

## A CASE STUDY ON NEURO-OPHTHALMOLOGY AND ITS CONTRIBUTION TO HEADACHE

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### ABSTRACT

Headache is one of the most commonly experienced of all the physical discomfort. It can occur as a result of many conditions. Ophthalmologists are often the first physicians to evaluate patients with headaches, eye pain and headache associated visual disturbances. Patients believe that appropriate ocular examination and treatment help to lessen their headache visit ophthalmologist's very frequently. Many primary headache disorders have ophthalmic features and secondary causes of headache frequently involve the visual symptoms and signs are associated with headache disorders. Moreover, the frontal or retro-orbital pain of some primary ophthalmic conditions may be mistaken

for a headache disorder, particularly if the ophthalmologic examination is normal. This case study shows how to diagnose case of headache in ophthalmic practice and the red flag signs which need referral to other specialists.

**KEYWORDS:** Headache, ophthalmology, red flag sign, neuro-ophthalmology.

### INTRODUCTION

In Ayurveda, shirashool (headache) has been given as a symptom of many diseases. Ayurvedic texts also describes shirashool as a primary disorders in shirorogas. Shira has been given utmost importance by Charak who has declared it as the most important part of the body.

Shira is considered as a uttamanga as it is the seat of panchadnyanendriya. Shira is the place where indriya, indriyavahastrotas and pranvahastrotas is located.

Shira is the seat of prana hence shira is considered one among dashapranayatana.

It is one of the trimarma. And out of 107 marma 37 marma are situated in shiras.

Shiraroga is defined as the one where shirashool is prime symptom.

Acharya Shushrut mentioned 11 shirarogas and Acharya charak mentioned only 5 shirarogas.

Though headache is the cardinal symptom of most of the shirarogas still it is considered as a commonly experienced discomfort.

Many neuro-ophthalmic conditions are associated with head or ocular pain.

Some are benign and others are potentially life threatening.

Rather than listing and describing numerous conditions this article presents single case interfacing neuroophthalmology and headache, and approach to obtain the proper diagnosis and management.

The discussions are not intended to be exhaustive but include conditions encountered in practice that present a diagnostic challenge.

## **AIM**

To diagnose exact cause of headache with reference to neuro-ophthalmology.

## **OBJECTIVES**

To study different diagnostic approach for evaluation of headache.

## **MATERIAL AND METHODS**

### **Case history**

A 37 year old male came with complaints of headache since last 6 months. Having no any history of any active present or past illness.

H/O alcohol and tobacco consumption since past 10 years. C/O –

- Headache (retro-orbital) - 6 months
- Mild blurring of vision

O/E –

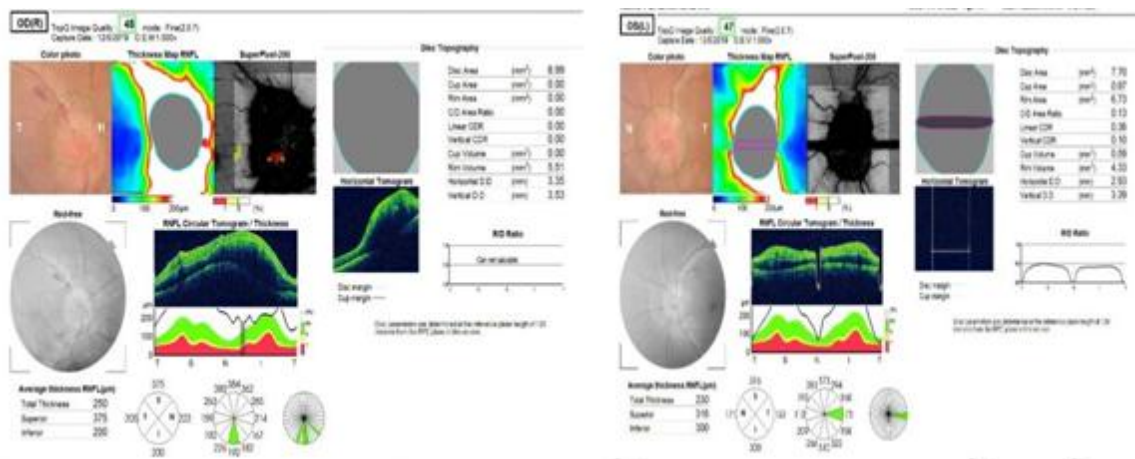
- Visual acuity of both eyes – 6/9
- Eye movements – orthophoric in nature

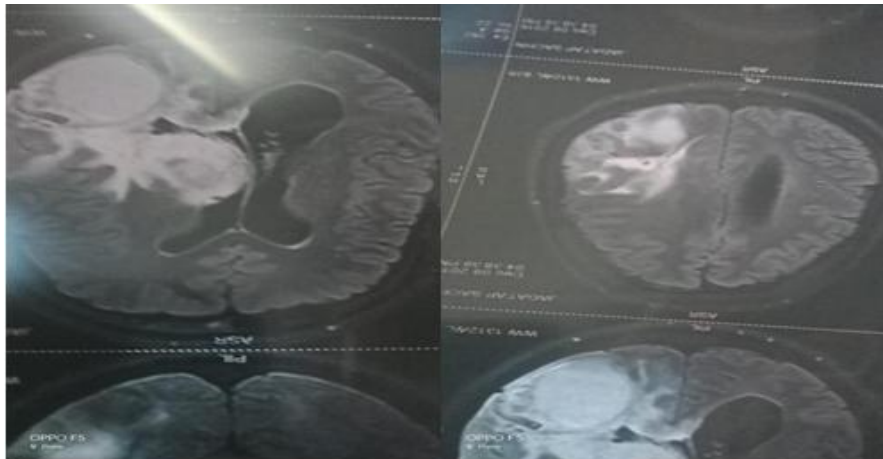
- Anterior segment – within normal limit
- Posterior segment – **champagne cork** like appearance of optic disc in both eye.

## INVESTIGATION

- PERIMETRY shows bilateral right inferior homonymous hemianopia.
- OCT scan shows chronic papilledema in both optic disc.
- CT BRAIN – shows illdefined ASI seen in left thalamus, left temporal lobe extending into left parietal lobe with extensive perifocaledema in posterior lobulated cystic component of 47\*38\*56 mm, the lesion in total is of 88\*44 mm.

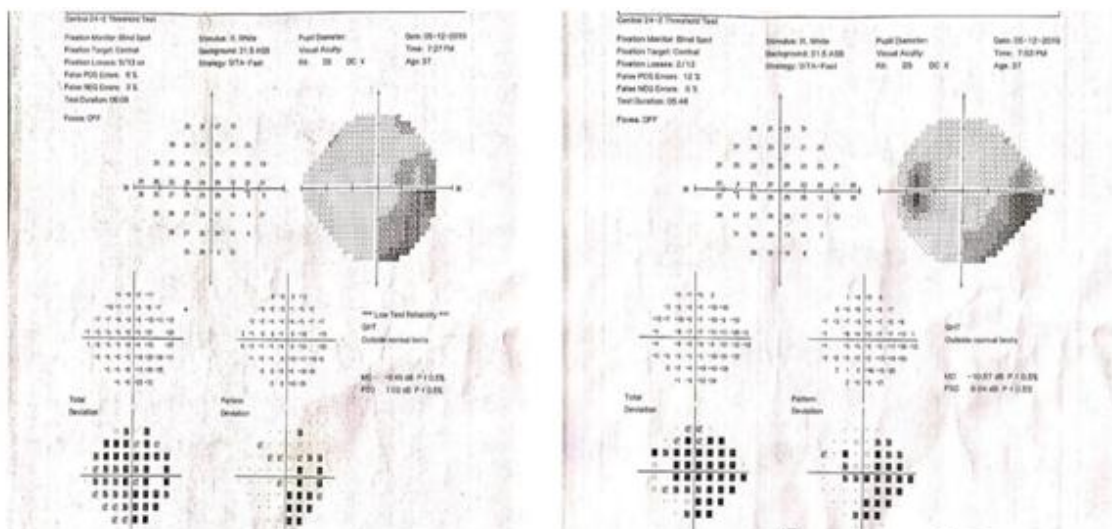
## OBSERVATION AND RESULTS





Right necessary images  
Old Reports Provided: NO

**IMPRESSION:**  
 Ill defined ASI seen in the left thalamus, left temporal lobe extending into left parietal lobe with extensive peritumoral oedema and posterior lobulated-cystic component of 47 x 38 x 56 mm. The lesion is total. It is 88 x 44 mm.  
 The lobulated cystic component is showing peripheral enhancement. On post-contrast studies adjacent few smaller similar cysts seen. There is no enhancement of the solid component.  
 Linear hypointensity seen lateral to it on GRE images w/o bleed/Poikilocytosis.  
 The lesion is seen to extend into the left side of midbrain.  
 The solid component of lesion is isointense on T1WI, DWI and hyperintense on T2WI and FLAIR.  
 The lesion is causing mass effect in the form of partial obliteration of 3<sup>rd</sup> ventricle and left lateral ventricle causing dilatation of bilateral lateral ventricles and effacement of adjacent sulci.



**DISCUSSION**

In this case, we can say that papilledema happened due to the pressure of space occupying lesion found in brain on the optic nerve.

Generally papilledema causes brief changes in the vision but in this case there was no any ophthalmic complaints as he was unaware of it when the perimetry examination was carried out it was found that patient had right inferior homonymous hemianopia.

The patient was complaining of retro-orbital headache since 6 months it may be associated with increased intra cranial pressure due to the lesion.

After thorough clinical examination and investigations the patient was diagnosed with left parieto-temporal glioma and patient hence was referred to higher centre for further management.

So this case study shows that never ever ignore a complaint of headache before diagnosing exact cause of headache.

As it is said by Acharya Charak,

एको हेतुरनेकस्य तथैकस्यकएव हि । व्याघ्र कस्य बहवो बहूनां अवस्तथा '- इति

(च. नि.८)

One cause can create one disease like that it can be responsible for many diseases too. Hence the diagnosis of the root cause should be made to treat the disease. As further stated by Acharya Gangadhar,

एकनिदानकानाम् अनेकव्याधिनाश्च समानानेकनिदानकानां वा न निश्चयेन व्याधीनां ज्ञानं भवति को व्याधिभविष्यतीति संशयात् । निदानस्य सन्निकर्षविप्रकर्षादिना जयपराजयविद्यातादितो व्याधुत्पत्तिव्यभिचाराच्च ।  
च. नि. १-५ (गंगाधर टीका)

For proper diagnosis of disease we should use different diagnostic tools to reach the root cause of disease, as Ayurveda believes to treat root cause of disease.

Hence, by preferring these references proper diagnosis of the case represented above was done and the patient was referred for higher centre for further management.

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