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Cardiac involvement in eosinophilic granulomatosis with polyangiitis

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Inflammatory rheumatic diseases often involve the heart. Coronary vasculitis is common in polyarteritis nodosa (PAN), Kawasaki's disease (KD), Takayasu's arteritis (TA), rare in Behcet's disease (BD) and among systemic vasculitis most commonly seen in eosinophilic granulomatosis with polyangiitis (EGPA). Involvement of the heart is an unfavorable prognostic factor with 50% mortality described in EGPA [1]. The mechanism of action in EGPA is explained by the direct activity of the disease and all parts of the heart can be affected, endocardium, myocardium, pericardium and coronary arteries [2]. Some authors assume that the effect of systemic inflammation on the heart can be expected in many other inflammatory diseases [3]. Frequency of coronary arteritis in EGPA is anecdotal. Multimodal screening with multiple cardiologic methods including echocardiography, CMR (cardiac magnetic resonance) and coronarography reveals subclinical forms of disease [2].

The paper by Matsuda draws attention to rare manifestations of systemic vasculitis [4]. The main question is whether it was coronary vasculitis without coronarography evidence. The authors described very mild changes in electrocardiogram (ECG), only biphasic, terminal negative T wave in lateral leads (V5–V6, I, and aVL) that usually count for the left circumflex artery (LCx) which can irrigate inferoposterior wall as well as right coronary artery (RCA) depending on the dominance. Echocardiographic finding is consistent with hypokinesia of inferoposterior wall. Dynamics of ECG during hospitalization was not mentioned and the control ECG made after discharge was normal. Due to severity of the current disease other cardiac diagnostics could not be done. Anti-neutrophil cytoplasmic antibody (ANCA) is the measure of disease activity and relapse of vasculitis, but not the proof of organ involvement. As reported in the literature, cardiac involvement is more common than it is thought to be due to lack of recognition. The special value of the manuscript by Matsuda is to increase awareness of cardiac pathology related to EGPA. Clinically evident cardiac involvement is rare and subclinical is likely to be underdiagnosed and mostly described findings are ST–T wave changes [5]. Some studies reported that cardiac involvement is common in patients with EGPA and is associated with high eosinophil counts and the absence of ANCA [1, 6]. Also, many studies that assessed heart involvement during remission found frequent changes in the heart [7]. Coronarography is a useful tool for more accurate assessment of cardiac disease. Based on studies involving heart in EGPA, and considering that the patient is hemodynamically stable and that the echocardiography finding has recovered with immunosuppressive therapy, there is a strong indication of coronary vasculitis. According to the literature, even mild changes in ECG and asymptomatic patient should raise suspicion of cardiac involvement in EGPA [5, 7].

Compliance with ethical standards

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