

Treatment of Chronic Refractory Migraine with Acupuncture and Chinese Herbal Medicine: A Case Series

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Abstract

This case series demonstrates the successful treatment of migraine headache in two middle-aged female patients with multi-year symptom histories. Interventions consisted of weekly acupuncture treatments, along with Chinese herbal medicines and dietary modifications. Acupuncture points and herbal medicines were chosen based on the individual characteristics of each patient. Frequency, duration and intensity of migraine headaches decreased in both patients within the first week of treatment and resolved by the third month. These cases illustrate the successful treatment of chronic migraine headaches that were unresolved following conventional interventions. This case series forms part of a growing body of evidence that supports the use of acupuncture and herbal medicine as alternative options for the treatment of refractory migraine headaches.

Introduction

Migraine is a common, intermittently debilitating, neurovascular disorder characterised by recurrent moderate-to-severe headaches, which often occur in association with a number of autonomic nervous system symptoms (Bartleson & Cutrer, 2010). The incidence of migraine peaks between 15 and 24 years of age (Stewart et al, 2008), and the prevalence is highest between the ages of 35 and 45 (Stewart et al, 1992). Women are approximately three times as likely to be affected as men. In the United States, the one-year prevalence rate of migraine is estimated to be 17.6 per cent in women and 5.7 per cent in men (Stewart et al, 1992), and the cumulative lifetime incidence of migraine is 43 per cent in women and 18 per cent in men. (Stewart et al, 2008).

paraesthesia. People with migraines tend to report recurring attacks triggered by a number of different factors including stress, anxiety, bright or flashing lights, lack of food or sleep and dietary intake (Bartleson & Cutrer, 2010). Female migraineurs experience an increased risk of attacks of migraine during the perimenstrual window, suggesting that female sex hormones play a role (Martin & Lipton, 2008). Migraines are often severe enough to limit a person's daily activities, including their ability to work, study or leave their homes.

Conventional treatment takes a multimodal approach that may include avoidance of risk factors for migraine (such as obesity, lack of exercise and stress), avoidance of migraine attack triggers (such as caffeine and alcohol), and use of prophylactic and migraine-abortive drugs (Schwedt, 2014). First-line prophylactic medications for chronic migraine include propranolol, amitriptyline, sodium valproate and topiramate (Modi & Lowder, 2006). In general, a preventative agent is started at a low dose and gradually increased over time until the patient sees benefit, experiences side effects or reaches the maximal dose. These medications take a minimum of three to four weeks, and can take up to 12 weeks, to become effective. They are rarely 100 per cent effective in preventing migraine attacks; a 50 per cent reduction in headaches is considered a good result (Bartleson & Cutrer, 2010). In addition to this low rate of success, side effects are common and can limit the use of these prophylactic agents.

Standard acute treatment of migraine attacks revolves around pain relievers, such as over the counter (OTC) nonsteroidal anti-inflammatory drugs (NSAIDs) or other non-prescription analgesics, and migraine-specific prescription pain medications

Acupuncture is at least as effective as conventional drug preventative therapy for migraine and is safe, long lasting and cost-effective ...

Migraines are described according to the intensity of the headache pain, and the frequency and duration of the attacks. Migraine headaches may be accompanied by symptoms such as nausea with, or without, vomiting and sensitivity to light and/or sound (Bartleson & Cutrer, 2010). Approximately 31 per cent of individuals who suffer from migraine attacks experience 'aura' symptoms, which precede the onset of the headache (Launer et al, 1999). Aura symptoms are commonly experienced as visual disturbances, but can also include neurological symptoms such as

Acupuncture Points	
Points	Target
Fengchi GB-20, Yintang (M-HN-3), Baihui DU-20, Taiyang (M-HN-9), Sishencong (M-HN-1)	Treats headache, clears head, calms mind, descends Liver yang, unblocks channels
Hegu L.I.-4, Taichong LIV-3	Moves qi and blood, treats pain, headache, sedates Liver yang
Zhongzhu SJ-3, Zulinqi GB-41	Treats headache, clears Shaoyang channel
Zusanli ST-36, Gongsun SP-4, Zhongwan REN-12	Improves digestion and GI symptoms, regulates and tonifies Spleen & Stomach, transforms damp and phlegm, stops nausea and vomiting
Taixi KID-3, Sanyinjiao SP-6	Nourishes Kidney yin
Qihai REN-6	Tonifies and soothes the qi
Tianshu ST-25	Regulates bowel movements
Yinlingquan SP-9, Fenglong ST-40	Transforms damp and phlegm
E-stim: Hegu L.I.-4 (black), Zusanli ST-36 (red)	

Herbs	
Formula	Target
Cnidium 9 by Seven Forests: Chuan Xiong (Rhizoma Ligustici Chuanxiong) 18%, Man Jing Zi (Fructus Viticis) 12%, Bai Shao (Radix Paeonium) 12%, Zhe Chong (Eupolyphaga seu Opishoplatia) 12%, Jiang Can (Bombyx Batryticatus) 10%, Hong Hua (Flos Carthami) 10%, Jing Jie (Herba Schizonepetae) 9%, Bo He (Herba Menthae) 9%, Dang Gui (Radix Angelicae Sinensis) 8%. Dose: 5 pills three times per day.	Disperses blood and wind, dispels wind, relieves pain, unblocks the channels, relieves headache
Prosperous Farmer by Kan Herbals: Bai Zhu (Rhizoma Atractylodis Macrocephalae), Fu Ling (Scleroticum Poriae Cocos), Huang Qi (Radix Astragali), Jiang Ban Xia (Rhizoma Pinelliae cured with ginger), Shan Yao (Rhizoma Discoreae), Chen Pi (Pericarpium Citri Reticulatae), Sha Ren (Fructus Amomi), Mu Xiang (Radix Aucklandiae), Hou Po (Cortex Magnoliae Officinalis), Ren Shen (Radix Ginseng), Gan Cao (Raxix Glycyrrhizae), Gan Jiang (Rhizoma Zinziberis), Shan Zha (Fructus Crataegi). Dose: 5 pills three times per day	Strengthens the middle jiao, fortifies Spleen qi, transforms damp and phlegm, moves depressed Spleen qi

Table 1: Acupuncture points and Chinese herbal medicines used in the treatment of Case 1

such as ergotamines or triptans (Snow et al, 2002). Acute headache medications must be limited to no more than two times per week to prevent medication-overuse headaches, which can lead to a pattern of increasing headache frequency, often resulting in daily headaches.

A Cochrane review carried out in 2009 concluded that acupuncture is beneficial in the treatment of acute migraine attacks, and that it is at least as effective as, or possibly more effective than, prophylactic drug treatment, with fewer adverse effects (Linde et al, 2009). A recent literature review came to a similar conclusion, finding that acupuncture is at least as effective as conventional drug preventative therapy for migraine and is safe, long lasting and cost-effective (Da Silva, 2015).

Case 1

Presenting concerns

Patient 1 was a 33-year-old female with an 18-year history of migraines diagnosed by her family practitioner and her allergy specialist. An MRI had been performed five years previously, with no organic pathology detected. The patient reported migraines which occurred one to two times per week, lasting for up to 10 hours, with a severe stabbing pain rated at eight to ten on a scale of one to ten, and nausea. Pain was usually located behind the left eye, occasionally covering the entire head and resulting in vomiting when most severe. The patient repeatedly experienced a visual aura before headache onset. In the past, onset had been correlated with her menstrual period, but more recently onset had become more random. Migraines were worse with light, noise,

smell and movement. The patient was especially sensitive to cleaning chemicals, gasoline and perfumes. When migraines occurred, lying down in a dark, quiet place provided partial relief. The patient also had a diagnosis of sciatica and irritable bowel syndrome. The patient had been prescribed several treatments over the course of the preceding years, including tramadol, sumatriptan and vitamin B2, without experiencing significant benefit. Further, the patient had experienced an adverse effect while taking sumatriptan, which she described as ‘feeling like a pressure cooker in my insides’ with a sensation as if her arms were being squeezed. Based on the patient’s journal entries, onions were thought to be one of the triggers for her headaches.

Intervention

Weekly acupuncture treatments were performed and the patient was prescribed two Chinese herbal medicines - Cnidium 9 (a modern formula designed specifically to treat migraine headaches), and Prosperous Farmer (a modern version of *Liu Jun Zi Tang*) (see Table 1 for details). The acupuncture points and herbal medicines were chosen to address the patient’s traditional Chinese medicine (TCM) pattern of Spleen qi deficiency with phlegm damp retention. The symptoms which pointed to the TCM diagnosis included hearing loss, nausea, vomiting, IBS with gas and bloating, diarrhoea with undigested food, feeling cold most of the time and difficulty staying asleep. Her tongue was red and scalloped with a white, moist coating. Her pulse was slippery, deep and thin.

Outcomes

One week after the initial treatment, the patient reported having had no migraines during the previous week (Figure 1). This represented a significant change from her previous 18-year history of experiencing one-to-two migraines per week. The patient received a second acupuncture treatment, continued to take the herbal formula as prescribed and reported no migraines by the end of week two. By the third week, the patient reported she was better able to stay asleep. During week four, the patient reported experiencing two migraines following

her menstrual period, however headache duration was reduced by 80 per cent, and intensity was reduced by 75 per cent, compared with baseline (Figure 1). The patient had begun to avoid dairy, eggs, nitrates and citrus, as she now perceived these to be migraine triggers. During weeks five and six, the patient experienced no further migraines, and by week eight she reported continued improvements in her sleep and energy levels. The patient received weekly acupuncture treatments and continued to take the herbal formula through week 12. At week 16 follow-up, the patient reported that she remained free of migraines.

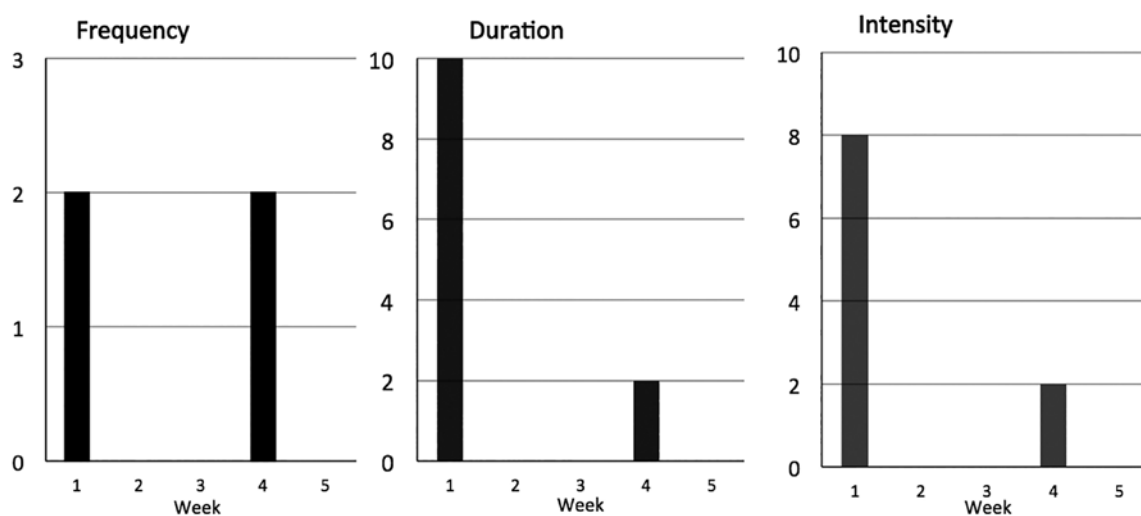


Figure 1: Frequency, duration and intensity of migraines experienced by patient in Case 1. Frequency is shown as number of migraines per week; duration is shown as hours migraines lasted; intensity is shown as level of pain experienced from 1-10 (10 being highest).

Case 2

Presenting concerns

Patient 2 was a 29-year-old female with a six-year history of migraine headaches. Five years prior to intake, she had undergone an extensive workup that included MRI and CT scans, at which no organic pathology was detected. The patient reported episodes lasting three-to-four months during which migraines occurred daily, normally beginning in the morning and lasting approximately four to five hours. The pain was described as feeling like pressure inside her head, which at its most severe felt like it was ‘going to blow up’. Headaches were frequently accompanied by nausea and vomiting. The patient had also been diagnosed with Hashimoto’s thyroiditis, an MTHFR (methylentetrahydrofolate reductase) gene defect, and seasonal allergies. The patient had previously taken OTC pain relievers, had been prescribed amitriptyline and other antidepressants, and had undergone a nerve

block, all of which had resulted in limited relief from pain. During the week prior to intake, the patient reported daily migraine headaches that she rated at nine or ten out of ten in severity, each lasting for approximately five hours. At the first visit, the patient reported pain rated at three out of ten in severity, as well as tinnitus, a heightened sense of smell, a metallic taste in her mouth, black floaters in her eyes, forgetfulness, increased appetite and alternating between feeling hot and cold. She had been sleeping 10 hours per night, but was fatigued with her energy being scored as five out of ten.

Interventions

Weekly treatments with acupuncture were performed and the patient was prescribed two Chinese herbal medicines - *Cnidium* 9, and *Tian Ma Gou Teng Wan* (Gastrodia Uncaria Pills) (see Table 2 for details). The acupuncture points and herbal medicines were chosen to address the patient’s TCM pattern diagnosis of Liver yang rising with Kidney yin and yang deficiency. The symptoms which pointed to the TCM diagnosis included tinnitus, dizziness and feeling a hot sensation inside her body. Her tongue had a red body with a thin white coating. Her pulse was wiry and slightly slippery with deep chi positions bilaterally.

The pain was described as feeling like pressure inside her head, which at its most severe felt like it was ‘going to blow up’.

Acupuncture Points	
Points	Target
Fengchi GB-20, Yintang (M-HN-3), Baihui DU-20, Taiyang (M-HN-9), Sishencong (M-HN-1)	Treats headache, clears head, calms mind, descends Liver yang, unblocks channels
Hegu L.I.-4, Taichong LIV-3	Moves qi and Blood, treats pain, headache, sedates Liver yang
Waiguan SJ-5, Zulinqi GB-41	Treats headache, calms Liver qi
Zusanli ST-36	Harmonises Stomach, tonifies Spleen
Sanyinjiao SP-6	Harmonizes Liver and Kidney, invigorates Blood
Taixi KID-3	Nourishes Kidney yin
E-stim: Hegu L.I.-4 (black), Zusanli ST-36 (red)	

Herbs	
Formula	Target
Cnidium 9 by Seven Forests: Chuan Xiong (Rhizoma Ligustici Chuanxiong) 18%, Man Jing Zi (Fructus Viticis) 12%, Bai Shao (Radix Paeoniam alba) 12%, Zhe Chong (Eupolyphaga seu Opishoplatia) 12%, Jiang Can (Bombyx Batryticatus) 10%, Hong Hua (Flos Carthami) 10%, Jing Jie (Herba Schizonepetae) 9%, Bo He (Herba Menthae) 9%, Dang Gui (Radix Angelicae Sinensis) 8%. Dose: 5 pills three times per day.	Disperses blood, dispels wind, relieves pain, unblocks the channels, relieves headache
Tian Ma Gou Teng Wan by Mayway: Shi Jue Ming (Concha Haliotis), Sang Ji Sheng (Herba Taxilli), Gou Teng (Ramulus cum Uncis Uncariae), Ye Jiao Teng (Caulis Polygoni Multiflori), Fu Ling (Scleroticum Poriae Cocos), Yi Mu Cao (Herba Leonuri), Tian Ma (Rhizoma Gastrodiae), Zhi Zi Fructus Gardeniae, Huang Qin (Radix Scutellariae), Du Zhong (Cortex Eucommiae), Chuan Niu Zhi (Radix Cyathulae).	Calms the Liver, extinguishes wind, clears heat, subdues Liver yang, tonifies Liver and Kidney, invigorates blood

Table 2: Acupuncture points and Chinese herbal medicines used in the treatment of Case 2. Target or purpose of each treatment is listed.

Outcomes

The patient reported a significant decrease in migraine symptoms following her first treatment (Figure 2). By week two, headache frequency had decreased by 50 per cent, headache duration had decreased by 40 per cent and headache intensity had decreased by nearly 75 per cent, compared with baseline. During the third week, the patient's migraine symptoms continued to decrease even though she was suffering from seasonal allergies. She also noticed a decrease in her tinnitus. At week four, the patient reported having experienced no migraines or headaches for the entire preceding week, which she described as being 'very unusual'. She could not remember the last time

that she had been migraine free for such a long period of time. At the successive follow-ups the patient reported no further migraines, but did describe feeling discomfort due to perfume and other odours in her office. At week eight, the patient reported experiencing an episode of flu-like symptoms with nausea and vomiting, followed by a day of feeling as if her head 'was going to explode', but these symptoms rapidly resolved. Through week 12, the patient continued to be migraine free. At week 16 follow-up she reported occasionally experiencing headaches when exposed to strong odours, but also said that these quickly dissipated and did not evolve into migraines.

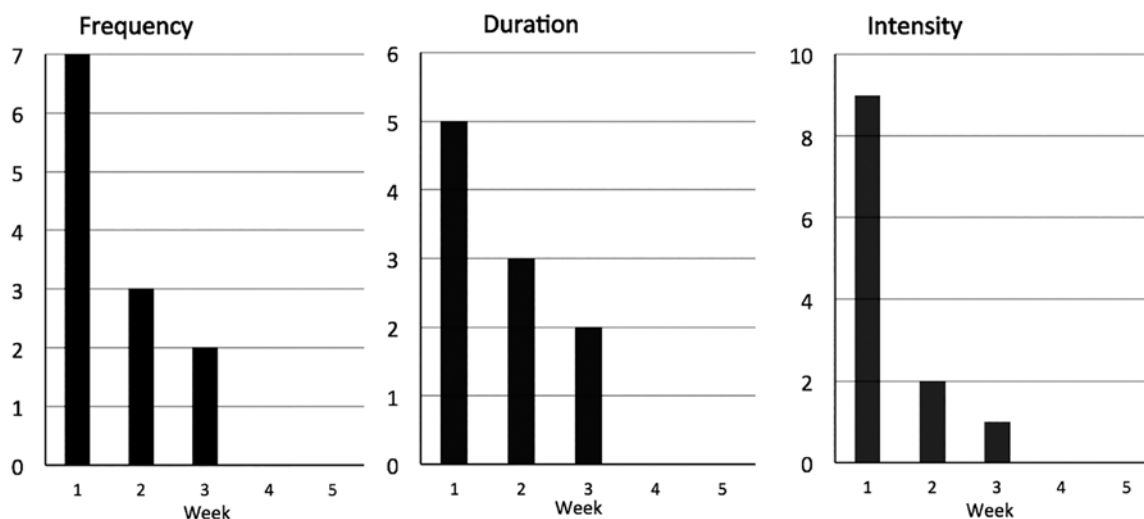


Figure 2: Frequency, duration and intensity of migraines experienced by patient in Case 2. Frequency is shown as number of migraines per week; duration is shown as hours migraines lasted; intensity is shown as level of pain experienced from 1-10 (10 being highest).

Discussion

The 2009 Cochrane review of acupuncture for migraine prophylaxis concluded that acupuncture is at least as effective as standard drug treatment for migraine and causes fewer side effects (Linde et al, 2009). These two cases support these claims, and demonstrate the successful resolution of migraine headache pain in patients with long symptom histories who had not been able to find relief with conventional medical treatments. Both cases responded well to acupuncture and Chinese herbal medicine, showing rapid and persistent decreases in pain intensity, headache duration and headache frequency. At subsequent follow-up, up to 16 weeks from the initiation of treatment, both women continued to report maintaining positive outcomes with either complete (Case 1) or nearly complete (Case 2) resolution of symptoms.

In conclusion, this case series suggests that acupuncture and Chinese herbal medicine can be an effective treatment combination for refractory migraine headaches.

Dr. Jeffrey Langland, Ph.D., received his doctorate degree from Arizona State University in the area of virology in December 1990. His area of interest at that time and still today is investigating and understanding the complex cellular defenses against microorganisms. After graduating from Arizona State, he was a post-doctoral fellow at UC Davis studying oncolytic viruses, followed by a post-doctoral position at the University of Wyoming comparing similarities between plant and human defenses against viruses. In 1995, he returned to Arizona State University as a Research Assistant Professor. In this capacity he has instructed several courses including General Virology and The Biology of AIDS. In August 2007, Dr. Langland became the first joint faculty member at Southwest College of Naturopathic Medicine, maintaining his position at ASU and becoming the instructor for Medical Microbiology and Concepts in Research courses. Dr. Langland is chair of the Research Department at SCNMM bringing new insight and a fresh approach to research for the students and to the field of naturopathic medicine. He can be contacted at j.langland@scnm.edumailto:j.langland@scnm.edu

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