ERECTOR SPINAЕ BLOCK FOR PERIOPERATIVE PAIN MANAGEMENT IN CHILDREN UNDERGOING THORACOTOMY

Background and Aims Thoracotomy for pediatric cardiac surgery can be associated with significant pain. Regional anesthesia techniques such as epidurals and paravertebral blocks can reduce the pain of thoracotomy but can also be associated with significant risk.

The erector spinae plane (ESP) block targets the dorsal and ventral rami of spinal nerve roots and has been used extensively for a host of adult surgical procedures. The ESP block is a less invasive option due to the avoidance of the neuraxial and paravertebral spaces.

Methods We present a case series in which the ESP block was used successfully in 25 pediatric patients undergoing thoracotomy for cardiac surgery. We compare the ESP to other modalities of perioperative pain management in 29 pediatric patients.

Results Patients presented for coarctation repair (5) and vascular ring division (20 patients). The patients ranged in age from 8 months to 17 years of age. The ESP blocks were performed after induction of general anesthesia under ultrasound guidance. Intraoperative opioid use was decreased compared to the usual doses used with other blocks or pain management modalities, and postoperative opioid use in the first 24 hours after surgery ranged from 0.05 to 0.5 milligrams per kilogram, significantly lower than other modalities. Postoperative FLACC pain scores were significantly lower in the ESP group in the first 48 hours.

Conclusions The erector spinae plane block can potentially lead to decreased intraoperative and postoperative opioid use for pediatric patients undergoing thoracotomy for cardiac surgery.

TRUNCAL (TAP AND QL) BLOCKS FOR APPENDECTOMY IN CHILDREN: A RETROSPECTIVE STUDY OF EFFICACY COMPARED TO GENERAL ANESTHESIA ALONE

Background and Aims The aim of this study is to evaluate the efficacy of US-guided truncal blocks (TAP and QL) in children undergoing appendectomy.

Methods After approval by the ethics committee we conducted a retrospective study including 204 pediatric patients underwent for appendectomy from April 2020 to April 2021. A group ‘GA’ received general anaesthesia alone (n=142), a group ‘GA+RA’ received GA with ultrasound-guided TAP or QL blocks (n=62). We compared total surgical and anaesthesia time, the needs in opioids intraoperatively, non-opioid analgesia and fluid therapy first 5 days postoperatively, incidences of PONV, duration of the body temperature reaction, length of hospital stay (LOS), using Mann-Whitney U-test, chi-square and Fisher’s exact tests.

Results Patients in both groups were comparable in age, body weight, ASA status. Total surgical time including anaesthesia was longer in ‘GA+RA’ group [1,63(0.6) vs 1,34(0.6) hours, p<0.001]. Patients in ‘GA+RA’ needed significantly less doses of phentanyl intraoperatively [4,5(2,4) vs 7,0(3,6) mg/kg/h, p<0.001], despite of that, there was no difference in incidences of PONV between groups. 34% of patients in ‘GA+RA’ and 58% of patients in ‘GA’ needed additional analgesia in the end of surgery (p=0.003), but needs in non-opioid analgesia in 1–5 days after surgery were comparable. We didn’t observe differences in duration of temperature reaction, fluid therapy, as well as in LOS after surgery.