

EP008

RANDOMISED COMPARISON BETWEEN PERICAPSULAR NERVE GROUP BLOCK WITH LATERAL FEMORAL CUTANEOUS NERVE BLOCK AND QUADRATUS LUMBORUM BLOCK FOR POSTOPERATIVE ANALGESIA IN HIP SURGERY

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Background and Aims The optimal postoperative analgesic technique for hip surgery is still controversial. The present study aimed to compare the pericapsular nerve group (PENG) with the lateral femoral cutaneous nerve (LFCN) and quadratus lumborum blocks (QLB) in terms of analgesic efficacy, quadriceps motor preservation and side effects in patients undergoing total hip arthroplasty (THA) surgery.

Methods Eighty patients (ASA I-III) were randomly allocated to receive either a QLB (n=40) using 30 mL 0.25% bupivacaine or the PENG and LFCN blocks (n=40) using 30 mL 0.25% bupivacaine (25 mL for the PENG block and 5 mL for the LFCN block) in this prospective, double-blind study. The primary outcome was the consumption of postoperative morphine in a multimodal analgesic regimen after spinal anesthesia. The secondary outcomes also included pain scores (static and dynamic), quadriceps muscle strength, patient satisfaction, and incidence of postoperative complications.

Results There was no significant difference between the two groups in terms of morphine consumption and pain scores in the first 12 hours ($p > 0.05$). Patients receiving the combination of the PENG and LFCN blocks had significantly higher quadriceps muscle strength at 6 h, less morphine consumption, and static pain scores at 24 h hour, compared to QLB ($p < 0.05$). Patient satisfaction, dynamic pain scores, and block-related complications were similar between the groups ($p > 0.05$).

Conclusions PENG with the LFCN block provides longer analgesia and better preservation of quadriceps strength after THA. However, further studies with larger sample sizes are needed to determine if these differences are clinically significant.

EP009

FACTORS ASSOCIATED WITH HYPOTENSION OR BRADYCARDIA EPISODES DURING ARTHROSCOPIC SHOULDER SURGERY UNDER GENERAL ANESTHESIA COMBINED WITH INTERSCALENE BLOCK IN THE BEACH CHAIR POSITION

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Background and Aims Shoulder surgery is commonly performed in the beach chair position (BCP). However, it may cause hemodynamic instability, especially when general anesthesia (GA) with a preoperative interscalene brachial plexus

block (ISB) is used. Moreover, Hypotension or Bradycardia episodes (HBE) occurring during the BCP may be associated with an increased risk of neurological complications. The objectives of this study were to investigate the incidence and characteristics of HBEs and their associated factors.

Methods The Institutional Review Board approved this study. We retrospectively reviewed the medical records of patients who underwent arthroscopic shoulder surgery under GA combined with ISB in the BCP between January 1, 2015, and July 31, 2022. HBEs, patient demographics, anesthetic, and surgical factors were collected and analyzed for their association with HBEs.

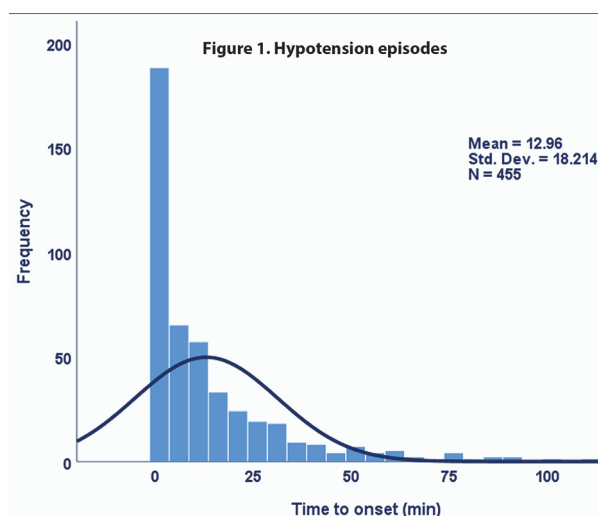
Results From the identified cohort of 660 patients, 482 (73%) experienced HBEs. The onset of HBEs mainly occurred earlier after patient positioning, as the mean time to the first hypotension and bradycardia episodes were 12.96 ± 18.21 minutes and 10.44 ± 13.13 minutes, respectively. Multivariable analysis showed that increasing age, female gender, and history of hypertension were associated with HBEs. In contrast, bispectral index (BIS) monitoring was associated with a lower risk of HBEs.

Abstract EP009 Table 1

	Adjusted OR (95%CI)	p-value
Age	1.021 (1.007, 1.036)	0.004*
Female	1.791 (1.226, 2.615)	0.003*
Hypertension	2.770 (1.773, 4.329)	<0.001*
BIS monitoring	0.479 (0.289, 0.796)	0.004*

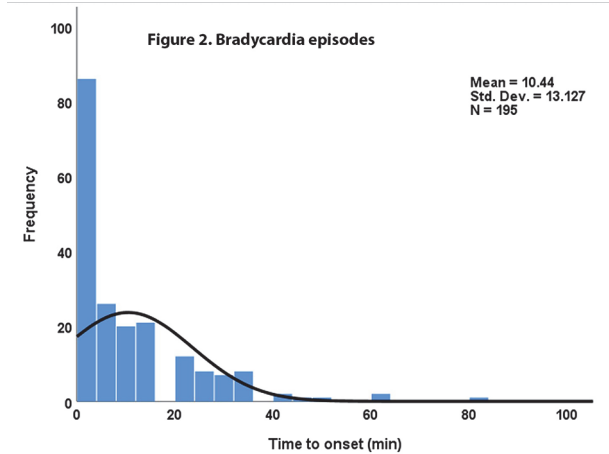
BIS monitoring = bispectral index monitoring; OR = odds ratio

Multivariable logistic regression analysis for factors associated with hypotension or bradycardia episodes



Abstract EP009 Figure 1 Hypotension episodes

The distribution of hypotension episodes onsets



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