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Correspondence

Acupuncture in diagnosing prehospital unconsciousness

To the Editor,

Quickly finding the cause of coma is always a challenge in emergency situations. Patients in hysterical-induced coma often show a surprising ability to endure painful stimuli. No interpretable response may be obtained by painful maneuvers like supraorbital nerve compression and sternal rubbing. Therefore, sometimes differentiation between psychogenic and organic origin may be quite difficult. We describe a case where acupuncture in contrast to other painful maneuvers seemed to terminate prehospital unconsciousness of the same patient twice at 2 following days.

A 19-year-old woman suffered a severe psychological trauma after arriving at the scene of a motor vehicle accident and identifying the fatally injured victim as her own 14-year-old sister. The same day she was admitted to hospital because of a hysterical reaction and repeatedly becoming unconscious. After she was discharged the following day, she again experienced short periods of unconsciousness until she fell into a deep coma, not reacting to any stimulus. The physician-staffed emergency service was notified. It was reported by the relatives that she might have hit her head severely when falling down. Examination showed a deep coma (Glasgow Coma Scale 3) with weak muscle tone and no reaction to strong pain stimulus at the neck. The vital parameters were stable (heart rate of 100 beats per minute, systolic blood pressure 110 mm Hg, and oxygen saturation 97%). During examination of the pupillary reflex, a minimal flickering of the eyelids occurred and the eyes were deviated toward the ground. However, even on repeated, strong pain stimulus during transport to the emergency vehicle and while inserting an intravenous cannula, she did not show any further reaction. The emergency physician, an anesthetist who was also trained in acupuncture, inserted an acupuncture needle into the acupuncture point Du 26 (In Chinese: *Shuigou* or *Jenchung*), which is located at the philtrum at a distance of one third between the nose and upper lid. Immediately after insertion and strong stimulus by turning the needle, the patient reacted with some very deep breaths and she began to weep. Subsequently, the patient woke up and was completely awake within several minutes. The results of neurological evaluation were normal. For further observation, she was admitted to a psychiatric hospital with the diagnosis of dissociative stupor due to posttraumatic stress reaction.

The next day the physician-staffed emergency service was called to this patient again. This time she was found lying unconscious on the street in the vicinity of the psychiatric hospital admission office. Examination showed the same findings as the day before. After acupuncture at Du 26 she awoke much quicker this time. Afterward, she was admitted to the department of neurology, where a cranial computed tomography revealed completely normal findings. She was discharged the same day upon her own request.

In this case of deep unconsciousness, a psychogenic origin was taken into account because of the history and the minimal eyelid reaction in combination with the bulbus deviation [1]. However, it also had to be considered that the patient might have acquired a cerebral trauma when she hit her head. A Glasgow Coma Scale of 3 is usually an indication for intubation. However, the vital signs were stable and intubation would have represented overtreatment in a case of psychogenic unconsciousness. When the patient suddenly awakened after acupuncture without any neurological deficit and without headache, a cerebral trauma could be excluded. Therefore, acupuncture was not only of therapeutic but also of diagnostic value. Until a patient is awake, other therapeutic options described in the literature such as tetanic stimulation of the nervus ulnaris [2], administration of thiopentone or diazepam [1], or occlusion of the airway are not available or not recommended because of breathlessness [3]. Thus, in comparison to these methods, acupuncture at Du 26 might be a more suitable and effective option. In traditional Chinese medicine, this acupuncture point has been successfully applied, particularly in emergency situations. Obviously, stimulation of this point might be extremely painful and therefore endogenous catecholamines and blood pressure might be increased. In animal experiments, acupuncture at Du 26 was able to reverse cardiovascular depression during anesthesia in dogs [4] and to decrease anesthetic activity in rabbits [5]. To date, no clinical trials have been conducted regarding a specific effect of this acupuncture point. However, this case report shows that acupuncture at Du 26 might be worth an attempt in cases of prehospital

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unconsciousness if a psychogenic cause is suspected or if no other option is available.

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