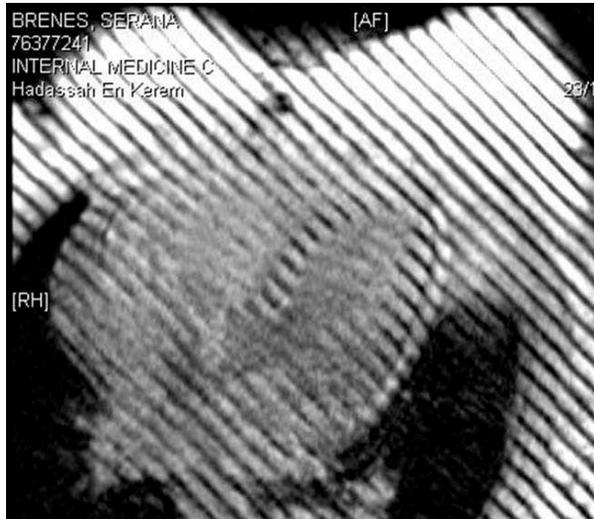


MRI TAG Line Can Help Demonstrate Pericardial Adhesion in Constrictive Pericarditis

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The diagnosis of constrictive pericarditis is often very challenging, raising the need for new novel methods to diagnose this entity. Clinical evaluation combined with cardiac imaging and hemodynamic studies are used to help making final diagnosis. MRI is an excellent tool to demonstrate pericardial thickening the imaging equivalents of constriction. Tissue tagging is an MRI technique in which parallel lines of reduced signal are generated. These can be followed up during cardiac cycle. MR tagging has been suggested as a tool for demonstrating fibrotic adhesions between the visceral and parietal pericardial layers. Persistence of the pericardial TAG lines throughout the cardiac cycle can only occur if there is fusion of the pericardial layers. In our institution we are using tagging as in all suspected constrictive cases referred for cardiac MRI. In this work we present our first experience with tagging for the diagnosis of constrictive pericarditis. The existence of adhesions by tagging is in correlation with pericardial width, mitral valve restrictive inflow velocities, septal motion abnormality and dilatation of the inferior vena cava. Of the 3 patients with positive tagging who underwent surgical procedure, all were found to have constriction during operation.

These preliminary findings indicate that TAG may serve as another tool to demonstrate constrictive physiology using cardiac MRI. Further studies are needed to test the sensitivity and specificity of TAGging for constrictive pericarditis.