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THE IMPACT OF EPICARDIAL ADIPOSE TISSUE FOR THE PREDICTOR OF CORONARY ATHEROSCLEROSIS BY USING 320-MDCT - COMPARISON TO ABDOMINAL VISCERAL ADIPOSE TISSUE -

ACC Poster Contributions
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Background: Abdominal visceral adipose tissue (AAT) is well recognized as one of the risk factors for atherosclerosis. However, the impact of epicardial adipose tissue (EAT) to coronary atherosclerosis, compared to AAT, is not well-known. In the present study, we examined which adipose tissue is better to predict coronary atherosclerosis.

Methods: We analyzed 277 (164 male and 113 female, age 65±11) consecutive 320-MDCT data which were taken for coronary disease screening from Dec 2009 to May 2010. We evaluated the navel level cross sectional AAT area and mean EAT thickness at the anterior right and left ventricle as follow; normal-mild which consisted of thickness less than 2mm, moderate with a thickness greater than 2mm but less than 5mm and severe which consisted of thickness greater than 5mm. The severity of coronary atherosclerosis in each of three major coronary arteries was evaluated as by calcification, lumen narrowing with plaque and positive vessel remodeling.

Results: On number of coronary disease, calcification and vessel positive remodeling, there was a strong relationship between the severity of coronary atherosclerosis and the severity of EAT (see table). However, there was little relationship between AAT and coronary atherosclerosis.The data showed EAT was a better predictor for coronary atherosclerosis than AAT.

Conclusions: EAT is a better predictor for coronary atherosclerosis than AAT.

Relationship between EAT and coronary atherosclerosis				
	normal-mild EAT	moderate EAT	severe EAT	
0 or 1 vessel disease(n=188)	45%	34%	19%	
2 or 3 vessel disease(n=87)	24%	26%	50%	p<0.001
no or mild calc.(n=243)	42%	32%	26%	
moderate to severe calc.(n=33)	24%	27%	48%	p=0.02
positive remodeling(-) (n=180)	52%	29%	19%	
positive remodeling(+) (n=96)	17%	35%	48%	p<0.001