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A SYSTEMATIC REVIEW OF NATURAL SUPPLEMENTS IN THE TREATMENT OF RHEUMATOID ARTHRITIS

Y. Liu1, J. Pope2, M. Turk2. 1Western University, London, Canada; 2St Joseph’s Health Care, Rheumatology, London, Canada

Background: Rheumatoid arthritis (RA) is a chronic autoimmune condition affecting almost 1% of the general population (1). Pharmacological management has been the mainstay of treatment for RA and includes DMARDs and biologics. Despite these therapies, anywhere from 28-90% of patients with RA use complementary and alternative medicine (2). These non-pharmacological therapies range from dietary interventions to supplements to nonprescription therapies.

Objectives: To determine the efficacy of non-pharmacological, orally-ingested interventions on clinically-relevant endpoints in patients with rheumatoid arthritis.

Methods: We systematically reviewed EMBASE and MEDLINE electronic databases from inception until Feb 23, 2019 for relevant articles. Only randomized controlled trials (RCTs) which assessed oral, non-pharmacological interventions (e.g. diets, vitamins, oils, herbal remedies, fatty acids, supplements, etc.) in adult patients with RA, that presented clinically-relevant outcomes (defined as pain, fatigue, disability, joint counts, and/or disease indices) were included. Clinical outcome data was extracted by two independent authors as difference from baseline measurement. Therapies with at least 3 RCTs which presented similar data on the same clinical outcome were meta-analyzed using a pooled random effects model using RevMan 5.

Results: A total of 4423 unique articles were independently assessed by two authors, of which 72 articles met our inclusion criteria. Thirteen different interventions were studied more than once, and six interventions had clinical outcomes reported in at least 3 trials. However, only vitamin D and fatty acids met criteria for meta-analysis.

Pooled random effects models suggested vitamin D supplementation improved HAQ scores from baseline (mean difference = -0.10, 95% confidence interval (CI) = -0.17 to -0.02; p=0.01) but had no effect on DAS28 scores (Table 1).