

Anesthesia Management in a Patient with a History of multidrug Anaphylaxis

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Received: October 5, 2021; Published: October 8, 2021

Abstract

Perioperative anaphylaxis is a life-threatening systemic allergic reaction. Allergic reactions occurring during anesthesia were found to be between 1/6000-1/20000 in retrospective studies. The mortality rate is between 3-5% [1]. The causes of perioperative anaphylaxis are neuromuscular blocking agents, antibiotics, latex, hypnotic induction agents, chlorhexidine, opioids, and colloids. Risk factors for perioperative anaphylaxis include female gender, mast cell disorders, allergic diseases (asthma, eczema, hay fever), drug allergy, and atopy [2-6]. We aimed to present the anesthetic management in our case who had to have knee replacement surgery, had co-morbidities and had a history of anaphylaxis against multiple drugs.

Keywords: Anaphylaxis; Knee Replacement; Co-morbidities; Anesthesia Management

Introduction

According to the World Health Organization (WHO) data Worldwide, 234 million surgeries are performed annually and 7 million the person is affected by the complications associated with the surgical procedure. WHO states that half of all surgical complications states that it is preventable [7]. There is nothing more natural than the fact that these people of all races, genders, and different co-morbidities, who need surgery for different reasons, encounter anesthesia and are under various risks as a result. We anesthetists try to do our duty by minimizing the risks and feeling that we have to create a safe surgical process first and then a comfortable and aesthetic situation. Allergy and Anaphylaxis are two important perioperative issues that continue even when we start the day with us and finish our work in our daily practice.

Case Presentation

A 67 year old female patient, height: 154 cm, weight: 105 kg, diagnosed with hypertension, obesity, hypothyroidism. Preoperative evaluation for left knee prosthesis surgery was performed by us. Chest X-ray, electrocardiography, thyroid function test: Normal. On the morning of the operation, Fasting Blood Sugar: 111 mg/dlt, Urea: 49, Creatinine: 0.67, AST: 44, ALT: 48, Na:139, K:4.2, Cl:103, Ca:8.9. In her anamnesis, she had a history of angioedema, fainting, burning in the stomach, facial tingling, glottis edema after the use of levofloxacin, radiocontrast agent and meloxicam at different times. Recommendation of department of pulmonology, immunology and allergy diseases, American Society of Anesthesiologists (ASA) III patient, who was administered 40 mg prednol 1x1 7 hours before surgery, and 40 mg Avil 1x1 1 hour before surgery, was administered as premedication 3 mg dormicum as an intravenous infusion in 100 ml saline before the operation. He was monitored after he was taken to the operating room, vital signs were recorded as blood pressure (BP): 160/88, heart rate (HR): 102 beats/min, SpO₂: 95%. Regional anesthesia preparations were made, he was brought to a sitting position, the intrathecal interval was approached with a gray spinal needle (27 Gauge) from the lumbal vertebra (L 3-4) interval by following the rules of asepsis-antisepsis. After observing the arrival of cerebrospinal fluid (CSF), 10 mg of Heavy Marcaine was

administered, it was kept in the left lateral position for a while, anesthesia control was done and surgery was started. Peroperatively, 80 mg of prednol, 8 mg of ondansetron, and 2g of iespor as prophylactic antibiotic were administered intravenously in 100 ml of physiological saline. The entire 100 mg contramal iv infusion was administered to the patient without any problems. Contramal IV PCA was prepared for postoperative analgesia. No complications and anaphylactoid reactions were observed during this period.

Discussion

Ensuring the safety of patients in the perioperative period is the most important responsibility of the anesthetist. During this period, many events, allergies and anaphylactic reactions, which are related or not related to anesthetic methods and agents, can be seen. Although the frequency of these reactions varies according to geographical regions (1/10,000 to 1/30,000), they may result in severe cardiovascular collapse, bronchospasm, and severe skin reactions [8, 9].

In an international study conducted by M. Kroigaard et al, [10] it was reported that an allergic reaction due to nondepolarizing muscle relaxants followed by latex and antibiotic allergies developed frequently during anesthesia. Latex allergy can occur as Type I (anaphylactic type) and Type IV (late type). Type I reactions may occur after 30-60 minutes, while Type IV reactions may occur after 24-48 hours. Latex-containing products are frequently used in the health sector. This can be life-threatening for people with a latex allergy. Allergy history should be questioned in the preoperative period. Findings such as urticaria, rhinitis, respiratory distress, facial edema due to exposure to these substances should raise suspicion for latex allergy. In our patient, There was a history of allergic reaction that developed 3 times in the perioperative period. Latex allergy was detected in the later allergy test. Although it has been shown that preoperative pharmacological prophylaxis does not prevent the occurrence of anaphylaxis, [11] we applied H1-H2 antagonists and steroids in order to prevent or reduce possible reactions related to nonspecific histamine release [9].

Conclusion

Preoperative evaluation should be done meticulously in patients with a history of anaphylaxis and multiple drug allergies. First of all, whether there is a co-morbid disease, if any, relevant branch consultations should be made, and the examinations should be requested and evaluated in accordance with the classification prescribed by the American Society of Anesthesiology (ASA).

Intraoperatively, a close monitoring of the patient should be performed, and emergency medications and defibrillator should be kept ready for sudden malignant complications.

In the postoperative period, the patient should be followed up in the intensive care unit for at least one day, the pain should be stopped depending on the type of surgery, and the prevention of nausea and vomiting should be one of our basic approaches.

We think that complications can be prevented by making the preoperative preparations of patients with a history of anaphylaxis thoroughly with a good anamnesis, choosing non-allergenic drugs in the intraoperative period and optimal use of analgesic drugs for the postoperative period.

References

1. Lobera T., et al. "Study of hypersensitivity reactions and anaphylaxis during anesthesia in Spain". *J Investig Allergol Clin Immunol* 18.5 (2008): 350-356.
2. Mertes PM., et al. "Anaphylactic and anaphylactoid reactions occurring during anesthesia in France in 1999-2000". *Anesthesiology* 99.3 (2003): 536-545.
3. Chong YY., et al. "Anaphylaxis during general anaesthesia: one-year survey from a British allergy clinic". *Singapore Med J* 49.6 (2008): 483-487.
4. Mertes PM., et al. Groupe d'Etudes des Reactions Anaphylactodes Peranesthsiques. Anaphylactic and anaphylactoid reactions occurring during anesthesia interaction with compound 48/80. *Agents Actions* 11 (1981): 196-203.

5. Nel La and Eren E. "Peri-operative anaphylaxis". Br J Clin Pharmacol 71.5 (2011): 647-658.
6. Grosman N. "Histamine release from isolated rat mast cells: effect of morphine and related drugs and their interaction with compound 48/80". Agents Actions 11.3 (1981): 196-203.
7. Safe Surgery Saves Lives Frequently Asked Questions (2014).
8. Laxenaire MC and Mertes PM. "Anaphylaxis during anaesthesia. Results of a two-year survey in France". Br J Anaesth. 87 (2001): 549-558.
9. Mertes PM and Laxenaire MC. "Allergic reactions occurring during anaesthesia". Eur J Anaesthesiol. 19.4 (2002): 240-262.
10. Kroigaard M., et al. "Scandinavian Clinical Practice Guidelines on the diagnosis, management and follow-up of anaphylaxis during anaesthesia". Acta Anaesthesiol Scand 51.6 (2007): 655-670.
11. Setlock MA., et al. Latex allergy: failure of prophylaxis to prevent severe reaction. Anesth Analg 76.3 (1993): 650-652.

Volume 1 Issue 4 November 2021

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