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Title Page:

Navigating the Needles: Unveiling the Risks of Acupuncture, A Case Report

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Introduction:

Acupuncture is an alternative medical therapy that has grown in popularity. Acupuncture's widespread use has increased the demand for reliable information on safety concerns (1). Acupuncture-related complications are uncommon, but they range from minor side effects like local pain and hemorrhage to more serious complications like infection transmission (hepatitis B and C, HIV infection), pneumothorax, cardiac tamponade, vascular lesions, and spinal cord injuries (2).

Postmortem examinations revealed that a 10-20 mm deep puncture is sufficient to reach the lung because its surface is about 15-20 mm beneath the skin (3). Acupuncture complications are more commonly reported by those who manage them than by the acupuncturist (2). Only 20% of the reports were written by the acupuncturist who performed the procedure that caused the adverse effect (4).

With the widespread use of acupuncture, there is a greater need for reliable information on safety concerns. Because acupuncture is a growing alternative medical therapy, raising awareness of the potential complications of this invasive procedure is essential. Reporting acupuncture-related complications can help with patient education, awareness, and the need for an accredited and registered professional. We present a case of tension pneumothorax following acupuncture, which is a potentially fatal complication.

Case History and Description:

A 28-year-old female presented with complaints of severe right-sided chest pain following acupuncture in which needles were inserted into the chest wall. The pain began spontaneously and was pleuritic, with an

intensity rating of 8 out of 10. When the patient began to experience shortness of breath, she went to the emergency room (ER). The right-sided chest pain began 30 minutes before the ER visit and radiated to her shoulder. Deep breaths, movement, and coughing aggravated the pain. In addition, the patient had a history of anxiety and depression. The patient did not smoke. She was taking sertraline for depression. She was afebrile, blood pressure was 126/82 mmHg, heart rate was 88 beats per minute, and her oxygen saturation was 94% on room air. The patient was started on nasal cannula oxygen therapy. The first chest x-ray revealed a pneumothorax with no shifting. Due to worsening shortness of breath, a follow-up x-ray revealed a right-sided pneumothorax in the apical region, 40.5% measuring 38 mm, with a mediastinal shift to the left which was concerning for the development of tension pneumothorax (Figure 1). As a result, a chest tube was immediately inserted. The patient's pain was managed on an as-needed basis. Hemoglobin was 11.5 g/dL, WBC was 6.2 K/uL, and platelets were 146 K/uL. The sodium concentration was 142 mmol/L, the potassium concentration was 4.0 mmol/L, the chloride concentration was 110 mmol/L, and the calcium concentration was 8.4 mg/dL. After remaining persistent for two days, the pneumothorax shrunk to 20mm. The chest tube was removed, and the patient appeared comfortable on room air. She was finally discharged home with instructions to resume home medications.

Conclusion and Learning Points for Clinicians:

Complications are sure to develop as alternative types of medicine become more popular. Pneumothorax is a potentially fatal consequence of acupuncture that should be investigated in any patients who develop shortness of breath after treatment.

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Abstract:

Acupuncture, an increasingly popular alternative medical therapy, has heightened the demand for information on its safety profile. This is a case report involving a 28-year-old female who presented with intense right-sided chest pain and breathlessness after an acupuncture session where needles were inserted into her

chest wall. The immediate medical evaluation revealed a tension pneumothorax with radiographic evidence of a mediastinal shift, compelling, urgent intervention via chest tube insertion. The patient's symptoms persisted for two days before the pneumothorax diminished, facilitating the removal of the chest tube.

This case emphasizes the atypical presentation of pneumothorax after acupuncture, suggesting a delayed onset of symptoms possibly related to the size of the bronchopleural fistula formed by the acupuncture needle. While acupuncture-related adverse events are uncommon, serious life-threatening complications like tension pneumothorax underscore the necessity for rigorous safety standards. Amidst the growing popularity of acupuncture, this report urges healthcare professionals to be aware of and report such incidents for enhanced patient education and safety.

Key Words:

Acupuncture, pneumothorax, complications, alternative medical therapy.

Key Clinical Message:

Acupuncture as an alternative medical therapy has grown in popularity in recent years, prompting a surge in demand for reliable safety information. While acupuncture-related complications are generally rare, they can cause minor side effects to severe consequences like infection transmission and, in extreme cases, tension pneumothorax. Awareness and reporting of such complications are crucial for patient education and ensuring the competence of practitioners.

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Ethics Statement:

This is a case report that does not require formal ethical committee approval. The data were anonymously registered in our database.

Consent:

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Clinical Trial Registration:

This is not an interventional study. We only reported the patient's findings from our database as a case report.



Figure: 1 Right-sided Pneumothorax noted in the apical region with mediastinal shift to the left.

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Figure 1.docx available at <https://authorea.com/users/643230/articles/1221864-not-yet-known-not-yet-known-not-yet-known-unknown-navigating-the-needles-unveiling-the-risks-of-acupuncture-a-case-report>