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Mental nerve injury following general anaesthesia

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EDITOR:

A healthy 31-yr-old female with no previous medical history was scheduled for gynaecologic laparoscopy for primary sterility under general anaesthesia. Routine preoperative investigations were unremarkable. The patient was premedicated with 1 mg kg⁻¹ of hydroxyzine (Atarax[®]) administered orally one hour before the induction of anaesthesia. General anaesthesia was induced with 1 µg kg⁻¹ of fentanyl, 2.5 mg kg⁻¹ of propofol and 0.15 mg kg⁻¹ of cisatracurium. The patient was easily ventilated for 3 min via a size 4 clear face mask with soft adjustable cushion (VBM Medizintechnik GmbH, Einsteinstrasse 1. D-72172 Sulz a.N. Germany). No unusual or excessive pressure was exerted on the mask. Intubation of the trachea was easy and the endotracheal tube was fixed with a tape on the upper lip. Following intubation, a size 2 oropharyngeal (Guedel) airway (Intersurgical UK, Wokingham, UK) was inserted and fixed with a tape. The surgical procedure lasted 45 min. Intra- and postoperative course were uneventful and the patient was discharged home the same day. Twenty-four hours postoperatively, the patient presented to the anaesthetic department complaining of numbness in her middle lower lip. Clinical assessment showed a loss of temperature and touch perception at the level of her middle lower lip. The patient was followed up and the numbness regressed gradually from her chin cephalad. Complete remission occurred within 2 weeks.

Discussion

In this case, paraesthesia/anaesthesia corresponded to the area of innervation of the upper branches of the mental nerves (branch of the mandibular division of trigeminal nerve). Only four cases of mental nerves injury following anaesthesia have been found in the literature [1–3]. In all reported cases, long lasting anaesthesia delivered via face mask with a

difficulty to retain airway patency preceded the nerve injury. Damage to nerves of the head due to excessive pressure from an anaesthesia mask can be induced [2]. However in our case, the ventilation was easy and of short duration. Nevertheless, the patient still developed a mental nerve injury. The exact cause of this complication was not clear. Acute peripheral nerve damage is usually a result of chemical or physical injury. The patient's lips were in contact with no chemical substances during anaesthesia and surgery. It is possible that the numbness of the lower lip was related to excessive pressure exerted by the plastic oropharyngeal airway on the mental branch of the inferior alveolar nerve as it entered the mandibular foramen on the inner aspect of the mandibular ramus [1].

In conclusion, mental nerve injury following general anaesthesia may be related to prolonged and difficult ventilation with a face mask. It is also possible that pressure applied by the oropharyngeal airway at the level of the mandibular foramen may be an alternative mechanism. Although these nerve injuries usually showed complete remission within few weeks to several months [3], the loss of sensation for temperature and touch could lead to thermal injury and self-induced trauma to the lip and buccal mucosa [1]. Patients should be alerted to avoid injuries to the lip and mouth until any such numbness resolves.

F. Richa, A. Yazigi, P. Yazbeck

Department of Anaesthesia and Intensive Care
Hotel-Dieu de France Hospital
Saint-Joseph University
Beirut, Lebanon

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Correspondence to: Freda Richa, Anaesthesia and Intensive Care Department, Hotel-Dieu de France Hospital, Saint-Joseph University, Alfred Naccache Street, Ashrafieh, Beirut, Lebanon. E-mail: fredrich24@yahoo.com; Tel: +961 3 872077; Fax: +961 1 615295

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