Chronic CAD/Stable Ischemic Heart Disease

REGRESSION OF CORONARY ATHEROSCLEROSIS IN DIABETIC PATIENTS WITH HIGH INTESITY STATIN REGIMENS: INSIGHTS FROM SATURN

Oral Contributions
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Background: Diabetes associates with accelerated progression of coronary atherosclerosis. While lipid lowering can decrease disease progression, previous reports have not documented plaque regression in diabetics. The current analysis aimed to determine if high-intensity statin therapy promotes regression of coronary atherosclerosis in diabetics.

Methods: Serial intravascular ultrasonography evaluated changes in atheroma and vessel indices in patients with (n=159) and without (n=880) diabetes treated with atorvastatin 80 mg or rosuvastatin 40 mg daily for 24 months in SATURN.

Results: High-intensity statin therapy produced similar LDL-C lowering [-60.8 (-65,-56.7) vs. -58 (-60.9,-55.2) mg/dL, p=0.13], HDL-C raising [2.9 (1.5, 4.3) vs. 4.5 (3.5,5.4) mg/dL,p=0.014] and CRP lowering [-0.5 (-1.7, 0.3) vs. -0.4 (-1.5, 0.1) mg/L, p=0.93] in patients with and without diabetes. Diabetic and non-diabetic patients had similar degrees of regression of percent atheroma volume (PAV) and total atheroma volume (TAV) (Table), as well as comparable reduction in volumes bounded by the external elastic membrane (EEM) and with preservation of luminal volumes.

Conclusion: High-intensity statin therapy promotes regression of coronary atherosclerosis in diabetics to a similar degree to that seen in non-diabetics. These findings provide new insight into the mechanisms by which intensive lipid modification in diabetic patients with established coronary disease can lower cardiovascular events.

Table

Parameter	No Diabetes(N=880)	Diabetes(N=159)	P Value
Δ PAV (%)	-1.35 (-1.7,-1.0)	-1.13 (-1.7,-0.6)	0.38
Δ TAV (mm3)	-7.8 (-9.8,-5.9)	-6.2 (-9.0,-3.4)	0.19
Δ Lumen volume (mm3)	1.04 (-2.9,5.0)	2.0 (-3.7,7.7)	0.70
Δ EEM volume (mm3)	-6.8 (-11.7,1.9)	-4.4 (-11.5,2.8)	0.46