

Spontaneous Pneumothorax During Labour

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Citation

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Abstract

Spontaneous pneumothorax complicating pregnancy is rare. We report a case of spontaneous pneumothorax during labour in a 23 year old healthy Asian primigravida diagnosed 2 days post partum. Maternal hypoxia must be identified early to protect the foetus and spontaneous pneumothorax should be considered in the differential diagnosis of chest pain and dyspnoea during delivery. It is a potential cause of both maternal and foetal mortality

CASE

A 23 year old healthy primigravida had a spontaneous vaginal delivery under epidural and entonox inhalation. During labour, she developed acute pleuritic left sided chest pain and became dyspnoeic with oxygen saturation of 94% on air. These symptoms were attributed to the stress of delivery. The delivery progressed and she delivered a healthy 6lbs baby.

Post partum, she remained breathless with persistent chest pain. There were no ECG changes and her oxygen saturations remained between 94 -96% on air. She was treated with analgesia. However this failed to improve and a chest x- ray was performed on day 2 post partum. A left sided pneumothorax was identified and an 18Fr chest drain was inserted. However the air leak persisted and on day 5 post partum she was referred to the thoracic unit for further management.

She underwent a left video assisted thoracoscopic (VATS) bullectomy and pleurodesis. Post operatively she recovered well and on day 2 post surgery, her chest drains were removed. Chest x-ray showed satisfactory re-expansion of her left lung. She was discharged home the same day. Follow up at 8weeks was unremarkable.

DISCUSSION

Spontaneous pneumothorax complicating pregnancy is rare. It is a potentially life threatening cause of acute respiratory distress during labour ¹. Maternal hypoxia must be identified early to protect the foetus and spontaneous pneumothorax should be considered in the differential diagnosis of chest pain and dyspnoea during delivery. The other causes of acute

respiratory failure in pregnancy are ARDS, venous air embolism, beta-adrenergic tocolytic therapy, asthma, thromboembolic disease and pneumomediastinum.

The aetiology of most pneumothoraces occurring in pregnancy is rupture of apical blebs or bullae₂. Increased intra-luminal and intra- alveolar pressure caused by Valsalva manoeuvres during the expulsive phase of labour may cause alveoli to rupture and air to track between the parietal and visceral pleura ₃. This may occur quickly or gradually, depending on the degree of lung injury and respiratory state of the patient. Recognition of the signs and symptoms of pneumothorax include chest pain, progressive hypoxemia, tachycardia, and respiratory distress.

Radiological evidence of air in the thoracic cavity confirms the diagnosis and immediate management is required.

A study has shown that the stress of labour is usually assumed to be the cause of chest and abdominal pain post partum₄. However, our case demonstrates that pneumothorax should always be considered in the differential diagnosis of dyspnoea and chest pain in the peri partum period because a delay in its diagnosis can have devastating consequences for both mother and baby. It is essential to suspect the diagnosis early prior to the sudden deterioration of the patient when compensatory physiological changes are exceeded.

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