B35 ULTRASOUND GUIDED CLAVIPECTORAL FASCIA PLANE BLOCK FOR MIDDLE THIRD CLAVICULAR FRACTURE

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Background and Aims Although the interscalene block of the brachial plexus is the gold standard for clavicle osteosynthesis surgery[1], it´s not free from complications[2]. The objective was to evaluate the anaesthetic and analgesic efficacy of the clavipectoral fascia plane block (CPB)[3] in mid-clavicular fracture surgery.

Methods Descriptive observational study in 50 patients treated for osteosynthesis of mid-clavicular fracture (12 months period). The main objective was to assess pain (VAS) in the immediate postoperative period (POI), and at 6–12 and 24 hours. As secondary objectives: degree of intraoperative sedation (IOP) (Ramsay Score), perioperative fentanyl consumption, rescue analgesia, unplanned general anaesthesia, the presence of motor or sensory block, and diaphragmatic paralysis evaluated by ultrasound.

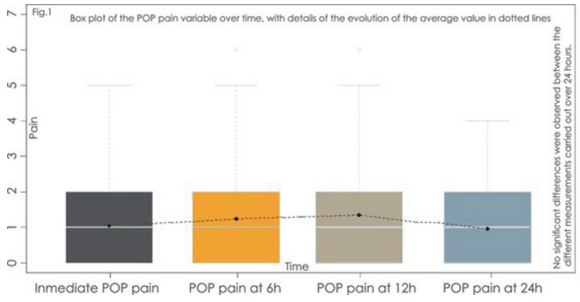
After intravenous premedication with midazolam 3mg, fentanyl 0.5–1mcg/kg, ketorolac 30mg, dexamethasone 8mg, and cephalothin1g, CPB was performed according to the technique described related with the supraclavicular nerve block[4,5]. IOP sedation was with dexmedetomidine IV 0.2–0.5 mg/kg/h. As postoperative analgesia ketorolac 30 mg/12 h IV, and as rescue analgesia (VAS $\geq$ 4/10) tramadol 50 mg IV bolus.

Results El dolor postoperatorio POI a las 6–12 ya las 24 h fue de 1,04(DE=1,26);1,24(DE=1,42);1,34(DE=1,92);0, 96 (DE= 1,29) respectivamente (figure 1). La dosis total perioperatoria media de fentanilo fue de 0,88 mcg/kg.Durante el postoperatorio, 9 pacientes (18%) solicitaron analgesia de rescate.No hubo conversiones a anestesia En general, no se eliminará bloqueo motor ni sensible de la extremidad superior ni parálisis diafragmática (table 1).

Abstract B35 Table 1

Table 1. Clinical Variable

Clinical Variable	Categories	Results	
Ramsay Score	Median (IQR)	3	1,0
Fentanyl Perioperative (mcg/kg)	Average (SD)	0,88	0,076
Rescue Analgesics	Tramadol 50 mg,n (%)	9	18
	No, n (%)	41	82,0
Postoperative Pain	Immediate,average (SD)	1,04	1,26
	6h, average (SD)	1,24	1,42
	12h, average (SD)	1,34	1,92
	24h, average (SD)	0,96	1,29
Unplanned conversion to general anesthetic	Yes (n,%)	0	0
	No (n,%)	50	100
Motor Block	Yes (n,%)	0	0
	No (n,%)	50	100
Sensory Block	Yes (n,%)	0	0
	No (n,%)	50	100
Diaphragmatic Paralysis	Yes (n,%)	0	0
	No (n,%)	50	100



Abstract B35 Figure 1

Conclusions Our series supports the anaesthetic and analgesic efficacy of the CPB block for the osteosynthesis of fractures of the middle third of the clavicle.

B36 EVALUATION OF ULTRASOUND GUIDED PERICAPSULAR NERVE GROUP BLOCK ON NEURAXIAL ANESTHESIA POSITIONING PAIN, POSTOPERATIVE ANALGESIA AND QUALITY OF LIFE (QOR-15) IN PATIENTS UNDERGOING HIP SURGERY

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Background and Aims Pericapsular nerve group (PENG) block targets anterior hip joint capsule nerves, and has been used for acute and perioperative pain in hip fractures. Herein, we evaluated the effect of preoperative PENG block on spinal anesthesia positioning pain and postoperative analgesia in hip surgery.

Methods This randomized, controlled, assessor blinded study was conducted between May 2021 and March 2022 following IRB approval. ASA I-III patients aged 35–90 y scheduled for hip fracture surgery were included. In the PENG group (n=40) USG-guided PENG was applied with 20 mL LA, 20m prior to spinal anesthesia whilst in the control group (n=41) 1.5 mcg/kg fentanyl IV was applied 5m prior to spinal anesthesia. Spinal anesthesia, perioperative and postoperative analgesia plans were same for all patients. Peri-positioning and postoperative numeric rating scale (NRS), PCA morphine consumption, time to first opioid requirement were noted for the first 24 hours. Additionally, the quality of recovery (QoR-15) score was determined at the 24th hour.

Results NRS scores were significantly lower in the PENG group at peri-positioning and at postoperative 3rd, 6th and 12th hours ($p<0.001$). Cumulative morphine consumption was statistically higher in all time points in the control group. Time to first opioid requirement was later in the PENG group ($p<0.001$) and QoR-15 score averages were significantly higher too (111.02±9.67 vs 99.51±9.45,respectively, $p<0.001$).

Abstract B36 Table 1

	Group PENG (n:40)	Group Control (n:41)	p
Descriptive Data			
Age (years)	73.28±9.54	73.26±7.62	0,991
Body Mass index	27.14±4.23	26.05±3.14	0,191
Surgical Time (min)	79.57±8.18	78.65±8.85	0.628
Surgery Type 1 vs 2*	21/19	20/21	
NRS at different times			
Preoperative NRS	5 (4-5,25)	5 (4-6)	0,885
Prepositioning NRS	2 (2-2)	4 (3-4)	***<0,0001***
Positioning NRS	3 (3-4)	5 (4-5)	***<0,0001***
Post positioning NRS	2 (2-2)	3 (2-3)	***<0,0001***
3th Hour	0 (0-3)	3 (3-4)	***<0,001***
6th Hour	3 (3-3)	4 (4-5)	***<0,001***
12th Hour	3 (3-4)	5 (4-5)	***<0,001***
18th Hour	3 (3-3)	3 (3-3)	0,375
24th Hour	2 (0-2)	2 (0-2)	0,177
Cumulative Morphine consumption (mg)			
3th Hour	0 (0-0)	1 (0-2)	***<0,001***
6th Hour	1 (0-2)	3 (2-4)	***<0,001***
12th Hour	2 (1-3)	5 (3-6)	***<0,001***
18th Hour	3 (2-4)	6 (5-8)	***<0,001***
24th Hour	3 (2-4)	7 (5-8)	***<0,001***
Time to First Opioid requirement (h)			
	8 (6.75-12)	4 (3-7)	<0.001
Quality of Recovery 15 (QoR 15) score			
	111.02±9.67	99.51±9.45	<0.001

Table 1: Comparison of descriptive and postoperative analgesia related data. * Surgery Type: 1: Partial hip prosthesis, 2: Proximal femur nailing. Surgery types are expressed as number of patients whereas other descriptive data is expressed as mean±standard deviation. Data related to NRS and analgesic requirements are expressed as median (percentiles 25–75). p values were italicized and p values that are written in bold represent statistical significance.

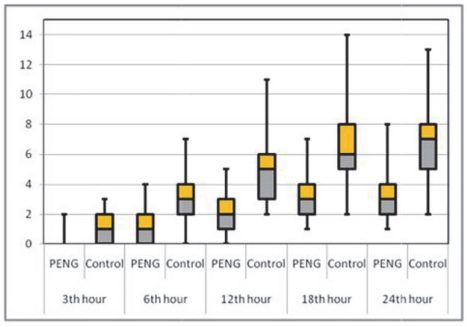

Figure 2: Demonstration of cumulative morphine requirement (mg) by groups over time. X axis: Time points after surgery, Y axis: Cumulative morphine consumption(mg)

Abstract B36 Figure 1

Conclusions PENG block reduces pain associated with spinal anesthesia positioning and improves the quality of the postoperative analgesia regimen when added to a multimodal analgesia plan.

B37 THE USE OF NEEDLE TRACKING IN SKILL ACQUISITION FOR ULTRASOUND GUIDED PERIPHERAL NERVE BLOCKS

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Background and Aims Ultrasound guided regional anaesthesia is an important skill expected of an anaesthetist, with greater emphasis in the Royal College of Anaesthetists updated training curriculum. The curriculum includes key capabilities such as "Demonstrates how to achieve an optimal ultrasound image", and suggests assessment methods including part-task simulation and simulation courses. With ultrasound and needle technology continually improving, there are opportunities for improved patient safety and peripheral nerve block accuracy. However, with this comes an ever important focus on safely teaching and acquiring new skills.

Methods Using the Braun Philips Xperius ultrasound system (Phillips, Netherlands) we have developed a simulation course to test whether needle tracking technology may improve peripheral nerve block safety, accuracy and speed. Anaesthetic trainees volunteered to perform a range of simulated nerve blocks using a phantom jelly. Trainees were divided in to two groups. One group practiced with the Stimuplex Onvision (Braun, Germany) needle, whilst the control group practiced using SonoPlex II Facet S (Pajunk, Germany) needle. McLeod et al's (2019) validated global rating scale was modified to produce a combined checklist/global rating scale to score participants on needling technique, errors and time to perform block.

Results Onvision needle tracking may reduce time to perform blocks for out-of-plane techniques and reduce needle redirections for both in-plane and out-of-plane techniques. Block accuracy was similar for both needles. Time to perform block was reduced following practice with either needle.

Conclusions Needle tracking provides an opportunity to improve block speed, accuracy and safety for specific blocks and trainee groups.

B38 ULTRASOUND GUIDED AXILLARY BRACHIAL PLEXUS BLOCK USING A NOVEL OPERATOR CONTROLLED INJECTION DEVICE: A PRODROMAL STUDY

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Background and Aims Ultrasound guided axillary brachial plexus block is useful for a variety of upper extremity surgical procedures. SAFIRA® - SAFer Injection for Regional Anaesthesia is a novel device allowing a single operator to conduct the whole block procedure by controlling solution injection using a pedal. The aim of this study was to compare the block technique using an assistant to perform the injection with the use of SAFIRA®.

Methods 20 patients undergoing surgery of the upper limb were randomly allocated into two groups (n = 10). Group A, where block was performed by two persons and group B where block was performed by a single anesthesiologist using SAFIRA®. Procedure duration (including time for prescanning), block success and block onset time were assessed. Additionally, complications involving nerve injury were recorded. Blocks were performed by the same two anesthesiologists.

Results The time needed to perform the block was similar in both groups (290 seconds ± 128, Group A versus 221 ± 112 seconds, Group B – p= 0.07). Success rate of all blocks was 100%. A significantly faster onset of sensory and motor block for all nerves separately was faster in Group B ($p<0.05$ in all instances). Nevertheless in most cases statistical significance was marginal. No complications were recorded.

Conclusions The use of SAFIRA®, a novel single operator controlled device, is comparable to the block performance with an assistant. It seems beneficial in terms of shorter procedure