

A suspected case of the rare Hamman's syndrome

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Background:

- Hamman syndrome is characterised by spontaneous pneumomediastinum and subcutaneous emphysema.
- The proposed pathophysiology involves increased intrathoracic pressure (such as with excessive pushing during second stage of labour) causing micro perforation/rupture of alveoli leading to diffusion of air into surrounding tissues.
- The reported incidence 1 in 100,000⁽¹⁾ and approximately only 200 cases have previously been described in the literature.

Case:

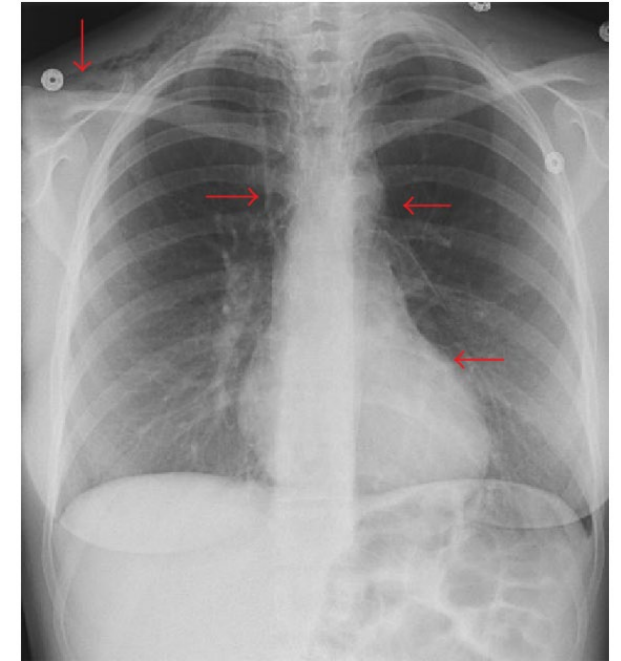
- A 34 year old otherwise well primigravida woman presents in spontaneous labour following an uncomplicated pregnancy.
- There was a prolonged second stage of labour, with 90 minutes of active pushing.
- She progressed to an instrumental (forceps) delivery due to an abnormal CTG trace.
- One hour post partum, she reported facial swelling. This was reviewed by the obstetric and anaesthetic teams and initially attributed to a nitrous oxide reaction. She was treated with anti-histamines and corticosteroids.
- Six hours post partum, she reported worsening facial swelling, central chest discomfort/pressure and upper back discomfort.
- An ECG demonstrated normal sinus rhythm and the chest discomfort resolved shortly after.

Case Continued:

- 24 hours post partum, she developed a sensation of neck "pressure", ringing in the ears and her facial swelling developed crepitus, which suggests subcutaneous emphysema.
- At this time, she was reviewed by the ENT team, who hypothesised that excessive pushing during second stage may have caused micro-perforations in her maxillary sinuses.
- She remained an inpatient for monitoring. Her symptoms had completely resolved by day 4 post partum and she remained asymptomatic at a 6 week telehealth follow up.

Discussion:

- Retrospectively, this is a suspected case of Hamman syndrome based on the presentation of chest pain and facial crepitus in the context of excessive Valsalva/pushing.
- Additionally, many other associated symptoms of Hamman syndrome were present (upper back pain, neck pain, ringing in ears)⁽²⁾
- Thankfully, it is usually a benign and self limiting condition where monitoring and supportive care is appropriate.
- Serious cases result in a life threatening cardiac tamponade.
- It is often mis/undiagnosed due to its rarity and the atypical constellation of symptoms.
- Other life threatening differentials such as pulmonary embolism, pneumothorax and oesophageal rupture/Boerhaave syndrome must be considered.
- Raises an interesting discussion about the management of future deliveries in the context of aiming to avoid excessive/prolonged pushing and subsequent recurrence.



(3)

References:

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- (2) T. E. Langwieler, K. D. Steffani, D. P. Bogoevski, O. Mann, and J. R. Izbicki, "Spontaneous pneumomediastinum," *The Annals of Thoracic Surgery*, vol. 78, no. 2, pp. 711-713, 2004.
- (3) Hindawi (2015) Figure 1: Hamman's syndrome: A rare cause of chest pain in a postpartum patient: Available at: <https://www.hindawi.com/journals/crpu/2015/201051/fig1/> (Accessed: March 12, 2023).



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