Myocarditis in adult-onset Still's disease: a case report

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Adult onset Still's disease (AOSD) is a rare systemic inflammatory disease characterized by spiking fever, arthritis and an evanescent rash. Pericardial disease is a typical cardiac involvement in AOSD, but myocarditis had been rarely reported. A 60-year-old woman admitted to the emergency department with myalgia, arthralgia, and fever. The patient had arthralgia for 4 months and fever, sore throat, and shortness of breath started 1 week ago. Physical examination revealed BP of 118/72 mmHg, BT of 38.4°C, throat injection, and salmon-pink rash on both leg and arm. Laboratory examination revealed WBC 18,400/ul with 91.3% neutrophils, C-reactive protein 33.9mg/dL, ESR 87mm/hr, AST 82U/L, ALT 51U/L, and ferritin 2761.0ug/L(13.0-150.0). Her culture studies were negative, rheumatoid factor was 21.2mg/dL(0-14), anti-nuclear and anti-neutrophil cytoplasmic autoantibodies were negative. Chest X-ray showed cardiomegaly with bilateral pleural effusion, abdominal and chest CT showed no infectious focus or neoplastic lesion. She had chest discomfort, and her creatinine kinase-MB and troponin-I were increased at 23.8ug/L(0-5.0) and 19.0ng/mL(0-0.05), respectively. Transthoracic echocardiography showed normal ejection fraction without wall-motion abnormality and small amount of pericardial effusion, and coronary angiography showed mLAD 60% of tubular stenosis. She was diagnosed as AOSD with peri-myocarditis based on Yamaguchi's criteria, and elevation of cardiac enzymes. She started high dose of intravenous methylprednisolone(1mg/kg), and her fever and other symptoms improved significantly with normalization of inflammatory markers and cardiac biomarkers. Myocardial involvement in AOSD is rare, and pathologic confirmation is mostly unavailable. In our case, clinical symptoms of cardiac involvement and increased cardiac enzymes without significant wall-motion abnormality indicated the occurrence of myocarditis, although other evidence including dilated cardiac chambers or depressed ventricular function was lack. Proper glucocorticoids administration improve it without any sequelae, suggesting that clinical suspicion and evaluation should be required in such condition.

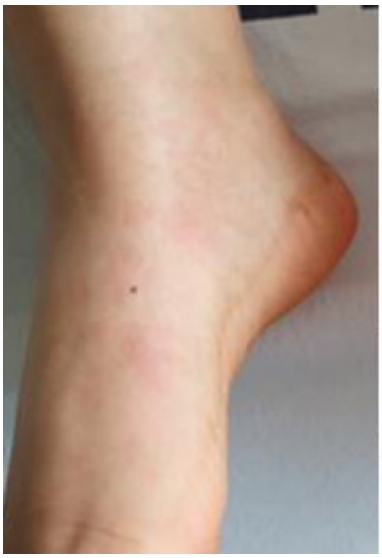

Figure 1. Salmon-pink rash on the patient's foot

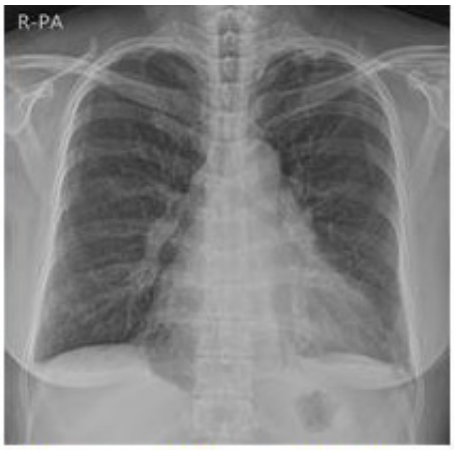

Figure 2. HOD7 Chest x-ray shows cardiomegaly with bilateral pleural effusion.

	HOD 1	HOD 4	HOD 5	HOD 8	HOD 12
CK(U/L,26-192)	33	39	41	258	26
CK-MB(ug/L,0.0-5.0)	< 0.18	< 0.18	< 0.18	23.8	< 0.18
Troponin I (ng/mL,0.000-0.046)	0.275	0.163	0.074	18.959	3.887

Table 1 The patient started high dose of intravenous methylprednisolone on HOD 5