

Effect of Selected Yogic Practices on Patient with Tension Type Headache: A Case Study

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ABSTRACT:

Headache can be defined as a painful sensation in any part of the head, ranging from sharp to dull, that may occur with other symptoms. Globally, the percentages of the adult population with an active headache disorder are 46% for headache in general, 11% for migraine, 42% for tension-type headache and 3% for chronic daily headache. The current study was observed in the direction to see the effect of selected *yoga* practices on tension type headache (TTH) patients. The patient in the current case report found herself having a tension-type headache. The complaint of pain was in the vertex region of the head and tightness around the head region from last 2 years. She also had complaint of pain in holocranial region of the head, pain in her eyes, ears with low blood pressure (100mmHg/65mmHg). After certain regular *yoga* practice, which were advised in the therapy center, there was a significant reduction in the headache, the HIT-6 score (questionnaire to evaluate severity of headache) and perceived stress scale score were significantly reduced after the intervention. There was also improvement in the pain of eyes, ears and symptoms of vertigo. It was also found that after *yoga* practice duration, frequency and heaviness of headache reduced. The present case study exhibited that if yogic practices are adopted properly even along with medication, they help patient to get relief in tension type headache and its associated problems. This also implies that *yoga* plays vital role in controlling and reducing symptoms of vertigo, pain of eyes and ears.

KEY WORDS: Headache, Pain, Tension type headache, Tension, Vertigo, Yoga.

Received: 07.06.2022 Revised: 27.06.2022 Accepted: 01.07.2022 Published: 03.07.2022

Quick Response code



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INTRODUCTION:

Headache can be defined as a painful sensation in any part of the head, ranging from sharp to dull, that may occur with other symptoms. In most of the headache cases, the problems are not life-threatening;

however, they can diminish the quality of life in the serious medical conditions such as diabetes or high blood pressure. Many peer-reviewed medical studies reveal that people who suffer from regular attacks, have a low quality of life. It also can be

compared with those people who are having cognitive heart failure. Moreover, people who are having headache also experience impairment in interpersonal relationships, including work relationships.

[1]

Globally, the percentages of the adult population with an active headache disorder are 46% for headache in general, 11% for migraine, 42% for tension-type headache and 3% for chronic daily headache. [2]

One of the simple and yet most complex headache problems is that of tension-type headache (TTH). It is characterised as head pain devoid of migrainous characteristics. A feature usually ascribed to this disorder are a bilateral location, a tendency to wax and wane throughout the day; a heavy pressing and tight quality of pain; an association with contracted muscles of the scalp and neck and occurrence to emotional conflict, [3] it is most common headache problem seen, both alone and in conjunction with other types of headaches. All headache disorders are classified into two major groups and subtypes. Clinically, tension-type headache (TTH) can be of three types: episodic, chronic and probable. [4]

In the episodic tension-type headache, there is a recurrent headache occurring fewer than 15 days a month and lasting from 30 min to 7 days. It may occur during the time of stress event. Chronic TTH occurs 15 or more days for at least 6 months. Patients may also have headache daily or every day.

[4]

The pathophysiology of TTH is not properly and completely understood in medical field so far due its various etiological factors. Tension type headache sometimes considered as primary disorder of CNS pain modulation alone, unlike migraine, which involves a more generalized disturbance of sensory modulation. The name tension-type headache implies that pain is the product of

nervous tension, but there is no velar evidence for tension as an aetiology. Headache that arises under the circumstances is known to be associated with contraction of the scalp and neck muscles. [5] There are so many research studies which clearly show that *yoga* can play an important role in the management of such headache. The present case study is an attempt with the aim to evaluate the effect of selected yogic practices on tension type headache.

CASE PRESENTATION:

Mrs. N of aged 28 was an Indian female with a height of 155 cm and weigh 70 kilograms. She is a housewife and not involved in any physical activities. She eats both vegetarian and non-vegetarian food and her appetite was good, bowel was irregular and sleep reported to be disturbed. She was not practicing any kind of *yoga* before coming to therapy center of institute of human behavior and allied sciences. Patient had been on some pain killer medication with some symptomatic relief for short term but she was not satisfied with the temporary relief with medicine.

Present Medical History

Mrs. N visited the hospital in February 2022 with the complain of pain in holocranial region of the head and tightness around the head region from last 2 years. She reported that she is often having a tension-type headache. She also complained of pain in her eyes, ears with low blood pressure (100mmHg/65mmHg). She was informed about the yoga procedure and her consent was taken to publish her case report.

The patient was diagnosed with tension-type headache having pain in eyes, ears with low blood pressure (100mmHg/65mmHg).

THERAPEUTIC INTERVENTIONS:

The patient was on the following medications as per doctor's advice at the time of reporting in OPD of *yoga* therapy center in Institute of Human Behavior and Allied Sciences.

1. Pregabalin 75 mg
2. Amitryline 10 mg
3. Diclo 50 mg
4. Calium 500 mg

Yogic Management and Dietary Modifications:

The individual *Yoga* protocol session for 30 min for TTH.

Dietary and Lifestyle Modifications

1. Sleep before 9:30 pm in the night with the gap of 2 hours after food.
2. No use of any electronic gadget after 8 pm
3. Not to skip any meal, and time between two meals should not be too much longer
4. Restriction of spicy, oily and fried food
5. Advice to eat more vegetables and seasonal fruits

Follow up:

Patient was called in the hospital 2 times in the OPD on the interval of 15 days to assess the practice and resolve the doubts.

Management

All practices in the *yoga* protocol were selected specifically with the view to handle tension related problems which are listed below.

1. To reduce of tightness of the neck, head and shoulder region.
2. To reduce the intensity and frequency of the headache.
3. To improve the quality of life.
4. To give deep relaxation to the body and mind.

Results:

After selected *yoga* practice for 30 days, there was a significant reduction in the headache (Table-1). There was significant reduction in the HIT-6 score ((questionnaire to evaluate severity of headache)) and perceived stress scale (questionnaire to evaluate the perceived stress) which indicate improvement in the headache and reduction of stress after practice of 4 weeks of specific *yoga* practices (Table-2). The result also showed relief in eyes and ears pain, symptoms like vertigo was reduced after practice. It was also found that duration, frequency and heaviness of headache was reduced. After intervention, improvement in the blood flow also positively observed.

Table- 1 Selected yogic practices as intervention:

No	Practice Title	Practice Name	Repetition	Time
1	Starting Prayer	ॐ सह नावतु । सह नौ भुनक्तु । सह वीर्यं करवावहै । तेजस्वि नावधीतमस्तु मा विद्विषावहै । ॐ शान्तिः शान्तिः शान्तिः ॥	Once only, no repetition	2 min
2	Sukshma Vyayam	Griva Shakti Vikasaka Vakshasthala Shakti Vikasaka (I&II)	3 Rounds 3 Rounds	2 mins 2 mins

3	Asanas	Tadasana With Modifications Bhujangasana Vakrasana	2 rounds/1 min holding 2 rounds/ 1 min holding 1 min hold with each leg	2 min 2 min 2 min
4	Pranayama	Yogic Deep Breathing Nadishuddhi Pranayama Without Kumbhaka Bhramari	3 Rounds 5 Rounds 5 Rounds	2 mins 2 mins 2 mins
5	Meditation & Relaxation	Deep Relaxation Technique (DRT)	Continuous	10 mins
6	Closing Prayer	ॐ सर्वे भवन्तु सुखिनः सर्वे सन्तु निरामयाः । सर्वे भद्राणि पश्यन्तु मा कश्चिददुःखभागभवेत् । ॐ शान्तिः शान्तिः शान्तिः ॥	Once only , no repetition	2 min

Table- 2: Pre-post assessment results:

Assessments	Pre	Post
HIT-6	70	44
PSS	38	26
Duration	Continuous	20 min
Frequency	Everyday	1 time in 10 days
Blood pressure	107/63 mmHg	98/72 mmHg

DISCUSSION:

The present case study was carried out to explore the impact of selected yogic practices on the patient having tension type headache and some other associated symptoms. The pathophysiology of tension type headache is not much explored and understood in current scenario due to various etiological factors associated in it. The behavioral model of headache states that any individual experiencing headache depends on a specific pathophysiological mechanism “triggered” by the interplay of the individual’s physiological factors (autonomic arousal), environmental factors (stressful circumstances), ability to cope with these factors (cognitive &

behaviorally) and consequential factors. It is often seen that due to these factors there is increase in the person’s chance of reporting head pain clearly to doctors. [6]

There are studies where *yoga* therapy being an intervention, emphasized individualized self-regulation after practice in patient. The yogic approach has been successfully used in the management of tension-type headache. There are studies that show the *yoga* can reduce headache intensity and frequency. [7] Previous study reported that *yoga* practice is cost effective and self-adopted intuitive practice. Such traditional practice had been widely practiced indirectly in the treatment of mental related fluctuation resulting in the pain. [8]

In the current case study, the *yoga* protocol was designed to address the improper flow of *pranic* energy as discussed in the traditional hatha *yoga* texts (Table-1). The initial intervention was to calm down the mind and reduce the pain wherever in the body. The *yoga* protocol practice was primarily focused on reducing headache through loosening of the shoulder joints, chest and neck to release the tightness with the help of different asana. *Nadishuddhi Pranayama* and *Bhramari* do help to bring balance in the sympathetic and parasympathetic nervous systems. *Shavasana* and deep relaxation technique were implemented to calm and relax the mind. There was deep relaxation technique which addresses the all fluctuations of the mind and gives deep calmness after practice.

CONCLUSION:

The current case study showed improvement but even though robust research need to be carried out to see minutely the efficacy of yogic intervention especially in tension type headache. Thus, study exhibited that specific yogic practice with the medication may be effective to control and prevent headache and associated symptoms in short time.

LIMITATIONS OF THE STUDY:

The limitation of the present case report is that several biochemical and physiological parameters were not assessed. The duration of intervention was only 4 weeks which may not be sufficient to track the actual effect of on the body and mind in totality. Moreover, self-reported information only taken into consideration regarding the headache and eyes-ears pain in the study.

PATIENT'S WRITTEN CONSENT:

The written consent had been taken from the patient before giving any sots of yogic practices.

ACKNOWLEDGEMENT:

The contribution and assistance given by the staffs of Out Patent Department of Institute of Human Behavior and Allied Sciences in collaboration with Morarji Desai National Institute of Yoga is acknowledged.

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CONFLICT OF INTEREST: Author declares that there is no conflict of interest.

GUARANTOR: Corresponding author is guarantor of this article and its contents.

SOURCE OF SUPPORT: None

HOW TO CITE THIS ARTICLE:

Sharma S, Guru Deo, Basavaraddi IV. Effect of Selected Yogic Practices on Patient with Tension Type Headache: A Case Study Int. J. AYUSH CaRe. 2022; 6(2): 233-238.