

Can HDL-cholesterol Predict Coronary Artery Disease (CAD) ? A Study of Computed Tomography Coronary Angiography (CTCA)

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Objective: To asses the rule of HDL-cholesterol on the incidence of CAD using CTCA imaging.

Methods: Subjects without evidence of CAD who had undergone CTCA for the early detection of CAD were categorized according to their HDL-ch level; <40 for men, <45 for women (group-I) and >40 for men, > 45 mg/dl for women (group-II), matched in baseline characteristics (table). In each group the incidence of CAD; number of segments with significant (diameter stenosis > 50%) and non-significant (diameter stenosis < 50%) disease and calcium score were calculated. **Results:** CTCA finding of 120 subjects; 50 in group-I and 70 in group-II were analyzed. Both groups were not statistically different regarding the mean calcium score, non-significant and significant CAD (table).

Conclusion: Our CTCA data showed that HDL-ch level was not trusting predictor for the incidence of CAD

| Variables | HDL<40(M),<45(F) | HDL>40(M),>45(F) | P-value |
|--------------------------|------------------|------------------|---------|
| Gender (male) | 35 (70) | 51 (72) | 0.89 |
| Age (yrs) SD | 54+10 | 56+8 | 0.35 |
| HDL (mg/dl) SD | 36+5 | 53+9 | |
| BMI (kg/m ²) | 28+4.7 | 27+3.4 | 0.065 |
| DM (mg/dl) | 12 (24) | 16 (22.8) | 0.88 |
| Hypertension | 23 (46) | 31 (44) | 0.85 |
| LDL (mg%) SD | 128+33 | 133+29 | 0.082 |
| Smoking | 24 (46) | 34 (48) | 0.95 |
| CTCA findings | | | |
| Ca-score | 248+461 | 189+291 | 0.43 |
| N-CAD | 4 (8) | 4 (5.7) | 0.63 |
| NS-Seg/p | 3.8 | 4.6 | 0.18 |
| S-Seg/p | 0.96 | 1.3 | 0.44 |

M-male, F-female, BMI-body mass index, DM-diabetes mellitus, N=normal, NS-non-significant,S-significant , Seg/p- segments per patient