

Acute parotitis after Caesarean section for a Preterm Triplet pregnancy complicated by anaemia and postpartum haemorrhage.

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Introduction

Acute parotitis post anaesthesia, also known as “anaesthesia mumps” is an acute transient swelling of the parotid glands post anaesthesia¹. This condition is a very rare peri-operative complication of anaesthesia of unknown aetiology. There is limited information available due to the paucity of cases reported. The condition is generally self-limiting, with resolution often occurring within 48 hours, however there is a risk of harm as it can lead to airway obstruction. Consequently, prompt investigation to determine the diagnosis followed by implementation of the appropriate management is essential^{1,2}. Management may be as simple as intravenous hydration, along with intravenous medications such as corticosteroids, anti-inflammatory drugs, and, or antihistamines². Of note, this condition has been reported to demonstrate recurrence, which becomes a risk for individuals requiring anaesthesia².

Case Report

A 35-year-old multiparous patient, with a spontaneously conceived Diamniotic trichorionic (DCTA) pregnancy was transferred to our tertiary centre for Caesarean section (CS) in labour at 34-weeks’ gestation. There was no known history of medical illnesses or allergies, and she had completed corticosteroids for fetal lung maturation 24-hours prior. The pregnancy was complicated by microcytic anaemia (Haemoglobin level 8.9-g/dL). Blood availability was confirmed pre-operatively. With consent, spinal anaesthesia was performed along with appropriate anaesthesia monitoring.

Case Report continued

12-mg hyperbaric bupivacaine, and 10-mcg fentanyl were administered between L3–L4 intervertebral spaces with a 24-gauge atraumatic spinal needle in the traditional sitting position. Once the sensory block to the Th 4 dermatome was confirmed, the procedure commenced. Delivery of three live preterm infants with good Apgar scores, along with delivery of two placentae occurred. The procedure was complicated with an intraoperative haemorrhage of 1400mls, which was managed pharmacologically with oxytocic agents. Replacement ensued with 2L of isotonic fluid and 2 units of packed red blood cells.

At a routine post-operative review, 12-hours later, bilateral painless swelling of the parotid glands was noted, with the right side being more prominent (Image 1). There were no features of airway compromise, impaired swallowing, trismus, or stridor. Observations were within normal parameters, the motor block had resolved, and there was appropriate fluid balance.

Vaccination against mumps in childhood was confirmed. A single intravenous dose of 8-mg dexamethasone was administered along with antibiotic coverage using amoxicillin/clavulanic acid and isotonic fluid infusion of 125 mL-h¹. Analgesia with 75-mg of diclofenac sodium continued. Ultrasound of the parotid glands reflected the asymmetric nature of the swelling, with the right measuring 7.3 cm x 2.9 cm and the left 5.2 cm x 2.4 cm. Diffuse increases in echogenicity and increased vascularity were noted. The submandibular and thyroid glands were normal in size and homogenous in echogenicity. 3-hours after the initial presentation, signification resolution was observed (Image 2), with complete resolution within 24-hours.

At the subsequent postnatal review 2 weeks thereafter, she was completely asymptomatic.

Discussion

There are limited publications related to postoperative acute parotitis associated with regional (spinal, epidural, and combined spinal-epidural) anaesthesia in obstetric patients. Dehydration, immobilization, and even surgical position have all been considered as contributing factors to developing swelling of salivary glands. In addition, a variety of medications used intraoperatively and postoperatively have been postulated to increase the risk of salivary stasis. These include anticholinergics, phenothiazines, β -blockers, morphine, and diuretics^{1,2,3}.

In this case, it is difficult to determine with certainty which factors may have directly caused her parotitis. Most published cases reflected term, singleton pregnancies with normal haematological profiles. Based on this limited literature, it can be postulated that factors that may have contributed to the development of parotid gland swelling, in this case, included the acute intraoperative haemorrhage resulting in hypotension and systemic dehydration. This was further complicated by pre-operative anaemia and multiple gestations.

Acute postoperative parotitis generally appears to regress spontaneously within 48 hours requiring no treatment as seen in this case. Supportive treatment with hydration, anti-inflammatory drugs, and head elevation have been suggested in the literature^{1,2,3}. Documented cases of recurrence with regional analgesia in a parturient, and airway compromise requiring ventilation in non-parturients are causes for concern². Therefore, persons with a previous history should be adequately optimised preoperatively, and intraoperatively to reduce or prevent a recurrence. Postoperatively, there should be close monitoring to ensure prompt diagnosis in event of an occurrence, with monitoring for airway obstruction as well as the need for treatment.

Conclusion

The aetiology of acute parotitis post-regional anaesthesia in obstetric patients is largely unknown. Appropriate peri-operative optimisation to prevent hypotension and dehydration may be preventative of this condition. Although transient and benign, there is potential for airway compromise and recurrence.

Images



Image 1 Bilateral parotid gland swelling at initial presentation

Image 2 Resolution in progress.

References

1. Peixoto AR, et al Acute Swelling of the Parotid Gland after Spinal Surgery Under General Anaesthesia – A Case Report. Journal of Anaesthesia Forecast. 2021; 4(1): 1013. <https://scienceforecastoa.com/Articles/JAF-V4-E1-1013.pdf>
2. Günaydın B, et al Postoperative Acute Parotitis After Cesarean Delivery Under Spinal Anaesthesia. Turkish journal of anaesthesiology and reanimation, 2021 49(2), 159–162. <https://doi.org/10.5152/TJAR.2020.405>
3. Jan R, et al. Acute transient sialadenitis – “anesthesia mumps:” Case report and review of literature. Anesthesia Essays and Researches 2020;14:352 <https://www.aeronline.org/text.asp?2020/14/2/352/297840>