What Is Current Best Medical Therapy: What Does It Do To Carotid Plaques And Do Patients Accept It And Comply With It?
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Intensive medical therapy based on measurement of carotid plaque burden (“treating arteries instead of risk factors”)\(^1\) doubles the proportion of patients with plaque regression (from 25% to 50%)\(^1\), markedly reduces microemboli on transcranial Doppler\(^2\), reduces plaque lucency\(^1\) and markedly reduces the risk of stroke, death or myocardial infarction\(^1\).

Comprehensive stroke prevention therapy does not mean just aspirin and a statin. In secondary stroke prevention, it is possible to reduce recurrent stroke by 80% or more\(^3\); the treatments required to achieve this, ranked approximately in order of importance, are smoking cessation, a Cretan Mediterranean diet, blood pressure control, cholesterol lowering, antiplatelet therapy or anticoagulation as appropriate, vitamin therapy (particularly methylcobalamin)\(^4\) to lower homocysteine, and appropriated carotid endarterectomy.

A Cretan Mediterranean diet is high in beneficial oils such as canola and olive oil, whole grains, fruits, nuts, beans and lentils. It contains less than 200mg/day of cholesterol, much less animal flesh than most North Americans consume (a serving the size of the palm of your hand every other day of any animal – anything with eyes, a face or a mother), and should contain no egg yolks (except in occasional baked goods).\(^5\)-\(^7\) A single large (65 gram) egg yolk contains 237 mg of cholesterol – more than the 210mg in a 12-ounce Hardee’s Monster Thickburger- and it also contains ~250mg of lecithin, which is converted by intestinal bacteria to trimethylamine, in turn oxidized in the liver to trimethylamine n-oxide (TMAO), which is pro-atherosclerotic\(^8\). High levels of TMAO markedly increased risk among 4000 patients referred to the Cleveland Clinic for carotid angiography\(^9\).

Blood pressure control, particularly in black patients, is much improved by individualizing therapy based on plasma renin and aldosterone levels\(^10\). High-dose statins may cause muscle problems, and increase the risk of diabetes by ~ 20%\(^11\), so addition of ezetimibe to highest tolerated dose of statin is a useful maneuver\(^12\).

Showing patients images of their carotid plaques markedly improves compliance\(^13\). In my patients, objectively measured compliance to the intensive medical regimen described above is 90%, assessed in the setting of the IRIS trial.

References: