CHAPTER 8

AYURVEDIC
SHALAKYA TANTRA
(Netra Roga, Siro, Nasa Karna Evam Kanth Roga)

Doctoral Theses

01. GOUD (Prem Kumar)
Effect of Triphaladi Ghana Vati Alone and Along with Pathyadi Varti in the Management of Timira - Immature Senile Cataract-An Open Label Two Arm Randomised Controlled Trial.
Supervisors: Prof. Manjusha Rajagopala and Prof. Prashant Kumar Gupta
Th 28957

Abstract

Introduction: Background and Objectives: Cataract affects 78.8 million people globally, with India accounting for 66.2% of blindness cases. While surgery remains definitive treatment, non-surgical alternatives are needed for immature senile cataract. This study evaluated the efficacy of Triphaladi Ghana Vati alone versus combined with Pathyadi Varti in managing Timira (immature senile cataract) over 90 days. Methods: A comprehensive approach included in-silico network pharmacology, experimental validation in sodium selenite-induced rat cataract models, and an open-label randomized controlled trial. Sixty-four participants aged 40-60 years were randomized into Group A (Triphaladi Ghana Vati 500mg thrice daily) and Group B (combination with topical Pathyadi Varti twice daily). Primary outcomes assessed visual acuity changes, with secondary measures including subjective symptoms and contrast sensitivity. Results: Computational analysis identified six key molecular targets (HDAC8, ALDH1A1, GSTP1, ABCB1, CYP19A1, CASP3) with promazine sulfoxide as lead bioactive compound. Animal studies confirmed significant anti-cataract effects in combination therapy, with improved antioxidant markers. Clinical trials showed statistically significant improvements in both groups, with Group B demonstrating superior outcomes. Blurred vision improved more in combination therapy (2.73 to 1.69) versus monotherapy (2.81 to 2.39). All objective parameters including unaided distant visual acuity (mean difference 0.097 vs 0.039), contrast sensitivity, and best-corrected visual acuity showed greater improvement in Group B. However, neither treatment significantly altered structural cataract grading. Conclusions: Combined Triphaladi Ghana Vati and Pathyadi Varti therapy demonstrated superior efficacy over monotherapy in managing early-stage cataract symptoms through functional improvements rather than structural changes. The study validates Ayurvedic formulations` therapeutic potential in conservative cataract management, supporting integration of traditional approaches while establishing scientific foundation through modern computational and experimental validation.
Keywords: Timira, immature senile cataract, Triphaladi Ghana Vati, Pathyadi Varti, Ayurvedic ophthalmology

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02. SHARMA (Shikha)

Efficacy of Katakaphaladi Varti Anjana Along with Dashanga Haritaki Modaka Orally in the Management of Timira with Special Reference to Simple Myopia – A Randomized Controlled Trial.

Supervisors: Dr. Narayan Bavalatti and Dr. Manjusha Rajagopala

Th 28958

Abstract

Background: Myopia is the most prevalent refractive error globally and a major cause of visual impairment, particularly among children and young adults. Conventional corrective measures such as spectacles, contact lenses, and refractive surgery address vision but do not halt disease progression and may carry limitations or risks. In Ayurveda, myopia can be correlated with Timira (early-stage Drishtigata Roga), for which several therapeutic approaches are described. This study evaluates the comparative efficacy of two Ayurvedic regimens in managing simple myopia. Objective: To compare the efficacy of Katakaphaladi Varti Anjana (60 mg twice daily) with Dashanga Haritaki Modaka (6 g twice daily orally) versus Shankhadyanjana (60 mg twice daily) with Shatavaryadi Churna (6 g twice daily orally) over 45 days in improving visual acuity, spherical equivalent refraction, and asthenopic symptoms in simple myopia. Methods: An open-label, double-arm randomized controlled clinical trial was conducted on 100 patients (200 eyes) aged 10–25 years with simple myopia (-0.50 to -6.00 D). Participants were equally randomized into two groups. Visual acuity (LogMAR chart), spherical equivalent refraction, axial length (A-scan), and asthenopic symptoms were assessed at baseline, post-treatment, and follow-up. Pharmacognostical and physicochemical evaluation of Katakaphaladi Varti and Dashanga Haritaki Modaka were performed. Additionally, an acute ocular toxicity study of Katakaphaladi Varti was carried out in rabbits following OECD guideline 405. Results: Both groups showed significant improvement in visual acuity and symptomatic relief; however, Group A (Katakaphaladi Varti Anjana with Dashanga Haritaki Modaka) demonstrated greater improvement in unaided and best-corrected visual acuity, spherical equivalent refraction, and asthenopic symptoms. The acute ocular toxicity study revealed no significant irritation or corrosion. Conclusion: The trial suggests that Katakaphaladi Varti Anjana with Dashanga Haritaki Modaka is safe and more effective than Shankhadyanjana with Shatavaryadi Churna in managing Timira (simple myopia), offering a promising Ayurvedic intervention for refractive error control

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03. THAKUR (Akanksha)

Experimental Evaluation of Retinoprotective Activity of the Polyherbal Compound and Adjunct Effect of Ayurvedic Intervention and Conventional Standard of Care in Pramehaja Timira W.S.R. Nonproliferative Diabetic Retinopathy – A Double Arm Exploratory Trial.

Supervisors: Prof. (Dr.) Manjusha Rajagopala, Dr. Prasanth Dharmarajan, Prof. (Dr.) Pradeep Venkatesh, Dr. Shorya Vardhan Azad and Prof. Abul Kalam Najmi

Th 28959

Abstract

Diabetic retinopathy (DR) is a significant microvascular complication of diabetes and is a leading global cause of blindness. While modern medical interventions such as photocoagulation and anti-VEGF injections exist, their use is often associated with certain limitations and side effects, and they may not fully address the systemic nature of the disease. This study aimed to investigate the adjunctive role of a polyherbal Ayurvedic intervention, conceptualized as a treatment for Pramehaja Timira, in the management of Non-Proliferative Diabetic Retinopathy (NPDR). The intervention was meticulously designed to offer a holistic, multi-targeted approach, which is crucial for effectively combating the complex, systemic pathology of DR. The research was structured as an open-label, double-arm randomized controlled clinical trial, enrolling a total of 80 eyes. Participants were divided into two groups: Group 1, which received standard care alone, and Group 2, which received standard care in combination with the specific Ayurvedic protocol. A preliminary in-ovo evaluation of the polyherbal compound, Vasakadi Kashaya, was also conducted, which effectively demonstrated its promising anti-angiogenic potential, a key mechanism in the progression of diabetic retinopathy. Clinical outcomes from the trial demonstrated that while both interventions provided therapeutic benefits, the combined approach in Group 2 resulted in a more pronounced and statistically significant improvement across several critical parameters. These included a greater reduction in diminished vision, microaneurysms, and macular edema, alongside an improvement in distant visual acuity. Furthermore, the Ayurvedic protocol also contributed to better systemic glycemic control, evidenced by significant reductions in fasting blood sugar (FBS) and HbA1c levels. The findings of this exploratory trial suggest that integrating the Ayurvedic protocol with conventional standard of care may represent a superior, synergistic approach for halting and potentially reversing ocular disease progression in patients with NPDR.

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