Haemopneumothorax related to acupuncture

INTRODUCTION
Acupuncture has become very popular for health maintenance as well as treatment of pain and various illnesses. Although commonly thought of as being safe, acupuncture has been related to serious adverse events including pneumothorax, cardiac tamponade, infection and nerve injuries. The following report describes a case of haemopneumothorax caused by acupuncture.

CASE REPORT
A 30-year-old man presented to the local hospital with sudden-onset shortness of breath and pleuritic chest pain. He had been receiving daily acupuncture sessions for a sore neck, which involved having a needle placed in the fourth intercostal space in the paravertebral area. During one session the patient noted that he felt the acupuncture needle was pressing deeply into his back. He then developed worsening dyspnoea 10 min after completion of his treatment. On presentation to the emergency department a chest X-ray showed a left-sided pneumothorax with pleural effusion (figure 1). A 28 French gauge chest tube was inserted, draining 1 L of blood. CT of the thorax showed ongoing large left haemopneumothorax with left lung collapse. Contrast extravasation suggestive of an ongoing bleed from the left apical region was also noted.

The patient was transferred to our centre for emergency surgical management of his haemopneumothorax. He underwent emergency left video-assisted thoracoscopic surgery drainage, wedge resection and talc pleurodesis in view of haemodynamic instability on transfer. Approximately 2.8 L of blood was evacuated from the left hemithorax, along with clots from the left apex. Haemostasis was performed on a thin bleeding adhesion at the apex of the thoracic cavity. A wedge resection of the left upper lobe was performed using staplers.

This was followed by talc pleurodesis and placement of a chest tube. He made an uneventful postoperative recovery and was discharged home well on postoperative day 6. Histological examination showed visceral pleural fibrosis and haemorrhage with no blebs or bullae. The patient continued to be clinically stable on follow-up, with chest X-rays showing expanded lungs without any evidence of pneumothoraces.

DISCUSSION
Our patient is a young man who developed a left-sided haemopneumothorax after an acupuncture session, requiring emergency surgical intervention. Several cases of acupuncture-related pneumothoraces with or without tension pneumothorax have previously been reported. However, there have not been any reports of haemopneumothorax resulting from acupuncture.

It is believed that acupuncture-related pneumothoraces result from pleural manipulation or lung injury from the acupuncture needles. In this particular patient we believe that the haemopneumothorax resulted from an acupuncture-related pneumothorax causing a tear in vascularised left apical adhesions which were present within the thoracic cavity. The aetiology of these adhesions is unknown in this case. These adhesions usually contain a small non-contractile vessel within and, when tearing of the adhesions occurs, there is continuous bleeding into the pleural space resulting in a haemothorax.

Spontaneous pneumothorax is less likely in our patient in view of the lack of risk factors such as a smoking history, previous pneumothoraces or underlying lung pathology. Furthermore, no blebs were noted on histological examination. The temporal relation of his symptoms, occurring 10 min after acupuncture, led to our conclusion that this case of haemopneumothorax was secondary to acupuncture.

Although acupuncture is supposed to be a subcutaneous or intramuscular procedure and is believed to be safe, it is important when inserting needles to take note of potential complications such as...
haemopneumothorax and to provide the patient with appropriate information prior to engaging in acupuncture. Healthcare professionals as well as patients need to be aware of these potential complications to ensure early diagnosis and management as well as prevention of any further morbidity and mortality.

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