

EFFICACY OF JIVANTYADI GHRITA NASYA AND NETRA TARPANA IN THE MANAGEMENT OF EALES DISEASE (TIMIRA) – A CASE STUDY

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ABSTRACT

Introduction – Eales disease is an idiopathic occlusive vasculitis involving the peripheral retina. Clinical findings in Eales disease are characterized by avascular areas in the peripheral retina followed by microaneurysms, and neovascularization and are hallmarked by recurrent vitreous hemorrhages and vision loss. The symptoms of Eales disease can be correlated to *Dwitiya Patalagata Doshdushtijanya Timira* in Ayurveda. When the vitiated *Doshas* are situated in the *Dwitiya Patala*, it causes confused visual perception and appearance of bees, flies, and circles in front of the eyes, which can be correlated with *Timira* described by *Acharya Sushruta*. According to *Acharya Vagbhata*, *Nasya* and *Netra Tarpana* are indicated in *Timira's samanya chikitsa*. Here, we present a case of 38 years old male patient, previously diagnosed and treated with Eales disease that underwent *Ayurvedic* treatment at our institution and showed remarkable improvement. **Case presentation** – A 38-year-old male patient, presented to our institution's OPD with complaints of diminution of vision in both eyes, floaters, specks, and cobwebs in the vision of both eyes in the last eight months. He was previously diagnosed with Eales disease in both eyes with the help of FFA and fundus photography. He was treated with oral steroids, AKT (Anti- Koch's Therapy), Intravitreal injection in both eyes, and Pan-retinal photocoagulation therapy in the left eye. But due to poor response and recurrent retinal haemorrhages and neovascularization, he was advised of left eye Vitrectomy. Hence the patient opted for *Ayurvedic* management. He underwent *Jivantyadi Ghrita Nasya*, and *Netra Tarpana* along with oral medications like *Saptamrut Lauha*, *Panchatiktaghrita Guggul*, and *Avipattikar Churna* for one month. **Result**- His visual acuity improved significantly from 6/18 to 6/9 in the right eye and 6/36 to 6/12 in the

left eye. In fundoscopic findings, vitreous haze decreased, and active haemorrhages were arrested after one month of treatment. **Conclusion-** Thus it can be concluded that *Jivantyadi Ghrita Nasya and Netra Tarpana* were found to be effective in treating signs and symptoms of Eales disease.

Key words: Eales disease, *Jivantyadi Ghrita, Nasya, Netra Tarpana, Timira.*

INTRODUCTION

Eales disease is an idiopathic inflammatory venous occlusive disease involving the peripheral retina. It primarily affects young adult males and is often bilateral^[1]. In 1880, Henry Eales first described it in healthy young men with abnormal retinal veins and recurrent vitreous hemorrhages^[2]. Eales' disease mainly affects young males in their second decade of life. It is more prevalent in India and Middle Eastern countries with cases observed worldwide. No definite cause for Eales disease has been found to date and it is considered idiopathic. The three hallmark signs of Eales' disease are retinal venous inflammation (periphlebitis), ischemia, and subsequent retinal neovascularization. It is characterized by mid-peripheral venous dilation, perivasculature exudates along the peripheral veins, superficial retinal haemorrhages, and even macular edema. The vascular abnormalities at the junction between perfused and non-perfused zones include microaneurysm, veno-venous shunts, venous beading, and occasionally hard exudates and cotton wool spots^[3]. Vascular sheathing ranges from thin white lines limiting the blood column on both sides to the segmental heavy exudative sheathing. As per *Ayurveda*, the condition was compared to *Timira*, a *Drushtigata Roga*. The *Doshas* invade the first two *Abhyantara Patalas* of the *Netra* to cause *Timira*. When the *Dushita Dosha* achieves *Urdhvagamitva* and reaches the second *Patala* of the eye, it is characterized by *Vihwaladarshana* and *Gocharavibhrama*^[4]. When the vitiated *Doshas* are situated in the second *Patala* they cause confused visual perception and appearance of bees, flies, and circles in front of the eyes. These symptoms of Eales disease can be correlated to *Dwitiya Patalagata Doshdushti Lakshan* of '*Drushtirbhrisham Viwhalati*', '*Makshikamashakan Keshanjaalakani*^[5]. The *Viwhala Darshana* (Blurring of vision) symptom is produced due to affliction of the second *Patala*. *Akshiragam*, *Tamasyatidarshanam*, and *Raktapitta* are described as *Raktaja*

Vyadhi in *Charak Samhita*^[6]. These can be correlated with vision defects in Eales due to microvascular complications. The inflammatory changes in the blood vessels were caused by pathological *Pitta* and *Rakta* due to the two having *Ashraya-ashrayi Bhava*, and thus having the proclivity to complement each other's pathological activities. According to *Acharya Vagbhata*, *Nasya and Netra Tarpana* are indicated in *Timira's Samanya Chikitsa*^[7]. Management depends on the underlying etiology and control of inflammation. Management options in modern science like recurrent use of oral Steroids, Steroid injections may have side effects as well these may not produce Satisfactory results, and hence approaches in complementary and alternative medicine may be sought. The *Ayurvedic* management of Eales disease is presented in this report.

Case presentation:

A 38-year-old male patient presented on 12th May 2022 to the *Shalakyatantra* OPD of the institution with complaints of diminished vision in both eyes, floaters, Specks, and cobwebs in the vision of both eyes for the last 8 months. There was no history of recent travel or trauma, any known allergies, or addiction. He denies any history of significant illnesses, and his immediate family members do not present with similar complaints. His blood pressure, pulse, heart rate, and respiratory rate were also normal. The patient consulted another ophthalmologist & was diagnosed with Eales disease in both eyes with the help of FFA and fundus Photography. He was given oral steroids, steroid injections, and AKT which did not provide relief. He had also taken Intravitreal Injections of Avastin (An anti-VEGF agent) in both eyes. He underwent one sitting of Pan-retinal photocoagulation therapy (PRP) in his left eye before starting *Ayurvedic* treatment. He was also advised for left eye Vitrectomy.

| Table 1: Visual acuity | | | | |
|-------------------------------|-----------------|----------|-------------|----------|
| Vision | Distance vision | | Near vision | |
| | Right eye | Left eye | Right eye | Left eye |
| Unaided | 6/18 | 6/36 | N8 | N8 |

| Table 2: Local examination | | |
|-----------------------------------|-----------------------------------------|-----------------------------------------|
| | Right Eye | Left Eye |
| Lid | Normal | Normal |
| Conjunctiva | Normal | Normal |
| Sclera | Normal | Normal |
| Cornea | Clear | Clear |
| Anterior chamber | Maintained | Maintained |
| Iris | Normal | Normal |
| Pupil | Round, regular, reacting | Round, regular, reacting |
| Intraocular pressure | 14.6 mm Of Hg with Schiotz Tonometer | 17.3 mm Of Hg with Schiotz Tonometer |

| Table 3: Fundus examination | | |
|------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------|
| | Right eye | Left eye |
| Disc | NAD, CD Ratio –Normal | NAD, CD Ratio –Normal |
| Macula | NAD | NAD |
| Vessels | Vascular sheathing, microaneurysms, vessels obliteration | Vascular sheathing, microaneurysms, vessels obliteration |
| Background | Areas of capillary non-perfusion, retinal neo- vascularization | Areas of capillary non-perfusion, retinal neovascularization Old PRP scars |
| Lens | Early cataract changes | Early cataract changes |

Diagnostic assessment:

FFA and fundus photography findings –

- Areas of capillary non-perfusion
- Perivascular sheathing of peripheral vessels
- Vessel's obliteration
- Retinal Neovascularization

Laboratory investigations:

CBC, ESR, Blood glucose level, Sickle Cell preparation & HB electrophoresis, ACE & lysosome level, ANA (anti-nuclear antibody), RA factor, Mantoux test, and TB interferon were within normal limits.

| Table 4: Timeline of events | |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date | Event |
| Jan 2022 | Diagnosed with Eales disease |
| Feb 2022 | Oral steroids and steroid injections taken |
| March 2022 | Started AKT |
| April 2022 | PRP (Pan-retinal photocoagulation) therapy one sitting done |
| May 12, 2022 | The patient presented to the OPD with Diminished vision in both eyes, floaters, specks, and cobwebs in the vision of both eyes. Oral medicines started: Tab <i>Saptamrut Lauha</i> , Tab <i>Panchatikta Ghrita Guggul</i> , <i>Avipattikar Churna</i> |
| May 19, 2022 | <i>Nasya</i> and <i>Netratarpan</i> started |
| June 19, 2022 | <i>Nasya</i> and <i>Netratarpan</i> stopped and started with <i>Pratimarsha Nasya</i> |
| June 19, 2022 | Visual acuity improved, and signs and symptoms decreased |

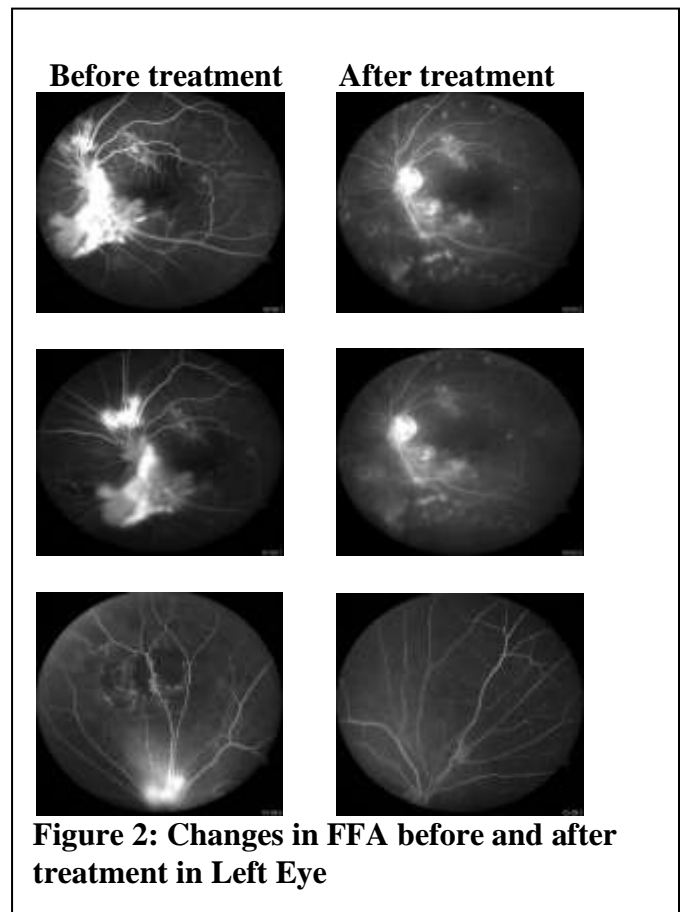
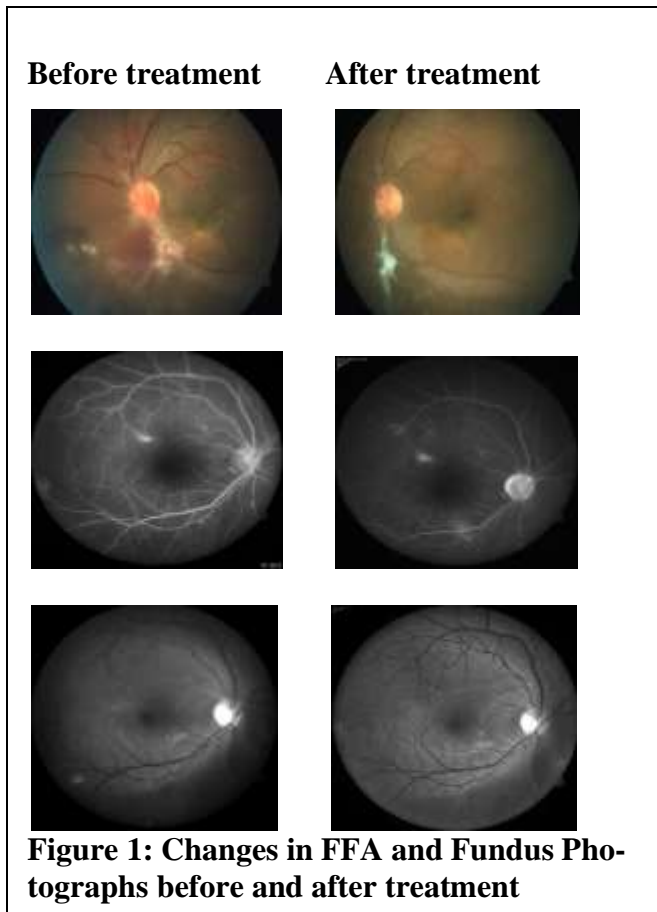
Therapeutic Intervention:

दोषानुरोधेन च नैक्शस्तं स्नेहास्त्रनैविस्त्रावणरेकनस्यैः। उपाचरेदंजनमूर्धबस्तिबस्तिक्रियातर्पणलेपसकैः ॥ - अष्टागहृदय
उत्तरतंत्र १३ / ४८ (तिमिर सामान्य चिकित्सा)

➤ Patient underwent an Ayurvedic treatment protocol comprising of -

- Oral medications: Tab *Saptamrut Lauha*, Tab *Panchatikta Ghrita Guggul*, *Avipattikar Churna*.
- *Nasya Jivantyadi Ghrita*
- *Netra Tarpana Jivantyadi Ghrita*
- *Pathya-apathya*

| TABLE 5: AYURVEDIC MANAGEMENT | | | | |
|-------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Drug | Ingredients | Dose | Anupana | Duration |
| <i>Nasya Jivantyadi Ghrita</i> | <i>Jivanti, Ghrita, Kakoli, Kshirkakoli, Pippali</i> | 8 drops ^[8] in each nostril | <i>Snehan-Til Tel, Swedan-Nadi Swed</i> , instilled prescribed drops of oil in each nostril, gargling with warm <i>Triphala Kwath</i> | 1 month |
| <i>Netra Tarpana-Jivantyadi Ghrita</i> | <i>Jivanti, Ghrita, Kakoli, Kshirkakoli, Pippali</i> | 3 sittings of 5 days with 1000 <i>Vakmatra Dharankala</i> | Created a well-out of <i>Maash</i> dough around both the eyes, filled it with warm <i>Ghrita</i> until the eyelashes were immersed completely, and kept it for 800 <i>Matras</i> , after removal of the <i>Ghrita</i> and <i>Paali</i> , <i>Prakshalan</i> with Warm water was done. | 1 month |
| Tab. <i>Panchatikta Ghrita Guggul</i> (started 15 days after 1st visit) | <i>Panchatikta, Go Ghrita, Guggul</i> | 2-0-2 | Warm water | 1 month |
| Tab <i>Saptamrut Lauha</i> | <i>Loha Bhasma, Yash-timadhu, Triphala</i> | 2-0-2 | Warm water | 1 month |
| <i>Avipattikar Churna</i> | <i>Triphala, Trikatu, Trivrutta, Sharkara, Vida Lavana</i> | 1 gm at bed-time | Warm water | 1 month |



| Table 6: Follow-up findings | Right eye | Left eye |
|-----------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Visual acuity (unaided) | 6/9 | 6/12 |
| Fundus examination findings | Vitreous floaters decreased. Vitreous haze decreased. Active hemorrhages were arrested | Vitreous floaters decreased. Vitreous haze decreased. Active hemorrhages were arrested |

DISCUSSION

Eales disease a *Drishtipatalagata Roga* is mainly attributed to *Sira*, *Srotasabhishyandam*, and *Raktavaha Sroto Dusti*. In this context of *Siroabhishyandam* in eye diseases the *Ashraya Sthana* is *Srotas*, the affected *Dhatu* is *Rakta* and vitiated *Dosha* is *Pitta*. In order to understand the *Samprapti* of Eales disease in *Ayurveda*, the general *Samprapti* of eye disease must be considered. Due to *Achakshushya Hetu Sevana*, the vitiated *Pitta* and *Rakta* have an affinity towards penetrating the eyes. Hence the vitiated *Dosha* moves towards the eyes through *Jatroordhwa Srotas* and finally gets con-

finied to the eyes^[9]. The pathology starts with *Sroto Dushti* of *Raktavaha Srotas* manifested as microangiopathy in the form of *Attipravrutti*, *Sanga*, and *Granthi* as haemorrhages and exudates. *Akshiragam*, *Tamasyatidarshanam*, and *Raktapitta* are described as *Raktaja Vyadhi* in *Charak Samhita*. These can be correlated with vision defects in Eales due to microvascular complications. In Eales though initially *Raktashaya* and ischemia occur later on blood circulation increases, which leads to haemorrhages and exudative features. Due to a lack of circulation, there is localized hypoxia which results in the development of new vessels. As these vessels are

fragile, they bleed easily. The texture of vessels is damaged and hence the permeability increases. This results in leakage and hemorrhages from the blood vessels [10]. Exudates formation, neovascularization, and proliferation of the tissues are all these factors altogether lead to degenerative changes in the retina. In this context, *Urdhawaga Raktapitta* can be correlated with Eales disease, according to *Charaka*. Etiologies explained in *Vidhishonitiya Adhyaya* of *Charak Sutrasthan* are responsible for the quantitative increase of *Rakta Dhātu*, which impedes the movement of *Vata Dosha* hence normal circulation is hampered and stagnation takes place leading to *Sanga* of *Raktavaha Srotas*. Treatment of *Raktavrita Vata* should be done as per *Vataraktachikitsa* [11] to normalize the movement of obstructed *Vata Dosha*. Restoration of vascular integrity was achieved by *Rakta Shodhaka* action of the treatments. This action was aimed at reducing *Pitta*, the chief instigator of *Rakta* becoming pathological. Improvement of vision was brought about by the *Chakshushya* and *Rakta Shodhaka* properties. By normalizing the retinal pathology, clarity and acuity of vision could be improved.

- *Nasya*: *Nasya Karma* is described for *Timira* because the nose is a gateway to drug administration in the case of *Urdhwajatrugata Roga*. *Acharyas* have recommended all efforts to strengthen the eyes by resorting to *Nasya* in *Timir Chikitsa*. *Nasya* with *Jivantyadi Ghrita* is useful due to its *Vaatpitta Shamak*, *Timir-nashak Yog* [12]. *Pratimarsa Nasya* was done during the second course of treatment as it was determined that the body was considerably purified. It enters through the cribriform plate and instigates excitatory neural activity by acting on neurotransmitters in the brain. *Jivantyadi Ghrita* was used for *Nasya* due to its *Vaatpitta Shamak* and *Rasayan* properties.
- *Netratarpan*: It is the most revered *Kriyakalpa* extensively used in *Netra Roga*. The drug availability in intraocular tissues increases due to the longer duration of drug contact and the lipophilic and hydrophilic nature of drugs in medicated

Ghritas in the *Netratarpana* procedure. Due to *Raktapittashamak*, *Ropaka*, and *Rasayan* properties, *Jivantyadi Ghrita* is used to alleviate hemorrhagic signs [13].

- *Avipattikara Churna - Rechaka* is indicated for all *Pitta Rogas* and has gastroprotective, antioxidant, anti-secretive, and anti-inflammatory properties. *Virechana Karma* is instrumental in the modulation of gut micro-biota in the intestine, which plays a key role in inflammatory disease [14, 15].
- *Saptamrita Lauha* – It helps in optimizing eyesight by its *Rasayana* (rejuvenating) property and is antioxidant by nature [16].
- *Panchatikta Ghrita Guggul* – It has *Shothahara* (anti-inflammatory) properties. It balances *Pitta* and also has depurative (purifies blood) and antioxidant properties [17].

CONCLUSION

The protocol was found to be effective in arresting further pathogenesis and improving both visual acuity and posterior segment findings. The patient tolerated and responded well to *Nasya* and *Netra Tarpana*. The patient did not get any side effects during treatment. According to this case report it can be concluded that *Ayurvedic* management of Eales disease with *Nasya*, *Netra Tarpana*, and the Systemic medications provided faster relief from symptoms, thereby improving the quality of life of the patient.

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