Obstetric ANAESTHESIA
Princess Royal Maternity

Hamman's syndrome- diagnosing an uncommon complication during labour

E Bhatti, M Davidson
Princess Royal Maternity Unit, Glasgow Royal Infirmary, Glasgow.

Introduction

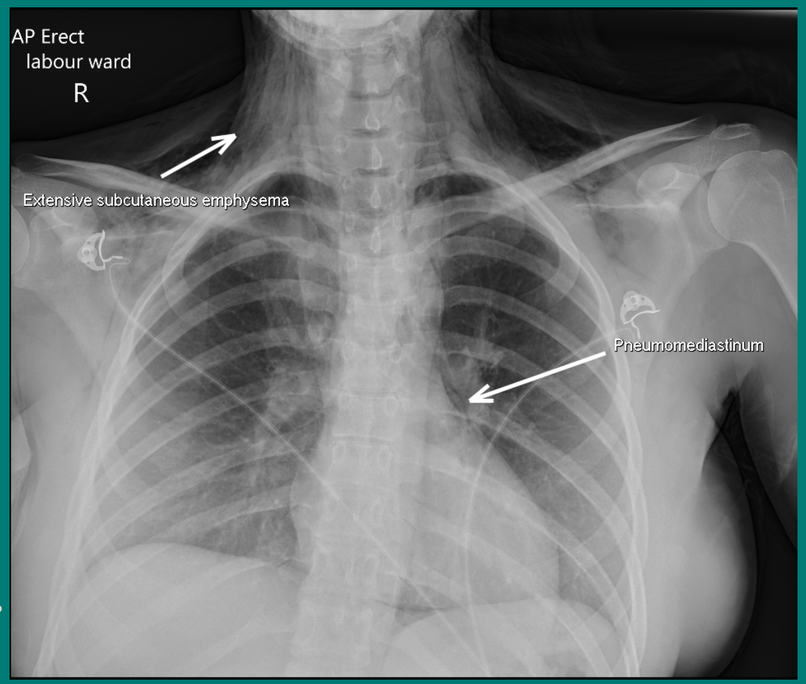
We present a case of Hamman's syndrome in a labouring woman who developed dramatic facial swelling from subcutaneous emphysema. We discuss challenges of clinical assessment during the active second stage of labour, utility of point of care ultrasound to assist diagnosis and hope to raise awareness of this uncommon syndrome.

Case

A 27 year old primigravida presented in spontaneous labour. She had no relevant past medical history and was a non-smoker. She progressed to full cervical dilatation and began active pushing. After 90 minutes she developed dramatic, progressive facial swelling associated with dysphonia. The obstetric team noted subcutaneous emphysema, raising the possibility of pneumothorax and requested anaesthetic assistance. There was marked facial oedema most prominently periorbitally and creptius palpable from clavicles to midface. There was no tracheal deviation or hyperresonance on chest percussion. Auscultation was limited by transmitted noise of maternal efforts. Bedside lung ultrasound revealed lung sliding bilaterally helping to rule out significant pneumothorax. Ventouse delivery was performed under pudendal block and use of Entonox was discouraged to avoid further air leak expansion. Chest xray (CXR) revealed pneumomediastinum and extensive subcutaneous emphysema. A CT chest with oral contrast was undertaken to rule out oesophageal rupture. This revealed pulmonary interstitial emphysema in keeping with a leak from a small airway. Follow-up CXR two weeks later showed resolution of pneumomediastinum.

Discussion

Hamman's syndrome describes spontaneous pneumomediastinum and subcutaneous emphysema due to extreme valsalva manoeuvres. Incidence in the obstetric population is 1:100000.1 It is more common in nulliparous women and in prolonged second stage. The mechanism is increased intra-alveolar pressure leading to alveolar rupture. Leaked air follows bronchovascular connective tissue toward the mediastinum, into subcutaneous tissues.1 Typical presentation is chest pain and swelling affecting the face, neck and upper thorax. Crepitus is often found on examination.1 There may be associated dyspnoea, dysphagia or dysphonia. Serious differential diagnoses must be excluded such as pneumothorax, pulmonary embolism and Boerhaave syndrome. Diagnosis is usually confirmed by CT but lung ultrasound is a simple technique which can rapidly rule out a differential diagnosis of pneumothorax by confirming the presence of lung sliding and B-lines.2



Key Points

- Hamman's syndrome = spontaneous pneumomediastinum, subcutaneous emphysema and may be due to extreme valsalva manoeuvres
- Presents most commonly- chest pain and swelling of face, neck, thorax
- Management usually conservative but CT to confirm diagnosis and rule out serious differential diagnoses
- Lung ultrasound can be a useful bedside tool to rule out significant pneumothorax

References : (1)James RE, Bhanu C, Hapuarachi S, et alFacial swelling and dysphonia during labour: a case of Hamman's syndromeBMJ Case Reports CP 2019;12:e227489

2) Miller A. Practical approach to lung ultrasound. BJA Education. 2016; 16 (2): 39–45.