

# A case of anesthesia mumps after sacral laminectomy under general anesthesia

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## ABSTRACT

Acute transient parotid gland enlargement in association with general anesthesia is a rare complication and has also been called anesthesia mumps. Unilateral or bilateral parotid or submandibular swelling usually develops during surgery under anesthesia or, a few hours later and usually resolves in a few days with no sequelae. It has been reported as a complication after general anesthesia in patients undergoing spinal surgeries in prone and lateral decubitus position, even after cesarean section in the supine position and also reported in Intensive Care Unit patients. We present a case of a unilateral parotid swelling noticed in immediate postoperative course, in a patient who underwent spine surgery.

**Key words:** Anesthesia, mumps, pain

## INTRODUCTION

Anesthesia mumps is characterized by an acute transient parotid gland swelling in association with general anesthesia.<sup>[1]</sup> It is a rare, but known entity that resolves spontaneously in some days without any complication.<sup>[2]</sup> It has been found to be associated with patients of all age groups and various surgical procedures. Majority of the cases were found after the patient underwent general anesthesia for a long time.<sup>[3]</sup> We present this case, as no case of anesthesia mumps, has been reported yet in Pakistan.

## CASE REPORT

A 52-year-old, 88 kg man scheduled for sacral laminectomy and excision of the sacral mass for sacral chordoma, under general anesthesia. His past medical history revealed no specific findings. The preoperative results of biochemical studies, chest X-ray and electrocardiography, were normal. Physical examination revealed limitation of movement of the left thigh. General anesthesia was induced with intravenous propofol 2 mg/kg, morphine 0.1 mg/kg,

atracurium 0.6 mg/kg and maintained with isoflurane/oxygen/nitrous oxide mixture under standard monitoring. After oral tracheal intubation, an endotracheal tube was fixed on the right side of the mouth and kept at 22 cm in depth. After intubation, the patient was placed in the prone position with the neck flexed at approximately 10°. The head was turned to the right side, and the left side of the face was placed on a soft gel rolling pad. The surgery proceeded for about 7 h. The total blood loss was about 1000 ml. After endotracheal extubation, patient was shifted to postanesthesia care unit, where swelling of the left parotid gland was noted. The swelling of the parotid gland increased in size and hardness. Painful sensations were complained of after the patient was sent to the room after 4 h stay at postanesthesia care unit.

ENT consulted, examination revealed firm, mildly erythematous swelling starting from the left per auricular face to the angle of the mandible, no parotid secretions noted. Patient was reassured, and pain was managed with nonsteroidal anti-inflammatory drugs. Patient was discharged to home at 7<sup>th</sup> postoperative day after complete recovery with a follow-up visit at ENT clinic.

## DISCUSSION

Anesthesia mumps is an acute transient sialadenitis of the major salivary glands in the early postoperative period.<sup>[1]</sup> It is a rare, but known complication of general anesthesia, it is usually unilateral, transient swelling of the parotid gland which may last for several minutes to several days, resolving

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10.4103/1658-354X.154743

spontaneously without requiring any specific treatment.<sup>[2]</sup> It has been reported in a wide range of age groups and in different surgical procedures.<sup>[3]</sup> The majority of cases were found after the patient who underwent anesthesia for a long time.<sup>[4]</sup> Incidence of anesthesia mumps was reported that 5 in 3000 following endotracheal anesthesia by Matsuki *et al.*<sup>[5]</sup>

The etiology and the mechanism behind the anesthesia mumps are still not clear. Among the implicated mechanisms suggested in literature are trauma, head and neck positioning, straining and coughing during anesthesia, vascular congestion and venous engorgement of head and neck,<sup>[1]</sup> overactive pharyngeal reflex stimulation of the salivary gland via the parasympathetic nerves, succinylcholine-stimulated copious secretions,<sup>[1]</sup> dehydration, and mechanical blockage of the parotid duct by intubation and fixation of the endotracheal tube or head stripping and obstruction of glandular excretory ducts by position, calculi, or thickened secretion<sup>[6]</sup> were the major causes of acute salivary glands enlargement during induction of anesthesia.

Liu *et al.*<sup>[1]</sup> believe the presence of the patient's underlying disease (obesity), choice of anesthetic drugs (succinylcholine, atropine), surgical position (prone, lateral decubitus), operative site (such as head and neck surgery) and induction methods (such as endotracheal tube, laryngeal mask inadequate insertion and fixation) may all contribute to the development of acute swelling of the parotid glands after general anesthesia. In our patient, prone positioning, endotracheal intubation and prolong surgery may be the contributing factors to the development of acute unilateral transient swelling of the parotid gland.

Anesthesia mumps is uncommon postoperative complication but, fortunately, it is commonly self-limited condition, which rapidly improves with symptomatic therapy. Symptomatic therapy includes reassurance, observation, rehydration therapy and anti-inflammatory drugs such as nonsteroidal anti-inflammatory drugs;<sup>[1,7]</sup> dehydration is one of the most common causes of anesthesia mumps. Therefore, adequate rehydration therapy is fundamental for the treatment of anesthesia mumps.<sup>[1,7]</sup> Our patient was treated with nonsteroidal anti-

inflammatory drugs, and the swelling subsided gradually within a week.

To prevent this complication, we suggest the use of an adaptive shaped soft pad for proper padding of face, to avoid direct compression of the parotid gland and ducts. Minimum turning of neck should be allowed to keep normal venous blood circulation, especially when the patient is placed in the prone position, or the duration of surgery is long. Premedication with anticholinergic drugs to decrease secretions, smooth intubation and extubation without disturbance or straining of the patient to avoid mechanical stimulation and occurrence of this unusual complication. Moreover, keeping an optimum hydration status during surgery is another important point in the prevention of this complication. In conclusion, proper use of anesthetic medication and technique, with adequate patient protection may help decrease this complication.

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**How to cite this article:** Asghar A, Karam K, Rashid S. A case of anesthesia mumps after sacral laminectomy under general anesthesia. *Saudi J Anaesth* 2015;9:332-3.

**Source of Support:** Nil, **Conflict of Interest:** None declared.