

Excess Mediastinal Fat in Patients Undergoing Coronary Revascularization as Compared to Patients Undergoing Valve Surgery with Normal Coronaries

Dan Aravot, Yuri Peisachovitch, Jacob Gurevitch

Cardiothoracic Surgery, Carmel Medical Center, Haifa, Israel

Background: Visceral abdominal fat was found to be associated with an increased risk for cardiovascular disease as well as for its other risk factors including diabetes mellitus, hypertension, and other dyslipidemic and metabolic syndromes. Mediastinal fat may be a useful specific marker of visceral fat accumulation as well as an important mediator of metabolic as well as local toxic effect which may contribute to the previously discovered abnormal LV energy metabolism.

Methods: In this study we compared the volume of the mediastinal fat obtained during surgery from patients undergoing coronary revascularization with a matched group undergoing valve surgery with normal coronaries.

The mediastinal fat included the tissue resected from the anterior mediastinum from phrenic to phrenic.

Results: There were 20 patients in each group all men matched for age and weight.

The mean mediastinal fat volume in the coronary group was 127 cm³ (95-143) compared to 63 (45-92) cm³ in the valvular group (p<0.001). In the coronary group the incidence of diabetes, hypertension and dyslipidemia were significantly higher than that in the valvular group.

Conclusion: Mediastinal fat volume is significantly larger in patients with coronary artery disease than in patients with valvular disease presenting normal coronary arteries which may suggest association with most metabolic risk factors as well as exertion of local vascular toxic effects.