

# **EFFECTS OF A 6-MONTH INTAKE OF 3 GRAMS OMEGA 3 FATTY ACIDS ON INFLAMMATORY MARKERS IN MAINTENANCE HEMODIALYSIS PATIENTS.**

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This pilot study (n=60) examined the effect of a 3-gram omega 3 fatty acid supplementation for 6 months on inflammation, lipid panel, change in anemia management, medication dose and malnutrition status in stable maintenance hemodialysis (MHD) patients in Lebanon.

Patients were randomly assigned into 2 groups: intervention and control after an initial matching process for diabetes, gender, age and number of years on dialysis. The intervention group received 3-gram omega 3 fatty acid pills daily for 6 months and none by the controls.

Markers for inflammation were C-Reactive protein (CRP) and ferritin and markers for anemia were Hgb, IV Iron dose and Erythropoietin Stimulating Agent dose. Finally, markers for malnutrition included medication dose, lipid panel and a subjective global assessment questionnaire (SGA) score. As a safety precaution, prothrombin time, blood pressure and urea reduction ratio (URR) were monitored. To control the effect of dietary omega 3, food frequency questionnaire specific to omega 3 was conducted pre and post study. Tolerance and compliance to pill intake was also evaluated.

Independent t test was used to test for statistical significance for all continuous data and Factorial ANOVA with 2 factors (time and intervention) repeated on one was used for pre and post intervention lab parameters. Changes in inflammatory markers at month-6 relative to baseline were a slight increase in CRP levels (1.25 to 2.75 mg/dl) and slight decrease in mean ferritin level from 907 ng/dl to 814 ng/dl; with both changes being statistically not significant. Within and between groups analysis did not show any significant changes in the anemia management (IV iron dose, Hgb and ESA dose) and lipid profile (LDL-C, HDL-C, TC, TC/HDL-C) levels at 6 months relative to baseline.

Most reported adverse event were nausea and vomiting, but were not severe to cause any interruption in the medication intake. Compliance was high ranging between 84% and 93% of the prescribed dose.

Our results showed that a 6-month intake of high doses (3g) of omega 3 is well tolerated, but has no impact on inflammation markers.

