

A case of trigeminal hypersensitivity after administration of intrathecal sufentanil and bupivacaine for labor analgesia

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ABSTRACT

Rostral spread of intrathecal drugs and sensitization of supraspinal sites may provoke several adverse effects. This case describes a patient with right hemifacial paresthesia, trismus and dysphasia on the trigeminal nerve distribution after intrathecal sufentanil administration. Primigravida, 34 years, 39 weeks of pregnancy, with hypothyroidism and pregnancy induced hypertension. Allergic to latex. In the use of puran T4, 50 µg /day. When the patient presented cervical dilatation of 4 cm, she requested analgesia. She was placed in the sitting position and a spinal puncture was performed with a 27G needle pencil point in L4/L5 (1.5 mg of bupivacaine plus 7.5 µg of sufentanil). Next, was performed an epidural puncture in the same space. It was injected bupivacaine 0.065%, 10 ml, to facilitate the passage of the catheter. After 5 min lying down in the lateral upright position, she complained of perioral and right hemifacial paresthesia, mainly maxillary and periorbital, as well as trismus and difficulty to speak. The symptoms lasted for 30 min and resolved spontaneously. After 1 h, patient requested supplementary analgesia (12 ml of bupivacaine 0.125%) and a healthy baby girl was born. Temporary mental alterations have been described with the use of fentanyl and sufentanil in combined epidural-spinal analgesia, such as aphasia, difficulty of swallowing, mental confusion and even unconsciousness. In this patient, facial areas with paresthesia indicated by patient appear in clear association with the ophthalmic and maxillary branches of the trigeminal nerve and the occurrence of trismus and dysphasia are in association with the mandibular motor branch. The exact mechanism of rostral spread is not known, but it is speculated that after spinal drug administration, a subsequent epidural dose may reduce the intratecal space and propel the drug into the supraspinal sites.

Key words: *Combined spinal epidural anesthesia, labor analgesia, trigeminal nerve*

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INTRODUCTION

Rostral spread is the supraspinal distribution of an opioid or local anesthetic within the cerebrospinal fluid during neuroaxis anesthesia. When these drugs reach supraspinal sites, sensitization of trigeminal nuclei may occur and provoke certain adverse effects. Although pruritus is the most common adverse effect, rare symptoms may occur. This is the first case that describes a patient with

right hemifacial paresthesia, trismus and dysphasia on the trigeminal nerve distribution after intratecal sufentanil administration.

CASE REPORT

Primigravida, 34 years, 39 weeks of pregnancy, with hypothyroidism and pregnancy induced hypertension and allergic to latex in the use of puran T4, 50 µg /day. Previous surgeries: treatment of pyloric stenosis and lower limbs varicectomy. Occupation: pharmaceutical. When patient presented a cervical dilatation of 4 cm, she requested analgesia. She was placed in the sitting position and a spinal puncture was performed with a 27G needle pencil point (BBraun®) in L4/L5 (1.5 mg of bupivacaine plus 7.5 µg of sufentanil). Next, was performed an epidural puncture with the Arrow® set in the same space. It was injected

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bupivacaine 0.065%, 10 ml, to facilitate the passage of the catheter. An initial resistance to its passage was observed. After 5 min lying down in the lateral upright position, patient complained of perioral and right hemifacial paresthesia, mainly maxillary and periorbital, as well as trismus and difficulty to speak. The symptoms lasted for 30 min and resolved spontaneously. After 1 h, patient requested supplementary analgesia (12 ml of bupivacaine 0.125%) and a healthy baby girl was born (Apgar 9/9). The catheter was removed without problems.

DISCUSSION

Combined spinal-epidural analgesia has become a common technique for labor analgesia, because of the rapid onset and minimal motor blockade. However, temporary mental alterations have been described with the use of fentanyl and sufentanil, such as aphasia, difficulty of swallowing, mental confusion and even unconsciousness.^[1-4]

Rostral dispersion of opioids and local anesthetics are supposed to be the responsible for these adverse effects. The exact mechanism of rostral spread is not known, but it is speculated that after spinal drug administration, a subsequent epidural dose may reduce the intrathecal space and propel the drug to the supraspinal sites. In this patient, the facial areas with paresthesia indicated by patient appear in clear association with the ophthalmic

and maxillary branches of the trigeminal nerve and the occurrence of trismus and dysphagia are in association with the mandibular motor branch. The events in this case suggest that sufentanil and/or bupivacaine rostral dispersion to the trigeminal nuclei may have caused these symptoms. Although naloxone is recommended to treat the symptoms, the immediate diagnosis was quite difficult and they resolved spontaneously.

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