PSORIASIS

IMPACT OF DIETARY CORN OIL AND VIRGIN COCONUT OIL ON IMMUNOHISTOCHEMICAL AND CLINICAL MARKERS OF INFLAMMATION IN MODERATE PSORIASIS: A PROSPECTIVE RANDOMIZED CONTROLLED INVESTIGATOR-BLINDED TRIAL

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Introduction: Psoriasis and associated comorbidities—obesity, hypertension, cardiovascular disease, metabolic syndrome—share inflammation as a common pathway. Dietary fat is implicated in driving inflammation, but its effects on immune cell drivers in psoriasis remains unclear.

Objective: To compare effects of two dietary cooking oils on inflammation using immunohistochemistry and clinical indices of psoriasis.

Materials and Methods: Moderate psoriasis (5-10% BSA) subjects were randomized to either dietary corn oil or virgin coconut oil (VCO), with standardized weekly group sessions on lifestyle and food choices. Blinded investigators monitored subjects' daily electronic reporting for 28 days. Weekly & post-intervention clinical assessments and blood extractions were done. Biopsies of non-lesional skin at baseline, lesional skin at baseline and Day 28 were sent for H&E and immunohistochemistry to evaluate effects on T-cells (CD3), myeloid dendritic cells (CD11c), cytokeratins (K16), cell proliferation (Ki67).

Results: All subjects (n=20) completed the study, without adverse reactions. After 28 days no statistically significant difference was found in clinical indices between the two groups, but most patients on VCO showed clinical improvement in PASI, BSA, DLQI, and erythema. No statistically significant difference was found in cell counts of myeloid dendritic cells, T-cells, markers for cytokeratins and cell proliferation between groups, but a trend towards higher quantitative inflammatory cell counts was observed in the corn oil group. Non-significance may be attributed to study duration and sample size. However, Chi-square test

on comparisons of all skin biopsies, showed significant differences in proportions of pro- and anti-inflammatory ratings (p value<0.00001). Compared to VCO, corn oil had higher counts for skin thickness (K16), CD3, CD11c, KI67; and less improvement of clinical indices. Addendum: To follow are RNA sequencing, clinical, nutritional measures, and laboratory results

Conclusion: Immunohistochemical markers and clinical indices showed dietary virgin coconut oil may have potential anti-inflammatory effects compared with Corn oil.