



MANAGEMENT OF TUBERCULAR MENINGITIS INDUCED DIPLOPIA WITH VIDDHA KARMA- A CASE REPORT

Ayurveda

**Dr. Shamli
Shailendrakumar
Pawase**

Ph.D. Scholar, Assistant Professor, Department of Shalakya Tantra, Sumatibhai Shah Ayurved College, Hadapsar, Pune, Maharashtra, India

**Prof. Dr. Nilakshi
Shekhar Pradhan**

Professor and HOD, Department of Shalakya Tantra, Sumatibhai Shah Ayurved College, Hadapsar, Pune, Maharashtra, India

ABSTRACT

Ophthalmic manifestations of meningeal tuberculosis are very common. Patients may get complications like optic disc edema, cranial nerve paralysis causing diplopia or primary optic atrophy. In ayurvedic context, double vision is explained in Dwitiya Patalagata Timira by Acharya Wagbhat. Acharya has also explained Siravedh (bloodletting) as a treatment modality in Timira Vyadhi. Double vision or Netra Vakrata is mainly a symptom of Vata Dosh Dushti. A 23 year female patient diagnosed with meningeal tuberculosis visited ophthalmic OPD for the treatment of diplopia and squint. Patient started with the symptoms like fever, generalized weakness, left sided facial weakness and left eye squinting before 7 days. Patient was diagnosed with meningeal tuberculosis after cerebrospinal fluid examination and got relief from all other symptoms after starting tuberculosis treatment except squinting of left eye and diplopia. Patient was diagnosed as Dwitiya Patalagata Timira at our OPD and Viddhakarma was the only line of treatment selected for management. Viddhakarma at selected points were done after every 3 days. After 6 settings of Viddhakarma patient's diplopia and squinting was completely resolved. Injection Botox is the only available treatment for such patients which has limited period action and other side effects too. But Viddhakarma itself can be a complete plan of care to treat these types of patients.

KEYWORDS

Diplopia, Tubercular Meningitis, Timira, Viddhakarma

INTRODUCTION

Tubercular meningitis (TBM) is one of its severe forms. The causative organism for TB is Mycobacterium tuberculosis and typically occurs when TB bacteria spread from other parts of the body to the brain and spinal cord through the bloodstream or lymphatic system. It affects the meninges i.e. covering of the brain and spinal cord making the diagnosis and treatment more difficult. Early diagnosis of the disease is necessary to avoid further complications¹.

TBM presents with a wide spectrum of symptoms like fever, headache, nausea, and vomiting. As the disease progresses, patients may experience neurological symptoms such as altered mental status, seizures, cranial nerve palsies which can lead to symptoms like diplopia or double vision, and signs of increased intracranial pressure such as papilloedema. Diagnosis of TBM can be challenging as its symptoms are nonspecific. The diagnosis needs cerebrospinal fluid (CSF) analysis, which often reveals characteristic findings such as lymphocytic pleocytosis, elevated protein levels, and low glucose levels. Imaging studies like CT scans or MRI can also help in diagnosis by revealing signs of meningeal inflammation or tuberculomas¹.

It primarily involves central nervous system but it can also have ophthalmic manifestations due to its connections through cranial nerves. Ophthalmic manifestations of meningeal tuberculosis are very common. Patients may get complications like optic neuritis, cranial nerve paralysis causing diplopia or primary optic atrophy, chorioiditis, papilloedema etc².

TBM treatment involves a multidrug regimen with antitubercular drugs (ATT) that are effective against Mycobacterium tuberculosis. The standard treatment regimen typically includes a combination of isoniazid, rifampicin, pyrazinamide, and ethambutol for an initial intensive phase, followed by a continuation phase with fewer drugs for a prolonged period to prevent relapse. The phase of complications many times needs a course of corticosteroids for long term. Regular monitoring and follow up by ophthalmologist is necessary to early diagnose ophthalmic complications of the disease and drugs in ATT¹.

This case study represents the symptom of double vision i.e. diplopia in a patient diagnosed with tubercular meningitis. In Ayurvedic context, double vision is explained in Dwitiya Patalagata Timira by Acharya Wagbhat. According to Wagbhat, symptom of Dwitiya Patalagata Timira is 'Dwidhaikam drushtimadhyasthe' which mean double vision. Acharya Wagbhata has also explained bloodletting as a treatment modality in Timira Vyadhi³.

Case History

A 23 years female patient was working in IT sector since 2 years having

8-10 hours sitting job in front of desktop. Since then patient was having neck pain and rigidity. Patient was started with complaints of frontal headache, continuous nausea with intermittent episodes of vomiting on 1/11/2023. Next day patient was admitted in emergency dept to a nearby hospital after an episode of up rolling of eyes followed by unconsciousness for a short period with right sided body parts weakness and stretching. Patient underwent some diagnostic tests there like MRI Brain, all other lab investigations which turned out to be normal. As suggested by the Neurologist, patient underwent for CSF (cerebrospinal fluid) culture which was suggestive of Tubercular meningitis.

Treatment and recovery- Patient was started with ATT (anti-tubercular treatment) and steroid therapy. After about 10 days, patient slowly recovered from all other symptoms except ophthalmic manifestations of the disease. Hence patient was referred to Shalakya Tantra Netra OPD for ophthalmic opinion. At the first visit patient was on following medications.

Sr. no.	Medicine	Dose
1.	Cap. RcineX	1-0-0
2.	Tab. Combutil 800	0-1-0
3.	Tab. PZA 750	1-0-1
4.	Tab. Benadon 40	1-0-0
5.	Tab. Levipil 500	1-0-1
6.	Tab. Matilda plus	1-0-0
7.	Tab. Dexona 8mg	1-0-1 in tapering dose for 30 days

On first day examination clinical findings:

Sr. no.	Heading	Right Eye	Left Eye
1.	Lids	Normal	Normal
2.	Conjunctiva	Normal	Normal
3.	Cornea	Clear	Clear
4.	Pupil	No abnormality noted	No abnormality noted
5.	Anterior Chamber	Normal	Normal
6.	Lens	Normal	Normal
7.	Fundus	No abnormality noted	No abnormality noted
8.	Distant Vision	6/6	6/6
9.	Colour Vision	Normal	Normal
10.	Near Vision	N/6	N/6
11.	Extra Ocular Movement	Medial rectus restricted movement	Normal

Ayurvedic Diagnosis-

On examination patient was diagnosed as Dwitiya Patalagata Timira³.

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वा. उ. १२/ ४

Vitiated Doshas travel through the Sira to the second Patala and causes double vision.

Treatment

Acharya Sushruta has explained Viddha Karma at specific points in various diseases. It is similar to acupuncture therapy of old Chinese treatments. Specific vital points are pricked 2mm deep with a sharp needle¹.

This patient was advised Viddhakarma twice weekly after every 3 days on selected points which are⁵-

- उपनासिका मर्म
- ललाट मर्म
- अपाङ्ग मर्म

Reference of Viddha Karma in Netra Roga⁴

तिमिराक्षिपाकप्रभृतिष्वक्ष्यामयेषूपनासिके ललाट्यामपाङ्ग्यां वा,

एता एव च शिरोरोगाधिमन्थप्रभृतिषु रोगेष्विति

(सु.शा. ८/२९)

Viddhakarma was the only treatment selected for this patient. Viddhakarma was done with sterile ½ inch 26 number needle. Same treatment protocol continued for 3 weeks. After 5 sittings Kshipra Marma was added for Viddha Karma. After 6 sittings, patient was completely resolved.

DISCUSSION

The case study represents an important intersection of modern medical practice and traditional Ayurvedic treatment in the management of ophthalmic manifestations of meningeal tuberculosis, specifically double vision and squint. Meningeal tuberculosis is a severe complication of tuberculosis that often affects the central nervous system and can lead to visual disturbances, such as optic disc oedema, cranial nerve paralysis, and optic atrophy. The patient described in the study, a 23-year-old female diagnosed with meningeal tuberculosis, initially experienced a range of neurological symptoms, including fever, facial weakness, and squinting of the left eye, which later developed into diplopia.

In this case, after the tuberculosis treatment successfully addressed the systemic symptoms, the ocular manifestations persisted. The patient was diagnosed with Dwitiya Patalagata Timira, a condition described by Acharya Waghbhatta in Ayurved Samhita, where double vision and Netra Vakrata is attributed to disturbances in the Vata Dosha. Acharya Waghbhatta's treatment for such conditions, including the use of Siravedh (bloodletting) and other techniques like Viddha Karma, offers an alternative therapeutic approach to managing ocular symptoms³.

The patient was treated with Viddha Karma, an Ayurvedic procedure involving therapeutic puncturing at specific vital points, done at regular intervals, which resulted in complete resolution of both the squint and diplopia after six sessions. The Kshipra Marma was added at sixth session gave magical results. Viddha Karma at Kshipra Marma is specifically suggested in Vat-Rakta Chikitsa by Acharya⁵. The history of sedentary lifestyle in a specific posture for long time shows the long term vitiation of Rakta and Vata Dosh. Many Chinese research studies prove the spike changes in EEG after acupuncture therapy at visual cortex centre⁷.

This outcome suggests that Viddhakarma may be an effective treatment option in cases of diplopia due to meningeal tuberculosis, offering a non-invasive, long-lasting solution compared to the temporary effects and potential side effects of conventional treatments such as Botox injections^{6,7}.

CONCLUSION

This case emphasizes the potential role of Ayurvedic therapies in complementing conventional medical approaches, particularly when

modern treatments are limited in scope or come with significant side effects. However, more extensive studies and clinical trials are needed to substantiate the efficacy of Viddhakarma as a standard treatment for such ophthalmic manifestations.

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