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Natural Formulations: Novel Viewpoint for Scleroderma Adjunct Treatment

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Abstract

Background: Scleroderma is a complex disease involving autoimmune, vascular, and connective tissues, with unknown etiology that can progress through any organ systems.

Objective: Yet, no cure is available; the thorough treatment of scleroderma and current treatments are based on controlling inflammation. Nowadays, medicinal plants/natural-based formulations are emerging as important regulators of many diseases, including autoimmune diseases. Here, we provided an overview of scleroderma, also focused on recent studies on medicinal plants/natural-based formulations that are beneficial in scleroderma treatment/prevention.

Methods: This study is the result of a search in PubMed, Scopus, and Cochrane Library with "scleroderma", "systemic sclerosis", "plant", "herb", and "phytochemical" keywords. Finally, 22 articles were selected from a total of 1513 results entered in this study.

Results: Natural products can modulate the inflammatory and/or oxidative mediators, regulate the production or function of the immune cells, and control the collagen synthesis, thereby attenuating the experimental and clinical manifestation of the disease.

Conclusion: Natural compounds can be considered an adjunct treatment for scleroderma to improve the quality of life of patients suffering from this disease.

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Figures

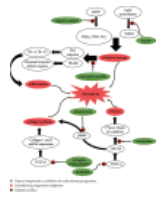


Figure 1 Pathogenesis of scleroderma; some natural...

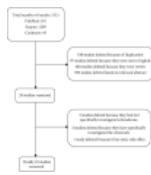


Figure 2 Study design diagram.



Figure 3 Mechanisms of action of herbal...



Figure 4 Chemical structures of selected natural...

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