

Reimagining Rheumatoid Arthritis Care: The Promise of Emerging Complementary Therapies

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I. INTRODUCTION

Rheumatoid arthritis (RA) is a chronic autoimmune disorder characterized by persistent inflammation of synovial joints, leading to pain, stiffness, progressive joint destruction, and functional disability. It affects a considerable proportion of the population worldwide and is more frequent in women. Conventional treatment includes disease-modifying antirheumatic drugs (DMARDs) and non-steroidal anti-inflammatory drugs (NSAIDs), which effectively control disease activity but are often associated with long-term adverse effects and economic burden. Due to these limitations, complementary and nutritional therapies are gaining interest as supportive treatment strategies in RA management.

II. AIM AND OBJECTIVES

Aim:

To evaluate the therapeutic potential of curcumin, anti-inflammatory diets, and probiotic cheese as adjunctive treatments in rheumatoid arthritis.

Objectives:

1. To assess the effect of curcumin on inflammatory markers and clinical parameters in RA.
2. To evaluate the impact of anti-inflammatory dietary patterns on pain and physical function.
3. To examine the emerging role of probiotic cheese in immune modulation.
4. To analyze the safety and limitations of these complementary interventions.

III. METHODOLOGY

This narrative review is based on secondary data obtained from published systematic reviews, meta-analyses, and randomized controlled trials related to complementary therapies in rheumatoid arthritis. Relevant literature was sourced from peer-reviewed journals including *Frontiers in Immunology*, *Nutrients*, *International Journal of Rheumatic Diseases*, and *Nature Reviews*. Studies assessing the effects of curcumin, anti-inflammatory diets, and probiotic interventions on inflammatory markers and clinical outcomes in RA patients were included.

CRITICAL ANALYSIS

Curcumin exhibits consistent anti-inflammatory and immunomodulatory effects in RA. Evidence from clinical trials demonstrates reductions in C-reactive protein, erythrocyte sedimentation rate, disease activity scores, and joint counts. However, variations in formulation, bioavailability, and dosage limit direct comparison across studies.

Anti-inflammatory diets, particularly the Mediterranean and plant-based diets, have shown significant benefits in reducing pain and improving functional capacity. These effects are largely attributed to improved lipid profiles, weight reduction, and decreased oxidative stress. Nevertheless, improvements in laboratory inflammatory markers remain inconsistent.

Probiotic cheese offers a novel food-based strategy for gut microbiota modulation. Early clinical studies indicate favorable effects on cytokine profiles and disease activity; however, existing studies are limited by small sample size and short duration.

Overall, while these complementary approaches are promising, the heterogeneity of studies, limited long-term data, and potential confounding factors reduce the strength of current conclusions.

IV. CONCLUSION

Curcumin, anti-inflammatory diets, and probiotic-based functional foods appear to be effective and safe adjunct therapies in the management of rheumatoid arthritis. They provide symptom relief, reduce disease activity, and improve quality of life without significant adverse effects. However, further large-scale, well-designed randomized controlled trials are required to establish standardized treatment protocols and confirm long-term clinical benefits.

V. SUMMARY

This review summarizes current evidence on the role of curcumin, anti-inflammatory dietary patterns, and probiotic cheese as complementary approaches in the management of rheumatoid arthritis. Findings from recent clinical trials and meta-analyses indicate that these interventions may reduce disease activity, alleviate pain, and improve functional outcomes with minimal safety concerns.

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