

Mindfulness Meditation in the Control of Severe Headache

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In the West, the use of the methods of alternative medicine, including meditation, has been on the rise. In the US, Kabat-Zinn and associates have pioneered the extensive use of mindfulness meditation (MM) for the treatment of people facing pain and illness. Among the essentials of MM is the observation of bodily sensations, including pain. In Taiwan, despite the deep cultural roots of meditation, its therapeutic use has received little attention from institutionalized medicine. We report on the case of a man who was prone to developing severe headaches due to activities requiring extreme concentration. He learned to control his pain and discomfort through mindfulness meditation, although this practice in fact induced headaches initially. It is suggested that training in MM may be a medically superior and cost-effective alternative to pain medication for the control of headaches with no underlying organic causes in highly motivated patients. (*Chang Gung Med J* 2002;25:538-41)

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Over the past two decades, "alternative" methods have gained increasing acceptance in medical practice, especially in the West.⁽¹⁾ Among others, the practice of mindfulness meditation, as pioneered and developed by Jon Kabat-Zinn,⁽²⁾ "has expanded beyond its traditional religious and spiritual contexts, to become the foundation of some medical interventions," including the relief of headaches and other kinds of pain.^(3,4) Kabat-Zinn and his associates describe meditation as "the intentional self-regulation of attention. It enhances concentration and awareness as an individual focuses systematically and intentionally on particular aspects of his inner or outer experience." The so-called concentrative meditation emphasizes "one-pointedness of attention," whereas mindfulness meditation (MM) practices, the topic of this report, "start from a degree of one-pointedness and then expand the field of awareness to include a range of objects of attention as they change from moment to moment in the field of awareness."^(2,3) The objects in question include both

thoughts and bodily sensations, such as pain. Mindfulness meditation practices can be classified by the practitioner's concomitant state or activity, such as sitting meditation, or walking meditation. Meditation is performed initially with an instructor/therapist, and then is continued by the patient alone.⁽⁴⁾ We report on the successful use of MM training in the case of a man who was prone to develop severe, recurring headaches due to intense concentration.

CASE REPORT

Our report is unusual, in that it does not concern deliberate treatment of a medical condition. Instead, it involves the fortuitous discovery of a remedy. In October 1998, the subject, a man aged 30 years, enrolled in a class of MM, being introduced first to walking meditation and next to sitting meditation. The first session of sitting meditation brought on a severe headache, more painful than any that he had

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ever experienced before, with neck stiffness and a feeling of his "head about to crack". However, acting upon the instructions he had been given, to observe all bodily phenomena that occurred during meditation, he continued to meditate and observed his pain until it disappeared. In continued consultation with his MM instructor, he mastered the ability to consistently control his headaches within 1 week. In a typical session, the headache would appear about 10 min into the sitting meditation, but would disappear after an additional 15 min of observation.

As it turned out, the subject had suffered from an early age with severe headaches, brought on by similar circumstances. At age 11, he had developed an avid interest in Qigong,⁽⁵⁾ which he studied with the help of printed materials, and practiced 15-20 times a month for brief periods of 5-10 min. Qigong involves concentration on the flow of energy within the body. The specific form practiced by the subject resembled sitting MM, but involved an attempt to guide the flow of energy, rather than merely observing it. On one occasion, at age 13, he felt a sensation of heat that traveled from his back to his head, triggering feelings of anxiety and a severe headache with numbness of the scalp ("a feeling of 'ants crawling'"), "head-fullness," and dizziness. He suffered no nausea, vomiting, or blurred vision. Thereafter, for about 8 years, each attempt to practice Qigong would bring on a debilitating headache.

Because of the headaches, he reduced the frequency of his attempts to 1 or 2 per month, between the ages of 13 and 20. Sensing a headache, the subject would stop Qigong and try to shift his attention to other objects until the headache passed. The pain would persist for several hours and even days, during which time he was unable to study and had to lie down, or even required prolonged bed rest. Starting at age 20, and for 10 years thereafter, the subject stopped practicing Qigong, and his severe headaches disappeared.

At this point, it is important to note that the subject was a long-practicing physician. As such, in retrospective reporting (history taking), he characterized his headaches as measuring 6-7/10 on the Visual Analog Scale (VAS), a patient's subjective, numerical assessment of pain intensity. In addition, he was in a position to know that he had never suffered from hypertension, diabetes mellitus, heart disease, epilepsy, or head injury, or any other physical condition

that could be related to his headaches. He had never abused drugs or alcohol and did not smoke. At no time did he take pain medication to control his headaches. As for the headaches caused by MM, the subject estimated them as measuring 8/10 on the VAS.

Following his MM training period, the subject practiced MM 2-3 times a week, for about 2 years, but at age 32 he began to work with a master-instructor of Qigong, and shifted his emphasis once more to this practice, while remaining aware of the risk of inducing headaches. However, whenever he felt a headache coming on, he would call upon his MM expertise to control it. Above all, he felt psychologically secure in his ability to overcome his headaches whenever necessary.

In the subject's own words: "While observing the change in my headache, I understood how physical sensations could be modified and controlled by mental means. When I feared a headache and tried to avoid it, I was actually bound more tightly to the pain. But when I put aside my anxious feelings, my pain and discomfort grew less. This experience helped me to understand my body more deeply, and to sense its innate ability to adjust and recover; and it gave me a stronger feeling of controlling my body."

DISCUSSION

Based on the classification of headaches by the International Headache Society, our subject suffered from tension-type headaches, which some researchers believe to be biologically indistinguishable from migraines.⁽⁶⁾ In the past 2 decades, Jon Kabat-Zinn and associates in the US successfully used MM for the relief of pain, including headaches.^(2,7,8) For example, among participants in a 10-week training program, 65% showed pain reduction of greater than 33%, and 50% showed reduction of greater than 50%.⁽⁷⁾ In such patients, drug utilization decreased, while activity levels and feelings of self-esteem increased.⁽⁸⁾ In individual cases, improvements were very dramatic. For example, Kabat-Zinn reported on a woman with a 20-year history of migraines who achieved remarkable relief within 2 weeks' practice. She had not been helped by repeated visits to headache clinics or by daily use of cafergot.⁽²⁾

In Taiwan, despite the fact that meditation prac-

tices are deeply embedded in traditional culture, they have not found a place in institutionalized medicine. A Chinese literature search engine for the period 1970-2001, using the key word meditation, and a Medline search for 1966-2001, using the key words meditation and Taiwan, found very few scientific references, none of which involved headaches.^(9,10) In this report, we wish to call attention to the potential of MM for the non-pharmacological relief of headaches not associated with organic causes.

Admittedly, the subject of this report is not a typical patient. As we noted, he did not seek MM training in order to treat a medical condition, and the benefits he experienced were fortuitous. Moreover, he was highly motivated, a fast learner, and very open to exploring meditation practices. Conventional non-steroid anti-inflammatory headache medications are not considered curative treatments and can have various side effects, including damage to organs such as the stomach, intestines, liver, and kidney. We suggest that physicians consider offering MM training as an alternative to suitable headache patients. In our experience, training involves an initial 2-h session of instruction and practice, followed by several return visits to discuss individual problems. Understandably, motivation and readiness to comply with the MM regimen are essential to success. The cost-effectiveness of meditation training is also an important factor.⁽¹¹⁾ Once learned, the practice involves no financial expense to the patient or to a "third-party" payer (e.g., Taiwan's Health Insurance Bureau). We also venture to suggest the fact that this subject was professionally qualified to evaluate the significance of his own case adds weight to our argument. In fact, we believe that MM skills might also be applied to the control of other pain problems, as well as anxiety.⁽¹⁰⁾

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