

Psychogenic respiratory distress – anxiety induced airway collapse

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Abstract

Presentation

56-year-old female with sudden onset dyspnoea, stridor and vomiting on day one post elective thyroid biopsy.

Diagnosis

Psychogenic upper airway obstruction and respiratory distress. Severe anxiety in relation to the potential complications following a fine needle thyroid biopsy under local anaesthetic causing compromise of the airway, dyspnoea and stridor. Diagnosis of exclusion following normal nasendoscopy and radiology images.

Treatment

Intubation and mechanical ventilation with corticosteroids for supraglottic swelling.

Discussion

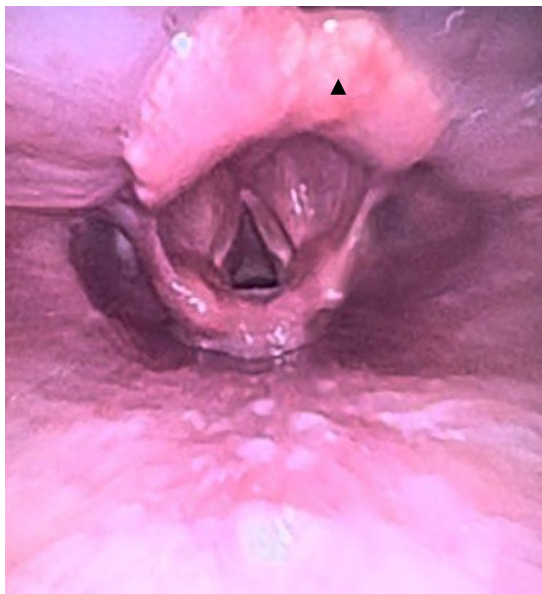
Haematoma formation leading to airway obstruction following a thyroid biopsy is a rare complication that must be disclosed to patients to gain informed consent for the procedure. The clinical presentation of severe anxiety related to the potential of this complication occurring can mimic a mechanical obstruction. It is a diagnosis of exclusion and requires definitive airway management prior to diagnostic assessment.

Introduction

A biopsy of the thyroid gland is a minimally invasive diagnostic procedure performed under local anaesthetic. One of the most serious complications is haematoma formation leading to airway obstruction¹. This must be discussed with the patient to ensure maximum capacity for informed consent for the procedure². If a patient does present with swelling following this procedure, it should be treated as a multidisciplinary emergency and requires immediate airway management³. We present a case of anxiety-induced airway compromise following an elective outpatient procedure to the neck.

Case

A 56-year-old female self-presented to the emergency department in significant distress with acute onset stridor, dyspnoea and vomiting following a fine needle biopsy of her thyroid gland the previous day. She had limited ability to communicate but reported sudden onset dyspnoea and stridor that morning. She also reported an allergic reaction to benzodiazepines following a previous administration. Symptoms did not improve following inhaled and nebulised bronchodilators with intravenous corticosteroids. High-flow nasal oxygen was commenced and an expedited transfer to theatre arranged for management of what appeared to be rapidly evolving airway obstruction⁴. Anaesthesia and otolaryngology colleagues agreed an awake flexible bronchoscopic intubation would provide the safest technique for definitive airway management. The patient was maintained upright at 90° to avoid further respiratory compromise. In line with guidelines, sedation was avoided due to the risk of further airway compromise⁴. Topicalisation of the oronasopharynx proved difficult using aerosolised local anaesthetic spray due to vomiting and a high work of breathing but achieved with lidocaine mucosal gel. A bronchoscope preloaded with a nasal endotracheal tube was passed through the nasopharynx to the epiglottis for assessment.



Epiglottis

Figure 1: Expiration

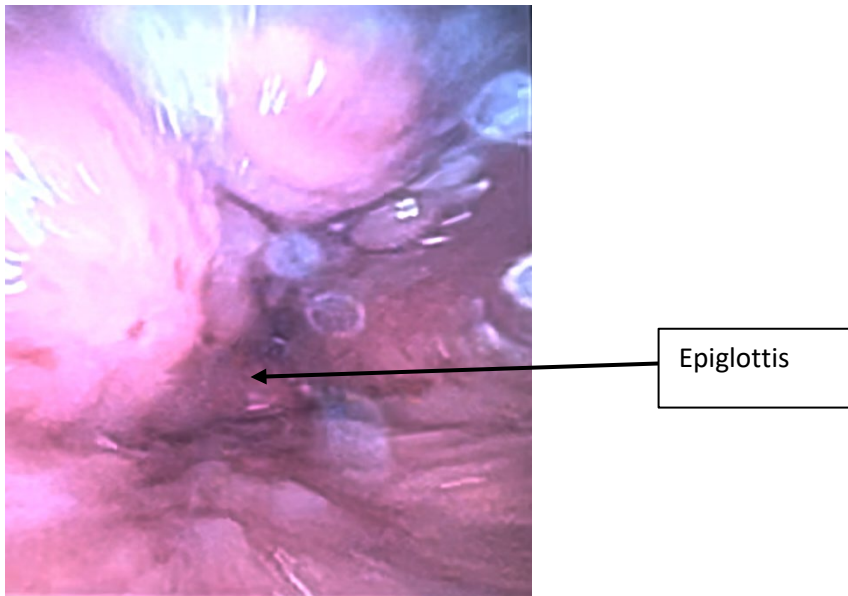


Figure 2: Inspiration

Figure 1 shows an unobstructed glottis during expiration. Both vocal cords appear functional with localised oedema but no obvious supraglottic cause of stridor.

Figure 2 occurs during inspiration and we can see that localised oedema combined with patient agitation has led to a transient but complete obstruction of the glottis.

It was agreed correct management would be intubation and radiological scanning to dictate further management³. The nasal endotracheal tube was passed through the vocal cords without issue and a general anaesthetic administered. Computed tomography of the neck identified localised oedema only. The patient was admitted to the intensive care unit for continued intravenous corticosteroid therapy and extubated the next day without issue.

Discussion

Psychogenic stridor (also reported as hysterical stridor) is a diagnosis of exclusion involving upper airway collapse in the absence of mechanical obstruction due to psychological factors^{5,6}. Most reported cases are described in adolescent females with symptoms of acute asthma or stridor unresponsive to conventional treatments^{6,7,8}. The obstruction is often severe enough to require intubation and ventilation. This patient had no history of respiratory disease but did have a known history of anxiety with a prior adverse reaction to benzodiazepines. During the consent process for the biopsy, she was informed that complications included swelling in the neck causing airway obstruction. After the procedure, she misjudged that she had acute swelling at the puncture site leading to severe anxiety attack which subsequently caused respiratory compromise and her emergency presentation⁹. Whilst there was localised oedema superior to the epiglottis, this was felt to be secondary to

the high work of breathing. There were no adverse outcomes following this procedure and corticosteroid therapy was carefully tapered to avoid complications as reported in previous cases.

Declaration of Conflicts of Interest:

None declared.

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