Erector spinae plane block for open nephrectomy: a new paediatric success

Nogueira G.¹, Artilheiro V.², Costa G.³, Ferreira J.L.³

¹ Hospital Vila Franca de Xira, Anaesthesiology Department, Lisboa, Portugal

² Centro Hospitalar de Lisboa Ocidental, Anaesthesiology Department, Lisboa, Portugal

³ Centro Hospitalar Universitário de Lisboa Central, Anaesthesiology Department, Lisboa, Portugal

Background

Open nephrectomy is associated with severe pain and pain-derived morbidity. There are several options for postoperative pain management, each one with its own drawbacks. Since its description in 2016¹, *erector spinae* plane block (ESPB) has been deemed as a safe and effective regional technique.

We present one of the few reports of a paediatric open nephrectomy, managed with the novel ESPB.

Clinical case

- 1yo, 9.6kg
- Male
- ASA 1

Preoperative

Left Wilms tumour proposed for open radical nephrectomy

- No intra-vascular tumoral extension or other syndromatic features
- Asymptomatic with no known comorbidities or routine preoperative testing abnormalities

Intraoperative

Inhaled induction with sevoflurane

Tracheal intubation after IV induction

- ✓ Fentanyl 2 mcg/kg
- ✓ Propofol 3 mg/kg
- ✓ Rocuronium 0.6 mg/kg

Opioid-sparing anaesthesia

- ✓ Fentanyl bolus of 1 mcg/kg prior to incision (partially installed block)

Multimodal analgesia

- ✓ Acetaminophen 7.5 mg/kg
- ✓ Metamizole 20 mg/kg
- ✓ Regional analgesia

General
Anaesthesia

Regional
Anaesthesia

Surgery

Positioning

- ✓ Left lateral decubitus

US scanning

- ✓ Longitudinally
- ✓ Parasagittal to T7-T9

Technique

- ✓ In-plane needle insertion
 - Craniocaudal orientation
 - T8 left transverse process (TP) identification
- ✓ Bolus of 0.5 mL/kg Ropivacaine 0.2%
 - Injection deep to *Erector Spinae* Muscle (ESM)
 - Craniocaudal LA spread from T6 to T10

Postoperative

Recovery from anaesthesia in PACU

- ✓ Uneventful

Follow-up on Surgical ward

- ✓ FLACC score of 2 the first 24h and of 1 until discharge
- ✓ No need of rescue analgesia

Discussion

Multimodal analgesia poses as the best approach to open nephrectomy pain, particularly by avoiding opioids and NSAIDs. ESPB, a recently described block, is effective in providing somatic and visceral analgesia by craniocaudal LA spread.² Its clinical applications are still not thoroughly established and are currently expanding. Therefore, our report supports ESPB as a valid pain management alternative for open nephrectomy in children.

References

[1] Forero M, et al. *Reg Anesth Pain Med*. 2016;41:621-627.

[2] Adhikary S Das, et al. *Reg Anesth Pain Med*. 2018;43(6):1-7.