BILATERAL BRACHIAL PLEXUS BLOCK

A rare clinical indication

CENTRO HOSPITALAR
LISBOA NORTE, EPE

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INTRODUCTION

Current literature is poor regarding bilateral plexus blocks. Many factors contribute: bilateral techniques are time consuming, potentially uncomfortable and undertake greater risk of complications and local anesthetics toxicity. Few situations have indication for it.

CLINICAL CASE

- 62 y.o. female, 65kg
- Victim of car accident, resulting in upper limbs' trauma:
 - LUL: complex wound with multiple fractures and tissue loss
 - RUL: complex wound with traumatic finger amputation (D2 and D3)
- Submitted to debridement and closure of the proximal end in the amputation injuries and traumatic flaps

CONCLUSION

LUL supraclavicular block

These lesions, although distal, involved more proximal regions and were more extensive and likely to require further interventions - and so, having a perineural catheter was convenient.

Although there's less risk of phrenic nerve paralysis, there's higher risk of pneumothorax, which is decreased by ultrasound-guidance.

RUL axillary block

A bilateral supraclavicular block would be relatively contra-indicated given the risk of respiratory compromise due to bilateral phrenic nerve paralysis and pneumothorax risk

Combination supraclavicular + axillary block thought to be appropriate

The indication for bilateral blocks should be evaluated case to case, given the possibility of doubling the risk of complications and risk of local anesthetic toxicity.

In this case, 150mg of ropivacaine were administered, which does not exceed the maximal dose recommended.

MANAGEMENT

6 hour procedure. under general anesthesia
ASA standard monitorization + BIS + urinary output

- Intraoperatively (by the end of the surgery)
 - Paracetamol 1g + Ketorolac 30mg iv.
 - Ultrasound guided bilateral brachial plexus block with Ropivacaine 0.375%
 - LUL: **single shot** (20mL) supraclavicular block + **perineural catheter**
 - RUL: **single shot** (20 mL) axillary block
- Postoperatively
 - **Perineural perfusion with ropivacaine 0.2%** 5ml/h
 - Paracetamol 1g 8/8h.

Acute Pain Team follow up, controlled pain throughout.

The patient was further submitted to four surgeries, taking benefit of non conventional post-op analgesia after 3 of these procedures. The supraclavicular cateter was removed after 12 days.

No complications were registered.

REFERENCES

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