1066463 - SPINAL ANESTHESIA FOR A PATIENT WITH HEREDITARY ANGIOEDEMA TYPE 3

Chadi Saliba¹, Srinivasan Krishnamurthy², Fanny Silviu-Dan³, Thomas Schricker¹, Ralph Lattermann¹

1. Anesthesia, McGill University Health Centre, Montreal, QC, Canada
2. Obstetrics & Gynecology, McGill University Health Centre, Montreal, QC, Canada
3. Clinical Immunology and Allergy, McGill University Health Centre, Montreal, QC, Canada

Purpose: Hereditary Angioedema (HAE) is a rare autosomal dominant disorder characterized by a deficiency of functionally active C1-esterase inhibitor (C1-INH), allowing uncontrolled activation of the classic complement cascade (1). Vasoactive mediators and increased permeability of post-capillary venules typically lead to subcutaneous and mucosal oedema of the upper respiratory and gastrointestinal tract, without urticaria or pruritus.

We describe the perioperative management of a woman with HAE type 3 who was scheduled for elective ovarian cyst removal. Consent to publish this case report was obtained from the patient.

Clinical Features: A 46 year old female patient presented with repeated episodes of facial swelling leading to dysphagia and dyspnea since 5 years. These episodes were triggered by dental work and x-rays, by chewing cinnamon gum or by maintaining her face down in the opening of a massage table.

She did not take any medication. There was no prevalence of the attacks during the perimenstrual period and the family history of similar symptoms was negative.

Laboratory tests showed quantitatively normal levels of C1-INH, C3 and C4. The C1-INH functional level was normal on one occasion and low (0.64, normal 0.68) on another. The working diagnosis was that of a HAE type 3, in which the angioedema is bradykinin mediated. Symptoms are thought to be induced or worsened by estradiol and in fact preoperative levels were elevated (1680 pmol/l).

In order to avoid airway manipulation, the preoperative plan was to perform a mini-laparotomy under neuraxial anesthesia rather than a laparoscopic procedure under general anesthesia. The decision was made to have two doses of C1-INH concentrate (1000 units, Berinert®) available for treatment of angioedema, but not to give Berinert® prophylactically.

On the day of the operation, the patient received iv sedation with midazolam and spinal anesthesia was performed using bupivacaine 0.75% 15 mg with fentanyl 20 mcg. The surgical procedure was successfully carried out and no signs of angioedema were observed. Postoperative estradiol levels were lower than before (130 pmol/l) and the patient has not had any episodes of angioedema since.

Conclusion: Spinal anesthesia was safely performed in a patient with hereditary angioedema type 3 scheduled for elective ovarian cyst removal.

References: 1 Anesth Analg 2010 110: 1271-80