

Methodology

Study design and Patient selection

Patients with a history of migraine diagnosis who presented at the Research Polyclinic of Karabuk University Training and Research Hospital for wet-cupping therapy in the period May 2016-January 2018 were included in the study. Patients were excluded if they had a history of head and neck surgery, a diagnosis of sinusitis, a diagnosis of fibromyalgia and inflammatory disease (rheumatism, infection etc.), were pregnant, had a diagnosis of cancer, bleeding disorder and widespread skin disease, malignant hypertension or any other disease which could cause headache. The diagnosis of migraine was confirmed by an experienced neurologist and the migraine type was determined. The medical treatments of the patients were reviewed and MIDAS was applied to determine the baseline score. In addition to the medical treatment, WCT was applied once a month, 3 times (Day 0, 30, 60). At the end of the 3rd month patients were allocated into two parallel arms. They were randomly assigned to the intervention group or control group in a double blind manner by the sealed opaque envelope technique. Intervention group continued WCT whereas patients in the control group discontinued the treatment. MIDAS was applied again at the end of the 6th and 12th months to both of the groups. Disability values in the 6th and 12th months were evaluated with MIDAS between those who continued treatment (Group 1) and those who did not (Group 2). Approval for the study was granted by Turgut Ozal University Ethics Committee, with number 99950669/236, dated 30.06.2014. Study design, application procedures and any possible side effects were explained to the study participants and informed consents obtained. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

MIDAS

The migraine disability score is a scale evaluating disability and loss associated with migraine. It consists of 7 questions, the 1st, 3rd and 5th of which evaluate the days lost from school, work, housework or leisure activities because of headaches in the last 3 months. The 2nd and 4th questions evaluate the number of additional days lost from work or housework in the last 3 months due to a reduction in productivity (defined as at least a 50% reduction in productivity). An additional two questions (MIDAS A and B) evaluate the frequency of headaches and the severity of the headaches using a visual analog scale (VAS), but these are not added to the total MIDAS score. The total MIDAS points are obtained from the total of the first 5 questions. Total points of 0-5 = 1st degree (very little or no restriction), 6-10 points = 2nd degree (mild or occasional restriction), 11-20 points = 3rd degree (moderate level of restriction), and 21 + points = 4th degree (severe restriction).

Wet cupping technique

CT was applied using plastic disposable vacuum cups on the back in the 5 areas of C7 cervical spine (DU14 acupoint), T2-4 lateral spine bilaterally (BL41-42 acupoint) and T6-8 lateral spine bilaterally (BL44-46), which are the recommended sites for headache (12). The cupping technique procedure was conducted in five phases:

1. Primary suction; the cups are placed on the selected area with a manual suction pump which draws air out from inside the cups. The cups are left attached to the skin for 5 minutes. The skin and subcutaneous tissue swells.
2. Area disinfection; the swollen areas are wiped with sterile gauze after disinfection with povidone iodine.
3. Scarification; Superficial incisions (20-30 gauge), 5 mm length and 1-2 mm depth, are made on the skin with a sterile, number 11 surgical blade.
4. Bloodletting and secondary suction; the cups which had been previously removed are placed again on the scarified areas using a manual pump in the same way as described above. Blood leaks from the capillary vessels of the skin and subcutaneous tissue and fills the cups, which are left in place for 15 minutes.
5. Removing and dressing; the cups full of blood are removed after 15 mins. The areas of application are wiped with sterile gauze and then a dressing is applied.