

## General Anesthesia in a Patient with Multiple Drug Allergy

Sir,

A 25-year-old pregnant lady was detected to have hypothyroidism with a solitary nodule in the thyroid gland, and it was managed with a daily dose of Eltroxin 100 µg tablets. Postdelivery, the swelling in front of the neck was increasing in size. Fine-needle aspiration cytology (FNAC) of the swelling was suggestive of papillary carcinoma of thyroid and was posted for total thyroidectomy.

During preoperative anesthetic checkup, a history of multiple drug allergy and angioedema following intake of oral diclofenac was elicited. She did not have any other comorbidity. Skin allergy test showed doubtful or definite reaction to all induction agents, muscle relaxants, anticholinergics, benzodiazepines, neostigmine, and local anesthetics. All analgesics and antiemetics, except fentanyl, paracetamol, and metoclopramide, were also reactive.

On the day of surgery, 1 g paracetamol was given orally 2 h prior to the induction with sips of water. General anesthesia with inhalational induction and endotracheal intubation with mechanical ventilation without using muscle relaxants was planned, keeping the patient in a deeper plane of anesthesia. Intravenous hydrocortisone 100 mg and fentanyl 100 µg were given 5 min before the induction and no allergic reaction was noticed.

Anesthesia was induced with 8% sevoflurane in oxygen with a tight-fitting face mask using a flow rate of 6 L/min. Once the patient lost consciousness, anesthesia was deepened by adding nitrous oxide to oxygen (2:1) and sevoflurane (8%). After 3 min, the patient became apneic and was intubated and an oral airway was kept in place in order to avoid biting of the tube in case the patient became light. The anesthesia was maintained with oxygen, nitrous oxide (1:2), and sevoflurane (2-3%). Mechanical ventilation with a respiratory rate of 15 breaths/min and tidal volume of 450 mL were instituted. Intraoperatively, the hemodynamic parameters were stable with an average heart rate of 82-94 bpm, systolic blood pressure of 90-96 mmHg, peak airway pressure of 15-18 cm of H<sub>2</sub>O, and end-tidal CO<sub>2</sub> (EtCO<sub>2</sub>) of 25-30 mmHg. Normal saline was given at a rate of 100 mL/h during the intraoperative period. At the end of the surgery, sevoflurane and nitrous oxide were discontinued and the patient was extubated when completely awake. Postoperative pain was managed with bolus doses of intravenous fentanyl 20 µg and oral paracetamol.

Anaphylactic reactions to anesthetic agents have been reported with increasing frequency. Any drug administered in the perioperative period can potentially produce life-threatening anaphylaxis. Muscle relaxants and latex are the most frequently

involved drugs,<sup>[1,2]</sup> and the estimated incidence of anaphylaxis ranges from 1:10,000 to 1:20,000.<sup>[3]</sup> Our plan of induction and maintenance of anesthesia with an inhalational agent is justified as there are no reported cases of allergy to inhalational anesthetics.<sup>[4]</sup> Accidental opening of neck veins with a head-up position during thyroidectomy predisposes to venous air embolism, and the negative intrathoracic pressure during spontaneous inspiration further increases the risk. Hence, we chose endotracheal intubation and controlled ventilation over laryngeal mask airway (LMA) and spontaneous ventilation. Moreover, LMA might be displaced while positioning during thyroidectomy. We maintained a lower EtCO<sub>2</sub> to suppress the spontaneous respiratory efforts since muscle relaxants were not used. This safe and reliable technique can be recommended for providing general anesthesia in patients with multiple drug allergy.

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### Conflicts of interest

There are no conflicts of interest.

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