	5.09±2.78	5.40±2.84	0.331
Day 1 NRS at mobilisation (Mean±SD)	6.87±2.42	7.93±2.53	7.60±2.32	0.166
Day 2 NRS at rest (Mean±SD)	3.96±3.04	3.89±2.87	4.80±2.50	0.502
Day 2 NRS at mobilisation (Mean±SD)	7.42±1.98	6.75±2.09	7.10±2.53	0.486

ANOVA test for Multiple Comparisons and Bonferroni test for Post HOC analysis
p<0.05 accepted as statistically significant

Abstract EP010 Table 2 Tourniquet time comparison

Table 2. Tourniquet time comparison	
Regional anaesthetic technique	Tourniquet time ≥ 100 minutes
IPACK + ACB + LIA (Group 1)	21.9% of the patients in Group 1
ACB + LIA (Group 2)	19.3% of the patients in Group 2
LIA (Group 3)	13.0% of the patients in Group 3

Abstract EP010 Table 3 Pre-admission analgesic requirement comparison

Table 3. Pre-admission analgesic requirement comparison	
Regional anaesthetic technique	Pre-admission opioid +/- gabapentinoid usage (chronic pain patients)
IPACK + ACB + LIA (Group 1)	58.5% of the patients in Group 1
ACB + LIA (Group 2)	41.9% of the patients in Group 2
LIA (Group 3)	47.8% of the patients in Group 3

Conclusions Our data, although suggestive, showed using IPACK blocks has no statistical benefit. IPACK blocks are growing in popularity; with increased regular practice and honing of technique, studies with a higher patient population may show statistical benefits.

EP011 HEMODYNAMIC EFFECTS OF SPINAL ANESTHESIA IN PATIENTS WITH AORTIC STENOSIS

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Application for ESRA Abstract Prizes: I apply as an Anesthesiologist (Aged 35 years old or less)

Background and Aims Spinal anesthesia (SA) is considered contraindicated in patients with aortic stenosis (AS), due to the sympathetic block, decrease in peripheral vascular resistance, hypotension, decrease in coronary perfusion, and potential for acute myocardial ischemia. However, low-dose isobaric bupivacaine (ISOBUPI) is often used in clinical practice with little hemodynamic consequences. This study evaluates the use of SA with ISOBUPI in AS patients receiving lower limb surgery.

Methods Medical records of patients with moderate to severe AS having lower limb orthopedic surgery and receiving SA (≤ 10 mg ISOBUPI 0.5%) were screened for the occurrence of hypotension, intraoperative vasopressor therapy, and 24-hour

and 30-day mortality. Hypotension was defined as a systolic blood pressure (SBP) < 80 mmHg or mean arterial pressure (MAP) < 65 mmHg.

Results Thirty-five patients with moderate (n=16) to severe AS (n=19) receiving SA for lower extremity surgery were included. No 24-hour or 30-day mortality was observed. Hypotension with SBP < 80 mmHg occurred in 20% of the patients, and 51% had a MAP < 65 mmHg. Hypotensive events were treated with norepinephrine 0.04 mcg/kg/min (IQR: 0.04 – 0.04) or ephedrine 10 mg (IQR: 10 – 20), phenylephrine 200 mcg (125 – 275). No severe hemodynamic instability or other vasoactive interventions were observed.

Abstract EP011 Table 1

	Spinal anesthesia		
	Total (n = 35)	Moderate AS (n = 16)	Severe AS (n = 19)
Episode of SBP < 80 mmHg, n (%)	7 (20)	3 (19)	4 (21)
Episode of MAP < 65 mmHg, n (%)	18 (51)	9 (56)	9 (47)
Vasoactive intervention, n (%)	8 (23)	3 (19)	5 (26)
Norepinephrine infusion, n (%)	3 (9)	1 (6)	2 (11)
Max rate in mcg/kg/min - median (IQR)	0.04 (0.04 - 0.04)	0.04 (0.04 - 0.04)	0.04 (0.03 - 0.04)
Ephedrine bolus, n (%)	6 (17)	3 (19)	2 (11)
Ephedrine dose (mg) - median (IQR)	10 (10 - 20)	10 (10 - 15)	18 (14 - 22)
Phenylephrine bolus, n (%)	7 (20)	3 (19)	3 (16)
Phenylephrine (mcg) - median (IQR)	200 (125 - 275)	200 (150 - 300)	200 (150 - 250)
24-hour mortality, n (%)	0 (0)	0 (0)	0 (0)
30-day mortality, n (%)	0 (0)	0 (0)	0 (0)

Conclusions Spinal anesthesia in patients with AS did not result in refractory hypotension or adverse outcomes. These data suggest that AS should not constitute an absolute contraindication and that studies are needed to formally evaluate the utility and safety of low-dose SA with ISOBUPI in patients with AS.

EP012 PAIN MANAGEMENT OF COSTAL FRACTURES IN POLYTRAUMATIC PATIENTS. CASE REVIEW IN A SECONDARY HOSPITAL

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Background and Aims Costal fractures are a significant cause of morbidity in polytrauma patients. Poor pain control contributes directly to the appearance of complications. Multimodal analgesia is highly recommended for optimal treatment.

We aimed to review the pain management of costal fractures in our center during 2021-2022.

Methods We reviewed all the polytraumatized patients admitted to our center during 2021 and 2022, selected those with costal fractures described in chest x-ray or CT-scan and described the analgesic strategy used within the first 48 hours. We also evaluated the analgesic quality by the need of rescue analgesia (opioid vs non opioid) and the appearance of complications related to analgesia.

Results 31 of 220 polytraumatized patients had costal fractures. All of them received an intravenous regime (IV) and only in 4 of them (13%) an only regional technique (RA) was performed: 3 ECI (epidural continuous infusion) and 1 ESP (erector spinae plane) continuous block. From this 4 patients, 3 had unilateral fractures and 1 had 13 (bilateral) fractures. There was only one complication associated in the RA group and no complications in the IV alone group. 90% of the patients had good pain control and did not need rescue analgesia. 3 of the 30 patients (10%) needed an analgesic rescue.

Abstract EP012 Table 1 Demographics and distribution

N: 220 patients	2021 (115)	2022 (111)
Costal fractures: 30 patients (13,63%)	14 (12,17%)	17 (15,31%)
Sex (Male, Female)	13 male, 1 female	15 male, 2 female
Mean age (mode)	51 years (57 years)	47 years (54 years)
Injury mechanism:	N:	N:
Traffic accident (car)	7 (50%)*	11 (64.70%)
Traffic accident (pedestrian)	0 (0%)*	1 (5.88%)
Fall	6 (42,85%)	3 (17.64%)
Bicycle accident	1 (7,15%)	2 (11.76%)
Analgesic strategy	N:	N:
Regional anesthesia (RA)	0 (0%)*	4 (23,75%)
Intravenous regime (IV)	14 (100%)	13 (76,25%)
Analgesic quality:	1 patient (IV group)	1 patient (IV group)-> non opioid
Need for analgesic rescue:	Opioid	1 patient (RA group)-> opioid*
Opioid or non opioid:		*Patient had a total of 13 ribs fractured.

Abstract EP012 Table 2 Comparison between IV regimes and RA techniques

Variables	IV only group (2021)	RA group (2021)	IV only group (2022)	RA group (2022)
Patients included	14 (100%)	0 (0%)	13 (76.25%)	4 (23.75%)
Technique	2 CIP, 12 SSB	None	1 CIP, 12 SSB	3 ECI, 1 ESP continuous block
Number of fractures	More than 6: 2 Less than 6: 12	None	More than 6: 3 Less than 6: 10	More than 6: 4 Less than 6: 0
Laterality	Unilateral: 100% Bilateral: 0%	None	Unilateral: 9 (69%) Bilateral: 4 (31%)	Unilateral: 4 (100%) Bilateral: 0 (0%)
Complications	None.	None.	1 patient had severe bradycardia with cardiac arrest (resuscitated) after morphine PCA* + ECI.	
Notes	*CIP: continuous infusion pump. *SSB: single scheduled bolus. *Patient->controlled analgesia.			

Conclusions Multimodal analgesia is chosen in our clinical practice for pain control with good results. A shift towards RA techniques was made in 2022 in patients with numerous fractures (more than 6), even though is not exempt from complications.