The impact of superficial peroneal, deep peroneal and posterior tibial ultrasound block on patients' satisfaction undergoing hallux valgus surgery in ambulatory

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Introduction & Objectives

The advantages of ambulatory surgery are widely known and justify the progressive increase in the number of surgeries performed in this setting (in Portugal above 60%).

However, pain control after discharge is a mandatory premise. The increasing use of locoregional ultrasound guided techniques reflect its importance as part of an opioid-sparing strategy with marked gains and better outcomes. Several analgesic strategies have been adopted in hallux valgus surgery (HVS), such as, ultrasound block (USb) of the sciatic-popliteal nerve, which is an effective alternative. However, it is not absent of risks and due to its role on the motor block, it may lead to gait difficulties. The USb of the Superficial Peroneal (SP), Deep Peroneal (DP) and Posterior Tibial (PT) on the distal third of the leg, has been used as an alternative in the HVS, allowing consistent and lasting analgesia without associated motor block.

The **objective** of this study is to verify whether the USB of the SP, DP and PT is an effective and safe option, evaluating the analgesic efficacy in the first 24h postop, incidence of nausea or vomiting and satisfaction of the patients submitted to ambulatory HVS.

Material & Methods

- A retrospective analysis of patients underwent HVs between January and November 2017
- **General balanced anaesthesia** (induction - fentanyl 3mcg/kg and propofol 2mg/kg; maintenance - desflurane) **combined with USb SP, DP and PT** (total 10ml of ropivacaine 0.75%).
- **Intra-op. analgesia:** paracetamol 1g, ketorolac 30mg
- **Prophylaxis of PONV:** dexamethasone 4mg and ondansetron 4mg.
- **Ambulatory analgesia:** paracetamol 1g 3id, tramadol 100mg 3id and ibuprofen 400mg 3id.
- Patients were **evaluated** until discharge and contacted by telephone on the D2 postop:
 - > Pain was evaluated in the first 24 hours (numeric pain scale)
 - > Nausea and vomiting events
 - > Satisfaction of pain control and overall satisfaction (Likert scale 4 points)

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Superficial Peroneal US block

MAXIMUM PAIN SCORE

Results

23 patients - underwent HVs in the outpatient setting
10 patients - responded to the postop survey
There were no complications or need for rescue analgesia in the PACU

ASA Distribution:

ASA 1 – 4% (1)
ASA 2 – 70 % (16)
ASA 3 – 26 % (6)

Mean Age : 56,1 years [min 25; max 89]

- **Mean Pain Score:** 3 (0-10) [min 0; max 9]
- **Events of PONV:** 1
- **Mean satisfaction with pain control:** 3,9 (0-4) [min 3; max 4]
- **Mean overall satisfaction:** 4 (0-4) [min/max 4]

Conclusion

The USb of SP, DP and PT seems to be an **effective analgesic alternative**, not associated with motor block or other major complications. It is a distal block, **less likely to complicate**, with a **rapid learning curve** and execution, which leads to **high satisfaction** rates among patients undergoing ambulatory HVs. However more studies will be needed to prove the promising results presented and define the ideal analgesic strategy in this type of surgery.

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