



Basti: Gateway to Retinal Disorders Management.

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ABSTRACT:

In netra roga chikitsa, topical treatments in the form of kriyakalpa are frequently utilized. However, the fundamental idea behind ayurvedic medicine is shodhana, which is followed by shaman therapy. Acharya sushruta claims that Basti is both samshaman and sanshodhan. Even though it is suggested for the treatment of pitta, kapha, and sarvadhatu ashrita vyadhi, it is thought to be the best remedy for vata dosha. Basti treats ailments of all body channels, including urdhwajatrugata vyadhis, koshtha, marma, and shakha. Acharya Sushruta mentioned “चक्षुः प्रीणयति” when discussing the significance of basti chikitsa, suggesting that it should be recommended in cases of vascular and neuronal disorders of the eyes. The majority of retinal disorders are linked to systemic conditions that have horrifying consequences for the eyes. In light of this, an effort has been made to investigate lesser-known basti yogas from ayurvedic literature in netra roga, with particular attention to retinal conditions such as age-related macular degeneration (ARMD), diabetic retinopathy, and retinal vascular occlusion.

1. Introduction

Most systemic diseases, such as diabetes mellitus and hypertension, manifest ocular symptoms on the retina. The role of topical treatments, such as kriyakalpa, in their management is restricted. There are horrifying visual consequences associated with retinal disorders such as diabetic retinopathy, hypertensive retinopathy, age-related macular degeneration (ARMD), optic

neuropathy, and retinal vascular occlusion. Among the symptoms of timir are floaters, visual field defects, and visual impairment; patala gata dosha dushti is also seen in retinal disorders. We read about Timir under vataj nanatmaj vyadhi.¹ Vata is a necessary component for visual perception because it transmits visual impulses to the brain's visual cortex. The visual process involves pitta, kapha, sapta dhatu, and four abhyantar patalas in



addition to vata. For vata dosha, basti chikitsa is thought to be the most effective treatment. Even for the treatment of Pitta, Kapha, and sarva dhatu ashrita vyadhi, it is recommended.² Basti treats ailments of all body channels, including urdhwajatrugata vyadhis, koshtha, marma, and shakha. "चक्षुः प्रीणयति"³ has been mentioned by Acharya Sushruta in his explanation of the significance of basti chikitsa, suggesting its recommendation in cases of vascular and neuronal disorders of the eyes. Intravitreal anti-VEGF (Vascular Endothelial Growth Factor) injection is the primary, invasive, and often problematic treatment used today for retinal disorders. This treatment's effects are limited to the ocular area. However, because of its systemic action,⁴ basti chikitsa is regarded as a half or complete treatment.⁴

Ocular Diseases & Basti

The fundamental idea of ayurvedic medicine is that shaman comes after shodhan. As per acharya Sushruta, basti serves as both samshaman and sanshodhan. Dalhana states that Kala and Yoga basti are recommended for the Karma of Vata, Pitta, and Kapha Doshas, respectively. Shakha, Koshtha, and Marma Asthi Sandhi are among the tridoshas and trimarga diseases that Basti treats. The Acharya Sushruta refers to basti chikitsa as "चक्षुः प्रीणयति," implying that basti is effective in reaching eyes by piercing the blood-retina barrier. Yogaratnakara⁵, Vaghbata, and Acharya Sushruta had all mentioned basti chikitsa in Timir. Panchatikta Niruha Basti in Adhimantha (Primary Open Angle Glaucoma)⁶ has been recommended by Acharya Charaka. In cases of ocular diseases, basti chikitsa can be prescribed by knowing the likely mechanism of action and employing particular kinds and ingredients in accordance with vitiated doshas.

2. Methods

Probable Mode Of Action Of Basti According To Ayurveda

Similar to how the Sun's heat causes the Earth to absorb moisture, the administration of basti in the pakvashaya

brings the Dosha and Mala from all parts of the body, from the feet to the head. When a tree's roots receive irrigation, branches with leaves, flowers, and fruits are produced. When taken in the rectum, anuvasana basti produces amazing results from head to toe⁷⁸⁹. Pranayatana & Sadya Pranahara Mamsa Marma are the Guda (Anus). Due to the high sensitivity of the guda, the stimulation from the basti dravya activates the vayu through the sira, which has an overall effect on the body, including the chakshurendriya. This physiology demonstrates the wide-ranging effects of basti dravya and the connection between the colon and the central nervous system.

Probable mode of action of basti according to modern concept

When basti dravya is injected through the anal region, the intestinal mucosa absorbs it.

Mechanism acts as follows-

1. Absorption
2. Systemic Biology
3. Neural Stimulation
4. Excretion

Absorption: Depending on the basti dravya, basti may be absorbed by osmosis, adsorption, diffusion, or filtration. The upper hemorrhoidal vein absorbs basti dravya, which enters the portal circulation.

When used in basti dravya, saindhab alters tonicity and promotes quick absorption. Solution becomes colloidal with honey, improving bioavailability and penetration.

Oil/Ghee: increases basti dravya permeability through the outer blood retinal barrier and renders the solution lipophilic.

Systemic biology: medication entered through the anal region is absorbed by the mucosa of the intestine.

Drugs that are soluble in lipids are absorbed passively, while drugs that are soluble in water are absorbed actively. Through various diffusion mechanisms, basti dravya enters epithelial cells.



Neural stimulation: The second brain, or enteric neuron system, is stimulated by basti dravya, which in turn excites the submucosal plexus and mesenteric plexus.¹⁰

The gastrointestinal tract's colonic region is now a key location for drug delivery and absorption. Patients receiving both local and systemic treatment can benefit greatly from the use of colon specific drug delivery systems (CSDDS). The CNS receives information from neurotransmitters.¹¹ The effect is produced independently by the Central Nervous System(CNS)

Excretion: Compared to other areas of the intestine, the sigmoidal rectal and anal region of the large intestine have a significantly higher supply of parasympathetic nerve fibres. Their primary function is to stimulate, particularly the defecation reflex.

Disease specific action of basti

- Diabetic Retinopathy

A drishti patalagata roga, diabetic retinopathy is primarily described to sira srotas abhisyanda and raktavaha strotodusti because of various achakshyushya aahara and vihara karanas, particularly in patients with prameha.¹² One may refer to diabetic retinopathy as madhumeha janya patalagata roga. The etiological factors of netra roga, raktaj vyadhi, and madhumeha are nearly identical. Jatharagni and Dhatvagni cause mandya 'ama' to be created. Strotodushti and Sira Abhishyanda are caused by ama, and this is the primary pathological process for Netra Roga. Sira abhishyanda refers to the capillary leakage caused by oozing out. The pathophysiology of diabetic retinopathy involves the doshas of Vata, Pitta predominance, Kapha anubandha, Rakta, and Meda dhatu vitiation. Since Raktavaha srotas is impacted, various basti can be given at various stages of diabetic retinopathy. In Timir, Acharya Sushruta, Vaghbata and Yogaratnakara addressed the topic of basti chikitsa. Panchatikta Niruha Basti can be used for mild to moderate Non Proliferative Diabetic Retinopathy (NPDR) in madhumeha janya timir, which is diabetic retinopathy in the early stages of active

siroabhisyanda.¹³ madhutailik chakshushya basti can be used in cases of severe NPDR and Proliferative Diabetic Retinopathy (PDR).¹⁴ mustadi yapana basti and sthiradi niruha can be given in cases of severe dhatukshaya.¹⁵

- Age Related Macular Degeneration (ARMD)

One of the main causes of blindness is ARMD. Sclerosis of the arteries supplying the retina is the cause of ARMD.¹⁶ ARMD is classified as either dry or wet (exudative), and some researchers studying ayurveda have linked it to Pitta Vidagdha Drushti. ARMD is characterized by vitiation of Vata Pitta dosha, meda, asthi, and majja dhatu. It can be viewed as tritiya chaturtha patala gata timir. Therefore, Vata Pitta shamaka, strotas shodhana, and rasayana chikitsa should be used in the management of ARMD. Yapanam basti along with vaya sthapana gana dravya has been shown in a few clinical studies to be effective in ARMD.¹⁷ To manage ARMD, sthiradi niruha basti and yapana basti along with rasayana dravyas can be used.

- Retinal Vascular Occlusion

The pathogenesis of most retinal vascular disorders is microvascular occlusion (strotorodha, strotosanga), which results in ischemia and hypoxia in the retinal macular tissue, which causes retinal nerve degeneration and atrophy (dhatukshaya). In these conditions, basti nullifies vata, which is an intriguing factor in promoting the growth of neovascularization because vata has sanchari guna and leads to a network of weak blood vessels that are prone to hemorrhages (rakta pitta avastha). Thus, the recommended course of treatment may involve basti karma to pacify the vata dosha.¹⁸

3. Results

Table-1

Stage	Type of basti	Reference
Mild to moderate NPDR	Panchatikta niruha basti	Ch. Si 8/8



Severe NPDR and PDR	Madhutailik chakshushya basti	Va. ka 4/27-28
Severe dhatukshaya avastha	Sthiradi niruha and mustadi yapana	Ch. Si 3/36-37 Va. Ka 4/37-42



Figure- 1 - NPDR



Figure- 2 - ARMD

4. Discussion and conclusion

Advantages of Basti over Contemporary treatment	
Ayurvedic treatment Basti	Contemporary treatment Anti VEGF (Vascular Endothelial Growth Factor) Injection
Non Invasive	Invasive
Systemic action	Local action
Penetrate Blood Retinal Barrier	Penetrate Blood Retinal Barrier
Lesser Complications	Many complications

The primary causes of retinal disorders are dosha avarana-induced sira strotas and reduced nutrient supply to the ocular tissue in dhatus kshaya. Basti improves the nutritional status of all dhatus in the body, including netra, and serves as both a shodhana and a shamana. The nervous system and the vata dosha function similarly. Basti is the best Vata remedy because it works well on the nervous system, which includes the optic nerve and retina. Thus, basti chikitsa can be used to treat neurological and vascular conditions of the eyes, such as central retinal vein occlusion, diabetic retinopathy, and

occlusion of the central retinal artery. Since the rectum is the route of administration for basti, there is a lot of surface area available for drug absorption. Large doses of unpalatable tiktadi rasatmaka dravya can be administered without any problems using basti. Additional clinical trials on the less-studied basti chikitsa could open up new avenues for the treatment of retinal diseases.

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