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EDİTÖRE MEKTUP  
LETTER TO THE EDITOR

## A rare complication of acupuncture: pneumothorax

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Acupuncture is a healing practice that is usually used for management of pain. It was first used in Chinese traditional medicine and spread around the world in time. It involves insertion of acupuncture needles into various parts of the body to achieve management of disease. In addition to management of pain, it has recently been used for numerous purposes such as losing weight, cessation of smoking and management of allergic and rheumatic diseases (1). Although acupuncture is a relatively safe practice in the hands of the experienced practitioners, major complications which may result in death may rarely arise from the use of this practice. There are case studies in the literature mostly reporting on pneumothorax, cardiac tamponade, injury of medulla spinalis, subarachnoid bleeding and severe infections (HBV, HIV etc.) (2). In this study, a case of acupuncture-induced unilateral pneumothorax is reported.

A 24-year-old female patient was admitted to the emergency room with severe chest pain. Her pain increased with breathing and spread over the right side of the chest and the shoulder. She was administered, for almost three years, medical treatment for chronic neck pain caused by cervical hernia and did not respond to the treatment. Then, she was applied acupuncture by a physical therapy specialist. She started to suffer severe pain following the insertion of acupuncture needles into the right suprascapular region. She did not have a history of any chronic

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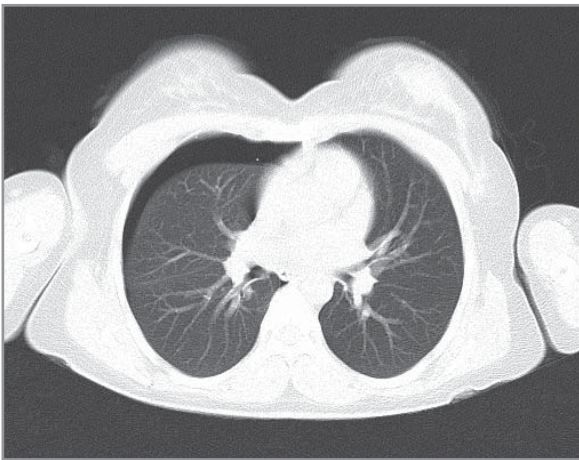
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diseases nor was she a smoker. Her oxygen saturation level was 97% at room temperature. Chest auscultation, as part of physical examination, revealed low respiratory sound in the right suprascapular region. Other system examinations and laboratory tests gave normal results. Chest x-ray showed reduced density in the right upper zone at the periphery. In addition, thoracic computed tomography showed evidence of a small pneumothorax covering almost 15% of the right hemithorax (Figure 1). A consultation was requested from the department of chest surgery. Then, the patient was taken to the outpatient clinic. She was administered symptomatic treatment with nasal oxygen and analgesics. The progression of pneumothorax was monitored by means of daily chest X-rays. The size of pneumothorax reached 20% on the third day of hospital stay, and a 28 Fr chest tube was placed in pleural space. Air leakage disappeared and chest tube was removed on the seventh day of hospital stay and the patient was discharged from the hospital.

Pneumothorax ranks the first among the major complications that may arise from the use of acupuncture (3). Acupuncture aims at improving the flow of energy that has been impaired and involves the insertion of needles into various meridian points of the body. It has been reported that some of the acupuncture points (GB21, ST11, ST12, ST13, ST12, ST18, KL22, KL27, LU2) may pose serious risks to the pulmonary tissues (4). Acupuncture needles are usually applied to GB-20, GB-21, BL-10 in management of pain caused by cervical hernia (5). GB-21, which is



**Figure 1.** A small pneumothorax covering almost 15% of the right hemithorax (computerized tomography of the thorax).

midway between the acromion and the spinous process of vertebra C7 on the posterior vertical extension of the mammillary line, was the source of complaint in our patient, as inferred from her description (6). In their prospective study of 230 patients who were applied acupuncture, Witt et al. reported only two cases of pneumothorax (7). Furthermore, they stated that one of these patients required intervention at the hospital whereas the other healed on its own (8). Pneumothorax may be unilateral or bilateral and may rarely result in death (3). Needles inserted too deeply or from a wrong angle because of lack of anatomic knowledge and carelessness may cause serious complications. Smoking, male gender, emphysema, corticosteroid treatment, active cancer and height are risk factors for acupuncture-induced pneumothorax (7). Our patient was not exposed to any of the above mentioned risk factors. She felt severe pain in the right side two hours after the acupuncture practice. She was admitted to the emergency room and was diagnosed immediately. This way, required intervention was performed and a major complication which could have resulted in death was averted.

In conclusion, acupuncture practitioners should be well-trained and be familiar with the anatomy of the treatment region for avoidance of potential complications. In addition, patients should be provided detailed information about potential complaints such as cough, shortness of breath and chest and back pain that may arise from the use of this practice somewhere close to the thoracic wall. They should be told to present to a health facility immediately in the presence of such complaints.

#### CONFLICT of INTEREST

None declared.

#### REFERENCES

1. Vickers A, Wilson P, Kleijnen J. Acupuncture. *Qual Saf Health Care* 2002;11:92-7.
2. Ernst E, Zhang J. Cardiac tamponade caused by acupuncture: a review of the literature. *Int J Cardiol* 2011;149:287-89.
3. Juss JC, Speed CA, Warrington J, Mahadeva R. Acupuncture induced pneumothorax, a case report. *Acupunct Med* 2008;26:193-6.
4. Peuker E, Gronemeyer D. Rare but serious complications of acupuncture: traumatic lesions. *Acupunct Med* 2001;19:103-8.

5. *Irnich D, Behrens N, Gleditsch JM, Stör W, Schreiber MA, Schöps P, et al. Immediate effects of dry needling and acupuncture at distant points in chronic neck pain: results of a randomized, double-blind, shamcontrolled crossover trial. Pain 2002;99:83-9.*
6. *Hecker HU, Steveling A, Peuker ET, Kastner J. Practice of Acupuncture. Point Location- Treatment-TCM Basics. Stuttgart-new York: Thieme 2004;283.*
7. *Witt CM, Pach D, Brinkhaus B, Wruck K, Tag B, Mank S, et al. Safety of acupuncture: results of a prospective observational study with 229, 230 patients and introduction of a medical information and consent form. Forsch Komplementmed 2009;16(2):91-7.*
8. *Iwadate K, Ito H, Katsumura S, Matsuyama N, Sato K, Yonemura I, et al. An autopsy case of bilateral tension pneumothorax after acupuncture. Leg Med (Tokyo). 2003;5:170-4.*