Prolonged epidural analgesia for the treatment of acute neuropathic pain

Case report

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1 Background

An 18-year-old female presented for the treatment of acute on chronic neuropathic pain in the right leg and foot.

The chronic neuropathic pain developed due to pressure of a **giant cell tumor on the sacral nerves from S1 to S3** (Fig.1).

The tumor was removed.

The current medical history started from admission into the hospital due to **extreme neuropathic pain crises in the right lower extremity** (Fig. 2). Pain treatment consisting of gabapentin, amitriptyline, morphine, midazolam, ketamine, lidocaine, tramadol, oxycodone was insufficient with maximal pain scores. She became somnolent and admitted to the intensive care unit for 2 days.

2 Method

The informed consent was obtained.

Epidural analgesia was considered.

The lumbar epidural catheter was **retrogradely** positioned with the tip of the catheter projecting at the level of **right S2 root**.

The settings of initiated epidural infusion of

levobupivacaine 0.125% constituted of 6-4 mL/hr continuously plus 6mL/10 minutes by boluses. The patient became pain-free with only occasional breakthrough pain, which was managed by boluses.

Simultaneously, local radiotherapy was initiated to tackle the pain.

The administration of neuropathic pain medications such as gabapentin and amitriptyline has been continued. Opioid analgesics were gradually reduced and abandoned.

The urinary bladder catheter was removed on day 8 of epidural infusion and on day 15 the patient was allowed for home visits.

The epidural infusion of levobupivacaine was **discontinued after 28 days** because of complete pain relief.

3 Discussion

During the epidural analgesia period the patient experienced **neither motor block nor urinary bladder dysfunction**.

After removal of the catheter, **sensory block persisted** at the level of **S1-S2 dermatomes** on the right side.

Duration and asymmetrical location of the remaining sensory block are suggestive for:

- 1) invasion of the sacral plexus by the tumor
- 2) effect of local radiotherapy

as primary causes rather than the prolonged administration of the local anesthetic.

4 Conclusion

The intractable neuropathic pain at the level of sacral plexus radiating to the lower limb can be **successfully treated for 28 days** with a prolonged epidural infusion of local anesthetics, without complications.

Fig. 1.

Fig. 2.