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LETTER TO EDITOR

Removal of an acupuncture needle accidentally broken in the neck

Dear Editor,

We have read your journal for a long time. It is well known that acupuncture is one of the traditional medicines widespread in China. Complications caused by broken acupuncture needles have been fairly minor.[1–3] We reported a recently encountered case to provide an important teaching point of treating needles broken in the body.

A 42-year-old woman presented with a broken needle retained in her neck following acupuncture therapy. Lateral X-ray showed that a bent needle was present at the level of the base of occipital bone (Fig. 1A). Her examination revealed a lesser cervical curvature, a sense of foreign body and tenderness over the punctured site at the atlantooccipital space near the posterior middle line. There was no evidence of neural compromise.

With the patient positioned prone for operation, the head was protected necessarily without being elevated on pillows to avoid hyperextension of the cervical spine. A second examination showed a weakening sense of the needle tail. After local anesthesia, the sense of palpation towards the needle disappeared. Through a small skin incision, the needle tail could not be touched. Then the incision was extended and deepened gradually, which also could not find the needle. By means of the C-arm, the bent needle was found to advance into the deep layer of atlantooccipital space (Fig. 1B). Ultimately, repeated radiography with a syringe needle for guidance laboriously detected and removed the broken needle. No residual foreign body was confirmed by a post-operative image. She was discharged uneventfully 3 days later.

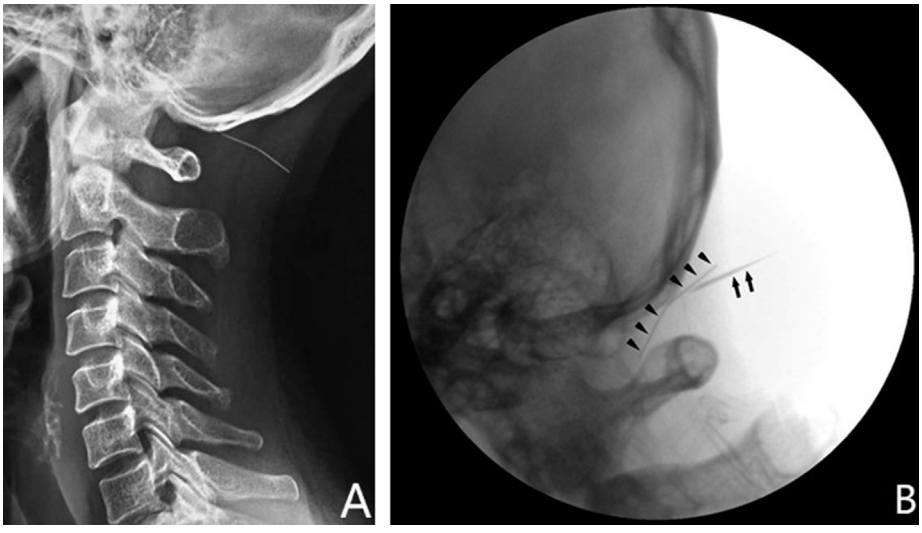

Figure 1 Preoperative X-ray (A). Intraoperative image (B) with a guide needle (arrow) and the broken acupuncture needle (arrowhead).

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Traditional Chinese needle is designed to be very thin with the tip being acute, allowing it can be migrated deeper. Repeated palpation before operation, maybe by different surgeons out of curiosity towards such scarce case, could render the broken needle inserted deeper. Tissue swelling caused by local anesthesia further weakened the sense of palpation, leading to more indiscriminative touching, which may shift needle deeper and exacerbate difficulty of localization. Besides, the needle's thin and soft property had the inherent disadvantage of being detected among soft tissues. Fortunately, the needle did not project into the spinal canal or cranial cavity, including in the surgical procedure. However, one case of a broken needle piercing the medulla oblongata and nine cases stabbing into the cervical spinal cord were reported in Japan.[3]

As in this case, much attention should be paid to reducing the frequency of palpation as possible. Contrary to routine physical examination, this concept could not only decrease the migration of broken needle, but may benefit the localization during operation due to its relatively superficial tail. General anesthesia instead of local procedure may be another important factor for avoiding needling deeper. In the operation, we should also be aware that repeated radiography by C-arm alone could hardly find the minute fractured needle, but C-arm in combination with guide-needle technique contributed towards the localizing procedure successfully.

Conflict of interest

All the authors declare no competing interests.

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