

## ***Epicardial adipose tissue in the development of cardiovascular disease in diabetic patients***

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### ***Abstract:***

The aim of this presentation is to review the role of epicardial adipose tissue (EAT) in the development of cardiovascular disease in diabetic patients.

EAT is true visceral fat deposited around the heart, between the myocardium and the visceral layer of the pericardium. EAT and myocardium share microcirculation and there is no fascia between them. Therefore adipokines produced by EAT spread directly into the myocardium and coronary vessels.

EAT provides mechanical protection and acts as a source of energy to the heart. Under normal conditions this visceral fat secretes anti atherogenic and anti-inflammatory cytokines as: adiponectin and omentin. When EAT increases its thickness, releases pro-inflammatory and pro-atherogenic adipocytokines as resistin and tumor necrosis factor, and is associated with metabolic syndrome, diabetes mellitus and cardiovascular disease.

Transthoracic echocardiography is a reliable method for the measurement of EAT.

Our research in the Ticoman General Hospital has shown that EAT thickness is increased when compared with non-diabetic and pre-diabetic patients. Also we have found that EAT has a better correlation than Intra-abdominal visceral fat with carotid intima-media thickness.

We consider that the measurement of EAT should be included in global evaluation of the diabetic patient, and that the reduction of visceral fat (included EAT) must be a goal in the management of those patient as an approach to the reduction of the inflammatory and atherogenic state and the reduction of cardiovascular disease in the diabetic patient.

We believe that it's important to evaluate as well EAT in subjects at high risk for the development of diabetes.

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### ***Biography:***

Carolina Guerrero is Sub-Investigator at Omega Diabetes Clinic. She is Diabetes Educator and member of Mexican Group for Basic and Clinical Research in Internal Medicine, Mexico

### ***Speaker Publications:***

Rubio-Guerra AF, Guerrero-García C, Meneses-Acero I, Maceda-Serrano A, Benítez-Maldonado DR, Vargas-Ayala G, Narváez-Rivera JL. Epicardial fat thickness, but not intraabdominal fat, correlates with intima-media thickness in patients with metabolic syndrome: Epicardial fat and intima-media thickness. Obesity Research & Clinical Practice. Volume 13, Issue 6, November–December 2019, Pages 602-603

Guerrero-García C and Rubio-Guerra AF. “Combination therapy in the treatment of hypertension.” Drugs in context vol. 7 212531. 6 Jun. 2018

Benítez D, Narváez J, Guerrero C, Lozano J, Arana K, Rubio A. Differences in Epicardial fat Thickness Among Normotensive, Borderline Hypertension and Hypertensive Subjects. Vol.20 (3) 113-117

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