A case report on Hamman's Syndrome following spontaneous vaginal delivery

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BACKGROUND

Hamman's syndrome is defined as spontaneous pneumomediastinum with the presence of subcutaneous emphysema[1]. It is a rare complication of labour, with an estimated incidence of 1:100,000 vaginal deliveries[2]. It is postulated that Hamman's syndrome occurs secondary to sustained Valsalva manoeuvres required in the second stage of labour, which can lead to marginal alveoli rupture and escape of air into the mediastinal space and subcutaneous tissue planes[3]. Prognosis following a diagnosis of Hamman's syndrome is favourable, as it is a benign, self-limiting condition. Treatment is often conservative, and supportive management is required while awaiting resolution[4].

AIM

To report the case of a Hamman's syndrome in a healthy 21-year-old primigravida following spontaneous vaginal delivery, highlighting its clinical presentation, diagnostic approach, and management, as well as to emphasize the importance of early recognition and supportive care.

CASE

A 21-year-old primigravida was admitted to birth unit at 41 weeks' gestation in spontaneous labour. She had an uncomplicated pregnancy, with no significant past medical history and BMI was 25. Stage one of labour lasted for six hours and forty-five minutes, with spontaneous rupture of membranes at 6cm dilation. During second stage, the patient developed sudden onset bilateral facial swelling and maternal tachycardia, with a peak heart rate of 166 beats per minute (bpm). Total duration of second stage was one hour and twenty-six minutes.

The patient was reviewed six hours post-delivery for increasing facial swelling, new-onset retrosternal inspiratory pain and pain with swallowing. On examination, she had a low-grade tachycardia ranging between 105 and 110bpm, and crepitus was felt over the sternum, upper chest, bilateral neck and jaw.

CT scan of the neck and chest identified a large volume pneumomediastinum [Figure 1], with gas within the superior pericardium, along with associated subcutaneous emphysema tracking into the neck, face, and anterior abdominal wall [Figure 2].

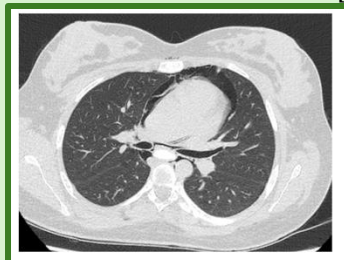

Figure 1: CT demonstrating pneumomediastinum

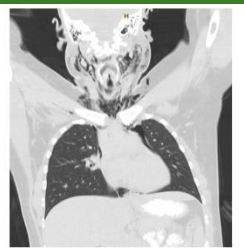

Figure 2: CT demonstrating subcutaneous emphysema in the neck, jaw, and face.

RESULTS

With input from General Surgery and Obstetric Medicine, a conservative approach to management was undertaken aiming for symptom control, with simple analgesia and low-flow oxygen. Symptoms began improving day one post delivery, and she was discharged from hospital on day three post-delivery.

DISCUSSION

Hamman's Syndrome is a rare but self-limiting condition that can be associated with prolonged labour. As it can present with symptoms resembling more severe conditions, CT imaging is invaluable for diagnosis and to rule out other life-threatening pathologies, such as Boerhaave's syndrome and pulmonary embolism [4]. Conservative management is usually effective, with most patients experiencing resolution of symptoms within one to two weeks. This case emphasizes the importance of recognizing Hamman's syndrome in labouring women, particularly those with prolonged second-stage labour, and the favourable prognosis with appropriate care.

References

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