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Case Report

Anesthesia mumps: a case report

Maher Al-Hajjaj[1]*, Anfal Salim[2], Mahmoud Mohammad[3], Maab Mohamed[4], Ahmad Tawosh[5] and Ababca Fatima Zohra[6]

[1]Department of Urology, Aleppo University Hospital, University of Aleppo, Aleppo, Syria

[2]Medical Student, Alexandria Faculty of Medicine, Alexandria, Egypt

[3]Emergency Medical Resident, Jordanian University, Amman, Jordan

[4]Postgraduate, National University, Khartoum, Sudan

[5]Medical Student, University of Harran, Turkey

[6]Pediatric Resident, Abdelhamid Ibn Badis University, Mostaganem, Algeria

Abstract

A 25 years old pregnant woman had a painful labor in her 38th week of pregnancy. Because of a previous delivery by a cesarean section, she underwent a second cesarean section. Her past medical and family history was unimportant. We performed the surgery under spinal anesthesia. The surgery was uneventful and the baby was in a good health. After 9 hours of surgery, she complained of painless swelling in the parotid glands. Physical examination and laboratories were normal. We started rehydration with normal saline and one dose of hydrocortisone (100 mg IV route). Close monitoring showed no problems in swallowing or any purulent discharge. Two days later, we had a complete resolution of the swelling. We discharged the woman with her child with no complaints. Our case is one of the rare cases of anesthesia mumps after spinal anesthesia. Physicians should be careful in considering such rare cases. Early diagnosis and management is the key.

More Information

***Address for correspondence:** Maher Al-Hajjaj, Department of Urology, Aleppo University Hospital, University of Aleppo, Aleppo, Syria, Email: alhajjaj963@gmail.com

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https://orcid.org/0000-0002-2287-9824

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Introduction

Acute temporary swelling of the salivary glands, especially parotid glands, termed "anesthesia mumps" usually occurs during or after surgery and is one of the rare complications of general anesthesia [1].

It was first reported in 1968 after various surgical procedures [2].

It can show unilateral or bilateral involvement and is mostly painless. It regresses without sequelae within days with symptomatic treatment or spontaneously [3].

The majority of the cases were found after the patient underwent general anesthesia for a long time [4].

Here, we report a rare case of bilateral swelling of the parotid glands after surgery. Diagnosis and treatment went smoothly.

Case presentation

A 25-year-old female, Gravid 1, Para 0, Live 1, was scheduled for cesarean section (C/S) at the gestational age of 38 weeks and 8 days due to a history of previous cesarean section.

Past medical history was unremarkable. Her first delivery was performed by a cesarean section because of the complete breech presentation.

Vital signs were as fellow: Blood pressure 14/60 mm/Hg, pulse 70/min, respiratory rate 18/min. A pelvic examination showed a 3-centimeter cervical dilation. The fetus's presentation was in a transverse position.

Examination of the membranes was normal. They were intact and there was no leakage. Laboratory findings were in the normal range (Table 1).

After taking patient consent, we started the induction of spinal anesthesia by Marcaine 0.5% at the lumbar level of L3-L4 interspace. Cesarean section was uneventful with a good health 2800gr boy. Apgar score in 1 and 5 minutes was 8 and 9 respectively. After delivery, the patient was in a good state. The patient was transferred to an obstetric ward and got out of bed four hours after the surgery.

Nine hours after surgery, she had bilateral swelling in the parotid regions. This swelling was painless and without any redness or signs of inflammation.

An examination inside the mouth showed no purulent discharge. Even with the massage of the parotids, there was no discharge or pain. Complete blood laboratories were non-

Table 1: Laboratory findings.

Wight blood cell count	Hemoglobine	Platelets	Creatinine	CRP	Urea	Glucose	Na+	K+
9×10^5/ml	11×10^5 gr/dl	315×10^5/mcl	1.1 mg/dl	16	41 mg/dl	85 mg/dl	142 mEq/L	4.3 mEq/L

specific. After excluding other reasons, the diagnosis was acute postoperative sialadenitis or anesthesia mumps.

We started an infusion of intravenous normal saline and 100 mg IV hydrocortisone. In the first 24 hours, we monitored our patient every 4 hours. There was no problem with swallowing or other complaints.

On the second day, about 90% of the swelling was resolved. Another 24 hours for monitoring showed a complete resolution of the bilateral swelling. Our patient was discharged without any complications.

Discussion

Acute postoperative sialadenitis was first described by Munde in 1878 after an oophorectomy surgery [1].

The etiology and the mechanism behind anesthesia mumps are still not clear. Among the implicated mechanisms suggested in the literature are trauma, head and neck positioning, straining and coughing during anesthesia, vascular congestion and venous engorgement of head and neck, overactive pharyngeal reflex stimulation of the salivary gland via the parasympathetic nerves, succinylcholine-stimulated copious secretions, 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 were the major causes of acute salivary glands enlargement during induction of anesthesia [5].

Anesthesia mumps is described as the transient non-infective swelling of the parotid glands in the intraoperative or postoperative period and is predominantly a rare complication in surgical or endoscopic procedures requiring general anesthesia [6].

Postoperative sialadenitis is generally considered a self-limited benign disease that will be healed within hours to days in the affected individuals. However, some therapies including rehydration and administrating anti-inflammatory medications such as nonsteroidal anti-inflammatory drugs (NSAIDs) or corticosteroids can be helpful for the treatment of this complication [1].

Several authors have postulated contributory causes such as straining or coughing during anesthesia leading to retrograde airflow through Stensen's duct, long-duration surgery, head positioning in the prone, lateral, or sitting position, use of perioperative drugs such as atropine, succinylcholine, glycopyrrolate, benzodiazepines or morphine, preoperative or perioperative dehydration, and other conditions precipitating obstruction or hyposecretion of the salivary ducts [7-10].

The literature also suggests that increased body habitus, malnutrition, bulimia/anorexia, alcoholism, Sjogren's syndrome, HIV (and other immunosuppressive states), sialolithiasis, ductal stenosis, and perioral trauma can contribute to patient susceptibility to anesthesia mumps [11,12].

Conclusion

Unilateral or bilateral swelling of the parotid gland after anesthesia is a rare case. Physicians should be aware of this benign condition; close monitoring and conservative management are the cornerstones of the treatment.

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