



An interesting case of post-partum chest tightness, facial asymmetry, and dysphonia

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Background

The aetiology of chest pain ranges from benign to life-threatening. Concerning causes include pulmonary embolism, pneumothorax, myocardial infarction, aortic dissection, and oesophageal rupture. We present a rare case of Hamman syndrome manifesting during delivery and worsening post-partum

Case Report

A 24 year old primigravid, antenatally well lady arrived fully dilated in spontaneous labour. She commenced pushing and at 1 hour suddenly developed right sided facial, eyelid, and neck swelling. She progressed to deliver a male liveborn baby.

Day 1 postpartum she developed worsening throat swelling, dysphonia, chest tightness, and subcutaneous emphysema along her trachea and anterior chest with normal air entry and vital signs. An ECG was normal and chest x-ray showed pneumomediastinum and bilateral supraclavicular subcutaneous emphysema.

A follow-up CT scan showed a moderate to large volume pneumomediastinum encircling the oesophagus, trachea, and thyroid. Gas was also tracking bilaterally within the bronchovascular interstitium, the oblique and right horizontal fissure, lower cervical soft tissues and bilateral supraclavicular regions with no signs of oesophageal perforation.

She was diagnosed with Hamman's syndrome (spontaneous pneumomediastinum and subcutaneous emphysema) and managed conservatively with analgesia. The patient's condition gradually stabilised prior to discharge.

Discussion

Hamman syndrome (Spontaneous pneumomediastinum/SPM) is a rare clinical entity with an incidence ranging between 1 in 25,000 to 1 in 44,000. It is more frequent in children and in individuals with previous respiratory disease with 70% of all patients being male. It is defined as extra-pulmonary air in the mediastinum without any apparent cause (1). Management is usually conservative and the disease process is usually benign.

SPM is theorised to occur when air leaks through alveolar ruptures with increased intrathoracic pressure. Free air then dissects along vascular sheaths and then further into the mediastinum and subcutaneous tissues. Pneumomediastinum is associated with subcutaneous emphysema, pneumothorax, pneumopericardium, and pneumoretroperitoneum.

Predisposing factors in pregnant women for increased airway pressure are often related to straining against a closed glottis (Valsalva). These include prolonged second stage with active pushing, forceful coughing or vomiting, asthmatic bronchospasm, or intense exercise (2). Recreational use (cocaine, marijuana, methamphetamines) have also been implicated.

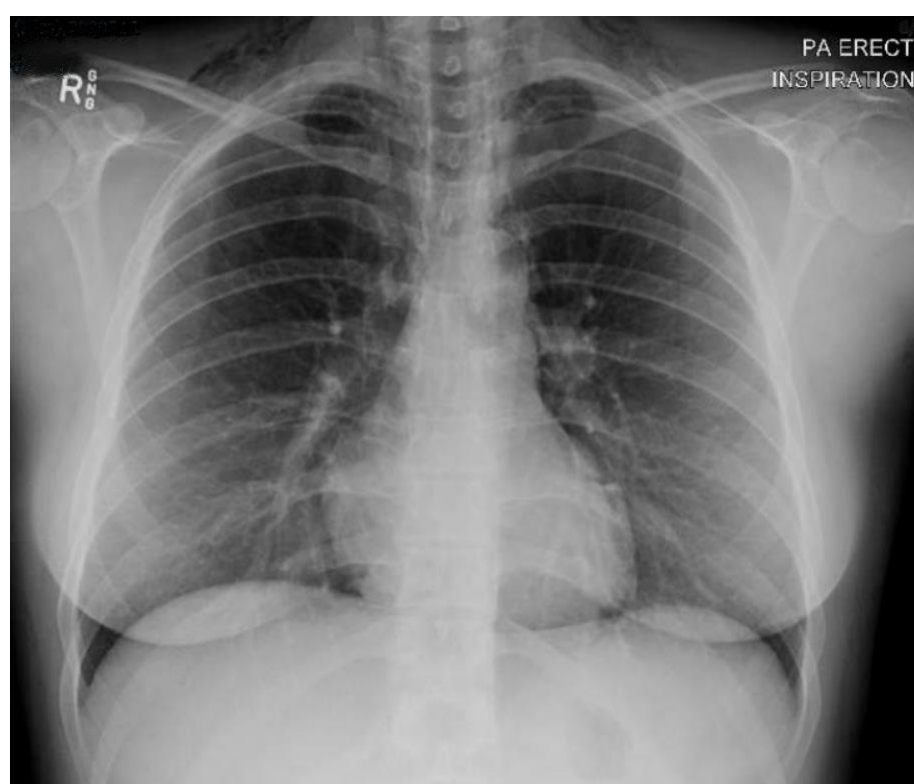
Discussion

Radiographic signs depend on delineation of normal anatomic structures by air with frontal and lateral chest x-rays and CT (3). Bedside Ultrasonography has also been used to demonstrate air artefact (4).

Common presenting symptoms of pneumomediastinum include chest pain, dyspnoea, cough, neck pain, odynophagia, dysphagia (5,6). Exclusion of other serious causes of pneumomediastinum (secondary) including trauma and Boerhaave's syndrome (spontaneous transmural perforation of the oesophagus) in addition to associated pathology such as pneumothorax is essential.



Images



1. Grapatsas et al. Hamman's syndrome (spontaneous pneumomediastinum presenting as subcutaneous emphysema): A rare case of the emergency department and review of the literature. *Respir Med Case Rep.* 2018; 23: 63-65
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6. Huon LK et al. Head and neck manifestations of Spontaneous Pneumomediastinum. *Otolaryngology- Head and Neck Surgery* 146(1) 53-57