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LETTER TO THE EDITOR

A case of anesthesia mumps after general anesthesia

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To the Editor:

We report a 57-year-old female patient who underwent a correction of surgical scar and sagging of the abdominal skin by plastic surgeons. She was 155 cm and 95 kg, with body mass index 37.5 kg/m^2. She had a history of arterial hypertension for 5 years. General anesthesia was induced by propofol 3 mg/kg and fentanyl 1 μg/kg. Endotracheal intubation was performed with muscle relaxation using rocuronium bromide 0.6 mg/kg after assisted ventilation and induction. Maintenance of anaesthesia was achieved with sevoflurane (2–3 vol%) in 50% O_2 and 50% air. The patient was extubated without any problems at the end of the surgery. In the recovery room, a painless swelling on the left pre-auricular and post-auricular areas extending up to the angle of the mandible was detected (Fig. 1). In addition, there was crepitation on palpation. There was no evidence of inflammation. The left parotid gland swelling was decreased in the next 24 h and resolved completely in 2 days.

Pneumoparotitis is a postoperative complication of general anesthesia characterized by acute transient swelling of the parotid gland that is defined as "anesthesia mumps." Anesthesia mumps is a rare and interesting clinical entity. However, the phenomenon is a clinical condition well known to experienced anesthesiologists. This clinical entity results from air refluxing into the parotid ductal system via an incompetent Stensen duct orifice [1]. These swellings usually resolve spontaneously over a period of a few hours to a few days without any known sequelae [2].

The exact mechanism of the development of pneumoparotitis in not fully understood. Stensen's duct leaves the lateral surface of the parotid gland, passes lateral to the masseter muscle, and enters the oral cavity through the buccal tissues adjacent to the maxillary first and second molars [3]. Possible explanations include positive pressure ventilation during general anesthesia and increased pressure in the oral cavity. Pneumoparotitis has been reported in the following situations or maneuvers in the literature: wind instrumentalists, balloon and glass blowers, bicycle tire inflation by mouth, dental procedures using air-powered equipment, cough in chronic obstructive pulmonary disease and cystic fibrosis, nose blowing, whistling, valsalva maneuver to clear ears, and spirometry [4]. We thought that the clinical picture in the present case may have resulted from intra-oral pressure increase via mask ventilation during general anesthesia.

Medical history and physical examination are important in the differential diagnosis of the disease. Obstructive, inflammatory, metabolic, and neoplastic causes of parotid gland enlargement should be ruled out. Crepitation on palpation is diagnostic for pneumoparotitis, but it can be mistaken in up to 50% of the patients [4]. Gland swelling, erythema, and tenderness on palpation may be detected in pneumoparotitis as a consequence of inflammation and infection [5]. In our case; the clinical examination showed swelling of the gland and crepitation on palpation, but erythema and pain were not observed.

In conclusion, parotid gland enlargement with air after general anesthesia is a rare condition. Medical history, physical examination, and radiologic studies may play an important role in the differential diagnosis and management of the condition.

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Fig. 1 Swelling on the left parotid gland

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