

Images in Cardiology: Massive Epicardial Adipose Tissue Indicating Severe Visceral Obesity

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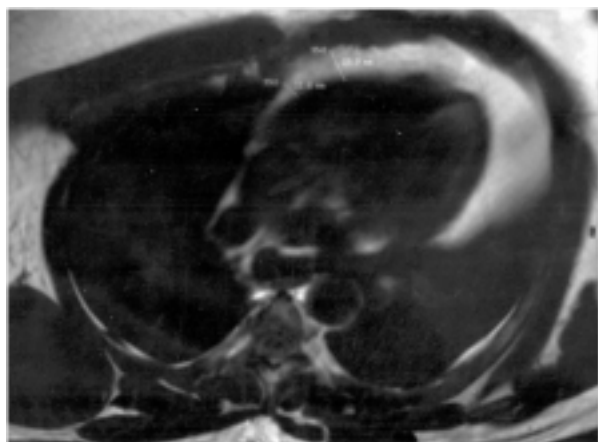


FIG. 1 MRI in a patient with visceral obesity. TSET1-weighted sequence with oblique axial orientation for a correct study of the four cardiac chambers, 10 mm thickness section with 1 mm intersection gap, 370 FOV, 256 × 256 matrix.

Magnetic resonance imaging (MRI) study of body fat distribution was performed in two obese men of the same age, body mass index (BMI), and duration of excess fat. The first patient had hypertension, diabetes, and high lipids levels. Physical examination revealed a severe visceral obesity with a large truncal-abdominal fat deposition. MRI showed a large abdominal visceral adipose tissue and epicardial fat thickness of 19.9 mm on the right ventricular (RV) free wall and 27.2 mm around the left ventricular (LV) apex (Fig. 1). The second patient presented a peripheral obesity, with prevalent

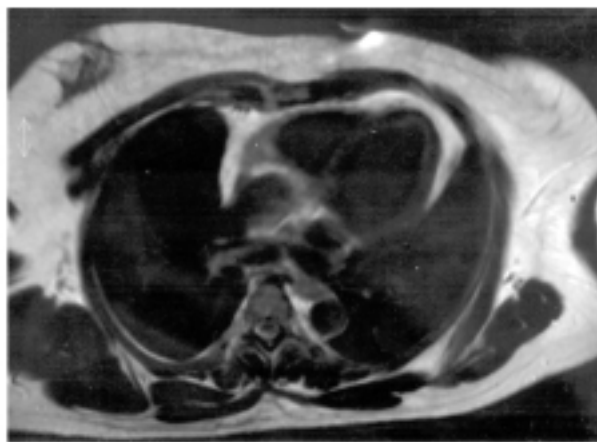


FIG. 2 MRI in a patient with peripheral obesity.

subcutaneous fat deposition but no cardiovascular or metabolic complications. MRI showed epicardial fat thickness of 4.7 mm on the RV free wall and 7.8 mm around the LV apex (Fig. 2). Epicardial fat, a true visceral adipose tissue deposited around the heart, should be considered an important indicator of visceral obesity and high cardiovascular risk independent of BMI.

Reference

Marchington JM, Mattacks CA, Pond CM: Adipose tissue in the mammalian heart and pericardium: Structure, foetal development and biochemical properties. *Comp Biochem Physiol B* 1989;94:225-232