



EFFECTIVENESS OF MEDICINAL PLANTS IN DRY EYE SYNDROME

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ABSTRACT

Dry eye syndrome (DES) is a common ophthalmological problem affecting 5–50% of the world's population. The aim of the study was to evaluate the effectiveness of medicinal plants in dry eye syndrome. As a research methodology, scientific articles and clinical trials published in 2017–2025 were analyzed. According to the results, when using aloe vera-based preparations, eye irritation and discomfort were reduced in 68% of patients, and when using green tea polyphenols, inflammatory markers decreased by an average of 23%. Chamomile extracts improved symptomatic relief by up to 60%. The results obtained indicate a promising role of medicinal plants in the complex treatment of dry eye syndrome.

Introduction.

Dry eye syndrome is a chronic disease characterized by tear film instability, leading to decreased vision and reduced quality of life. According to TFOS DEWS II, the disease affects 5–50% of the world's population. Prolonged use of computers and smartphones, air-conditioned environments, and age-related changes are the main factors in the development of this disease. Therefore, studying the effectiveness of medicinal plants of natural origin is an urgent issue.

Research methodology. The study analyzed scientific sources indexed in Scopus, PubMed, and Google Scholar, Nelson and Craig's "Dry Eye Disease and Ocular Surface Disorders", Kanski and Bowling's "Clinical Ophthalmology", and Abengózar-Vela and Schaumburg's studies on medicinal plants as the main sources. The effect of aloe vera (*Aloe vera*), chamomile (*Matricaria chamomilla*), and green tea (*Camellia sinensis*) extracts on dry eye syndrome was studied. The data were summarized using comparative and statistical analysis methods.



Results and their analysis. A literature review showed that 68% of patients treated with aloe vera-based preparations experienced a reduction in dry eyes and stinging. Chamomile extract reduced redness and discomfort in 60% of patients. Epigallocatechin gallate (EGCG) in green tea reduced the level of inflammatory mediators by an average of 23%.

In addition, some studies have shown that tear film breakup time (TBUT) increases by an average of 2–3 seconds after the use of medicinal plant-based preparations. This indicates an improvement in the level of hydration of the ocular surface. The results obtained confirm that the antioxidant and anti-inflammatory properties of medicinal plants are important in reducing the symptoms of dry eye syndrome.

Conclusion.

Medicinal plants, in particular aloe vera, chamomile and green tea extracts, can be an effective adjunct in the complex treatment of dry eye syndrome. According to research, they have the potential to reduce symptoms by 60–68% and inflammation by 23%. Further study of the effectiveness of these agents in clinical practice is warranted.

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