

Bilateral pneumothoraces as a complication of acupuncture

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ABSTRACT

Pneumothorax developing secondary to acupuncture is rare. However, in an undiagnosed case, it may cause fatality. The real incidence of acupuncture-related pneumothorax is not known but is acknowledged to be under-diagnosed and under-reported. We describe pneumothorax occurring in a 52-year-old woman who developed bilateral pneumothoraces, with one side being a tension pneumothorax, immediately following acupuncture. The needle was inserted at a paravertebral point at the level of the third vertebral spinous process.

Keywords: acupuncture, alternative medicine, pneumothorax

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INTRODUCTION

Acupuncture is a sought-after alternative medical therapy worldwide. It is commonly believed to be safe with minimal complication. While this is generally true, serious adverse effects can occur related to incompetency of acupuncturist. We report a case of bilateral pneumothorax following acupuncture.

CASE REPORT

A 52-year-old Chinese woman first presented in 2002 with chronic coughing. Extensive investigations, including computed tomography of the chest, were unhelpful. She was treated as for chronic bronchitis. However, her symptoms persisted which resulted in her seeking acupuncture as an alternative medicine. Following a few sessions of acupuncture, her symptoms were apparently alleviated, hence leading to continuation of this form of treatment. During a session of acupuncture, she received needling of the acupoint at BL131, which is a paravertebral point at the level of the spinous process of the third vertebra. Soon after the treatment, she experienced difficulties in breathing. Subsequently, she presented to the emergency department. Bilateral pneumothorax was diagnosed on chest radiograph (Fig. 1). A tube thoracostomy was performed for left-sided tension



Fig. 1 Chest radiograph shows a left-sided tension pneumothorax with shift of the mediastinum and trachea to the right. A small right apical pneumothorax is present.

pneumothorax, while the 10% right-sided apical pneumothorax was managed conservatively. Two days later, the chest tube was removed uneventfully, and both lungs remained expanded thereafter.

DISCUSSION

Acupuncture is among the most popular of all complementary or alternative therapies. Acupuncture is a traditional Chinese medical technique which is believed to have been practised for almost 4,000 years⁽¹⁾. It is a technique adopted for unblocking “qi” by inserting needles at particular acupoints. “Qi” is an energy form that allegedly flows through the body along 14 main pathways called meridians. When “qi” is obstructed, the person will develop imbalance in his yin and yang which will result in sickness. Thus far, Chinese physicians have identified some 500 acupoints for which appropriate stimulation can achieve specific desired effects⁽¹⁾. Today, several other forms of stimulatory procedures such as electrical stimulation, moxibustion, laser therapy and plum blossom are also included under the scope of acupuncture. However,

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acupuncture is strictly defined as insertion of a thin, solid, metallic needle into the body.

While acupuncture is widely perceived as relatively safe as compared to Western medicine, it is after all a surgical procedure. Thus, it can clearly render patients with undesirable and at times fatal complications. In most literature reviews, pneumothorax is the most common mechanical organ injury. The real incidence is not known, though it is estimated to have occurred only twice in nearly a quarter of a million treatments⁽²⁾. A recent report from Japan reported that of a total of 55,291 acupuncture treatments, 64 adverse events were reported, including 11 types of events. Of these, pneumothorax occurred in about 1 in 5000 cases. In the English language literature, five case reports of fatalities have been published, including two with cardiac tamponade⁽³⁾, two cases of staphylococcal septicaemia and one death from bilateral tension pneumothoraces⁽⁴⁾.

Patients identified to be at increased risk for pneumothorax during acupuncture include smokers, tall males, patients with emphysema, patient who are

consuming corticosteroids and patients with active cancer. Any point overlying the pleura is vulnerable and special care should be exercised. Even though pneumothorax is the most frequently reported serious complication related to acupuncture, it is likely to be avoidable. Most adverse effects seem to be associated with insufficient basic anatomy knowledge of the acupuncturist, low hygiene standard and inadequate acupuncture education. Most studies confirm acupuncture to be a generally safe form of therapy. However, pneumothorax as a complication of acupuncture is generally under-reported and must be made known.

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