Fulminant variant of Loeffler disease mimicking arrhythmogenic right ventricular cardiomyopathy in the course of enterobiasis

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A 37-year-old male farmer initially presented with recurrent palpitations and fatigue following recent influenza-like infection. Laboratory tests showed mild eosinophilia (828/mL), C-reactive protein elevation and troponin release, and Enterobius vermicularis infestation, which triggered treatment with pyrantel. Rest electrocardiogram revealed left-axis deviation, right bundle branch block, and epsilon-like wave in leads V1–V3 (Panel A). Several episodes of symptomatic multiform morphology broad-QRS-complex tachycardia were documented (Panel B). Transthoracic echocardiography (Panel C) revealed impaired left ventricular ejection fraction (LVEF 24%), dilation and dysfunction of right ventricle (RV) with apical RV trabeculations, endocardial hyperechogenicity, local a- and dyskinesia, which altogether met Task Force criteria of arrhythmogenic RV cardiomyopathy (ARVC). Contrast-enhanced computed tomography confirmed right lung congestion (Panel D). Cardiac magnetic resonance indicated features of active myocarditis in LV (Panel E; T2-weighted sequence; subendocardial oedema) and wide spread sub- and endocardial biventricular fibrosis (Panel F; late-gadolinium enhancement). Subsequently, patient’s general condition abruptly deteriorated with recurrent sustained ventricular tachycardia and cardiogenic shock requiring intra-aortic balloon pump implantation. Endomyocardial biopsy (EMB) was performed, however, prior to final EMB report, immunosuppressive therapy (dexamethasone, intravenous polyclonal immunoglobulins) was instituted, which led to clinical improvement (LVEF 30%, inflammatory parameters reduction, low eosinophil count). Final EMB result confirmed Loeffler disease with extensive eosinophil (Panel G; CD69+ eosinophils red) and leucocyte infiltration, cardiomyocyte necrosis, diffuse fibrosis (Panel H; Masson’s Trichrome staining; fibrosis blue; remnant myocardial fibres brown), and widespread intra-capillary coagulation. The present case constitutes an unprecedented example of fulminant enterobiasis-related Loeffler disease, leading to biventricular HF with predominant RV involvement imitating ARVC. Endomyocardial biopsy and immunosuppressive therapy were critical for the course of disease and should be considered in myocarditis with acute HF and concurrent eosinophilia of any degree.