Case report

Anaemia and skin pigmentation after excessive cupping therapy by an unqualified therapist in Korea: a case report

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Abstract
A case is reported of skin pigmentation and associated anemia resulting from persistently repeated cupping therapies performed by an unqualified practitioner in South Korea. Almost 30 sessions of excessive cupping therapies with blood loss over two months yielded little benefit but led the patient to admit a hospital and receive blood transfusion for acquired iron deficiency anemia. Skin pigmentation on the cupping-attached region remained without any subjective discomfort. We suggest the importance of qualified health professionals when receiving cupping treatments.

CASE DESCRIPTION
A 77-year-old woman visited our hospital of traditional Korean medicine to receive acupuncture treatment for severe, persistent pain in the lower back and right leg region. She had been diagnosed as having lumbar spinal stenosis a year earlier, with poor response to conventional conservative management. On her initial visit, several circle-shaped skin pigmentation were observed on her anterior and posterior body trunk and both lower extremities (figure 1). No itching or subjective discomforts were reported at the affected sites. She revealed that she had received multiple sessions of dry-cupping therapy over a 2-month period from an unqualified person 3 months before, with no beneficial effects. According to her report, blood-blisters formations were observed at the initial treatment after 5 min of dry-cupping therapy. Although this reaction was unanticipated by the practitioner, and such blood-blisters formation was observed during most sessions, she was urged by the practitioner to continue treatments. She discontinued dry-cupping therapy because of dyspnoea, which developed after about 50 sessions of dry-cupping therapy. Due to anaemia discovered at a regular health examination undertaken by the patient after cupping therapy, she was admitted to a tertiary hospital. Laboratory findings indicated iron-deficiency anaemia possibly associated with persistent blood loss by cupping therapy, with the following: haemoglobin, 6.2 g/dl; haematocrit, 26.8%, mean cell volume, 68.1 fl; white blood cell count, 3500 cells/µl; platelets, 584 000 cells/µl; serum iron, 96 µg/dl; total iron-binding capacity, 560 µg/dl and serum ferritin, 7.2 ng/ml. Her electrolyte levels, liver/kidney function and lipid profiles were normal. Stool occult blood was not detected. No lung or heart disease was found, either of which could have been responsible for the dyspnoea. After a blood transfusion and intake of oral iron supplements, her dyspnoea and anaemia were corrected. However, skin pigmentation remained on the cupping sites on her body. She is now undergoing a series of acupuncture treatments in our hospital and showing slight improvement in pain symptoms. No adverse events other than minimal bleeding at needling sites has been observed or reported during the acupuncture treatment.

DISCUSSION
Cupping therapy is a form of complementary and alternative medicine (CAM) in which plastic or glass cups are attached by suction on to the skin. It can be performed with or without bloodletting on the treated region, referred to as wet cupping and dry cupping, respectively. Cupping is commonly practised alone or in combination with acupuncture treatments for various conditions by doctors of traditional Korean medicine. In Korea, cupping therapy performed by non-medical laypersons is also frequently reported by patients, although there is no exact information on the prevalence of these practices. Adverse events observed after cupping therapy range from blisters and ecchymosis to anaemia, cervical epidural abscess and viral infection of punctured sites, as well as skin lesions such as blisters and pigmentation at treated sites. Several components of the administration of cupping therapy (hygiene level during performance, qualification of practitioners, dose and total sessions of cupping therapy, and the status of puncturing needles and cupping devices) may be responsible for observed adverse events, although most case reports lack reporting of related information. One systematic review found that no serious adverse events were reported in Chinese cupping studies, although their findings are limited due to the low methodological qualities of those studies. No adverse effects of cupping were reported when the treatments were conducted by qualified practitioners with a clean wet-cupping technique in a small randomised controlled trial. Collectively, a considerable gap exists between current evidence for the safety of cupping therapy and its widespread use.

In this case, the patient was not aware of the risk of cupping therapy administered by a non-medical professional, which had led to her unanticipated hospital admission and skin pigmentation, and had delayed treatments for her painful symptoms. Ill-informed patients who seek CAM due to refractory health conditions are likely to be especially susceptible to the incompetent practice of CAM by unqualified practitioners. Providing the evidence necessary to generate patient-level information about cupping therapy may contribute to...
the prevention of avoidable adverse events caused by unqualified practitioners. Emphasis should be placed on the importance of working with qualified health professionals when receiving cupping treatments.

REFERENCES
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