

Correlation Between Ear Lobe Crease and Coronary Artery Disease as Assessed by Coronary CT Angiography

*Eshet, Y; Goitein, O; Matetzky, S; Di Segni, E; Hamdan, A; Konen, E
Sheba Medical Center, Ramat Gan, Israel*

Background: A 35 year debate concerning the association between ear lobe crease (ELC) and coronary artery disease (CAD) has not yet been settled, since advanced age is considered a confounding variable. Coronary CT angiography (CCTA) is a reliable non invasive modality for the detection of even mild atherosclerotic disease, which can be missed by other diagnostic tests. This study investigates the correlation between ELC and atherosclerotic plaques in a relatively young population without known CAD.

Methods: Subjects evaluated for CAD by CCTA, referred from a chest pain unit (CPU), were also evaluated for the presence of ELC. The study was concluded as positive for any atherosclerotic plaque detected, negative if none was found, and severe if stenosis over 50% was found. The subjects were divided into age groups for analysis.

Results: The study cohort included 196 subjects (131 males, age 50 ± 9 years); 95 (48%) had a positive ELC sign, 109 (56%) had atherosclerotic disease, and 11 (6%) had severe disease. The occurrence of ELC increased with age, from 24% in the third decade, to 75% in the sixth decade of life. The statistical parameters for the correlation between atherosclerotic disease and ELC were not significant. The negative predictive value of ELC was 97% for the presence of severe CAD disease.

Conclusion: No significant correlation can be found between ELC and the presence of atherosclerotic disease as detected by CCTA. However, a negative ELC sign seemed to negate the presence of a severe disease.