

CHAPTER 12
AYURVEDIC
SHALAKYA TANTRA

Doctoral Theses

01. Dr. Deepak (A. S.)
Management of Acute Grade 2 Ankle Sprain by using Ikkadadhi Lepa Bandhana, Internal Administration of Gandha Taila Capsule, Shatavari Guggulu Tablet and Conventional Management – An Open Labelled Controlled Clinical Trial.
Supervisors: Prof (Dr) Vyasadeva Mahanta and Dr. Bresh K Prasad
Th 28772

Abstract

This study investigated the comparative clinical efficacy of an Ayurvedic treatment protocol—Bandhana with Ikkadadhi Lepa, oral Gandha Taila capsules, and Shatavari Guggulu—versus standard orthopedic management in Grade 2 ankle sprain. A total of 126 patients were enrolled, with 116 completing the trial. Participants were allocated to receive either the Ayurvedic regimen or conventional care consisting of below-knee plaster immobilization and routine pharmacotherapy. Clinical outcomes, including pain (VAS), tenderness, swelling, and functional performance assessed by AOFAS and Karlsson scoring systems, were evaluated at baseline, throughout the intervention period, and during a 30-day follow-up. Statistical analysis using repeated measures ANOVA, Mann-Whitney U, and Friedman tests demonstrated significant improvement in all parameters in both groups over time ($p < 0.05$). The Ayurvedic group exhibited a more rapid reduction in pain and greater functional recovery, with statistically significant differences emerging by Day 15 and Day 28 (AOFAS and Karlsson scores, $p < 0.001$). Reduction of swelling did not differ significantly between groups at any assessment point. Near-complete resolution of symptoms was observed in both groups by Day 58. The findings suggest that the Ayurvedic intervention facilitates earlier symptomatic relief and functional restoration compared to conventional management in the subacute phase of Grade 2 ankle sprain, while achieving comparable long-term outcomes. These results support the incorporation of evidence-based Ayurvedic modalities within contemporary musculoskeletal care pathways. Further randomized, blinded, multicentric studies with extended follow-up are recommended to substantiate efficacy and generalizability.

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1. Introduction 2. Department of Shalya Tantra 3. Material & Methods 4. Analytical Study of Shatavari Guggulu 5. Observation & Result 6. Discussion 7 Conclusion, Summary. References. Bibliography. Annexures.

02. Dr. DHANISHA (B K)
Effect of Nirgundi Patra Arka Eyedrops along with Amalaki Rasayana in Timira-Immature Senile Cataract - An Open Label Double Arm Randomized Controlled Clinical Trial.
 Supervisor: Prof. (Dr.) Manjusha Rajagopala
Th 28537

Abstract

Cataract is the clouding of normal transparency of the eye lens which impedes the passage of light. Globally, at least 2.2 billion people have a near or distance vision impairment. In at least 1 billion – or almost half – of these cases, vision impairment could have been prevented or has yet to be addressed. Among this 1 billion people, the main conditions causing distance vision impairment or blindness are cataract (94 million). Aging is the most common cause of cataract. There is no universally accepted pharmacological product or agent, that can either reverse or inhibit the progression of cataract. In this study Arka from Nirgundi leaves as eye drops and amalaki rasayana is planned in patients diagnosed with immature senile cataract as intervention. The study involved clinical study to find the efficacy of nirgundipatra arka eye drops along with amalaki rasayana as internal medicine in improving the visual acuity and contrast sensitivity in timira-immature senile cataract, experimental study to assess the anti-cataract property of amalaki rasayana and analytical study of trial drug. In the clinical study, distant visual acuity showed significant improvement from baseline to after treatment and improvement obtained persisted during follow up. The contrast sensitivity scores also improved significantly from baseline to after treatment, and improvement persisted at follow-up. In the In vivo study, Amalaki Rasayana treated group showed reduced cataract scores and improved lens morphology compared to the disease control group and significant increase in the level of antioxidant enzymes and glutathione showed strong antioxidant potential of Amalaki Rasayana. The analytical study of trial drugs- proved the formulation to be genuine and safe for use. In vivo study showed that Amalaki Rasayana has anticataract properties. In clinical study, the combination treatment significantly enhanced visual acuity and contrast sensitivity compared to the eye drops regimen alone, which shows that, this intervention can be used in early stage of senile cataract and the addition of amalaki rasayana to the eye drops regimen provide superior therapeutic benefits.

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03. JINOOP (P)
Effect of Durva Ghrita Ashchyotana, Ksheerabala Taila 21 Pratimarsha Nasya and Shatavaryadi Churna in the Management of Shushkakshipaka (Dry Eye Syndrome)-An Open Labelled Double Arm Randomized Controlled Clinical Trial.
 Supervisors: Dr. Narayan Bavalatti And Prof. (Dr.) Manjusha
Th 28774

Abstract

Dry Eye Syndrome (DES) is a multifactorial disease of the ocular surface, characterized by loss of tear film homeostasis, tear film instability, hyperosmolarity, ocular surface inflammation, and neurosensory abnormalities. Its prevalence increases with age and is higher in post-menopausal women. Globally, DES affects 25–30 million people, with India reporting a higher prevalence ranging from 18.4% to 54.3%. In Ayurveda, Shushkakshipaka, described under Sarvakshigata Roga, closely resembles DES. It is initially a Vata-predominant disorder with Pitta involvement. Conventional DES management, including artificial tears and anti-inflammatory treatments, offers only symptomatic relief. Ayurveda provides a holistic approach by addressing the underlying dosha imbalances. This study evaluated an Ayurvedic treatment protocol for Shushkakshipaka (DES), comprising Ksheerabala Taila 21A Pratimarsha Nasya, Durva Ghrita Ashchyotana, and Shatavaryadi Churna internally. The control group received Anutaila Nasya, Shunthyadi Ghrita Ashchyotana, and Triphaladi Churna. Analytical study confirmed the interventional drug proved to be safe and genuine. The study group showed significantly higher improvements in Schirmer's test and Tear Break-Up Time (TBUT), indicating better tear production and film stability ($P < 0.001$). Ocular Surface Disease Index (OSDI) scores demonstrated a lesser impact on vision-related functions after study period in the study group compared to control group. Significant relief was noted in symptoms like dryness, irritation, and burning, although no significant differences were observed in blurring of vision, pricking sensation, photophobia, or redness. Durva Ghrita improved tear film stability and corneal hydration. Ksheerabala Taila pacified Vata-Pitta, reducing symptoms, while Shatavaryadi Churna, acting as a Rasayana, promoted systemic and ocular health. The results confirm the rejection of the null hypothesis, supporting the efficacy of the Ayurvedic protocol in managing Dry Eye Syndrome compared to the control treatment.

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04. KUNDAL (Dr. Pankaj)
Comparative Study of Anutaila Pratimarsha Nasya with Shirisha Avaleha and Bhastrika Pranayama with Jalaneti in Vataja Pratishyaya with Special Reference to Allergic Rhinitis – An Open Labelled Randomised Clinical Trial.

Supervisor: Prof. (Dr.) Manjusha Rajagopala
 Th 28544

Abstract

Allergic rhinitis (AR) is a common disease which impairs quality of life, affects social life, school schedule and work, and is associated with substantial economic costs. Patients with Allergic Rhinitis report disturbed sleep, fatigue, irritability, and a range of practical problem. An Indian study reported that prevalence of allergic rhinitis was 11.3% in children aged 6–7 years, and 24.4% in children aged 13–14 years and 11% in adults. Pratishyaya by word itself indicates that it is a recurrent condition and can precipitate due to minute etiological factors. Vata is the main dosha and pitta and kapha are associated doshas. The disease is characterised by sneezing, running nose, stuffy nose, itchy nose, coughing, sore throat, watery eyes, frequent headaches.

Anu Taila when used as pratimarsha nasya act as a preventive and curative remedy for the diseases of nose and head region and preserves the health of the healthy individual. Anti-inflammatory activities of Shirish Avaleha are already proven. Considering its effect in different conditions a number of studies have been carried out in recent past which revealed its anti-allergic, anti-eosinophilic, anti-inflammatory activities of Shirisha which provided a lead to use the drug in cases of allergic manifestations, so it was decided to use it in Avaleha form in Vataja Pratishyaya. A regular practice of Jalaneti and Pranayama provides the relaxation and sound sleep and works as a healing therapy for allergic rhinitis. Yoga includes the practice of the yoga asanas or postures and the body purification techniques such as Jalaneti, Pranayama etc. Bhastrika is an important breath exercise in yoga and pranayama. Bhastrika involves a rapid and forceful process of inhalational and exhalation powered by the movement of the diaphragm.

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05. MEHAR (Dr. Kapil)
Efficacy of Sukhavati Varti Anjana along with Phalatrikadi Ghrita Orally in the Management of Timira - Simple Myopia – A Randomized Controlled Clinical Trial.
 Supervisor: Prof. (Dr.) Manjusha Rajagopala
 Th 28546

Abstract

Myopia, a common refractive error, poses significant social, educational, and economic challenges globally. Its rising prevalence, particularly among children and adolescents, necessitates effective interventions. Ayurveda correlates myopia with Timira (Prathama Patalagata stages), characterized by symptoms such as indistinct and blurred vision, advocating for treatments like Kriyakalpa and Chakshushya medicines. Objective: To evaluate the efficacy and safety of Sukhavati Varti Anjana (topical application) combined with Phalatrikadi Ghrita (oral administration) in managing simple myopia (Timira). Methods: A randomized controlled clinical trial on 110 participants, allocating them into two groups (55 each). Group A received Sukhavati Varti Anjana and Phalatrikadi Ghrita orally, while Group B served as the control (Vimala Varti Anjana and Rasayana Yoga orally). The intervention was administered for one month. Pre-clinical safety of Sukhavati Varti Anjana was confirmed through acute ocular toxicity testing on albino rabbits per OECD 405 guidelines. Subjective (e.g., avyakta darshana, vihwala darshana) and objective parameters (e.g., LogMAR values, axial length, keratometry) were assessed at baseline and post-intervention. Results: Group A demonstrated significant improvement in subjective symptoms like Avyakta darshana (34.26%) and Vihwala darshana (32.67%), and objective measures such as Unaided distance visual acuity-LogMAR (18.33%), auto-refractometer reading (8.62%) and subjective refraction (10.51%). The trial group showed an average 3.87% higher efficacy (average efficacy of 32.62% in Group A and 28.73% in Group B) across parameters. No adverse effects were reported. Conclusion: The combination of Sukhavati Varti Anjana and Phalatrikadi Ghrita is safe and effective in managing simple myopia, offering a promising alternative for integrative eye care.

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1. Introduction 2 Review of Disease 3. Drug Review 4. Pre-Clinical Study 5. Clinical study. 6. Discussion. 7. Summary and conclusion. Bibliography. Annexures.

06. VINOD KUMAR

Antimicrobial Activity of Ayurveda Formulation in Prevention of Surgical Site Infection – Randomized Clinical Trial.

Supervisors: Prof (Dr) Vyasadeva Mahanta, Prof. (Dr.) Yogesh Badwe,
Prof. (Dr.) Galib R and Dr. Anju Dinkar

Th 28825

Abstract

Surgical site infections (SSIs), occurring within 30 days postoperatively, constitute 12–16% of nosocomial infections and nearly 20% of healthcare-associated infections (HAIs), with global incidence rates of 0.5–15%. Major risk factors include diabetes, obesity, anemia, malnutrition, and immunosuppressive therapy. SSIs are associated with increased morbidity, mortality, hospital stay, and healthcare costs. The growing threat of antimicrobial resistance (AMR), identified by the World Health Organization as one of the top ten global public health concerns, necessitates the search for effective alternatives to conventional antibiotic prophylaxis. Ayurveda, with its integrative approach, offers potential through herbo-mineral formulations with antimicrobial, immunomodulatory, anti-inflammatory, and wound-healing properties. Objectives: Primary objective was to evaluate the clinical efficacy of Ayurveda formulation in prevention of surgical site infection and while secondary objective was to evaluate antimicrobial activity against various micro-organism. Materials and Methods: A randomized comparative study was conducted in the Department of Shalya Tantra, All India Institute of Ayurveda, New Delhi. A total of 142 participants were allocated into two groups via variable block randomization. The trial group (Group A) received an Ayurveda formulation consisting of Rasmanikya (60 mg), Abhraka Bhasma (125 mg), Gandhaka Rasayana (250 mg), and Guduchi Satva (1 g), administered preoperatively and continued twice daily for five postoperative days. The control group received a single prophylactic dose of cefuroxime (1.5g). Outcomes were assessed using the ASEPSIS wound score and the Southampton wound healing grading system. Statistical analysis included unpaired t-test, chi-square test, and repeated measures ANOVA. Results: Both groups demonstrated improvement in wound scores over time with no significant intergroup difference ($p > 0.05$). However, SSI incidence was lower in the trial group (1.4%) compared to the control group (5.6%), with an overall infection rate of 3.5%. No adverse events were observed in either group. Conclusion: The study proven the Ayurveda formulation with significantly lower surgical site infection and excellent safety profile with no adverse events. The research validates classical Ayurveda principles through modern scientific methodology, establishing the Ayurveda formulation as equally effective to conventional antibiotic prophylaxis in prevention of surgical site infection.

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1. Introduction 2 Literary Review 3. Material and Method 4. Pharmaceutical study & Analytical study 5. Antimicrobial Study 6. Observations and Results 7. Discussion. 8. Conclusion 9. Summary 10. Bibliography 11. Annexures.