

SPECKLE TRACKING ECHOCARDIOGRAPHY IN DIAGNOSIS AND FOLLOW-UP OF EGPA-MYOCARDITIS: A CASE REPORT

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Background. EGPA-related cardiovascular diseases are more common than previously thought and a careful diagnostic work-up for early detection is therefore required. Echocardiography is standard for detection and diagnosis of myocarditis and speckle tracking echocardiography has been used as an adjunct diagnostic modality. The main disadvantages of the cardiac MRI are breath-holds, exam time, availability and relatively cost.

Case summary. A 49-year-old man, with a history of chronic sinusitis and nasal polyps, was hospitalized due to weight loss, extremity weakness with paresthesia and marked eosinophilia with raised inflammatory markers. Apart from underweight and weak patellar and absent ankle reflexes, his physical status was unremarkable. EMNG confirmed distal sensorimotor axonal and demyelinating polyneuropathy. During the extensive diagnostic workup for eosinophilia, he developed severe headache with blurry vision in right eye and cavernous sinus thrombosis was confirmed by MRI and CT venography. CT scan confirmed pansinusitis with nasal polyps, ANCA-MPO was immeasurably high and IgE was increased. Echocardiography on admission was unremarkable with normal 2D left ventricular ejection fraction (LVEF), but two-dimensional speckle tracking bull's eye patterns of global longitudinal strain (GLS) revealed circumferential hypokinesia of basal segments and overall preserved GLS (−19.1%). Diagnosis of severe EGPA was made and he was started on anticoagulants, antibiotics, steroid pulse therapy followed by prednisolone 1mg/kg and cyclophosphamide. He was slowly recovering visual acuity but began to complain of chest pain and dyspnea. Troponin and NT-pro-BNP levels were increased with LVEF 45% and deterioration of GLS (−10.6%). Coronarography revealed normal coronary arteries. The cardiac MRI confirmed interventricular septal thickening with nonischemic fibrosis. At the 1-year follow-up, the patient remained clinically stable, with prednisolone tapered to 4 mg/day and GLS that recovered gradually with residual abnormal deformation of the basal posterolateral segments.

Conclusion. EGPA-related heart disease may be completely asymptomatic at first. GLS is a sensitive tool for early detection of myocardial involvement and LV dysfunction in patients with acute myocarditis regardless of etiology and is more sensitive than 2D LVEF evaluation.

Keywords: EGPA, myocarditis, speckle tracking echocardiography, strain

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