

AN AYURVEDIC APPROACH TO TENSION HEADACHE WITH SPECIAL REFERENCE TO VATIK SHIRASHOOL

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ABSTRACT

Tension Headache is very common type of headache with a lifetime prevalence in the general population, and it has a very high socio-economic impact. Tension Headache also known as Tension Type Headache which is type of primary headache. Although this type of headache was previously considered to be primarily psychogenic, Headache is a common public health problem and one of the most frequent reasons for visits to general practitioners and neurologists which place a great strain on the quality of life of people of all ages and countries. Tension-Type Headaches account for nearly 90% of all headaches. Tension Headaches affect about 1.4 billion people (20.8%

of the population). There is no satisfactory treatment available in modern medicine. Moreover, the management of headache disorders represents a drain on national health systems and results in significant socioeconomic costs (reduced or lost productivity). Tension-Type Headache is classified into three subtypes according to headache frequency. It is characterized by recurrent episodes of Headache lasting from few minutes to a week where in pain is typically pressing or tightening in quality, mild to moderate in intensity, and bilateral in nature in the head, neck and behind eyes. *Ayurveda* is a philosophy of life with holistic approach which plays an important role in prevention of tension headache. Though headache is the hallmark symptom of the *Shirorogas*, but most of the symptoms of Tension Type Headache show some correlation with *Vatik Shirashool*. The main objective of the study to evaluate the causes of Tension type headache, examines the contributing factors and some conceptual approaches of Ayurveda for the treatment of Tension Type Headache.

KEYWORD:- Headache, *Shirashool*, *Shiroroga*, Tension Type Headache.

INTRODUCTION

A headache or cephalgia is pain in the region of the head or neck. It can be a symptom of a number of different conditions of the head and neck. The brain tissue itself is not sensitive to pain because it lacks pain receptors. Rather, the pain is caused by disturbance of the pain-sensitive structures around the brain.^[1]

Tension Headache is very common type of headache with lifetime prevalence in the general population, and it has a very high socio-economic impact. Tension Headache also known as Tension Type Headache which is type of primary headache. A tension headache is a headache that feels like pressure or tension in and around the head. Headache is a common public health problem and one of the most frequent reasons for visits to general practitioners and neurologists which places a great strain on the quality of life of people of all ages and countries.

These headaches were previously known by many terms such as psychogenic headache, stress headache, psychomyogenic headache, muscle contraction headache etc. The International Headache Society (IHS) began developing a classification system for headaches in 1985. Now in its third edition (beta version), this system includes a tension-type headache (TTH) category. However, the term “tension type headache”(TTH) has been chosen by the International Classification Headache Diagnosis I (ICHD I) in 1988 and have been retained by ICHD II in 2004. The words “tension” and “type” underscore its uncertain pathogenesis and indicate that some kind of mental or muscular tension may play a causative role.^[2]

Tension type headaches are recurrent episodes of headache lasting minutes to weeks. The pain is typically pressing or tightening in quality, of mild to moderate intensity, and bilateral in location, and does not worsen with the routine physical activity.^[3] A tension headache is a condition involving pain or discomfort in the head, scalp, or neck, usually associated with muscle tightness in these areas.^[4]

Tension:- The pressure within a vessel, such as blood pressure is the pressure within the blood vessels. For example, elevated blood pressure is referred to as hypertension, especially stress that is translated into clenched scalp muscles and bottled-up emotions or anxiety⁵. This is the type of tension blamed for tension headaches. In spite of being very common, it is the least studied of the primary headache disorders, despite the fact that it has the highest socio-

economic impact. it does not have a biomarker for diagnosis like other primary headaches and remains a diagnosis of exclusion.

Shirah is a main control system of all bodily ailments. The life style in modern era creates so many psychological disorders. In *Ayurveda*, *Shirashool* (headache) has been given as a symptom of many diseases. Ayurvedic texts also describe *Shirashool* as primary disorders as *Shirorogas*. Head has been given most importance by *Charak* who has declared it as the most important organs of the body. *Vatik Shirahshoola* (TTH) is most common among them, which makes suffer many people due to their run race. The *Vata* is the main *Dosha* involved in *Shoola*.^[6] The International Association for the study of pain (IASP) has defined pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage.” In the *Samprapti* (pathogenesis) of *Vatik Sirahshoola*, *Vata* takes important role, which can compare to the nerve impulse and the seat of *Vata* is the CNS. Therefore, *Vata Vyadhi* indirectly indicates the diseases of CNS. We can correlate the *Vata* with tension also. Because tension means bodily tension and mental tension. Bodily tension means muscle tension i.e. contraction of muscle. The whole muscular system as ready for action. Nerve having the prime role for it. *Vata* having the *Chala Guna* (mobile). Mental tension means high thinking, while also the function of *Vata*. So we can correlate the *Vata* with tension also.

Though headache is the hallmark symptom of most of the *Shirorogas*, a majority of the symptoms of tension headache show some correlation with *Vatik Shirashool*.

Epidemiology

Tension Type Headache (TTH) is the most prevalent headache disorders. About 1.4 billion people (20.8% of the population) are affected by Tension Headache, out of which women found to be more commonly affected than men (23% to 18% respectively).^[7]

Tension headache is the most common type of chronic recurring head. It is more common in women than men (ratio 1.4 to 1). It is most common in young adults with about 60% occurring in people over 20 years of age. Onset over age 50 years is unusual. Lifetime prevalence of episodic tension headache is between 30% and 78%.

Care should be taken when diagnosed in the elderly because more secondary headache disorders occur in the elderly.

Incidence and Prevalence

Approximately 75% to 90% of all persons who complain of chronic or frequent headaches suffer from tension headache. Tension headache is more prevalent among women than men. About 69% of men and 88% of women develop a tension headache sometime during their lives. Tension headache can occur at any age but most commonly begins during adolescence or young adulthood, with the highest frequency among those aged 20-50 years. About 24% to 37% had TTH several times a month, 10% had it weekly, and 2% to 3% of the population had chronic TTH, usually lasting for greater part of a lifetime.^[7]

OBJECTIVE

To compile, analyze and present an *Ayurvedic* approach of tension headache w.s.r. to *Vatik Shirashool*.

Methodology

Based on review, analysis of *Ayurvedic* literature and text such as *Charaka Samhita*, *Sushruta Samhita* and modern text.

Review

The word tension shows that the headache has some relation with Muscular Tension. Though this is very common form of headache, however most subjects never consult a doctor. Tension Type Headache (TTH) are recurrence episodes of Headaches lasting anywhere from minutes to week. The pain is typically pressing or tightening in quality of mild to moderate intensity, and is bilateral in nature. It does not worsen with routine physical activity. Nausea and vomiting are usually absent but Photophobia and Phonophobia may be present.^[8]

Risk factors of tension headache^[9]

- 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 overworks
- Too much or too little sleep
- Missing meals
- Alcohol or drug use

Causes of tension headache^[10]

- Stress (everyday hassles, family crises, heavy workloads, unpleasant work or social situations).
- Change in sleep regimen (shift work, oversleeping)
- Skipping meals (a poor, scrappy diet)
- Certain foods (caffeine, alcohol, cheese, chocolate)
- Physical exertion
- Environmental factors (sun glare, odours, smoke, ambient noise, fluorescent lighting, sustained postures at video, terminals or while driving)
- Female hormonal changes (menses, menopause, pregnancy, exogenous hormone use)
- Medications used for concomitant medical conditions (nitrates, selective serotonin reuptake inhibitors, antihypertensives).
- Overuse of headache medication (analgesic and caffeine combinations butalbital compounds, opiates, ergot)
- Working in awkward positions or holding one position for a long time.
- Clenching or grinding teeth (functional disturbances of masticatory muscle around the temporomandibular joint)
- Stiff joints and muscles due to arthritis of the neck or inflammation of the shoulder joints may develop TTH.
- Tight band around the forehead, heavy weight on top of head.
- Eye strain caused by dealing with a large amount of paper work.
- Coping strategies (avoidance, self criticism, lack of use of social supports)
- Excessive worry
- All work – no play
- Long periods of study, typing or other concentration
- Perfectionism
- Injuries to the spine
- Repress, hostility, anger, frustration

Classification of TTH^[11]

The ICHD -2 divided Tension type Headaches into two broad categories, Episodic (ETTH) and Chronic (CTTH){first digit classification}. Episodic Tension Type Headache is then divided into two –Infrequent and Frequent{second digit classification}. All of the three types

of tension type headache have similar clinical features except for frequency. It is also suggested that on clinical examination, the clinicians should look for pericranial tenderness in patients with tension type headaches and sub-classify them as those associated or not associated with pericranial tenderness (third digit classification).

Showing classification and frequency of Tension Type Headache (Table-1)^[11]

Infrequent ETTH	Frequent ETTH	Chronic TTH
Less than 12 days/yr	More than 12 days /yr. At least 10 episodes per month for at least 3 months	More than 180 days per year. 15 days/month

Criteria of diagnosis

The diagnosis of Tension Type Headache is essentially clinical and relies only on symptoms and signs.

Salient features of Tension Type Headache^[11]

- Duration:30 min to 7 days 2 out of 4 following Headache characters:
- Bilateral
- Pressing/Tightening(Non pulsating)
- Mild to Moderate intensity
- Not aggravated by routine physical activity
- No nausea and vomiting
- No more than either of the two ie Photophobia and Phonophobia Not attributed by another disorders
- Excluded by History and proper investigation.

Sign & Symptoms of TTH^[10]

- The headache starts at the back of the head and spread
- Dull pressure or a squeezing pain (dull, steady, achy pain on both sides of the head) lasts from half an hour to several hours or days).
- Pain in TTH. - Compressive - constrictive type., Non-pulsatile, evening time.
- Varied in intensity, frequency and duration long lasting.
- Commonly in occipital and bilateral region associated with muscle contraction.
- Visual symptoms are absent.
- Nausea, vomiting, anorexia, rarely present.
- Photophobia, or phonophobia may be present.

- Tenderness on the scalp, neck and shoulder muscles.
- Insomnia.
- Fatigue.
- Irritability.
- Difficulty concentrating

All of the three types of tension type Headache have similar clinical features

- 1. Head pain:** The pain of TTH is usually described as pressure like, dull, constricting. In 90% of TTH patients the location of pain is bilateral but can be antero- posterior. While describing the characteristics of *Vatik Shiroroga*. *Charak* says that it produces *Stambhan* and *Sphuran*. Both the terms are pretty similar to constricting type of headache.^[12]
- 2. Accompanying symptoms:** Presence of nausea and vomiting rules out the diagnosis of Tension Type Headache. *Charak* has not mentioned *Chardi* or *Arochak* like *Lakshan* in *Vatik Shirashool*.^[12]
- 3. Precipitating and aggravating factors:** It is believed that stress, lack of sleep and not eating on time can precipitate TTH. *Charak* has clearly mentioned *Prajagrat* and *Upvasat* and *Bahya Trasa* as *Hetu* of *Vatik Shiroshool* which show resemblance to lack of sleep, fasting and stress.^[12]

Showing Correlation of *Vatik Shirashool* and Tension Type Headache (Table no. 2)^[13]

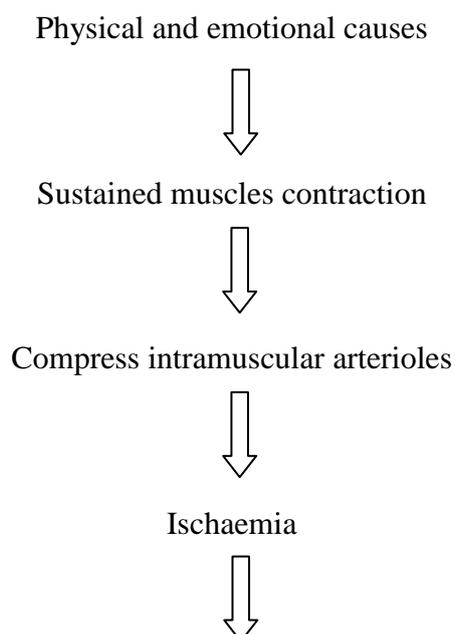
Symptoms	<i>Vatik Shirashool</i>	Tension Type Headache
Headpain	Bilateral Constriction of <i>Griva Pradesh Band</i> like pain	Bilateral Dull, Pressure like, constriction Band like pain
Accompanying symptoms	No Nausea and Vomiting	No Nausea and vomiting Either Photophobia or Phonophobia
Precipitating and Aggravating factors	Excessive Talking <i>Ratri Jagran</i> increase <i>Shoka Bhaya Trasa</i> (stress) Increase <i>Upavas</i> (not adequate) or Fasting increase	Stress increase Lack of sleep increase Not eating on time increase
Relieving factors	<i>Snigdha Usna Aushad</i> and <i>AharVihar</i> gives relief	Non pharmacological treatments in the form of relaxation therapies like massage have been found to be good.

Correlation Between the Symptoms of *Vatik Shirahshoola* and Tention Type of Headache. (Table No-3)^[14]

Rupa of <i>Vatik Shirahshoola</i>	Symptoms of TTH
<i>Shankhanistoda, Ghatasambheda</i>	Typically involve entire head commonly occipital and bilateral region
<i>Sayam Kala (Bhavanti Tivranishi)</i>	Moderately severe in evening time.
<i>Shiroghrurnanam</i>	. Giddiness
<i>. Prakasha Asahyata</i>	Photophobia
<i>Shabda Asahisnuta</i>	Phonophobia
<i>Nidra Alpata</i>	Disturbed sleep

Pathophysiology of TTH^[15]

- TTH is common, the pathophysiology and likely mechanism remain unclear. Current knowledge of the nociceptive (pain receptors) system suggests that the derivative pain of TTH has a muscular origin. Muscular or myofascial pain tends to be dull and achy, poorly localized and radiating, pain originating from cutaneous structures is sharp, localized and non-radiating.
- Most research has focused on a peripheral mechanism pertaining to pericranial muscle tenderness, thus explaining the previous term muscle contraction headache. researchers who have attempted to find correlations between subjective complaints of pericranial muscle tension and electromyographic changes during a headache have had conflicting results.
- Sustained muscles contraction from physical or emotional causes may compress intramuscular arterioles, causing ischaemia, accumulation of noxious metabolites or both results in localized tenderness.



Accumulation of noxious metabolites



Localized tenderness in head

- TTH has a purely central mechanism and that muscle tension is an epiphenomenon.
- Studies that suggest a sharp disorder with TTH have found reductions in platelet or serum serotonin, epinephrine, nor-epinephrine and dopamine levels. These findings appear to support the idea that an alteration in serotonergic and monoaminergic central systems results in depressed pain suppression and activated pain pathways in TTH (Normal level these neurotransmitters that help nerves communicate).
- Emotions have biochemical effects in the body and mental stress alone elicit muscle contraction through the limbic system.
- The cause of TTH is most likely multifactorial and best described by olesen's vascular myogenic supraspinal model.
- The convergence of multiple pain pathways – vascular, myogenic, supraspinal or all of these that enter the caudate nucleus of the trigeminovascular system and, in combination with other precipitating factors in a predisposed person, determine headache activation threshold is met.
- A genetic predisposition has been suggested by studies that found a threshold increased incidence of chronic TTH in families.
- Pathogenesis of TTH is complex and multifactorial with contributions that central, peripheral, vascular, muscular, psychogenic.
- Another chemical in the body that may play a role in TTH is nitric oxide, which is involved in the transmission of nerve impulses over production of nitric oxide has been linked to chronic tension headache and substances that block the production of nitric oxide have been shown to reduce the muscle tightness in TTH.

Treatment in ayurveda

General management of *Shiroroga* Commonly in all types of headache the following preventive measures should be taken. *Nidana Parivarjana* According to the treatment point of view, the etiological factors which produce headache should be avoided. Commonly rest, countenance without stress, avoiding the holding of the natural urges, controlling the mind is very helpful. Also other *Aharaja* and *Viharaja Hetus* should be avoided.

In *Bhaishajya Ratnavali*, general line of treatments for *Shirahshoola* has been described which is *Swedana*, *Nasya*, *Dhumapana*, *Virechana*, *Lepa*, *Vamana*, *Langhana*, *Shirobasti*, *Raktamokshana*, *Agnikarma*, *Upanaha*, *Purana Ghrita* and *Shashtika Shali*.¹⁶

Considering Tension Headache as *Vatik Shirshool*, its principle of management consists of

1. **Snehanam:** (Oleation therapy)
2. **Swedan:** (Sudation)
3. **Nasyam:** (Nasal administration of drug)^[17]

Since Tension Headache is quite similar to *Vatik Shirashool* in clinical presentation

Snehanam through its *Snigdha Guna* (unctuousness) pacifies *Ruksha Guna* of *Vata* by which it gets aggravated and causes the illness.

Swedan and *Upanaham* with its *Ushna Guna* pacify the *Sheeta Guna* of *Vata* and thus alleviate its vitiation. For its management *Charak* also indicates special type of poultice i.e. *Upanaha sweda* (a special type of *Swedana* which is made up of fish meat and *Agaru* together).^[18]

Nasyam therapy by its specific action on *Urdhavajatru* (region above the neck or *shiropradesh*) not only pacifies *Vata* but also acts as *Rasayan* therapy to prevent relapses.

For *Nasyam*, *Charak* has advocated some special formulation like *Rasnadi Tailam*^[19] and *Baladi Tailam*^[20] both of which contain *Vatashamak* and *Brihan* (nourishing) *Dravyas*.

Shaman Yogas: *Mayur Ghritam*^[21] or *Mahamayur ghritam*] have been advocated by *Charak* in this context. *Samshamana Chikitsa* Simultaneous to *Nidana Parivarjana*, the vitiated *Doshas* should be brought to their normal state by help of drugs, based on *Samanya Vishesh* principles, according to predominance of the manifesting *Dosha*.

Diet: *Vatahara Anna*^[17] or diet which pacifies *Vata* by its *Snigdha* and *Ushna Gunas*. eg. Milk, Ghee, Meat soup etc.

External therapies: *Charak* has mentioned the following for the management of *Vatik Shirashool*. All therapies like *Abhyangam* (Massage), *Shirodhara* (Pouring of medicated oil on forehead), *Pichu* (medicated tampon) and *Shirobasti* (Pouring of medicated oil in a cap-like structure) have been indicated. Most of the above mentioned therapies possess *Vata* pacifying properties.

Other Measures *Yoga Ratnakara* has described the following measures for *Shiroroga*. *Snehana Upanaha Swedana Dhumapana Lepa Langhana Parisheka Agnikarma Raktamokshana Shirobasti*.^[23]

These measures should be applied after considering the predominance of *Dosha* and other general considerations of the patients.

Satvavajaya

The term *Satvavajaya* implies the therapeutics for mental disturbances. This is secured best by restraining the mind from desire for unwholesome object and the cultivation of *Gnana*, *Vijnana*, courage, memory and *Samadhi* (concentration).

The advice of the counseling in the present time is no more considered to be only for psychiatric disorders, but also in the prevalence of disrupt psyche of a patient in need or parallel supportive therapy to alleviate his conditions by making him able to cope up his illness with better adjustment and adaptation.

Psychological and psychodynamic methods are no more a palliative management but also a curative treatment in those conditions, the basic approach is –

1. Assurance
2. Exchange or replacement of emotions viz. replacement of *Kama*, *Krodha*, *Bhaya*, *Harsha*, *Irshya* etc. with appropriate emotions.
3. Psychoshock theory.

DISCUSSION

Tension Type Headache (TTH) is the most prevalent headache disorders It does not have a biomarker for diagnosis like other primary headaches and remains a diagnosis of exclusion. It

is characterized by recurrent episodes of headache lasting from few minutes to a week wherein pain is typically pressing or tightening in quality, mild to moderate in intensity and bilateral in nature.

In accordance with *Ayurvedic* concepts, inspite of headache being the hallmark symptom of most of the *Shirorogas*, the majority of the symptoms of tension headache show some correlation with *Vatik Shirashool*. Considering this, the most beneficial line of treatment is *Snehanam*, *Swedanam* and *Nasyam*. Subsequently, *Shaman yogas* and Diet play an important role.

CONCLUSION

The Ayurvedic therapeutic techniques and medications offer good relief in TTH on utilization of therapeutic measures prescribed by the classics in the context of *Vatik Shirashool*. This management also reduces the occurrence of relapse.

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