Convulsive Syncope: An Unusual Complication of Acupuncture Treatment in Older Patients

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ABSTRACT

Vasovagal syncope is an uncommon complication during acupuncture. However, convulsive syncope during acupuncture treatment in older individuals is seldom reported in the literature. Two older patients who experienced convulsive syncope during acupuncture treatment at Taipei Veterans Hospital, Taipei, Taiwan, from January 2000 to December 2002 are reported. These cases are instructive to acupuncturists. Although acupuncture treatment is generally safe in most situations, one needs to be cautious in delivering acupuncture to older and debilitated individuals.

INTRODUCTION

Acupuncture is a relatively safe treatment in most situations when general precautions are followed.1,2 Nonetheless, adverse events may occur such as needle pain, hematoma, local infections, dizziness, fainting, syncope, and injuries to internal organs.3–5 A sensation of faintness and syncope during acupuncture treatment is an uncommon complication, with an incidence range of 0.02%–7%.6 Syncope during acupuncture treatment is a form of vasovagal syncope (also called neurally mediated or neurocardiogenic syncope), which causes a sudden decrease in or brief cessation of cerebral flow by inhibition of sympathetic flow and activation of parasympathetic flow.7,8 The course of the syncopeal event during acupuncture treatment usually is as follows. First, the patients often complain of not feeling well or of fearing blackouts. Then pallor, weakness, light-headedness, yawning, nausea, diaphoresis, hyperventilation, and blurred vision ensue. Despite recovering spontaneously in most cases, some patients may lose consciousness, especially if they are not immediately managed.7,9 However, convulsive syncope during acupuncture treatment in older individuals is seldom reported in the literature. Two patients with convulsive syncope during clinical acupuncture sessions were identified in a retrospective survey for identifying adverse effects of acupuncture from January 2000 to December 2002 (total of 59,798 acupuncture treatment sessions). The unusual presentations of these patients are worthy of notice in the clinical practice.

CASE REPORTS

Case 1

A 72-year-old man visited the acupuncture clinic at Taipei Veterans General Hospital, Taipei, Taiwan because of pain over the right forearm for 5 months. He had no previous his-

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tory of neurologic deficits. He had received six sessions of manual acupuncture with limited improvement since June 20, 2000. He came for the seventh acupuncture treatment July 19, 2000. He had not slept well 1 day before visiting the clinic. Electro-acupuncture stimulation, 2 Hz, was applied on points of Li-11 (Quchi) and TP-5 (Waiguan) while the patient was seated on a chair. After a 5-minute stimulation, he complained of dizziness. He then experienced cold sweating and lost consciousness suddenly. Irregular tonic–clonic movements of the right arm, upward rolling of eyes, and batting of both eyelids lasted 20–30 seconds after the syncope. All needles were immediately removed and the patient was allowed to lie down. A strong needling stimulation on Du-26 (Renzhong) was performed. Postictally, the patient remained mentally confused for 2–3 minutes. Approximately 10 minutes after the episode, supine blood pressure was 144/82 mm Hg with a pulse rate of 62 beats/min. The patient felt well except for fatigue after 40 minutes of rest. His laboratory tests, including blood chemistry panel, blood sugar, thyroid function, complete blood count and urinalysis, were checked and were normal. A 12-lead electrocardiogram (ECG) showed mild ST-T depression on V2–V5 leads, which implied myocardial ischemia. Further evaluation was suggested but the patient refused.

Case 2

A 63-year-old woman received acupuncture because of pain over the left ankle for 5 days after a sprain. She received the third acupuncture treatment October 17, 2002. She had been well in the past and denied any systemic diseases or medication use. However, she had slept badly for 1 night before visiting the clinic. The patient received manual needling at GB-34 (Yaningquan) and GB-40 (Qixu) points while seated on a chair. After a 3-minute acupuncture session she complained of dizziness and nausea. She then experienced cold sweating and lost consciousness suddenly. She exhibited irregular tonic–clonic movements of the left arm with batting of both eyelids lasting for 10–15 seconds and lip cyanosis after the syncope. All needles were immediately removed and she was allowed to lie down and to receive a strong needling stimulation on Du-26 (Renzhong). The event lasted for 1 minute, and she remained confused for 2–3 minutes. Approximately 15 minutes after the episode, supine blood pressure was 126/74 mm Hg with a pulse rate of 56 beats/min. After 60 minutes of rest, the patient felt chest tightness and fatigue. She was referred to a cardiologist for further evaluation. Laboratory tests, including blood chemistry panel, blood sugar, thyroid function, complete blood count and urinalysis, were normal. Her electroencephalogram was also normal. However, her ECG showed mild ST-T depressions on V3–5 leads. Arrangements were made for 24-hour Holter monitoring and a treadmill test. The results of treadmill testing were positive and 24-hour Holter monitoring showed intermittent ischemic ST depressions.

**DISCUSSION**

Syncope is defined as transient loss of consciousness caused by reduced cerebral blood flow.10 Convulsive syncope occurs when irregular tonic–clonic movements are associated with loss of consciousness in syncope.11 Syncope during acupuncture treatment (called “Yun-Cheng” in Chinese) is a form of vasovagal syncope.7 Convulsions may occur or be induced in vasovagal syncope.12,13 However, in a prospective survey of 32,000 consultations with doctors and physiotherapists, one patient with seizure shortly after needle insertion was reported.14 Convulsive syncope may be confused with seizure15; however, there are some differences between convulsive syncope and seizure. First, a loss of consciousness that is precipitated by pain, exercise, micturition, defecation, or stressful events are usually signs of syncope rather than a seizure. Symptoms such as sweating and nausea that occur before or during the episode are associated with syncope.16 Second, postictal confusion lasting <5 minutes suggests a seizure.15 Third, motor activity is irregular in most convulsive syncope; however, rhythmic movements may occur in most epileptic seizures. Fourth, biting of the tongue is very unusual in convulsive syncope but very common in epileptic seizure.10 In the two cases reported here, there were characteristic manifestations of convulsive syncope, such as loss of consciousness with prodromal symptoms (cold sweating or nausea), postictal confusion <5 minutes, and irregular tonic–clonic movements without biting of the tongue. Therefore, these two individuals most likely had convulsive syncope during acupuncture treatment.

There is only one report about convulsive syncope during acupuncture treatment in the literature.18 In that paper, a healthy young (25-year-old) man experienced convulsive syncope while receiving his first acupuncture ever. The possible contributing causes are presumed to be male gender, hunger, and first experience of acupuncture with needle phobia and anxiety. However, the two individuals reported here are older, have previously experienced acupuncture, and are without obvious gender preference. It has been reported that ischemic heart disease contributes to vasovagal syncope complicated by abnormal movements.19 In addition, a stressful event such as fatigue, nervousness, pain, or poor sleep can interrupt the balance status of sympathetic and parasympathetic flow between the heart and brain.20

Both patients in this report had poor sleep the night before visiting the clinic, and they also had ST-T depression on ECG recording. A stressful event (such as insomnia) before acupuncture and underlying cardiovascular diseases in older patients may contribute to convulsive syncope. However, it is difficult to define the causative relationship because of the small case number.

Convulsive syncope is a rare complication of acupuncture treatment and the course is benign. However, acupuncturists need to be cautious in delivering acupuncture to older and debilitated patients.
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REFERENCES


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