

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 ± 33 mg and 35 ± 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

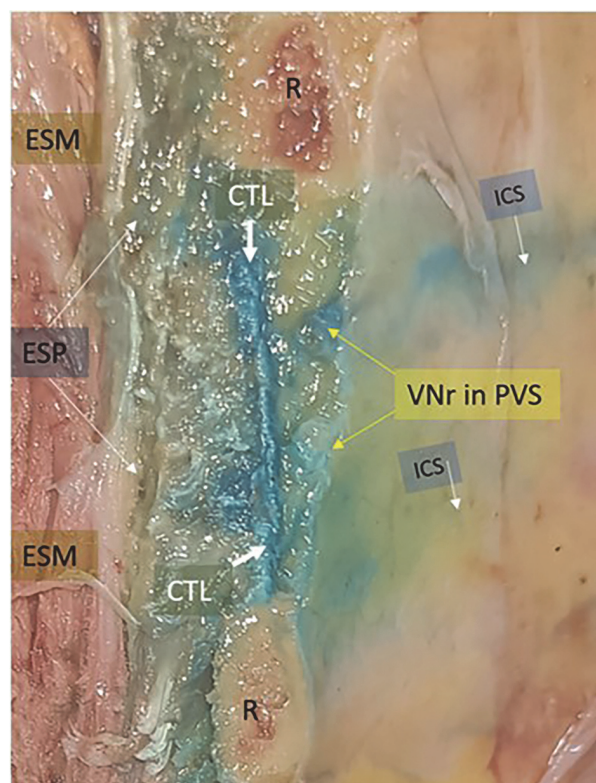
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Background and Aims The exact mechanism of action of erector spinae plane (ESP) block remains an enigma. We injected dye in ESP and other paraspinal spaces to compare the dye diffusion pattern along the paraspinal region in human cadavers.

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

Conclusions Following injections in erector spinae plane, there was no spread of the dye anteriorly to the paravertebral space and it only involved the dorsal rami. Inter-ligamentous space injection appears to be the most promising block in future as the dye spread both anteriorly to paravertebral space and posteriorly toward the erector spinae plane.

EP221

BETWEEN A ROCK AND A HARD PLACE: EPIDURAL ANESTHESIA FOR A CAESAREAN DELIVERY IN A WOMAN WITH DIAPHRAGMATIC PARALYSIS – A CASE REPORT

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Background and Aims Diaphragmatic paralysis (DP) can pose challenges during caesarean delivery (CD), as it may increase the risk of respiratory complications. While there is limited information on anesthesia techniques for patients with DP, central nerve blocks sparing upper intercostal muscles have been utilised in similar procedures.

Methods A 20-year-old woman with idiopathic diaphragmatic paralysis who required an emergent CD due to persistent variable fetal decelerations and intrapartum fever in the labour ward. Diaphragmatic paralysis was incidentally discovered during investigations for recurrent syncope, with no identifiable cause. The patient had a functional capacity of 5 METs. Epidural anesthesia (EA) was performed using titrated ropivacaine 0.75% through an epidural catheter, which had been placed at the beginning of the first stage of labor, 12 hours prior to the development of fever. A total volume of 14mL of ropivacaine was administered. Standard ASA monitoring, multimodal analgesia, and broad-spectrum antibiotics were employed.

Results The patient remained hemodynamically stable and ventilated spontaneously throughout an uneventful CD. No respiratory or neurological complications were observed in the postoperative period.

Conclusions The compressive effect of the dural sac allowed us to limit the spread of local anaesthetic, sparing upper thoracic myotomes. Although EA is an option in patients with diaphragmatic paralysis, decisions should be tailored to individual cases. Further studies are needed to evaluate the impact of EA on patients with diaphragm lung paralysis and other restrictive lung diseases.

EP222

TRIPLE BLOCK VS SPINAL ANAESTHESIA VS GENERAL ANAESTHESIA FOR TOTAL KNEE REPLACEMENT IN HIGH RISK PATIENTS: PERIOPERATIVE HEMODYNAMIC STABILITY, COMPLICATION AND COSTS

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Application for ESRA Abstract Prizes: I apply as an Anesthesiologist (Aged 35 years old or less)

Background and Aims This study compares perioperative complications of patients undergoing general anaesthesia (GA), spinal anaesthesia (SA) or isolated peripheral triple nerve blocks (NB) for total knee replacement surgery in high risk patients.

Methods In this retrospective single center study, 329 patients (ASA \geq III), scheduled for elective total knee replacement between 2014 and 2020 were included. All patients received a femoral catheter and a proximal sciatica nerve block for perioperative analgesia. Patients in the NB group received an additional obturator nerve block. Due to failure resulting from insufficient block or patients expressing their wish for a general anaesthesia, patients were assigned according to the definitive anaesthesia method. There were 22 individuals in the NB-, 171 patients in the SA – and 136 patients in the GA group. Perioperative parameters, events and costs were compared. Differences between groups were compared using the chi-square test.

Results The NB group showed a significantly better haemodynamic stability intraoperatively with less vasopressor consumption, respectively less relevant hypotension. In 73% of patients in the NB group a PACU-Bypass was achieved (vs 34% in SA group vs 13% in GA group). This influenced the overall costs positively. Remarkably, during the initial 24 hours, no episodes with severe pain (visual analog scale score > 30) were observed in the NB group. Regarding other postoperative complications we could not observe a statistically significant difference.

Conclusions In summary, the use of triple block as an isolated technique for total knee replacement surgery in specific high-risk patients appears to be a safe option with less haemodynamic complications.

ePoster session 7 – Station 2

EP223

HIGH THORACIC ERECTOR SPINAE PLANE BLOCK FOR SHOULDER ARTHROSCOPY: CASE SERIES

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Background and Aims Arthroscopic shoulder surgery is associated with moderate/severe postoperative pain, which may prevent rehabilitation of patients and increase hospital stay. Erector spinae plane block (ESPB) is a block in which different levels of local anesthetic (LA) are applied between the erector spinae muscle and the transverse process of the vertebrae. We aimed to present the analgesic effect of the block in the first 24 hours postoperatively in 10 patients to whom we applied ESPB at T2-T3 level for analgesia in shoulder surgery.

Methods Patients written consent was obtained. Ultrasound guided ESPB was performed at T2-T3 level in 10 patients with ASA I, II who will undergo shoulder surgery under general anesthesia. Anesthesia was maintained with sevoflurane-air and remifentanyl iv infusion according to hemodynamic parameters. Paracetamol, dexketoprofen iv was administered to the patients in the perioperative period. Patients 0, 1, 6, 12, 24 h, NRS scores were recorded.

Results Ten patients aged 33-75 (male/female = 5/5; mean age = 58.3 [SD = 16.5]) were included in the case series. The distribution of sensory nerve blockade varied between C2 and C7 in the anterolateral region, between T2 and T7 in the posterior region. The mean surgical time was 85.4 minutes.