Adherence To Mediterranean Diet Linked To Regression Of Carotid Vessel-Wall Volume.

Medscape (6/4, O'Riordan) reports that "an analysis of the primary-prevention PREDIMED study provides some evidence as to why a Mediterranean diet is able to reduce the risk of cardiovascular disease." Researchers found, "in a sub study of the trial...that **individuals who adhered to the Mediterranean diet supplemented with extra virgin oil had significant regression of the carotid vessel-wall volume compared with those who ate a control diet low in saturated fat."** The findings from "the study, which included an MRI assessment of the carotid artery, were presented at the European Atherosclerosis Society 2014 Congress."

PREDIMED MRI Sub study: Regression of Plaque Volume With Mediterranean Diet

Michael O'Riordan

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Mediterranean Diet Improves Cognition: PREDIMED

PREDIMED: Mediterranean Diet Costs More Than Standard Diet

Mediterranean Diets Beat Low-Fat for CVD Prevention

MADRID, SPAIN — An analysis of the primary-prevention **PREDIMED** study provides further evidence as to why a Mediterranean diet is able to reduce the risk of cardiovascular disease[1].

In a substudy of the trial, investigators report that individuals who adhered to the Mediterranean diet supplemented with extra virgin oil had significant regression of the carotid vessel-wall volume compared with those who ate a control diet low in saturated fat.

The results of the study, which included an MRI assessment of the carotid artery, were presented at the **European Atherosclerosis Society 2014 Congress** (EAS 2014) by **Dr Aleix Sala-Vila** (Institut d'Investigacions Biomèdiques August Pi Sunyer, Barcelona, Spain) and expand on the results of a carotid intima-media thickness (IMT) study presented last year and published in January.

In the previous analysis of PREDIMED, which was reported by **heart*wire***, there was an attenuation of plaque progression in the Mediterranean diet arm of the study that included supplementation with nuts, but no such change among those who ate a Mediterranean diet supplemented with extra virgin oil.

Dr Emilio Ros (Institut d'Investigacions Biomèdiques August Pi Sunyer), the lead investigator of the PREDIMED study and senior investigator of both analyses, told **heart*wire*** that the MRI-observed reduction in vessel-wall volume with the Mediterranean diet supplemented with extra virgin olive oil compared with the control diet, but not with mixed nuts, is likely attributed to statistical power. There was a trend toward a reduction in the vessel-wall area in those who also received mixed nuts, but the reduction did not reach statistical significance when compared with the control diet. There was no difference between the two Mediterranean diets in terms of the reduction in vessel-wall area.

The PREDIMED Trial, in a Nutshell

In the main PREDIMED study, investigators enrolled 7447 men and women ranging in age from 55 to 80 years, none of whom had established cardiovascular disease but who were at high cardiovascular risk. The study was stopped when an interim analysis at 4.8 years revealed a clear signal of benefit among subjects eating the Mediterranean diets. In the olive-oil and mixed-nut Mediterranean-diet groups, the primary end point of MI, stroke, or cardiovascular death was reduced by 30% and 28% respectively, as compared with the control group.

The MRI data, as well as last year's IMT data, are an attempt to assess the underlying mechanisms responsible for the clinical benefit. The latest MRI study, however, included just 19 patients from the control arm, 20 subjects from the Mediterranean-diet/extra-virgin-olive-oil group, and 21 subjects from the Mediterranean-diet/mixed-nuts group.

Presenting the data at EAS 2014, Sala-Vila noted that they also analyzed the content of the plaque, but the results were disappointing. Overall, investigators did not observe any significant changes in the lipid core of the plaque. The thought had been that as individuals consumed the Mediterranean diet there would be a shift in the content of the plaque makeup from a lipid-rich core to a more fibrous plaque.

"Still, we see a small change in the vessel-wall volume," Ros told **heart*wire***. "And we did see a trend toward a reduction in the lipids. The change in the vessel-wall volume is probably related to the lipids, but with these data we can't say for sure."