

Background and Aims Multimodal pain analgesia strategies are common in perioperative management of total knee arthroplasty (TKA), although the role of adductor canal blocks (ACB) versus femoral nerve block on early postoperative recovery for revision knee surgery is not investigated. The purpose of this study is to independently evaluate the effect of ACB on short-term postoperative outcomes including (1) length of stay (LOS), (2) postoperative narcotic utilization, and (3) function with physical therapy in revision TKA.

Methods We retrospectively identified a cohort study of consecutive 40 patients from January 2021 to July 2021 who had undergone unilateral revision TKA using a single-shot ACB (19 patients) vs femoral nerve block (21 patients) under spinal anesthesia (hyperbaric 0.5% Marcaine 2.5 ml and 20 microgram fentanyl) in addition to a standardized multimodal pain analgesia protocol. These 2 groups were compared using independent sample t- tests with primary end points of interest being distance ambulated after surgery, and inpatient narcotic use.

Results Quadriceps strength was better preserved in adductor group than in femoral group. Walking meters and going upstairs were better results in adductor group. IV morphine consumption within the first 48 hours period were less in adductor group comparing to femoral group.

Conclusions Adductor nerve block showed better early recovery in revision TKA when comparing to femoral nerve block (FNB).

EP062

PATIENT SATISFACTION WITH NERVE BLOCK ANALGESIA TECHNIQUES FOLLOWING AMBULATORY ANKLE REPLACEMENT SURGERY

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10.1136/rapm-2023-ESRA.124

Background and Aims This service evaluation project assesses patient satisfaction with home analgesia following a single-shot sciatic popliteal nerve block versus combined single-shot sciatic popliteal nerve block and perineural catheter technique with local anaesthetic infusion continued at home via an elastomeric pump for up to 48 hours post hospital discharge. Both nerve block techniques were initiated preoperatively for ambulatory ankle replacement surgery.

Methods Retrospective data on the nerve block technique and patient satisfaction were collected from anaesthetic charts and follow-up home calls for patients who underwent ambulatory ankle replacement between April 2022-December 2022. Thirty patients, 15 who received a single-shot block (group A) and 15 who received a combined single-shot block and perineural catheter technique with local anaesthetic infusion continued at home via an elastomeric pump (group B), were included in this service evaluation. The following responses were collected from patients via follow-up home calls: 1. What is the level of satisfaction with your pain control up to one week after hospital discharge (not satisfied, satisfied, very satisfied)?

2. Would you be happy to receive the same nerve block technique if you were to have the operation again?

Results Patient satisfaction with the block technique is summarised in the table 1 below.

Abstract EP062 Table 1 Summary table

	Group A (n=15)	Group B (n=15)
1. What is the level of satisfaction with your pain control up to one week after hospital discharge (not satisfied, satisfied, very satisfied)?	73% very satisfied 27% not satisfied	87% very satisfied 13% not satisfied
2. Would you be happy to receive the same nerve block technique if you were to have the operation again?	75% yes 25% no	100% yes 0% no

Conclusions Patients who received a combined single-shot block and perineural catheter technique reported better satisfaction with home analgesia than with a single-shot block.

EP063

A SINGLE NEEDLE TIP POSITION APPROACH 'THE MIDDLE TRUNK' BLOCK- FOR SUPRACLAVICULAR BLOCK: AN ANATOMIC CADAVERIC STUDY

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10.1136/rapm-2023-ESRA.125

Background and Aims Injection of local anesthetic with anatomical landmark following paraesthesia of the middle two fingers results in >97% block efficacy. Injections in 'Corner pocket' and 'Intra-cluster' in the supraclavicular brachial plexus under ultrasound-guidance have been suggested for better coverage. We hypothesized that a single injection of dye at the level of the middle trunk (MT) would result in diffusion in the superior and inferior trunks.

Methods After ethics approval, 12 ultrasound guided injection was performed with needle tip positioned within fatty connective tissue at the level of the MT bilaterally in 6 soft embalmed cadavers. We injected 3.5ml, 7.5ml and 15ml diluted methylene blue dye in 2 cadavers (4 specimens) each. Bilateral neck dissections was performed in the posterior triangle of the neck 30 minutes after injection in all cadavers and dye spread was visualized beneath investing layer of deep cervical fascia. (figure 1)

Results Injection of the lower volume of dye (3.5ml) consistently spared the superior trunk while an injection of the higher volume of dye (15ml) consistently stained all trunks when a single injection was performed at the MT level. Suprascapular nerve and phrenic nerves were consistently stained with 15 ml injections while they were spared with low and intermediate-volume injections. The dissections revealed dye dispersion with a dense (15ml) to differential stain pattern (3.5ml and 7.5ml resulted in a mild to moderate) of the cadaveric brachial plexuses. (figure 2)



Abstract EP063 Figure 1 USG and dissection images for MTB

	CS	C6	C7	C8	T1	ST	MT	IT	SSN	PN	ASM	MSM	SCA	ShocN	IS
CAD1 (15 ml)	R														
	L														X
CAD2 (15 ml)	R														
	L													X	
CAD3 (7.5 ml)	R								X	X	X	X	X	X	
	L								X	X	X	X	X	X	X
CAD4 (7.5 ml)	R										X	X	X	X	
	L										X	X	X	X	
CAD5 (3.5 ml)	R	X						X	X	X	X	X	X	X	X
	L	X	X			X		X	X	X	X	X	X	X	X
CAD6 (3.5 ml)	R	X	X					X	X	X	X	X	X	X	X
	L	X	X			X		X	X	X	X	X	X	X	X

Abstract EP063 Figure 2 Distribution of MBD in cadavers: numerical representation

Conclusions We propose the use of a single injection MT block technique using an injectate volume more than 7.5ml for an effective supraclavicular brachial plexus block.

EP064 EFFICACY OF ERECTOR SPINE PLANE BLOCK IN TWO DIFFERENT APPROACHES OF LUMBAR SPINAL FUSION SURGERY

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10.1136/rapm-2023-ESRA.126

Background and Aims ESPB has shown variable efficiency. We evaluated the efficacy of ESPB in elective lumbar spinal fusion surgery patients with different surgical approaches

Methods Retrospectively 45 elective lumbar TPF patients with TLIF or TLIF+ALIF approaches were divided into 2 groups: general anesthesia (GA,n=24), general anesthesia with ESPB (GA+ESPB,n=21). Primary we analyzed efficacy of ESPB in terms of pain intensity in the first 48h. Secondary – fentanyl free patients and opioid consumption in the first 24h postoperatively. Comparative analysis (SPSS®v.28.0).P<0.05.

Results Out of 45 patients (27 female),21 received GA+ESPB and 24 GA. Average age was 60.3±14.3 years. ESPB was performed in 17 TLIF and in 4 TLIF+ALIF patients. ESPB significantly reduced pain intensity at rest in both approaches 48h after surgery; p<0.05. GA+ESPB when compare with GA increased the number of fentanyl free patients immediately after surgery in TLIF (77%vs.29%;p=0.01) and TLIF+ALIF (82%vs.0%;p=0.004) approaches. For those with ESPB fentanyl infusion was started in 6.8±3.2h (23.5% of TLIF) and 8.9±7.6h (75% of TLIF+ALIF) after surgery. ESPB shortened fentanyl infusion time when compare with GA with mean difference(MD) 3.2±4.2h in TLIF;p=0.045, 6.7±5.3h in TLIF +ALIF;p=0.028. Only in TLIF+ALIF approach, ESPB reduced total fentanyl consumption compared with GA 1.43±0.45mg/24h vs.0.93±0.68mg/24h;p=0.015.

Conclusions ESPB reduces pain at rest after lumbar fusion surgery and the number of patients requiring immediate postoperative fentanyl in both approaches, reducing the total fentanyl consumption and duration of infusion. However, application of ESPB not always provide enough analgesia to

completely avoid fentanyl administration after surgery in the first 48h.

EP065 PNEUMOCEPHALUS WITH LATE PRESENTATION AFTER COMBINED SPINAL-EPIDURAL IN A PREGNANT WOMAN – A CASE REPORT

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10.1136/rapm-2023-ESRA.127

Background and Aims Pneumocephalus (PC), defined as presence of air in the intracranial space, is a rare complication of neuraxial techniques. We describe a case of a pregnant woman submitted to a combined spinal-epidural (CSE) technique who developed PC with late presentation.

Methods 16-year old pregnant woman, 41 weeks of pregnancy, asked for labor pain relief. A CSE with loss of resistance with saline (LORS) technique was performed. The epidural catheter (EC) was used for analgesia during labor work, with complete pain relief and no complications. 9 hours after, the patient was submitted to urgent cesarean section (CS) because of nonreassuring fetal status. Shortly after the anesthetic bolus via EC, the patient developed apnea, coma and anisocoria and was promptly intubated and ventilated. At the end of CS the patient woke up without neurologic deficits. Cerebral CT scan showed air densities in the right lateral and third ventricle. Bedrest and oxygen therapy was instituted. She developed postural headache treated with analgesia and was discharged 8 days after, fully recovered.

Results PC is often associated with identification of epidural space trough loss of resistance to air (LORA). However, in this case we used LORS. Also, she developed postural headache in the postoperative period, which suggests a dural lesion. The air entrance through the dural defect to the intracranial cavity, during the epidural bolus, seems to be the most likely mechanism of PC.

Conclusions PC usually manifests with headache and resolves spontaneously, however presentation can be atypical and surgical treatment may be necessary in cases of tension PC.

EP066 A SYSTEMATIC REVIEW OF THE USE OF LOCAL ANAESTHETIC WOUND INFILTRATION BY SURGICALLY PLACED RECTUS SHEATH CATHETERS IN PATIENTS UNDERGOING ABDOMINAL SURGERY USING MIDLINE INCISION

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10.1136/rapm-2023-ESRA.128

Background and Aims This systematic review has been performed to assess the efficacy of post-operative analgesia using bolus infusions of local anaesthetic given via rectus sheath catheters in patients undergoing laparotomy via midline incisions.

Methods A PubMed search of the literature has been used to capture all the relevant publications. All studies where rectus sheath analgesia has been compared with placebo and with epidural anaesthesia have been analysed. The review has revealed that there is considerable variation in the