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Pericardial Effusion in a Patient with Ulcerative Colitis: Report of a Rare Case

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Abstract
Extraintestinal manifestations are well described in inflammatory bowel disease. A 63 year-old male was admitted to our clinic with the complaint of dyspnea and dry cough. Echocardiography revealed minimal pericardial effusion. He was prescribed ibuprofen 600 mg twice on a daily basis. Four days later, he was admitted to the hospital due to palpitations, chest pain and increased dyspnea. From the medical history results, it was clear that the patient had ulcerative colitis and did not have medical treatment for the last sixth months. He was treated with oral prednisolone and mesalamine. Within six days, his bowel symptoms as well as his cardiac symptoms improved for the better, and the patient was discharged in good condition on day six after his admission to hospital. Pericardial effusion was completely resolved. Ulcerative colitis, which may not be detected as an underlying cause, should be considered in pericardial effusion cases as differential diagnosis.
Key Words: Pericardial Effusion; Ulcerative Colitis; Corticosteroid Theraphy.

Ülseratif Kolitli Bir Hastada Perikardiyal Effüzyon: Nadir Bir Olgu Sunumu

Özet
İnflamatuar barsak hastalıklarında barsak dışı belirtiler iyi tanımlanmasına rağmen kardiyak tutulum nadiren bildirilmiştir. 63 yaşında erkek hasta nefes darlığı ve kuru öksürük şikayeti ile kardiyoloji polikliniğine başvurdu. Ekokardiyografide minimal perikardiyal effüzyon vardı. Günde iki kez 600 mg İbuprofen reçete edildi. Hasta çarpıntı, göğüs ağrısı ve nefes darlığında artma olması üzerine dört gün sonra hastaneye başvurdu. Kardiyoloji servisine yatırıldı. Tıbbi hikayesinde ülseratif kolit tanısı olduğu ve altı aydır tedavi almadığı belirlendi. Tekrar yapılan ekokardiyografide effüzyonun arttığı ve sağ atriyuma bası olduğu tespit edildi. Oral prednizolon ve mesalamin ile tedavi edildi. Altı gün içinde göğüs belirtilerine ilaveten barsak belirtileri düzeldi ve hastaneye başvurduktan altı gün sonra iyi durumda taburcu edildi. Bu sürede perikardiyal effüzyon tamamen gerilemişti. Nedeni tespit edilemeyen perikardiyal effüzyon vakalarında ayırıcı tanıda ülseratif kolit mutlaka düşünülmelidir.
Anahtar Kelimeler: Perikardiyal Effüzyon; Ülseratif Kolit; Kortikosteroid Tedavisi.

INTRODUCTION

Ulcerative colitis (UC) is a subgroup of inflammatory bowel diseases (IBD) caused by exagerated immunological response to antigens or environmental factors in genetically sensitive people. With unknown underlying causes, it is a chronic disease with activation and remission periods. Cardiac manifestations, particularly pericardial effusion, of IBD is well known. There are several pericarditis and pericardial effusion cases caused by UC in literature (1-4). In this paper a life threatining pericardial effusion caused by untreated UC and its complete resolution by steroid therapy are presented with references to several data from literature.

CASE REPORT

A 63 years old male patient with dry cough and chest pain was admitted to cardiology clinic. He did not have any history of coronary artery or chronic obstructive pulmonary diseases. An transthorasic echocardiography (TTE) was performed and minimal pericardial effusion was observed. There was no indication for diagnostic or therapeutic pericardiocentesis. During the first admission, basic and routine laboratory tests were performed. It was thought that the clinical presentation was caused by acute pericarditis and ibuprofen 600 mg twice daily was prescribed as first-line treatment. The patient was called for a check-up 15 days after the beginning of the treatment. Since it was assumed to be the first episode of acute pericarditis, further diagnostic tests were not needed. The patient was re-admitted to hospital four days later with palpitation, chest pain and dyspnea complaints. He was hospitalized at cardiology clinic for further evaluation and treatment. After detailed anemnesis it has been concluded that the patient had UC for 12 years and was out of treatment for the last 6 months.

The physical examination showed that pulse rate was 110 bpm without pulsus paradoxus and body temperature was 37.6 °C. Blood pressure was 130/70 mmHg and juguler venous pressure was normal. The cardiac physical examination, meanwhile, showed that the patient was tachycardic with no extravoice or murmur. However, intestinal sounds have increased and there was abdominal sensitivity. The patient was defecating mucoid stool ten times a day. Blood urine nitrogen (BUN) level was 18 mg/dl (average value 6-20 mg/dl) and serum creatinin level was 1.0 mg/dl (average value 0.6-1.2 mg/dl). WBC count was 11,300/cmm (average value 4.800-11.000/cmm) with %79 neutrophile ratio. Hematocrit was 32.8 (average value 37-47), sedimentation rate was 58 mm/h (average value <20 mm/h) and C-reactive protein was 65 mg/l (average value 1-5 mg/l). There was sinus tachycardia on electrocardiography (ECG) and cardiomegaly on chest X-RAY. There was moderate pericardial effusion which was compressing on the right atrium (Figure 1).

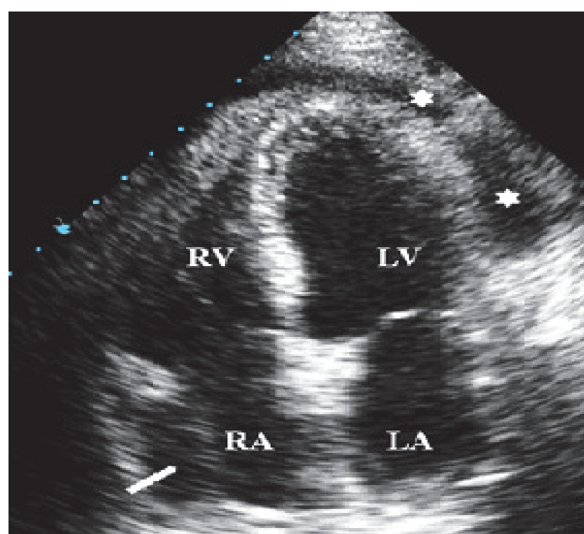

Figure 1. Transthoracic echocardiogram, apical four-chamber view, demonstrating a moderate pericardial effusion (asterisks) and collapse of right atrial wall (arrow). LV, left ventricle; LA; left atrium; RV, right ventricle; RA right atrium

The computerized tomography (CT) reassured pericardial effusion and revealed abnormal thickening of pericard (Figure 2). No malignity was detected. For the differential diagnosis of pericardial effussion, antinuclear antibody (ANA) and romatoid factor (RF) were investigated and the test results were negative. All of the serological test results for HIV, CMV, EBV and fungal infections were negative. Myocardial infraction was therefore excluded as the cardiac enzyme markers were negative. Thyroid function tests were within normal ranges. Tuberculin skin test was negative. The patient was consulted to gastroenterologist for UC treatment. No parazytes were seen on gaita microscopy. Thus 40 mg/day prednisolon and 4000 mg/day mesalamin was started. The response to treatment was very well. 6 days after the beginning of the treatment cardiac and intestinal symptoms were resolved. Pericardial effusion disappeared and ECG became normal. The patient was discharged 6 days after the admission and his general condition was good. Steroid treatment continued for 2 more months with gradual decrease. The TTE proved that there was no pericardial effusion.

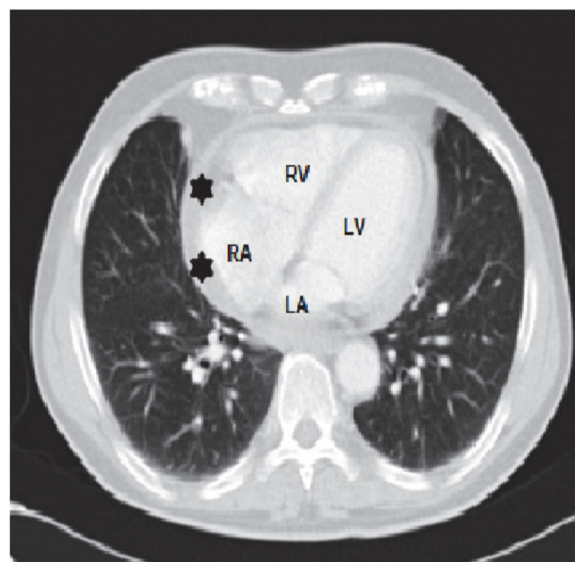

Figure 2. Computerized tomography of the chest showing pericardial effusion (asterisks). LV, left ventricle; LA, left atrium; RV, right ventricle; RA, right atrium

DISCUSSION

Extraintestinal symptoms of IBD like pyoderma gangrenosum, E. Nodosum, conjunctivitis, uveitis, Ankylosing spondylitis, arthritis, hepatisis, sclerosing cholangitis and pleural effusiom, and cardiac manifestation effusion, in particular, are well established (5). Acute pericarditis is the leading cardiac complication with 70% ratio, while myocarditis is the second with 10%. Pericardial effusion, conduction defects and cardiac tamponade are among other cardiac complications (4,6,7). Pericarditis is usually seen in acute exacarbation of inflammatory bowel diseaseas as it has been observed in our case (3,8). But during remission periods pericarditis can be seen even before the intestinal involvement (9).

Nonsteroidal Antiinflammatory Drugs (NSAIDs) should be avoided during the treatment of active UC patients. Despite the fact that NSAIDs are recommended for the treatment of pericarditis and pericardial effusion (10), there is the possibility of worsening UC (11). The treatment of pericarditis caused by UC is generally based on steroids; the rest of the treatment is ASA and indomethasine. Heart responds well to either nonsteroidal anti-inflammatory drugs or to corticosteroids (2,6). The point to be considered in the treatment is that steroid should not be stopped suddenly, otherwise the rebound effect may occur. We gradually decreased steroids in a 2 months period and did not see any pericardial effusions in TTE control.

In literature, there are some pericardial effusion cases caused by mesalamin and sulfalazine, which are used in IBD treatments (12). Cardiac involvement caused by mesalamine usually occurs just after the beginning of the treatment. In sulfazaline related cases signs such as lupus can be observed. Positive test results for ANA and the signs of pleural and pericardial diseases can be seen. The pathological mechanism is thought to be due to hypersensitivity reactions (13). Our patient didn't have any medical treatment for the last 6 months. In the light of this information, if the patient complains particularly from chest pain and dyspnea after the beginning of sulfalasine and mesalamin treatment, drug related complications should be kept in mind. As a result, in pericardial effusion cases with unclear etiology, UC should be considered in differantial diagnosis and it should be remembered that steroid treatment is very effective in pericardităis and pericardial effusion cases.

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