

CRITICAL ANALYSIS AND COMPARATIVE STUDY ON PRIMARY HEADACHES WITH *SHIRO ROGA*

ABSTRACT: Headache is one of the commonest symptoms of which is difficult to describe. There are over 150 types of headaches, but the more common types are a few. Number of *Shiro Roga* mentioned by *Acharya Charaka* is 5 and each of the authors namely *Acharya Sushruta*, *Madhava*, *Bhavamishra* and *Yogarajnakara* has mentioned as same as 11. *Acharya Vagbhata* and *Acharya Sharangadhara* have explained two different disease categories relevant to as 10 *Shiro Roga* and 9 *Kapalagata Roga*. 50% of the general population has experienced headaches in their lives and more than 90% report a lifetime history of headache. Primary headaches are headaches that are not the result of another medical condition or structural or metabolic abnormality. These include migraine, tension, Trigeminal Autonomic Cephalgias and Cluster headaches as well as a variety of other less common types of headaches. Objective of his study was to analyse primary headaches mentioned in modern medicine and them with relevant *Shiro Roga* mentioned in authentic Ayurvedic texts in accordance with the signs and symptoms. This conceptual study was conducted by compiling, studying and comparing relevant Ayurvedic texts and modern theories. The traditional science used by ancient Ayurvedic physicians, for classification, diagnosis and treatment of diseases are somewhat different from the modern science. Nevertheless, it is not possible to provide a comprehensive comparison of types of primary headaches with *Shiro Roga*, tentative correlation can be done.

KEYWORDS: *Shiro Roga*(Diseases of head), Primary headaches, Cluster headaches

INTRODUCTION

Headache is one of the commonest symptoms which is difficult to describe, but some common terms can be used to describe it such as throbbing, squeezing, constant, unrelenting, or intermittent. The location of the headache possibly will be in one part of the face or skull, or may be widespread comprising the whole head. There are over 150 types of headaches, but more common types are a few¹. Number of *Shiro Roga* mentioned by *Acharya Charaka* is 5 and it is mentioned by each of the authors namely *Acharya Sushruta*, *Madhava*, *Bhavamishra* and *Yogarajnakara* as same as 11. *Acharya Vagbhata* and *Acharya Sharangadhara* have explained 10 *Shiro Roga* and 9 *Kapalagata Roga*². 50% of the general population has headaches during any given year, and more than 90% report a lifetime history of headache.³ In 2013, The International Headache Society has released their latest classification system for headache in 2013, namely; Primary Headache, Secondary Headache and Cranial neuralgias, facial pain, and other headaches. Primary headache is not a symptom of an underlying disease but can affect the quality of life. Though some people have occasional headaches that resolve rapidly, others may have debilitating. These headaches are not life threatening and may be associated with symptoms that can imitate strokes.⁴

AIMS AND OBJECTIVES

To describe common types of primary headaches mentioned in modern medicine.

To analyze main features of primary headaches mentioned in modern medicine.

To correlate the clinical features of primary headaches mentioned in modern medicine with *Shiro Roga* mentioned in authentic Ayurvedic texts.

METHODOLOGY

This conceptual study was conducted by compiling, studying and comparing relevant Ayurveda texts and modern theories.

RESULTS

Primary Headache includes migraine, tension, Trigeminal Autonomic Cephalgias and cluster headaches, as well as a variety of other less common types of headaches.

- **Tension headache-** Commonest type of primary headache, occurs more frequently among women than men. As per the World Health Organization, it is said that in the developed world, about 1 in 20 people suffer with a daily tension headache. Common features are given below.

Table 01: Tension Headache

No		Features
1	Site of Pain	Bilateral (80%), periorbital, frontal and nuchal predominance
2	Quality of Headache	Dull, persistent, tightening and non-pulsatile. Patients may express as 'band around the neck'
3	Time and onset	Unpleasant stress and travelling
4	Effect with alcohol intake	Headache relieves with alcohol consumption
5	Associated features	Excessive belching, anxiety, pain in back and breast, giddiness and lack of concentration

Migraine headaches- It is the second most common type of primary headache. Not only adults but also children get affected by Migraine headaches. Before puberty, equal ratio plays in both males and females. Women are more prone to develop after puberty. It is a chronic, episodic neurological disorder characterized by recurrent attacks of moderate to severe pulsatile headache, which is widely variable in intensity, frequency and duration, commonly unilateral and usually associated with anorexia, nausea and vomiting. When considering the genetically predisposition in Migraine, more than 46% of patients are having a positive family history. In India, prevalence of Migraine in the population is about 15-20%.⁵

Table 02: Tension Headache

Triggers	Disturbed sleep patterns, hormonal changes, drugs, physical exertion, auditory stimuli, olfactory stimuli, visual stimuli, weather changes, hunger, psychological factor
Major types	Migraine attack without Aura Migraine attack with Aura
Minor types	Menstrual Migraine Abdominal Migraine Ophthalmoplegic Migraine Hemiplegic Migraine

	Basilar Migraine Retinal Migraine Chronic Migraine
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Migraine without Aura

A migraine without aura is the most common type of migraine headache. They account for about 75% of all migraines. Headache lasting 4-72 hours.

At least two of the following characteristics are found in Migraine headache; Unilateral location, pulsatile, moderate or severe in intensity and aggravation by routine physical activity.

During headache at least one of the following clinical features should be present;

1. Nausea and/or vomiting
2. Photophobia and Phonophobia

Migraine attack with Aura- Migraine with aura (classic migraine) is a recurring headache that strikes after or at the same time as sensory disturbances called aura.

Phases of Migraine:

1. Prodrome
2. Aura
3. Headache
4. Postdrome

1. Prodrome

The prodrome represents the earliest phase of the migraine attack, occurring even before the onset of aura. Imprecise premonitory symptoms which can start from 12-36 hours prior to aura. Symptoms include; Yawning, excitation, depression, lethargy, craving or distaste for various food, stiff muscles specially in neck, constipation or diarrhoea and sensitivity to smell or noise. Duration is about 15-20 minutes.

2. Aura

Warning or the signal before onset of headache is called Aura. These temporary disturbances can include; Visual signs and symptoms-Most people who have migraine with aura develop temporary visual signs and symptoms, which tend to start in the centre of the field of vision and spread outward. These might include: Blind spots (scotomas), zigzag lines that progressively float across field of vision, shimmering spots or stars, changes in vision or vision loss and flashes of light.

In addition to above mentioned disturbances, other temporary disturbances may associate with migraine aura such as numbness which characteristically felt as tingling in one hand or on one side of the face that may spread slowly along a limb, speech or language difficulty and muscle weakness. Aura usually occurs within an hour before head pain begins and generally lasts less than 60 minutes. In people above the of age 50 and older migraine aura may occur with little or no headache

3. Headache

Headache is generally unilateral and pulsating in nature lasting from 4-72 hours. In some cases, headache is bilateral and in few cases it starts unilaterally and later progress in to bilateral stage. Pain is seated usually behind the eye, inner canthus or frontotemporal region. Facial migraine may involve cheek, gums, nostrils and spread to neck, ears and eyes. Associated symptoms are anorexia, nausea, vomiting, photophobia, phonophobia and tinnitus.

4. Postdrome

Following headache, patients may complain of fatigue, depression, reduce appetite, irritability; euphoria and severe exhaustion which can be exist for few hours to 2days.

- **Cluster headaches-** This type of headaches are rare. Commonly affects men in their late 20s. Many patients associate severe headache with migraine.

Table 03: Cluster headache

No		Features
1	Site of Pain	Unilateral, most common site is periorbital region followed by maxilla, forehead, nose, jaw and chin.
2	Quality of Headache	Tearing, piercing, throbbing and burning pain
3	Time and onset	few minutes to 3 hours
4	Frequency	Daily attack number varies from 1-3 and the bouts comes in cluster for a certain period of time (tend recur over aperiod of several weeks.).
5	Associated features	Ipsilateral conjunctival congestion, ptosis, miosis, runny nose photophobia, hyperalgesia, lacrimation and nasal congestion Increased local area skin temperature is elevated in the vicinity of 1-1.5 degree Celsius.

Sites of pain

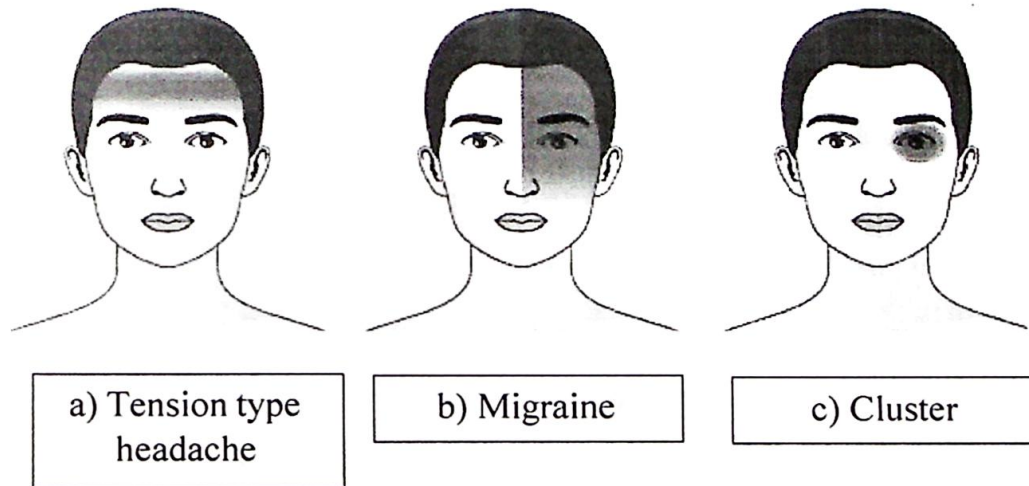


Figure 01: Sites of pain

Evaluation of the Patient with Headache

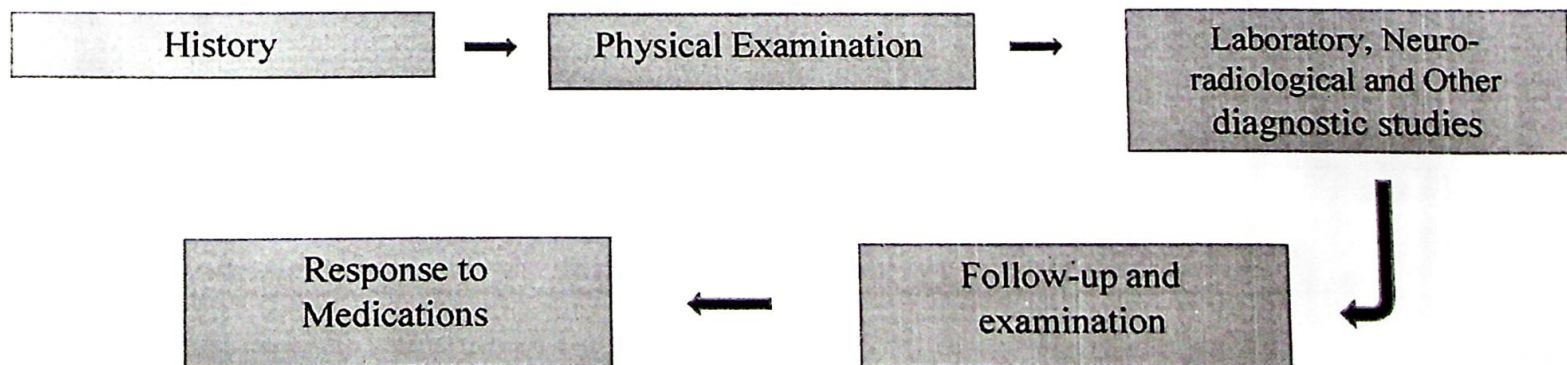


Figure 02

Evaluation of the headache should be started by proper history taking followed by physical examination. Sometimes it is required to perform laboratory investigations, Neuro-radiological and other diagnostic studies in order to go for diagnosis from tentative diagnosis. After proper and adequate treatment, it is necessary to follow-up and study the responses for the medication.

Vataja Shiro Roga- According to *Sushruta Samhita*; Headache developing without any apparent cause, severe at night subsiding by binding and mild fomentation.⁶ According to *Acharya Vagbhata*; Severe pricking pain in the two temples, the centre of the brows and forehead fall out, earache, feeling of pain in eyes as though being plucked out, the head reels and feels loose in all its joints, there is severe pulsation of the network of veins, rigidity of the lower jaw and the shoulders, intolerance to light, running nose, reduction in the pain severity by massaging, anointing with oil and fomentation are the clinical features of *Vataja Shiro Roga*.⁷

Pittaja Shiro roga-*Acharya Sushruta* explains that in *Pittaja Shiro Roga*, person feels his head as though spread with burning coal, as though hot fumes are coming out of his head and nose, pain subsiding by cold things and at night. *Acharya Vagbhata* explains that there is a feeling of hot fumes coming out from the head, fever, profuse sweating, burning sensation in the eyes, fainting, and pain become less at night and by cold things

Tridoshaja Shiro Roga- Both *Acharyas* explain that all the signs and symptoms mentioned in *Vataja*, *Pittaja* and *Kaphaja Shiro Roga* can be identified in this condition.

Ardhavabhedaka-According to *Acharya Sushruta* clinical features of *Ardhavabhedaka*(migrain) are half of the head has severe pain such as splitting, pricking, churning etc. appearing in bouts of (intervals of) either fifteen or ten days and without any known cause. *Acharya Vagbhata* also explains about the pain in the half of the head. He explains that the intervals between two attacks are either fortnight or a month and pain sub sides its own accord. When greatly aggravated it may destroy either eye or ears.

Table 04: Pain and associated symptoms According to Ayurveda

	<i>Vataja Shiro Roga</i>	<i>Pittaja Shiro Roga</i>	<i>Tridoshaja Shiro Roga</i>	<i>Ardhavabheda</i>
Location of Pain	In between brows, neckpain, pain on temples	Whole head	Whole head	Half of the head
Type of Pain	Severe Pain	Feeling of head spread with burning coal	Feeling of coated	Severe painsuch as splitting, pricking, churning etc.
Pain Reduce with	Bandaging, Hot application	Night , <i>Sheeta Upachara</i>	Heaviness	Automatically

Associated symptoms	Rigidity of the lower jaw and the shoulders, intolerance to light and running nose,	Fever, Hot fumes coming from nose and mouth	Swelling of the Eye-orbit and Face, Anorexia, Laziness	Visual or hearing impairment
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DISCUSSION: The traditional science used ancient Ayurvedic physicians, for classification, diagnosis and treatment of diseases are somewhat different from the modern science. Ancient Ayurvedic physicians basically used *Darshana*(inspection), *Sparsha*(Touch) and *Prashna*(question) for *Rogi Pariksha* (Examination of patients). Analysis of *Vataja Shiro Roga* displays elevation time as night and pain reduction with binding and mild fomentation which quite similar to the features and relief of Tension type headache. Further, the pain arising location *Vataja Shiro Roga* of mentioned in *Ashtanga Hrida Samhita* is comparable with Tension type headache. One of the qualities in Cluster headache is burning pain which can be compared with *Daha*(burning sensation) in *Pittaja Shiro Roga*. Some of the associated features of Cluster headache are quite similar to *Pittaja Shiro Roga* such as burning sensation in the eyes and nose. Therefore, Cluster headache can be correlated with *Pittaja Shiro Roga*.

Migraine can be correlated with *Ardhavabhedaka* as both the disease conditions possess many similar features. According to *Acharya Sushruta*, *Ardhavabhedaka* has a chronicity of occurring bouts of either fifteen or ten days and migraine also bears chronicity too. Site of pain in both conditions are very similar and it is unilateral. Severity of pain described as splitting, pricking, churning etc. in *Ardhavabhedaka* and in migraine moderate to severe pulsatile headache.

It is difficult to give a 100% compatible correlation of *Shiro Roga* with the types of Primary Headaches. It is said that Ayurvedic *Acharyas* who were presented in Vedic period and prehistoric time were used a divine power to learn and teach the knowledge of Ayurvedic science.

CONCLUSION: Though it is not possible to provide a comprehensive comparison of types of primary headaches with *Shiro Roga*, tentative correlation can be done. Consequently, *Vataja Shiro Roga* with Tension type headache, *Pittaja Shiro Roga* with Cluster headache, *Tridoshaja Shiro Roga* with Transformed migraine and *Ardhavabhedaka* with Migraine.

REFERENCES

1. Webmed, <https://www.webmd.com/migraines-headaches/migraines-headaches-basics>, access date 16.10.2020
2. Bhardwaj, A. (2015), Comprehensive Compendium of Supraclavicular Disorders in Ayurveda, 627-683
3. Sphenopalatine Ganglion Block for Headache, Corporate Medical Policy, Last CAP Review: 10/2019, BlueCross BlueShield of North Carolina
4. International Headache Society, Leading Headache Science, education and management globally, <https://www.ihs-headache.org>
5. Murthy, K.R.S. (2018) Sushruta, Sushruta Samhita, Chapter 25, Chaukhamba Orientalia, Varanasi; p.133-136
6. Sphenopalatine Ganglion Block for Headache, Corporate Medical Policy, Last CAP Review: 10/2019, BlueCross BlueShield of North Carolina

7. Murthy, K.R.S. (2017), Vagbhatta, Ashtanga Hrida,Uttara Sthana, Chapter 23,
Chowkhamba Krishnadas Academy, Varanasi; p.218-220