

Permanently Retained Acupuncture Needles: Radiographic Findings and Case Report

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We report a case of a female patient whose routine chest radiograph revealed numerous small, linear, radiopaque foreign bodies. These were determined to be permanently implanted acupuncture needles. We describe the imaging appearance of these wires, discuss the potential for complications and briefly review the pertinent literature.

Case Report

A 68-year-old, asymptomatic Asian female presented to radiology for a chest radiograph following a positive puritive protein derivative test. The radiograph revealed numerous, linear, metallic foreign bodies in the subcutaneous tissues of the back and abdomen (Figure 1A-D). These were uniform in size but varied in shape due to some variable degree of bending. They mostly appeared to conform to the two main acupuncture meridians on the back.

Discussion

The practice of acupuncture was originally developed in China 1400 years ago (1), and is now widely performed in the United States (2-4). This discipline is also widely practiced in Korea (5, 6), and has been reported in Europe (2). A typical acupuncture session involves the use of needles that are inserted into the subcutaneous tissues for 10 to 15 minutes and then removed. A semi-permanent form of acupuncture has been performed in the ear lobe (7). A Japanese form of acupuncture known as Hari involves the permanent placement of needles (1, 4, 8). These are said to provide a continuous stimulus to control pain (9).

Acupuncture needles are typically about 1 mm in diameter and 10 -15 mm in length (3). When the patient is able to afford it, the preferred metal is gold although silver or stain-

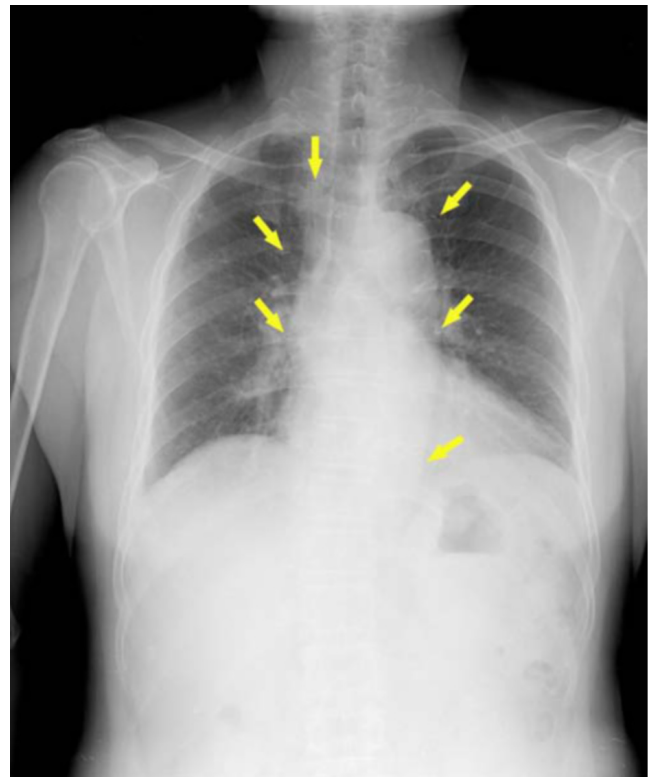


Figure 1A. Posteroanterior radiograph of the chest, showing multiple retained acupuncture needles (arrows) in the soft tissues of the torso. These needle fragments lie mostly along two main acupuncture meridians along the back.

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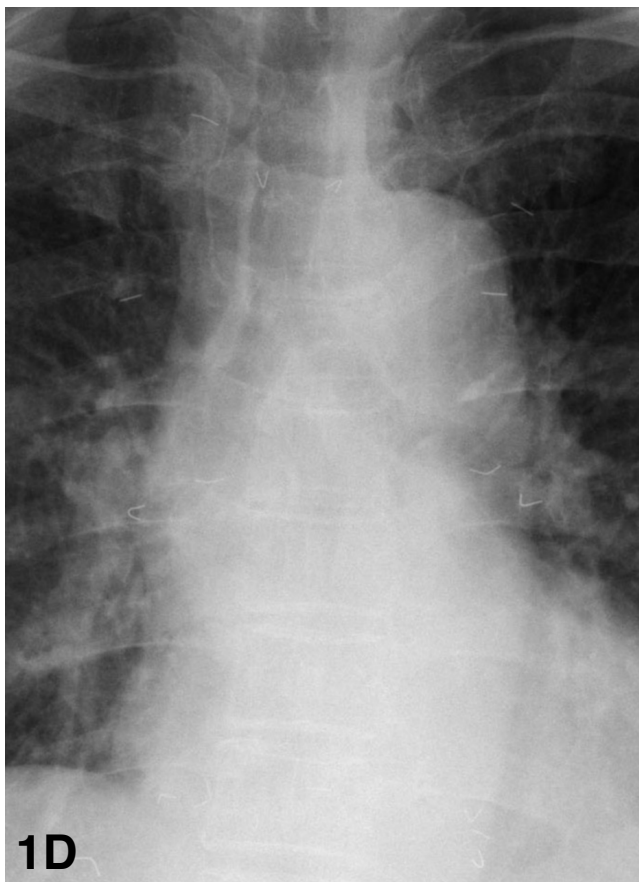
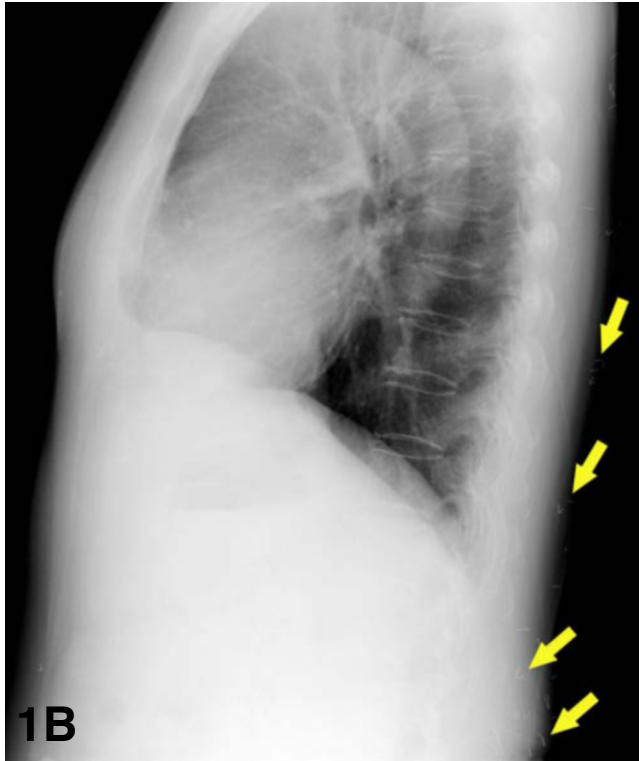


Figure 1B. Lateral radiograph of the chest showing multiple retained acupuncture needles (arrows) in the soft tissues of the back and anterior abdominal wall.

Figure 1C. Detail view of lateral radiograph shows multiple retained acupuncture needles in the soft tissues of the posterior torso. These needle fragments lie mostly along two main acupuncture meridians along the back.

Figure 1D. Detail view of the posteroanterior radiograph of the chest showing multiple retained acupuncture needles in the soft tissues of the back and anterior abdominal wall.

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less steel may also be used (4, 6). They are typically placed into the thicker parts of the body such as the back or hips, along defined meridians (3), but may be placed anywhere (1). They were traditionally placed by inserting the needle about 3 cm into the subcutaneous tissues and then broken off at the skin. A spring loaded syringe is now available for this purpose. The number used in a single patient varies from a few to thousands (4).

In most cases these needle fragments may remain in situ forever without problems. Although these needles occasionally migrate, especially in patients without much body fat (4), they usually do not result in complications. Baek et al reported an asymptomatic patient in whom needle fragments migrated to the liver, pancreas and kidney (9). Foreign body granulomas (10, 11) and contact dermatitis (12) have also been reported as complications of retained needle fragments. The potential for steel needle fragments to migrate in response to the intense magnetic field of an magnetic resonance scanner is currently unknown.

The true prevalence of retained acupuncture needles is unknown. Many patients who have had this treatment may never undergo medical imaging. Likewise, the prevalence of complications related to permanently retained needles remains unknown. There remains a paucity of literature describing such complications. When these retained needle fragments do appear during medical imaging, they are largely regarded as a medical curiosity. However, awareness of their appearance may be helpful to radiologists practicing in areas where acupuncture and its variants are widely practiced.

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