

FUTURISTIC TRENDS IN SHALAKYA TANTRA

Abstract

Shalakyā Tantra, a specialized branch of Ayurveda, is dedicated to managing diseases of the precious sense organs, incorporating diagnostic skills from ophthalmology, otorhinolaryngology, and dental sciences. The field has witnessed significant advancements, with the adoption of new techniques for administering herbal compounds to the eyes through Kriyakalpas such as Anjana, Pariseka, Tarpana, Vidalanka, and more. Challenging ear diseases find effective treatment through procedures like Karna Purana and Dhupana. Moreover, neurological conditions, often considered incurable, are addressed using Marma Chikitsa, Agnikarma, Kshara Karma, and Rakta Mokshana following standard operative principles and methods. Oral diseases are treated with the wealth of traditional herbal formulations, both topical and internal. As Shalakyā Tantra continues to evolve, its fusion of traditional wisdom with modern techniques shows great promise in enhancing overall patient well-being.

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I. INTRODUCTION

Ayurveda, an ancient system of medicine, has evolved into a comprehensive healthcare management approach from the pre-Vedic to the Vedic period. Before the advent of Western medical education in India, Ayurveda held a prominent position as a mainstream healthcare facility, focusing on understanding the causes and pathogenesis of diseases. The disease process and treatment module encompassed a wide range of prevailing diseases across eight specialties¹. Unfortunately, there was a decline in the patronage of colonel rulers during the colonial period, however, in independent India, Ayurveda has experienced growth in both depth and breadth, marked by new innovations and continued research.

Shalakyia Tantra, according to the Sushruta Samhita, stands as the second most important specialty in Ayurveda as the second most important specialty according to the Sushruta Samhita, an ancient Indian manual of surgical and medical practices. This branch is specifically dedicated to attending to afflictions of the head and neck. There are sub-specialties within Shalakyia Tantra, like eye diseases, ear diseases, nasal and paranasal diseases, oral diseases, neck diseases, headaches, diseases of the scalp, and cosmetic conditions.

The article provides an in-depth analysis of the following subheadings, shedding light on the cutting-edge advancements in Shalakyia Tantra:

- **Ocular Drug Administration Protocols:** Kriyakalpa and its advantages in eye disease management.
- **Karna Purana and Karna Dhupana:** Unveils the therapeutic potential of these treatments in ear diseases.
- **Nasya Karma:** Investigates its significance as a gateway to addressing central nervous system disorders.
- **Eye Exercises:** for enhancing visual performance.
- **Agni Karma:** studies the effectiveness of Agni Karma in pain management.
- **Kshara Karma:** research on the potential of Kshara Karma in infectious diseases.
- **Rakta Mokshana:** in correcting blood imbalances.
- **Marma Chikitsa:** rejuvenating effects on the nervous system.
- **Allergy Management:** Investigates Ayurvedic principles of management
- **Shiro Dhara** and Other Topical Therapies for the promotion of neurological health.

II. MATERIALS AND METHODS

1. **Kriyakalpa:** The different methods of topical drug delivery to the eye are called Kriyakalpa. Among the seven main Kriyakalpas, we have Pindi, Vidalaka, Seka, Aschyotana, Anjana, Tarpana, and Putapaka.

- **Pindi:** Smearing a medicated paste wrapped in cloth or gauze in a bolus form, secured over the eyeball for the prescribed duration
- **Vidalaka:** Application of herbal paste over the closed eyelid, with the exception of the eye lashes

- **Seka:** Dropping a thin stream of medicated solution onto the closed eye
- **Aschyotana:** Instillation of a solution into the inner canthus
- **Anjana:** Application of viscous solution or fine powder is applied into the lower fornix of the eye and retained for the prescribed duration
- **Tarpana and Putapaka:** Selected liquid medicine is retained over the eye using a black gram-dough retainer wall, extending to the brim of the eye lashes, and left in place for a specific duration².

The advantages of Kriyakalpas in Ayurvedic treatments for eye diseases are noteworthy. They have a distinct advantage in easily reaching the target tissue as they bypass the blood aqueous, blood vitreous, and blood retinal barriers. These results in faster action compared to oral drugs. Furthermore, they are not subjected to digestion by Pachaka Pitta, ensuring their efficacy is not compromised. The duration of tissue contact can be controlled based on the disease's location, stage, and severity, allowing for tailored treatment. Additionally, by applying medicine directly to the eye, higher drug concentrations can be achieved for the desired duration. Specific Kriyakalpas like Aschyotana, Seka, Pindi, and Vidalaka are particularly effective for anterior segment disorders, while Anjana, putapaka, and tarpana are more suitable for diseases affecting the posterior segment of the eye. It is important to note that Tarpana, Putapaka, and Anjana are best performed in a non-inflammatory state of the eyes (Nirama Avastha) to optimize their therapeutic effects³ These procedures are evaluated for their efficacy and safety with standard operating procedures in all the research centers and postgraduate institutes spread all over the country in challenging conditions like glaucoma, refractive errors and retinal degenerative diseases.

Karnapoorana and Dhupana: Instillation of medications to the ear is called Karnapoorana and fumigation to the ear is called Dhupana. The process involves a gentle massage around the ear and pinna with lukewarm medicated oil, followed by applying heat around the ear using a towel soaked in boiling water. This causes vasodilation and enhances the permeability of capillaries. The procedure dilates nerves on the surface, increasing blood flow to the brain. Medicated substances are then instilled into the ear canal, where they are absorbed by the skin lining, external auditory meatus, and tympanic membrane, spreading systemically through the blood flow. The absorbed drugs act on Bhrajaka Pitta present in the skin, exerting effects on both the local tissue and the body. The use of lukewarm medicine helps reduce inflammation and alleviate earache and pain in nearby structures like the mandible or neck. The choice of Til Taila or other medicated oil ensures Vata Shamana properties without aggravating Kapha. This makes Karnapoorana beneficial for Vata-related issues while also eliminating Aavarana of Kapha. The Snehapaka method used to prepare the medicine ensures that all fat-soluble active principles are optimally absorbed for therapeutic benefits. It is clinically tried in hearing loss of varied etiology.

Dhupana, an ancient therapeutic practice involving fumigation of the external auditory canal, holds significant importance and utility. It was coupled with religious rituals to ensure its widespread adoption in society and promote routine usage. Just like Yagya (rituals for welfare), Dhupana was believed to contribute to mass hygiene, especially during epidemics (Janapadodhvansa), as mentioned in classical texts. The primary aim of Dhupana Karma is to provide antiseptic and anti-inflammatory benefits, utilizing the bactericidal effects of the Krimighana drugs to treat various ear diseases⁴ Role of karna dhupana is established in otomycosis and other resistant fungal and bacterial affections of the ear.

2. Nasya Karma: Nasal administration of drug is called Nasya karma. It offers relief and healing for various ailments related to the head, neck, and senses, including:

- Relieving stiffness in the head, neck arteries, throat, and jaw obstructions.
- Addressing conditions like coryza, uvulitis, and tonsillitis.
- Improving cornea health, vision, and managing eyelid disorders.
- Providing relief from migraines and facial paralysis.
- Helping with convulsions and goitre-related pain.
- Alleviating tingling sensations and addressing loose teeth and tumors.
- Assisting with hoarse voice, speech disorders, and Vata-related issues of the mind, head, neck, and throat.

Nasya karma has been extensively researched in

- Painful conditions, such as cervical spondylitis, Toothache, Lockjaw, Tonsillitis, otalgia, eye strain, headache and dysphagia.
- Infective states such as Tonsillitis, rhinitis, sinusitis and dental infections.
- Neurological problems like Bell's palsy, speech disorders, stammering and epileptic seizures

Current research highlights the versatility and efficacy of Nasya karma in addressing a wide range of head and neck diseases⁵

3. Eye Exercises: Eye exercises offer significant benefits in improving vision and maintaining eye health. Some of these exercises include:

- **Sunning:** After instilling medicated eye drops, close your eyes and expose them to sunlight in the morning or evening. Swing your head gently for 5-10 minutes to enhance blood circulation to the eyes.
- **Eyewash:** Wash your eyes with Triphala Kashaya, a herbal solution that cleanses the eyes and contributes to improved vision due to its Chakshushya properties.
- **Palming:** Rub your palms together and place them gently over your closed eyes. Focus on your breathing to relax eye muscles and mind, enhancing concentration.
- **Candlelight concentration:** Concentrate on a candle flame in a dark room, about 18 inches away from your eyes. Move your eyes forward up to 3 inches towards the candle, and then back to the starting point for 20-30 counts. Focusing on a blue flame helps improve accommodation.
- **Bar exercise:** Stand in front of a swinging bar with plates placed ½ inch apart and 14 x 14 inches in size, at eye level. Sway your body from right to left while looking through the bars at a distant object. Blink when you reach each end of the frame. This

exercise relaxes eye muscles and improves accommodation.

- **Ball exercise:** Throw a ball to the ground, observe the bounce, and follow it with your eyes without moving your head. Blink when you catch the ball. This exercise helps relax eye muscles and improves accommodation.
- **Eye drops and cold pad:** Apply prescribed eye drops and place cotton pads soaked in cold water or rose water over your closed eyes. This provides a soothing effect and aids in relaxation.

Regular practice of these eye exercises may contribute to improved vision and eye health. They are mainly aimed at relieving strain of muscles of the eye, increasing the accommodating and focusing power of the eyes and can be seen widely practiced in management of refractive errors.⁶

Agnikarma: Agnikarma is applying heat to a specific location in scientific fashion. It is compared to thermal cautery. The heat helps remove obstructions in the Srotas (minute channels) and increases blood circulation to the affected site. With the rise in temperature, metabolic activity in the cells increases, leading to dilation of vessels, enhanced cell motility, and the synthesis and release of chemical mediators. The increased blood circulation flushes away inflammation, providing relief from symptoms. Additionally, the stimulation of afferent nerves by heat has an analgesic effect by acting on the gate control mechanism. Agnikarma proves to be a therapeutic and effective method for managing following conditions.⁷

- Krichronmeela (Blepharitis)
- Vartmaarbuda (Stye)
- Pakshmakopa (Eyelid swelling)
- Pakshmoparodha (Eyelid ptosis)
- Upapakshma (Eyelid edema)
- Bisavartma (Entropion)
- Shlishta Vartma (Ectropion)
- Pooyalasa (Eyelash disorders)
- Bahyalaji (Conjunctivitis)
- Lagana (Eyestrain)
- Vataja Abhishyanda (Allergic conjunctivitis caused by Vata)
- Vataja Adhimantha (Headache associated with Vata imbalance) Some of the oral diseases where Agnikarma is found to be effective include:
- Medhoja Oshtakopa (Lip swelling due to adipose tissue involvement)
- Jalaarbuda (Salivary gland enlargement)
- Vardhana (Tonsillar enlargement)
- Danta Naadi (Toothache)
- Sheeta Danta (Tooth sensitivity)
- Krimi Danta (Tooth decay or infection)
- Medoja Galaganda (Enlarged thyroid gland with fatty involvement)

Agnikarma has shown effectiveness in treating arsha (polypi) and arbuda (tumors) related to the nose and ear. Additionally, it has proven beneficial in managing chronic migraines and various other types of headaches

4. **Kshara Karma:** Application of alkali to a chosen area is called kshara karma. It has proven effectiveness in treating various conditions such as eye inflammation, tumors, and related issues. For ear ailments, it shows positive results in cases of deafness, infections, and more. Additionally, it is effective in addressing nasal congestion, polyps, and tumors. In the realm of oral health, Kshara Karma is found to be helpful for swelling, tumors, and dental problems. Overall, it proves to be a versatile and effective therapeutic procedure for managing these conditions

5. **Rakta mokshana:** Bloodletting from a specific vein or area is advocated in diseases originated from Rakta dushti. It is used to treat a variety of eye diseases such as Anjana namika, savrana shukla, sira shukra, raktaja abhishyanda, raktaja adhimanta, akshi ruja, and ragi timira. For ear diseases like Kaphanubandha bhadirya, karna vidradhi, karna shopha, paripota, utpaata, and parilehi, blood letting is also employed. Similarly, in cases of nasal diseases like Nasapaka, Nasarbuda, and Nasarsha, and head disorders like Khalitya, palitya, and indralupta, this therapeutic approach is utilized. Even oral pathologies, including Oshta roga, kanta rogas, sheetada, vaidarbha, and upakusha, are treated using bloodletting techniques like praccchana, siravyadha and jalaukavacharana in Shalaky Tantra.⁸

6. **Marma Chikitsa:** Marma Chikitsa is manipulation and energizing vital points called Marma of the body. It serves as a safe, convenient, and cost-effective complementary remedy. By pressing specific Marma points, it can release energy blockages, eliminate excess Ama (toxins), promote smooth energy flow, nourish tissues, and trigger the production of hormones like endorphins and cortisol. This induces a calming effect, improves blood circulation, and enhances the functioning of the targeted area. Stimulation of certain Marma points related to the eyes, such as Apanga, Avarta, Sthapni, Vidhura, Kurcha, Kurchshira, Indravasti, and Nabhi, may be effective in managing retinopathy, hearing loss, headaches, cataracts, glaucoma, and other challenging eye diseases⁹

7. **Allergy Management:** According to ancient Indian literature, the fundamental cause of allergic reactions is the imbalance in the internal constitution of the body. This imbalance, combined with exposure to allergenic particles, leads to the expression of allergies. Panchakarma (purificatory procedures), rejuvenating treatments, and the use of specific herbs play crucial roles in managing allergies.

Proper purification through Panchakarma enhances the effectiveness of herbal and rejuvenating treatments, leading to improved outcomes and increased life expectancy for patients. To prevent and treat allergic reactions, it is essential to understand one's body constitution and strive to maintain balance. This can be achieved by using substances that reduce doshas and avoiding those that increase doshas, while adopting a daily routine (Dincharya) that promotes bodily equilibrium¹⁰

Ayurveda recognizes allergies and intolerances (asatmya) and identifies specific triggers, including diet and lifestyle choices. The concept of Virudhahar or unwholesome diet is particularly relevant in understanding allergies.

Asatmya occurs when incompatible foods are combined, leading to long-term toxic effects on the body. Other factors such as location, genetics, season, illness, physical activity, water consumption, daily routine, and taste preferences also contribute to the development of allergies.

Clinical studies have been conducted on various Ayurvedic compounds, such as shirisha, bilvadi gutika, haridra khand, swarna bhasma, arogyavardhini, sutashekhararasa, and agastya rasayana, to evaluate their effectiveness in controlling allergic diseases of the head and neck. These studies demonstrate the potential of Ayurvedic treatments in managing allergies effectively.

- 8. Shirodhara:** It is a well-established Ayurvedic procedure involving the steady dripping of medicated oil or other liquids on the center of the forehead while the patient rests comfortably. This induces a state of relaxed awareness, leading to a balance between mind and body. Patients experience a sense of overall well-being, mental clarity, and improved comprehension. Recently, Japanese researchers have conducted advanced studies on Shirodhara's effects on psychoneuroimmunology and the specific impacts of *Lavendula angustifolia* essential oil.¹¹

Clinical studies have demonstrated a noteworthy reduction in headache severity, anxiety, depression, and stress levels through a simple, cost-effective, and patient-friendly treatment procedure. The therapeutic effect is believed to be biophysical in nature rather than solely relying on the pharmacological action of the liquid used. In other words, the beneficial impact of Dhara is not just attributed to the medicinal properties of the liquid but also to its significant biophysical effects.¹²

III. DISCUSSIONS AND CONCLUSION

Shalaky Tantra, the branch of Ayurveda dedicated to eye, ear, and oral health, has shown significant progress in addressing modern diseases related to these areas. It has expanded in various directions, offering a diverse range of therapeutic and procedural applications. The foundation of herbal approaches, based on dosha, ama, agni, srotas, and related principles, aids in selecting appropriate internal medications. Formulations such as churnas, ghrita, tailas, asava, arista, kashaya, rasa, rasayana, and other oral medicines, along with local procedures, make Shalaky Tantra a sought-after branch for treating head and neck ailments that challenge modern medical sciences with inadequate solutions.

In conclusion, the exploration of Shalaky Tantra within Ayurveda reveals a rich tapestry of traditional wisdom seamlessly integrated with modern healthcare advancements. From the ancient roots of Ayurveda to its resurgence in independent India, Shalaky Tantra has witnessed remarkable growth, marked by innovation and dedicated research. The in-depth analysis of specialized treatments under Shalaky Tantra sheds light on cutting-edge advancements, showcasing the versatility and efficacy of Ayurvedic interventions. From ocular drug administration protocols to marma chikitsa, each subheading reflects a holistic approach, addressing a myriad of health issues related to the head, eyes, ears, and sensory organs.

The meticulous detailing of materials and methods, such as Kriyakalpa, Karnapoorana, and Nasya Karma, provides a comprehensive understanding of Ayurvedic practices. These time-tested techniques, rooted in ancient principles, have proven effective in managing a wide spectrum of conditions, from eye diseases to ear ailments and beyond.

As we delve into the future of Shalakyia Tantra, the integration of ancient principles with modern diagnostic tools, including imaging techniques, promises even greater efficacy. The evidence-based approach of this branch, coupled with its ability to communicate findings to the contemporary world, positions Shalakyia Tantra as a valuable and sought-after field for addressing head and neck ailments.

In essence, Shalakyia Tantra stands as a beacon of holistic healing, offering a diverse range of therapeutic applications grounded in herbal approaches and Ayurvedic principles. With a foundation deeply rooted in ancient wisdom and a commitment to ongoing research, Shalakyia Tantra holds immense promise in providing solutions to modern health challenges, surpassing conventional medical sciences in its comprehensive and personalized approach

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