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Ascaris Worm in Vomitus Post-Abortion: Beware!

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Dear Editor,

Surgical abortion is a minor procedure commonly performed under sedation with paracervical block in our unit. We report a case of ascariasis in vomitus after sedation for surgical abortion in a patient with long-standing Graves' disease.

A 25-year-old primigravida female presented to the emergency room with amenorrhoea since 10 weeks and vaginal bleeding since 6 hours.The patient had Graves' disease without symptoms of hoarseness or dysphagia, and consuming carbimazole and celiprolol. There was nothing remarkable in her medical history. Her heart rate was 88 beat minute^{-1} (min) and blood pressure was 110/70 mmHg with 99% oxygen saturation during breathing of room air. Airway examination was essentially normal.

A painless firm swelling was palpable over the anterior neck measuring 8 × 8 × 4 cm. This swelling moved with deglutition and protrusion of the tongue. Lower border was appreciably indicative of no retrosternal extension. Respiratory and cardiovascular systems were normal. Haematological, biochemical and thyroid function tests were normal.

Informed consent was obtained. In the operating room, standard American Society of Anesthesiologists monitors were attached, and baseline vitals were noted. Hudson mask was placed with oxygen flow at 6 L min^{-1}. Ringers lactate's solution was infused at 8 mL^{-1} kg^{-1} hr via a 20 gauge intravenous (IV) line. Antiemetic prophylaxis was provided with an IV line of 4 mg ondansetron. Mild sedation with an IV of 1 mg midazolam and 50 µg fentanyl was administered, followed by paracervical block with 10 mL of 1% lignocaine infiltration.

The procedure was completed uneventfully. The patient was nauseous 5 minutes after the procedure, and subsequently vomited a large *Ascaris lumbricoides* worm. Anthelmintic medication was prescribed post-operatively.

Ascariasis is a common helminthic infection with a worldwide incidence of 25% (1). Due to the feco-oral route of transmission, it is more prevalent in countries with poor sanitation. The adult Ascaris worm, when irritated by stress like trauma, certain drugs or anaesthetic agents, may migrate out of oesophagus into the trachea leading to sudden life threatening upper airway obstruction and respiratory distress. The parasite is more prone to migrate during anaesthesia due to supine positioning of the patient, relaxed cardio-oesophageal sphincter, decreased gastric pH, reduced pepsin and absence of swallowing reflex (2).

Our patient was an undiagnosed case of ascariasis, without eosinophilia and with a large long-standing thyroid mass. Deep sedation for abortion was avoided in our patient because tracheomalacia was suspected due to the long-standing nature of thyroid swelling, thereby averting the event of tracheal collapse. Dean et al. (3) concluded

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that deep sedation without intubation is a viable method for anaesthesia for surgical abortions, whereas a case reported by Cheung et al. (4) reported aspiration pneumonitis after procedural sedation. Although the incidence of pulmonary aspiration is rare during procedural sedation, anaesthesiologists should always anticipate this rare adverse event. Respiratory distress due to tracheobronchial ascariasis has been well described by Ali and Mehta (5). In the event of aspiration of adult Ascaris worm leading to a compromised airway, the anaesthesiologist should aim to maintain oxygenation and secure the airway with an endotracheal tube. Rigid bronchoscopy should be performed for mechanical removal of the aspirated worm. The World Health Organization recommends that patients at a high risk of soil transmitted helminthiasis, including women of childbearing age, receive prophylactic treatment with benzimidazoles prior to general anaesthesia (5). Our patient was initiated on anthelmintic drugs post-operatively. We conclude that maintaining airway reflexes and vigilant monitoring peri-operatively is essential for procedural sedation, and prophylactic anthelmintic treatment should be considered particularly in endemic areas.

Informed Consent: Written informed consent was obtained from patient who participated in this study.

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