Inflammatory bowel disease (IBD) is considered as a dysregulated immune mediated disease. Pericarditis in IBD is a very rare disease both as an extra-intestinal manifestation of IBD and an adverse reaction of therapeutic drug for IBD such as mesalazine or sulfasalazine. A 26-year-old IBD male patient who had been taking mesalazine regularly for about 1 month was referred to our hospital because of fever, chest discomfort, and abnormal electrocardiographic findings. The patients was diagnosed as acute myopericarditis, and recovered after cessation of mesalazine using steroid and aspirin. When mesalazine was re-medicated some days after discharge, he suffered from myopericarditis again. Subsequently, myopericarditis was resolved just after cessation of mesalazine again. These findings suggest that the development of myopericarditis is caused by mesalazine.

KEY WORDS: Myopericarditis · Mesalazine · Inflammatory bowel disease.
ence value: 2-30 mm/hr) and C-reactive protein (CRP) (reference value: ≤ 0.59 mg/dL) were elevated up to 93 mm/hr and 15 mg/dL, respectively. The electrocardiogram (ECG) revealed distinct ST segment elevations in leads I, II, aVL, and V2-6 (Fig. 1). Echocardiogram showed mild pericardial effusion (about 0.2 cm) in the posterior space and slightly increased pericardial thickness, and global hypokinesis of the left ventricle (Fig. 2). Left ventricular ejection fraction was 60.3% and left ventricular internal dimension at diastole was 4.73 cm.

He was diagnosed as acute myopericarditis. After taking oral aspirin of 2 g per day and prednisolone of 40 mg per day with cessation of mesalazine medication, he felt no more chest pain and fever was disappeared at 3 days after medical treatment. The abnormal ECG findings were gradually normalized within 7 days. On echocardiogram at 11 days after treatment, pericardial effusion, increased pericardial thickness, and wall motion abnormality were completely improved. Finally, he was discharged with aspirin 2 g per day and prednisolone 20 mg per day. Unfortunately, the mesalazine (3 g per day) was re-administered at 6 days after discharge by his gastroenterologist. At 3 days after mesalazine re-medication, he felt chest pain and febrile sensation again, although he had been taking aspirin (2 g per day) and prednisolone (20 mg per day) at that time. He was readmitted to our hospital, and the echocardiographic findings showed minimal pericardial effusion and mild global hypokinesia of the left ventricle again, although the findings were milder than those at the time of first admission. Acute phase reactants were also elevated without leukocytosis nor eosinophilia (ESR 88 mm/hr, CRP 18.30 mg/dL, white blood cell count 6590/mm3 and eosinophil fraction 8%). Mesalazine was immediately stopped with maintaining other

![Fig. 1. Electrocardiographic findings on first admission. This ECG was recorded with time scale of 25 mm/s on the horizontal axis and a voltage sensitivity of 10 mm/mV on the vertical axis. A: ST segment elevation on lead I, II, aVL, V2-6 without reciprocal change at first admission. B: Improved ST segment elevation at discharge. ECG: electrocardiogram.](image)

![Fig. 2. Echocardiographic findings on first admission. A: Minimal pericardial effusion (white arrow) and increased posterolateral pericardial thickness about 0.39 cm (black arrow). B: Improvement of pericardial effusion and increased pericardial thickness at discharge.](image)
medications including aspirin and prednisolone. After then, he showed dramatic improvement of chest pain and fever within 3 days after cessation of mesalazine. There was no abnormal arhythmic rhythm change in ECG monitor except intermittent ventricular premature beats during admission. When discharge, we recommended not to prescribe mesalazine for him ever again to his doctor. However, we have no more information on the patient because he did not return for any treatment ever since.

**Discussion**

In our case, the patient was 26-year-old male who had been treated with mesalazine containing oral medication irregularly for UC but he was diagnosed as acute myopericarditis on 1 month after regular mesalazine oral intake. Subsequently, recurrent myopericarditis was developed by re-medication of mesalazine.

The prevalence of acute pericarditis as an extra-intestinal manifestation is known as 0.23% in UC patients, 0.19% in Crohn’s disease patients and it may be developed independently regardless of disease activity. The incidence of mesalazine-induced pericarditis is probably very low and it mostly occurs within a few weeks after mesalazine medication.

Although the precise pathophysiology of mesalazine-induced pericarditis is poorly understood, it has been known that mesalazine-induced pericarditis may be attributed to an acute hypersensitivity reaction against 5-aminosalicylic acid (5-ASA) regimen. One report showed increased proliferation index of serial lymphocyte stimulation test, which means T-cell mediated type IV drug hypersensitivity reaction.

Several cases of recurrent mesalazine-induced pericarditis have been reported; among them, a case reported recurrent pericarditis developed with changing mesalazine administration route from oral to anal suppositories type in an UC patient; another case described recurrent pericarditis occurred at 6 hours after re-medication of very low dose 5-ASA in an UC patient. These cases suggest that mesalazine induced pericarditis can be recurrent with mesalazine medication, irrespective of mesalazine administration route and doses. There was a fatal case with mesalazine-associated myocarditis which was developed about 13 days after mesalazine medication, and he (or she) died by ventricular fibrillation with cardiogenic shock.

The specific view in our case is that the mesalazine-induced myopericarditis was developed about 1 month after regular mesalazine intake, although he already had been taking it irregularly. It means that its development may be unrelated to duration of mesalazine medication. In our case, the first event of myopericarditis may be the result of idiosyncratic reaction or hypersensitivity reaction of mesalazine because he had already been taken mesalazine irregularly for about 6 years. However, the putative mechanism of its second events could be attributable to hypersensitivity reaction of mesalazine, considering that it occurred right after mesalazine re-medication and it disappeared with cessation of mesalazine.

In conclusion, we present a case of mesalazine-induced myopericarditis that was successfully improved by discontinuation of the medication. Because mesalazine-induced myopericarditis is very rare but could be fatal, meticulous attention for the accurate diagnosis of pericarditis in IBD patients taking mesalazine would be required if the myopericarditis is caused by extra-intestinal manifestation of IBD or mesalazine-induced hypersensitivity.

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