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The Clinical Effect of Dietary Supplementation With omega-3 Fish Oils and/or Copper in Systemic Lupus Erythematosus

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Abstract

Objective: To determine the effect of dietary supplementation with omega-3 fish oils with or without copper on disease activity in systemic lupus erythematosus (SLE). Fish oil supplementation has a beneficial effect on murine models of SLE, while exogenous copper can decrease the formation of lupus erythematosus cells in rats with a hydralazine-induced collagen disease.

Methods: A double blind, double placebo controlled factorial trial was performed on 52 patients with SLE. Patients were randomly assigned to 4 treatment groups. Physiological doses of omega-3 fish oils and copper readily obtainable by dietary means were used. One group received 3 g MaxEPA and 3 mg copper, another 3 g MaxEPA and placebo copper, another 3 mg copper and placebo fish oil, and the fourth group received both placebo capsules. Serial measurements of disease activity using the revised Systemic Lupus Activity Measure (SLAM-R) and peripheral blood samples for routine hematological, biochemical, and immunological indices were taken at baseline, 6, 12, and 24 weeks.

Results: There was a significant decline in SLAM-R score from 6.12 to 4.69 ($p < 0.05$) in those subjects taking fish oil compared to placebo. No significant effect on SLAM-R was observed in subjects taking copper. Laboratory variables were unaffected by either intervention.

Conclusion: In the management of SLE, dietary supplementation with fish oil may be beneficial in modifying symptomatic disease activity.

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