

Letter to the Editor

Accidental use of alcohol during arthrocentesis of the temporomandibular joint

Sir:

A 34-year-old woman was treated by arthrocentesis of the temporomandibular joint (TMJ). The trainee physician assistant had poured pure alcohol into the sterile container instead of saline solution, and the surgeon, the nurse, and the other staff were unaware. After local anaesthesia with articaine hydrochloride (2 ml) and adrenaline (0.005 mg/ml) (Maxicaine, VEM, Ankara, Turkey), there was no sign of facial paralysis or asymmetry. A 21 G needle with a 10 ml syringe was inserted 10 mm anterior and 2 mm inferior along the canthal-tragal line until bony contact had been made at the medial wall of the glenoid fossa.¹ The upper joint space was confirmed with pure alcohol (5 ml) instead of saline solution. At this time the patient was free of complaints.

The second needle was inserted almost 3 mm posterior to the first needle until bony contact had been made.² After a wash-out of the TMJ with alcohol (20 ml), the patient complained of a burning sensation on the right-hand side of her face. The surgeon noticed the smell of alcohol and stopped the arthrocentesis immediately. The patient showed signs of paralysis of the facial nerve, and numbness of the lip and tongue on the right-hand side of her face. The temporal, zygomatic, and buccal branches of the facial nerve seemed to be affected. After additional subcutaneous local anaesthesia (1 ml), the surgeon gave effective pressurising arthrocentesis (130 ml/minute, 50 kPa) with physiological saline solution (500 ml) with a dental surgical motor.³ After an hour the numbness in the right lip and tongue recovered, and the burning sensation subsided by the end of the third hour. Vital findings were normal but the patient still had paralysis of the right side of her face. She was given antibiotics, and analgesic and anti-inflammatory drugs, and discharged from the clinic.

Two weeks later her facial paralysis had not improved, and she was prescribed vitamin B twice a day for 3 months, and seen monthly for follow-up. The facial paralysis had completely resolved by the end of the third month after operation. She was also free of pain in the TMJ, had no signs of dysfunction, and had no signs of sensory disturbance (Fig. 1).



Fig. 1. After three months the patient had no pain in the temporomandibular joint and maximal mouth opening was satisfactory.

Accurate use of medical consumables and the checking of all equipment are important issues to be considered, as is education of staff. The recovery of the facial nerve may have been because the contamination with alcohol was limited to “lavage” rather than “injection”. Effective pressurised wash-out of the joint using a surgical motor might also have neutralised the undesired effects of the alcohol.

References

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