

**B439** **COMPARISON OF DEXMETOMIDINE AND PROPOFOL FOR PROCEDURAL ANALGOSEDATION IN CHILDREN UNDERGOING ULTRASOUND-GUIDED REGIONAL ANESTHESIA FOR ORTHOPEDIC SURGERY. A PILOT STUDY**

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10.1136/rapm-2022-ESRA.515

**Background and Aims** Ultrasound-guided regional anesthesia and peripheral nerve catheters for postoperative pain management is a relatively recent aspect of the field of pediatric anesthesia. The goal of this prospective, blinded study was to evaluate cardiovascular and respiratory safety, clinical efficacy, and recovery following orthopedic surgery performed in peripheral nerve blocks using dexmedetomidine and propofol for sedation with spontaneous breathing.

**Methods** The study included 90 children aged 1 to 18 who were randomly assigned to the dexmedetomidine or propofol groups, ASA-PS scores of I to III, since January 2022. We analyzed baseline characteristics: gender, age, body weight, hemodynamic and respiratory stability, the depth of anesthesia was determined with a modified Ramsay sedation score, presence of peripheral nerve catheter, duration of operation and anesthesia, and awakening time from anesthesia.

**Results** The operation time was longer in the dexmedetomidine group ( $t = -2.988$ ,  $DF = 88$ ,  $p < 0.01$ ). The time of anesthesia was longer in the dexmedetomidine group ( $t = -22.301$ ,  $DF = 88$ ,  $p < 0.05$ ). Awakening time from anesthesia was longer in the propofol group ( $t = 10,884$ ,  $DF = 88$ ,  $p < 0.01$ ). Patients with neuromuscular disorders had a longer awakening time from anesthesia in the propofol group ( $t = -4808$ ,  $DF = 43$ ,  $p < 0.01$ ).

**Conclusions** Our research has shown that dexmedetomidine and propofol are effective and safe for sedation in pediatric patients undergoing orthopedic surgery under regional anesthesia. Due to the rapid awakening from anesthesia, dexmedetomidine is the sedative of choice for patients with neuromuscular disorders.

**B440** **ULTRASOUND GUIDED POPLITEAL NERVE BLOCK VERSUS GENERAL ANESTHESIA FOR ANKLE SURGERY IN PEDIATRIC PATIENTS**

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10.1136/rapm-2022-ESRA.516

**Background and Aims** Pediatric population is a challenge in performing and evaluating regional anesthesia. Current trend prefers regional blocks over general anesthesia, and peripheral regional blocks over central ones. Comparison of intra- and postoperative analgesia with perioperative popliteal nerve block under sedation versus general anesthesia in pediatric patients undergoing ankle surgery

**Methods** 108 patients (period of 2 years), 7 y-17 y old for ankle surgery. ASA I 1–2. R group: perioperative popliteal nerve block + sedation (n=35, 32.4%). G group: general anesthesia: TIVA+opioid (n=73, 67.6%). R group: Propofol V=3mg/kg/h+ regional anesthesia. G group: general anesthesia: propofol 4mg/kg i.v. bolus dose+perfusion 12mg/kg/h +fentanyl 2mcg/kg+laryngeal mask. G group intraoperative evaluation: hemodynamics, respirations. R group intraoperative evaluation: hemodynamics, respirations, Visual Analogue Scale (VAS) self assessment, complaints. Postoperative evaluation for both groups (for 48h): VAS, self assessment, hemodynamics, respirations, additional analgesia.

**Results** R group: No complications.. 2 patients (5.71%) received single NSAID (VAS 4p) after surgery. 94.28%- no additional analgesia.

G group: No complications. Higher doses intraoperative sedatives and opioids. Multimodal postoperative analgesia

**Conclusions** Popliteal nerve block provides effective analgesia; reduces the need for general anesthesia, opioids, additional medication; improves patient's rehabilitation, recovery and comfort; lessens or even eliminates the need of opioid analgesia. It is a safe, effective and reliable method for treating perioperative pain in pediatric patients.

**B441** **ULTRASOUND GUIDED PERIPHERAL NERVE BLOCKS AS A VALUABLE COMPONENT OF ANALGESIA IN PAEDIATRIC CASES WITH LIVER DISEASE**

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10.1136/rapm-2022-ESRA.517

**Background and Aims** Patients with liver disease present a challenge for perioperative analgesia. Peripheral nerve blocks have a good risk benefit balance and may lower the need for perioperative analgesics.

**Methods** We present three paediatric cases with hepatic compromise in which peripheral blocks under general anaesthesia have provided satisfactory, uncomplicated analgesia and lowered the need for systematic agents

**Results** A 16-months-old 9kg baby, was scheduled for primary resection of hepatoblastoma. The extended right hepatectomy required a right subcostal incision along with a left subcostal extension. Ultrasound guided bilateral subcostal TAP blocks were performed, using Ropivacaine 0.1%, 0.4 ml/kg on the right and 0.2 ml/kg on the left side. A preperitoneal multi-holed catheter was introduced by the surgeon at the end of the surgery and Ropivacaine 0.1%, infusion was started at 0.3 ml/kg/h. Postoperatively only 4 doses of paracetamol were administered during the first 48 hours.

A postoperative omphalocele reconstruction was scheduled on a 4-year-old 15.5 kg girl with Alagille's syndrome, an inherited disorder with cholestasis. Single shot ultrasound guided bilateral rectus sheath block with 0.8 ml/kg Ropivacaine 0.1% with Dexmedetomidine 0.3mcg/kg provided analgesia for 10 hours. One rescue dose of paracetamol was required the first 24 hours.

A 17-year-old 102kg boy with Orthotopic Liver Transplantation for Ornithine Transcarbamylase Deficiency was scheduled for posterior open hamstring release. Popliteal Sciatic nerve block under ultrasound guidance with 20 ml