

## **Acute Spinal Subdural Hematoma after Long-needle Acupuncture: A Case report**

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### **Introduction**

Acupuncture is a very popular treatment modality for patients with musculoskeletal disorders. Regardless of the efficacy of acupuncture, associated complications remained as an issue of debate. Spinal subdural hematoma (SSDH) is a very rare entity, and mostly it is associated with coagulation abnormalities. SSDH may also occur after trauma and iatrogenic procedures including spinal anesthesia. In this report, we present an atypical case of SSDH after long-needle acupuncture which is a rare iatrogenic complication.

### **Case report**

A 46-year-old man came to the emergency room with paresthesia in the bilateral upper and lower extremities. We were informed that five days before visiting emergency room he had undergone a session of long-needle acupuncture in the posterior cervical region to treat chronic cervical pain. Exact acupuncture procedure was unknown, but the patient described that tens of needles were inserted in bilateral paracervical area and the depth of needle insertion was unclear. Right after the acupuncture, he had tingling sense and pain in the right arm and symptom was getting worse to spread over entire body. At the time of admission to neurosurgery department, neurological examination revealed weakness of the right upper limb as Medical Research Council grade 4, accompanied by the impairment of light and pinprick sensation in the bilateral upper and lower extremities. The last neurologically intact level was C4 bilaterally. The control and sensation of the urinary sphincter were intact but he complained of urinary dysfunction. A whole-spine magnetic resonance imaging (MRI) scan (Fig 1) revealed the presence of SSDH extending from C5 to the coccyx level, which was compressing subtly and displacing the posterolateral aspect of the cervical spinal cord to the left side of the spinal canal. A corticosteroid therapy was immediately administered intravenously. The severe symptom improved gradually, however, tingling sense, clumsy hand, and urinary hesitancy were remained. Ten days after the admission, a follow-up whole spine MRI was performed and revealed a reduction of SSDH. The patient was transferred to the department of rehabilitation medicine. He was undergone stair gait training, hand fine motor training, and physical modalities for pain control. Medications for pain relief and neurogenic bladder treatment were prescribed. The patient was discharged after one month of hospitalization. By the three months of follow-up, he returned to his normal activities and a whole spine MRI scan showed negative findings.

## Conclusion

The acupuncture, if not correctly practiced, may be harmful to the cervical structures, which can cause SSDH as a major complication. Although SSDH is a very rare disease, it can lead to serious consequences Resulting from injuries to the spinal cord and nerve roots. It is essential to perform cervical MRI when a patient does not show an improvement in the neurologic deficit after acupuncture.



Fig 1. A whole-spine magnetic resonance imaging scan revealed the presence of spinal subdural hematoma extending from C5 to the coccyx level.