

24 postoperative hours. Secondary outcomes included time to realize block, intraoperative fentanyl consumption, occurrence of intraoperative tachycardia or hypertension, postoperative pain scores, time to first analgesic rescue and total dose of postoperative analgesic consumption.

#### Results

**The two groups were comparable** No difference was noted in the time to perform the block ( $p=0.17$ ). The consumption of intraoperative fentanyl was similar between the groups ( $p=0.36$ ) with no difference in intraoperative hemodynamic parameters. We noted no differences in pain scores. The time to first analgesic rescue was similar ( $p=0.40$ ). The postoperative total tramadol consumption in the CB group was  $40\pm 33$  mg and  $35\pm 27$  mg in the AQLB group ( $p=0.21$ ).

**Conclusions** Our study showed that the AQLB and the CA were comparable regarding intra- and postoperative analgesic demand.

#### EP219 CRYOANALGESIA IS AN ESSENTIAL PART OF MULTIMODAL ANALGESIA IN THE SURGICAL TREATMENT OF FUNNEL CHEST DEFORMATION

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**Background and Aims** The management of acute pain during surgical correction of the funnel chest is an interdisciplinary challenge. For the first time in Poland (in May 2022) intraoperative cryolesia was performed using Cryo-S Painless Metrum Cryoflex device during minimally invasive modified Nuss surgery in the Department of Pediatric Orthopedics and Oncology of Musculoskeletal System of Pomeranian Medical University in Szczecin, Poland. The aim of the study was to compare the short and long-term effectiveness of intercostal cryoanalgesia in terms of pain relief, risk of sensory disturbances and patient comfort.

**Methods** A total of 100 patients who were operated on with the Nuss method were enrolled. The control group of 52 patients (15 years  $\pm$  2, 4 girls) had multimodal analgesia protocol according to the standard of acute pain management in children. The intervention group of 48 patients (15 years  $\pm$  3 years, 5 girls) had intraoperative intercostal cryolesia bilaterally from Th3 to Th8.

**Results** In the intervention group significantly better control of postoperative pain assessed according to the numerical rating scale (NRS) in the first postoperative days ( $p<0.01$ ) was achieved. Additionally, there was shorter duration of intravenous opioid use ( $p<0.01$ ), faster independence and correctness of exercises performed during postoperative rehabilitation ( $p<0.01$ ) and shorter hospitalisation time ( $p<0.01$ ). In the intervention group, better results were obtained in terms of quality of life according to the modified Nuss questionnaire.

#### Conclusion

**Conclusions** Adding cryolesia to multimodal analgesia during modified Nuss surgery gives better results in terms of pain control, improved rehabilitation, and reduced hospitalisation time.

#### EP220 PATHWAYS OF DYE SPREAD AFTER ULTRASOUND GUIDED INJECTIONS IN THE PARASPINAL SPACES- A CADAVERIC STUDY

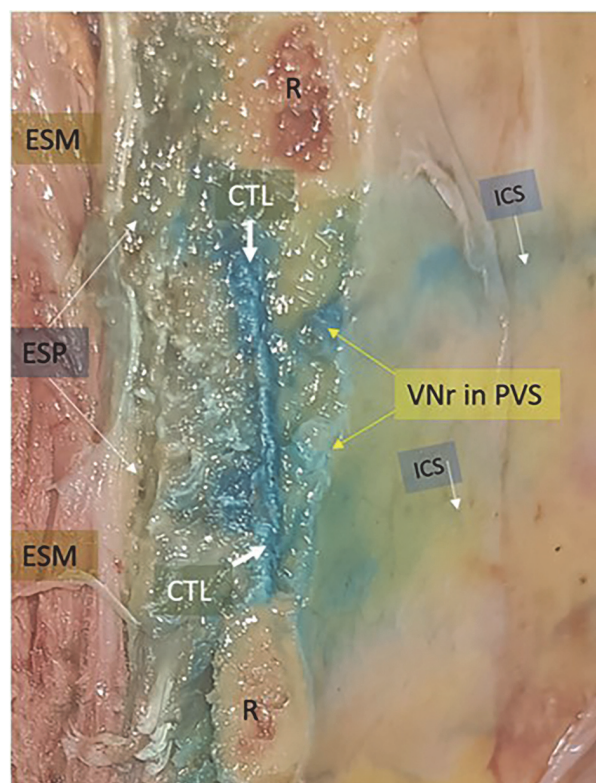
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**Background and Aims** The exact mechanism of action of erector spinae plane (ESP) block remains an enigma. We injected dye in ESP and other paraspinal spaces to compare the dye diffusion pattern along the paraspinal region in human cadavers.

**Methods** In 6 soft-embalmed cadavers (12 specimens), 20mL methylene blue dye (ESP and paravertebral space) or indocyanine green dye (inter-ligament space) was injected bilaterally using an in-plane ultrasound-guided technique at the level of the costotransverse junction of T4 vertebrae. Dye spread was evaluated bilaterally in the coronal plane in the paravertebral and intercostal spaces from the 1st and the 12th rib. Axial and sagittal sections were performed at the level of the 4th thoracic vertebrae. After cross-sections, the extent of dye spread was investigated in the ESP, inter-ligament and paravertebral spaces. The staining of the ventral and dorsal rami and spread into the intercostal spaces were also evaluated.

**Results** The ESP injection was mainly restricted dorsal to the costotransverse foramen and did not spread anteriorly to the paravertebral space. The paravertebral injection involved the origin of the spinal nerve and spread laterally to the intercostal space. The inter-ligament space injection showed an extensive anterior and posterior dye spread involving the ventral and dorsal rami. (figure1)



Abstract EP220 Figure 1 Dye spread in interligamentous space