Management of tension headaches by various alternative therapies - An update

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ABSTRACT

Modern life is stressful, and tension headaches are one result of that stress. People with such headaches often describe a sensation like a tight band around the head; this band may in fact exist as a contracted muscle. Other characteristics of tension headache include aching, dull, or throbbing pain, usually concentrated in the forehead, temples, or base of the skull. Symptoms may overlap those of migraine, cluster, or sinus headaches, and medical advice may be necessary to distinguish between them. Medical treatment for tension headaches generally involves the use of non-steroidal anti-inflammatory drugs and possibly muscle relaxants. Physicians may also recommend physical therapy techniques in hopes of addressing the causes of tension headaches, such as muscle tension in the neck or jaw. The present review provides the different novel techniques for management of headaches occurred through tensions.

Key words: Tension headaches, Acupuncture, Reflexology, Homeopathy.

1. INTRODUCTION

Tension headaches are very common, affecting up to 78% of people. Unfortunately, they’re also among the most neglected and difficult types of headaches to treat. With a tension headache, the pain often starts at the back of your head and moves forward, so that it eventually includes your neck, scalp, and head. It’s often described as feeling like you have a tight band across your head. It may be caused by staying in one position for a long time, such as in reading, using a computer, or playing video games. It may be also caused by stress, but sometimes there is no obvious cause. If your headaches happen 15 or more days in a month for several months, they are considered chronic tension headaches [1]. If they occur less frequently, they are called episodic tension headaches. Although tension headaches can be painful, they are rarely a sign of a more serious illness. A combination of lifestyle changes, relaxation techniques, and traditional and complementary therapies can help reduce the number of tension headaches you have.

1.1. Signs and Symptoms

- Headache starts at the back of your head and spreads forward.
- Dull pressure or a squeezing pain, often described as a tight band around the head.
- Muscles in your neck, shoulders, and jaw can feel tight and sore.
- Affects both sides of your head equally.
- May have difficulty sleeping or eating.

1.2. Causes

Researchers aren’t clear on exactly what causes a tension headache. For years, scientists thought that it was caused by tightening the muscles in your shoulders, neck, scalp, and jaw when you are tense. But new tests that measure muscle tension show that the muscles of people with tension headaches aren’t any tighter. Newer theories suggest tension headaches are caused by changes in brain chemicals called neurotransmitters (including serotonin), similar to what happens with a migraine. Scientists don’t know why the levels of neurotransmitters go up and down, but they think it activates pain pathways in the brain [2]. Tight muscles may help trigger the changes in neurotransmitters, or muscle tightness may be a result of changing levels of brain chemicals.

1.3. Triggers may include:

- Stress, Depression, Anxiety, Arthritis.
- Holding your head in one position for a long time (like using a computer).
- Sleeping in an awkward position or in a cold room.
- Eye strain, Fatigue, Overexertion, Skipping meals.
• Head or neck injury, even years after the injury.
• Clenching your jaw or grinding your teeth (bruxism).
• Medications, including some headache medications (leading to rebound headaches).

1.4. Risk Factors
• Gender -- women tend to have more headaches than men.
• Changes in estrogen levels during a woman's period or at menopause.
• Premenstrual syndrome, Stress, Chronic overwork, Too much or too little sleep.
• Missing meals, Alcohol or drug use.

1.5. Diagnosis
• Computed tomography (CT) scan or magnetic resonance imaging (MRI), to rule out a tumor or aneurysm, or to check for sinusitis.
• X-ray of the neck to look for arthritis or spinal problems; x-ray of the sinuses to look for sinusitis [3].
• Electroencephalogram (EEG), a brain wave study, to look for any seizure activity.

1.6. Treatment Approach
A comprehensive treatment plan including relaxation, exercise and other lifestyle changes, and occasional medication can be very effective in reducing the frequency and intensity of tension headaches. Biofeedback, yoga, and relaxation techniques, for example, can help relieve pain and lower the number of headaches you have. Regular exercise helps, too.

1.7. Lifestyle
Keeping a headache diary can help identify the source of your tension headaches and how you can change your environment and habits to avoid them. When a headache starts, write down the date and time it began. Note what you ate for the preceding 24 hours, how long you slept the night before, what you were doing just before the headache, any unusual stress in your life, how long the headache lasted, and what you did to make it stop [4, 5].

Good health habits are important for helping to lessen stress and tension headaches:
• Get enough sleep, eat a healthy diet, Get regular exercise, Quit smoking.
• Use relaxation techniques

1.8. Medications
Medications are used both to relieve pain and to prevent headaches if you have chronic tension headaches. To relieve pain: Over the counter (OTC) analgesics -- are usually effective.
• Acetaminophen (Tylenol): Can cause liver damage if used in high doses or over a long period of time.
• Aspirin: can cause stomach upset and bleeding (ibuprofen (Advil, Motrin) -- can cause stomach upset and bleeding, and raise risk of heart problems.
• Naproxen (Aleve): Can cause stomach upset and bleeding, and raise risk of heart problems. A combination of acetaminophen, aspirin, and caffeine.
• Excedrin, other brands: Can cause liver damage if use in high doses or over a long period of time; may increase the risk of bleeding [6].

Prescription analgesics: - may be needed if your headaches don’t respond to OTC medications. They include:-
• Naproxen (Naprosyn): can cause stomach upset and bleeding, and raise risk of heart problems.
• Indomethacin (Indocin): Can cause stomach upset and bleeding, and raise risk of heart problems.
• Piroxicam (Feldene): can cause stomach upset and bleeding, and raise risk of heart problems [7].

1.9. To prevent chronic tension headaches:
Tricyclic antidepressants: Tricyclic antidepressants are helpful in preventing all kinds of headaches, including migraines and tension headaches. Tricyclic antidepressants include: Amitriptyline (Elavil), Nortriptyline (Pamelor), Doxepin (Sinequan), Imipramine (Tofranil)

Selective serotonin reuptake inhibitors (SSRIs) -- another type of antidepressant that may not work as well as tricyclics in preventing headaches, but tend to have fewer side effects. They include: Fluoxetine (Prozac), Paroxetine (Paxil), Citalopram (Celexa), Sertraline (Zoloft)

Anticonvulsants -- Some anti-seizure drugs help prevent migraines and tension headaches, although researchers aren't sure why: Divalproex sodium (Depakote), Gabapentin (Neurontin), Topiramate (Topamax)

1.10. Nutrition and Dietary Supplements Diet
Certain foods can trigger tension headaches, including:

Chocolate, Cheese, Monosodium glutamate (MSG), a flavour enhancer found often in food from Chinese restaurants, Foods containing the amino acid tyramine, found in red wine, aged cheese, smoked fish, chicken livers, figs, and some beans, Nuts, Peanut butter, Some fruits, like avocado, banana, and citrus, Onions, Dairy products, Meats containing nitrates -- bacon, hot dogs, salami, cured meats, Fermented or pickled foods, Foods and drinks containing caffeine.

5-hydroxytryptophan (5-HTP, 400 - 600 mg per day) -- Your body makes the amino acid 5-HTP and converts it into serotonin, an important brain chemical. Researchers think changes in brain chemicals may be related to tension headaches, and some of the drugs used to treat headaches work by affecting serotonin. Based on that thinking, 5-HTP has been proposed as a treatment for tension headaches. Several studies indicate that 5-HTP may be effective for migraines, but the evidence is mixed for tension headaches [8] One study found that 5-HTP did not reduce the number of headaches people had, but it did allow them to reduce their use of other painkillers. More studies are needed to tell whether 5-HTP helps treat tension headaches. If you take an antidepressant, or supplements such as St. John’s Wort or SAMe, you should not take 5-HTP. If you are pregnant or breastfeeding, do not take 5-HTP without first asking your doctor.

1.11. Herbs

The use of herbs is a time-honored approach to strengthening the body and treating disease. Herbs, however, can trigger side effects and can interact with other herbs, supplements, or medications. For these reasons, you should take herbs with care, under the supervision of a health care practitioner.

- Peppermint (Mentha x piperita) : Peppermint oil, applied topically to the forehead, has shown some promise in very early studies. In one study, applying a 10% peppermint oil solution to the temples relieved pain about as well as acetaminophen (Tylenol). But more research needed to know for sure if peppermint oil is effective. Be careful not to get peppermint oil or any essential oil into the eyes [9].

- Tiger Balm (contains various oils including camphor, menthol, cassia oil, and clove oil): Tiger Balm is an over-the-counter ointment used for muscle pain. One study found that applying Tiger Balm to the forehead helped relieve headache pain better than placebo and about as well as acetaminophen (Tylenol).

- Butterbur (Petasiteshybridus, 50 - 75 mg of a standardized extract 2 times per day) -- A few studies suggest that butterbur may help reduce both the frequency and duration of migraine attacks. It has also been proposed as a treatment for tension headaches. However, so far no studies have been done to see whether it works for tension headaches. If you want to try butterbur for your headaches, ask your doctor about a safe extract and dose. Some butterbur may contain a chemical that may cause liver damage, so use a trusted brand. Butterbur may interact with several medications. Women who are pregnant or breastfeeding should not take butterbur [10].

- Feverfew (Tanacetumparthenium, 50 - 80 mg per day) -- Feverfew has been used traditionally to treat headaches, and several well-designed studies have found that it may help prevent and treat migraines. However, not all studies agree, and it has not been studied to see if it can prevent or treat tension headaches. Fevercan can increase the risk of bleeding, and should not be taken with blood thinners such as warfarin (Coumadin) or clopidogrel (Plavix). If you are allergic to ragweed you may also be allergic to feverfew. Women who are pregnant or breastfeeding should not take feverfew.

Although there are no scientific studies showing that these herbs work, they are sometimes suggested to treat tension headaches and other types of headaches. People who take blood-thinning medications or who have bleeding disorders should not take these herbs:Dong quai(Angelica sinensis), Ginger (Zingiberofficinale), Willow bark (Salix spp.) -- People who are sensitive to aspirin should not take willow bark.


Several techniques in the category of body-mind medicine have shown promise for the treatment of tension headaches. These include hypnosis, biofeedback, and relaxation therapies. For example, a randomized trial found evidence to support the use of relaxation therapy in improving sleep and well-being in people with tension headaches.

A careful review of multiple controlled studies found that biofeedback is useful for tension headaches, particularly when combined with other relaxation therapies. 42 Another review of 20 control trials found psychological
interventions, such as cognitive behavioral therapy, biofeedback, relaxation and coping strategies, to be associated with reduced chronic headache or migraine pain in 589 children. These treatments were compared to placebo, standard treatment, waiting list control, or other active treatments [11].

A topical ointment known as Tiger Balm® is a popular remedy for headaches, muscle pain, and other conditions. Tiger Balm contains the aromatic substances camphor, menthol, cajaput, and clove oil, making it a form of aromatherapy. A double-blind study enrolling 57 people with acute tension headache compared Tiger Balm (applied to the forehead) against placebo ointment, as well as against the drug acetaminophen (Tylenol). The placebo ointment contained mint essence to make it smell similarly to Tiger Balm. Real Tiger Balm proved more effective than placebo. In addition, it was just as effective as acetaminophen, and more rapid acting.

Another form of aromatherapy, peppermint oil applied to the forehead, has also shown promise, but current studies remain highly preliminary.

Therapeutic touch (TT) is a form of “energy healing” popular in the American nursing community. In a blinded study, 60 participants with tension headaches were randomly assigned to receive either therapeutic touch or a placebo form of the therapy. 29 The true therapy proved to be more effective than placebo [12].

A study of 28 people with tension headaches compared one session of osteopathic manipulation to two forms of sham treatment and found evidence that real treatment provided a greater improvement in headache pain.

Proliferation, massage, and reflexology (a special form of massage) have all been recommended for the treatment of tension headaches, but there is little evidence to support their use.

1.13. Acupuncture

Scientific studies investigating the use of acupuncture to treat tension headaches have found mixed results. Researchers agree that acupuncture appears safe and that it may be effective for some people. Acupuncturists diagnose tension headaches by paying careful attention to the kidney and its associated meridians (energy pathways in the body), as well as liver and gallbladder meridians [13]. The physical location of the headache also helps the acupuncturist create a treatment plan, which may include lifestyle/dietary changes or herbal remedies.

Placebo-controlled studies of acupuncture for tension headaches have yielded mixed results. One study compared six sessions of traditional acupuncture against sham acupuncture in 18 people with chronic tension headache. The real treatment caused a 31% reduction in pain and was found to be significantly more effective than placebo. And, a study of 29 students suffering from various types of headaches found that a single acupuncture treatment decreased the number of days during which headaches occurred, as well as total use of medications. A statistically insignificant reduction in the number of days of attacks was seen in the placebo group. Another small study, which involved 40 people with chronic daily headache, found that acupuncture point injections with Cathami-Semen (safflower seed) twice weekly for 4 weeks resulted in a 33% increase in headache-free days compared to the control group (that received regular saline acupuncture).

Another study enrolled 43 children with headaches (migraine or tension) and compared laser acupuncture against placebo laser acupuncture. 37 An individualized treatment approach based on the principles of traditional Chinese medicine was used. The results indicated that use of real laser acupuncture was statistically more effective than placebo acupuncture. And, in a very large randomized trial involving 3,182 headache patients, the group that received 15 individualized acupuncture sessions over 3 months experienced significantly fewer headache days and less pain compared to the group receiving usual care. 40 However, despite its large size and positive results, this study did not include a placebo group.

On the negative side, a study of 39 participants with tension headache found no convincing evidence that acupuncture was helpful. In addition, a single-blind study of 50 participants with tension headache found that a special brief-acupuncture style given once a week for 6 weeks did not reduce headache frequency. Several other trials also failed to find evidence of benefit with various forms of acupuncture. 57,35-36 And, in a 2008 analysis of 5 randomized controlled trials that were considered highest in quality, researchers determined that real acupuncture has limited effectiveness over sham acupuncture for tension headache. 38 While it is clear that many headache patients benefit from acupuncture, at present it is unclear whether or not this represents more than a placebo effect [14].

1.14. Chiropractic Spinal Manipulation

Several clinical trials indicate that spinal manipulation therapy may help treat tension
headaches, especially ones that start in the neck. One study compared spinal manipulation to Elavil and found that people in both groups got better, while those in the spinal manipulation group had less side effects. The benefits of spinal manipulation lasted longer: One month after treatment, the chiropractic group still showed improvement, while the Elavil group did not. Another study found a 50% reduction of headache severity after a single 10-minute spinal manipulation session. However, other studies comparing chiropractic to a sham treatment plus massage found no benefit.

Neck tension can cause tension and pain in the head. Such “cervicogenic headaches” overlap closely with tension headaches. Chiropractic spinal manipulation has shown some promise for these conditions, but the evidence is incomplete and somewhat contradictory.[15]

In a controlled trial of 150 participants, investigators compared spinal manipulation to the drug amitriptyline for the treatment of chronic tension-type headaches.8 By the end of the 6-week treatment period, participants in both groups had improved similarly. However, 4 weeks after treatment was stopped, people who had received spinal manipulation showed statistically significantly better reduction in headache intensity and frequency and used fewer over-the-counter medications than those who had used the amitriptyline.

In another positive trial, 53 participants with cervicogenic headaches received chiropractic spinal manipulation or laser acupuncture plus massage. Chiropractic manipulation was more effective.

However, a similar study of 75 participants with recurrent tension headaches found no difference between the two groups.10 Other, smaller studies of spinal manipulation have been reported as well, with mixed results.

In a more recent controlled trial, 200 people with cervicogenic headaches were randomly assigned to receive one of four therapies: manipulation, a special exercise technique, exercise plus manipulation, or no therapy.12 Each participant received at least eight to 12 treatments over a period of 6 weeks. All three treatment approaches produced better results than no treatment, and approximately the same effect as each other. While these results may sound promising, in fact they prove nothing at all, since any treatment whatsoever will generally produce better results than no treatment due to the power of suggestion.[16]. Ordinarily, researchers get around this problem by using double-blind, placebo-controlled trials (For more information on this important subject, see Why Does This Database Rely on Double-blind Studies?) While it isn’t possible to do a truly double-blind trial of chiropractic, the better trials noted previously used a form of placebo treatment, making them more reliable than this one.

1.15. Massage and Physical Therapy

Regular massage may help relieve stress and pain in people with chronic tension headaches, according to one preliminary study. Doing stretches for your head and neck (taught by a physical therapist) may also help. Practicing proper posture is another important factor in reducing the number of headaches. A physical therapist can teach you.

Reflexology is a technique that places pressure on specific “reflex points” on the hands and feet that are believed to correspond to areas throughout the body. Some early studies suggest it may relieve pain and allow people with migraines to take less pain medication[17]. However, more research is needed. Practitioners believe reflexology helps you become more aware of your own body signals, which might help you sense the subtle signals that indicate a migraine is about to occur (before pain starts). They also believe reflexology helps improve general well-being and energy level.

1.16. Homeopathy

Studies indicate that homeopathy may be no more effective than placebo in relieving tension headaches. Interestingly, however, one of the most common reasons people seek homeopathic care is to relieve the pain associated with chronic headaches. Many homeopaths report that homeopathy helps treat and prevent recurrent tension headaches. Before prescribing a remedy, homeopaths take into account a person’s constitutional type. In homeopathic terms, a person’s constitution is his or her physical, emotional, and intellectual makeup. An experienced homeopath assesses all of these factors when determining the most appropriate remedy for a particular individual[18].

The following remedies are commonly prescribed for tension headaches:

- **Belladonna**: For throbbing headaches that come on suddenly; symptoms tend to worsen with motion and light, but are partially relieved by pressure, standing, sitting, or leaning backwards.

- **Bryonia**: For headaches with a steady, sharp pain that occurs most often in the forehead but may radiate to the back of the head; symptoms tend to worsen with movement
and light touch, but firm pressure alleviates the pain; the person for whom this remedy is most appropriate is usually irritable and may experience nausea, vomiting, and constipation.

- **Gelsemium**: For pain that extends around the head and feels like a tight band of constriction; pain usually originates in the back of the head and may be relieved following urination; this remedy is most appropriate for individuals who feel extremely weak and have difficulty keeping their eyes open.

- **Ignatia**: For pain that may be described as a feeling of something being driven into the skull; these types of headaches tend to be triggered by emotion, including grief or anxiety, and the treatment is appropriate for both children and adults.

- **Iris versicolor**: For throbbing headaches that occur on one side of the head, especially after eating sweets; visual disturbances may also occur; these headaches are worse in the early morning, during spring and fall, and symptoms tend to worsen with vomiting.

- **Lachesis**: For headaches that tend to occur on the left side of the head; symptoms are typically worse in the mornings, before menstruation, and with exposure to warmth and sunlight; symptoms tend to improve with open air and firm pressure.

- **Nux vomica**: For headaches associated with hangovers, overindulgence in foods or alcohol, and overwork; these types of headaches are often accompanied by nausea and/or dizziness; this remedy is most appropriate for individuals who tend to be constipated and irritable.

- **Pulsatilla**: For headaches triggered by eating rich, fatty foods, particularly ice cream; pain tends to move but may be concentrated in the forehead or on one side of the head and may be accompanied by digestive problems or occur around the time of menstruation; children for whom this remedy is appropriate often develop these symptoms while at school.

- **Sanguinaria**: For right-sided headaches that begin in the neck and move upwards, recur in a predictable pattern (such as every seven days); pain is aggravated by motion, light, or sun exposure, odors, and noise; this remedy is appropriate for children who may have a craving for spicy or acidic foods, despite having a general aversion to eating due to the headache.

- **Spigelia**: For stinging, burning, or throbbing sinus pain that often occurs on the left side of the head; symptoms tend to worsen with cold weather and motion but may be temporarily relieved by cold compresses and lying on the right side with the head propped up.

### 1.17. Mind-Body Medicine

You can do many things to avoid tension headaches or relieve the pain: Biofeedback to control muscle tension. Learn to meditate, breathe deeply, or try other relaxation exercises, such as yoga or hypnotherapy. Develop a daily relaxation routine that focuses on the muscles of the head, neck, and on improving your posture. Other relaxation techniques that may be helpful include: Guided imagery, Hypnosis.

Reflexology is a popular alternative therapy. It promotes relaxation, improves circulation, reduces pain, soothes tired feet, and encourages overall healing. Reflexology is also used for post-operative or palliative care. A study in the American Cancer Society Journal found that one-third of cancer patients used reflexology as a complementary therapy. Reflexology is recommended as a complementary therapy and should not replace medical treatment. A typical treatment is 45 minutes to 60 minutes long and begins with a consultation about your health and lifestyle.

You are then asked to remove your shoes and socks and sit comfortably in a reclining chair or on a massage table. Otherwise you remain fully clothed. The reflexologist will assess the feet and then stimulates various points to identify areas of tenderness or tension. The reflexologist then uses brisk movements to warm the feet up. Then pressure is applied from the toes to the heel according to your comfort. Lotion or oil may be used. Most people feel calm and relaxed after a treatment. They may even feel sleepy. Occasionally, people feel nauseous, anxious, or tearful, but this is only temporary and is considered to be part of the healing process. If you’re pregnant, talk with your doctor first and let the reflexologist know. Be sure to give the reflexologist a complete and accurate health history. If you have foot ulcers, injury, or blood vessel disease such as blood clots, consult your doctor before having reflexology.

### 1.18. Prognosis and Complications

It’s rare to have a serious underlying condition due to headaches, like a tumor or a stroke. You should go to the emergency room if you experience the following: Sudden and severe headache that persists or increases in intensity over 24 hours, A sudden, severe headache that
you describe as "your worst ever," even if you are prone to headaches. Chronic or severe headaches that begin after age 50, Headaches accompanied by memory loss, confusion, loss of balance, change in speech or vision, or loss of strength in or numbness or tingling in any one of your limbs, Headaches after a head injury, especially if you are also drowsy or feel nauseated [26]. Headaches accompanied by fever, stiff neck, nausea and vomiting (may indicate meningitis), Severe headache localized to one eye, accompanied by redness of the eye (may indicate acute glaucoma)

The good news is that more than 90% of people with tension headaches can get significant relief from a combination of lifestyle changes, relaxation, and medication.

2. CONCLUSION

Tension headaches can be controlled well and managed effectively if it can be treated with combinational therapy which include like reflexology, Simple herbs, medication (if required) to produce additive effect to the patients and one best suggestion is of changes in lifestyle.

3. REFERENCES


