

# Pericardial Effusion Caused by Ankylosing Spondylitis

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## Abstract

Ankylosing spondylitis is a chronic systemic inflammatory rheumatic disease involving the sacroiliac joints. Uveitis is a systemic disease that can involve lungs, kidneys and heart. While extracardiac involvement is common, cardiac involvement is rare. Ankylosing spondylitis is seen in approximately 1-2 of every 1000 people. It is seen 3-4 times more in men than in women [1,2]. While involvement of the aortic valve, ascending aorta and conduction system is common in ankylosing spondylitis, pericardial involvement is rare. In this case, we present a rare case with pericardial effusion due to Ankylosing Spondylitis.

**Keywords:** Ankylosing spondylitis; Pericardial effusion and rare

## Introduction

Between the pericardium leaves surrounding the heart, there is less than 50 ml of serous, physiological fluid that can vary dynamically [1]. This amount of fluid is useful in performing the functions of the heart. However, the increase in the amount of fluid is called pericardial effusion and it impairs diastolic functions of the heart by increasing intrapericardial pressure. Ankylosing spondylitis is a chronic systemic inflammatory rheumatic disease that is common in young men and primarily involves the axial joints [2]. Extraarticular manifestations are common and severe. While uveitis, intestinal diseases, lung involvement, and kidney involvement are common, cardiac involvement is rare. The main pathophysiological mechanism responsible for this involvement is the sclerosing inflammatory process [3]. Aortic valve involvement, ascending aortic involvement and conduction system involvement are common in cardiac involvement due to this mechanism. However, pericardial involvement is less common [4]. In this article, we presented a rare case of pericardial effusion due to Ankylosing Spondylitis.

## Case Report

A 51-year-old male patient was admitted to our clinic with pleuritic pain in the left hemithorax that started 10 days ago,

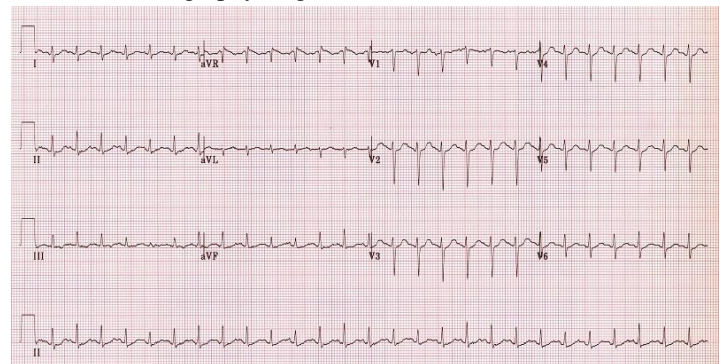
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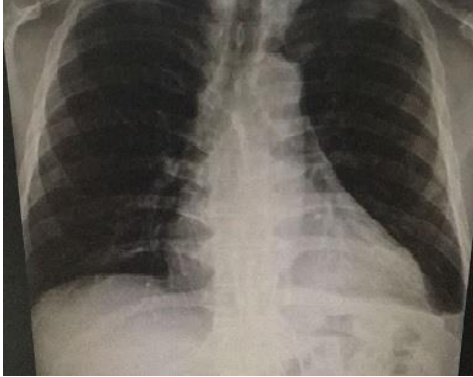
palpitations and shortness of breath. It was learned from her history that she had been diagnosed with Ankylosing Spondylitis for 3 years. The patient's blood pressure arteriole was 80 / 50mmHg, heart rate 130 / min, and respiratory rate 22 / min. Laboratory tests were unremarkable. There was sinus tachycardia on electrocardiography (Figure 1).



**Figure 1:** Electrocardiography shows sinus tachycardia.

There was no feature other than cardiomegaly on chest radiography (Figure 2). In echocardiography, there was a global 20 mm pericardial effusion in the diastole around the heart. The patient was started on colchicine 0.5 mg 2x1 and nonsteroidal anti-inflammatory. Pericardiocentesis was planned for the patient

because of the hemodynamics of the patient. Seldinger, 6 F sheath, 0.035 guidewire, pigtail catheter and 50 ml injector were used for this procedure. Pericardiocentesis was applied to the patient. Pericardial fluid was hemorrhagic (Figure 3).



**Figure 2:** Cardiomegaly is seen on chest radiography.



**Figure 3:** Hemorrhagic view of pericardiocentesis specimen.

After pericardiocentesis was performed to the patient, a sample of pericardial fluid was sent for diagnostic purposes. Pericardial fluid was evaluated as exudate according to the results of samples sent from pericardiocentesis fluid. No malignant cell was detected in the pathology evaluation. Tuberculosis was not detected. The present pericardial effusion was evaluated to be caused by Ankylosing Spondylitis. The patient was followed up in our clinic for 10 days. When the pericardial fluid withdrawn from the daily sheath fell below 50 ml, the sheath was withdrawn. The patient's clinical condition improved.

## Discussion

Ankylosing spondylitis is a chronic systemic inflammatory rheumatic disease involving the sacroiliac joints. Uveitis is a systemic disease that can involve lungs, kidneys and heart. While extracardiac involvement is common, cardiac involvement is rare. Ankylosing spondylitis is seen in approximately 1-2 of every 1000 people. It is seen 3-4 times more in men than in women [1,2]. While involvement of the aortic valve, ascending aorta and conduction system is common in ankylosing spondylitis, pericardial involvement is rare. In our case, there was no valve involvement due to ankylosing spondylitis, ascending aorta and conduction system involvement [3,4]. However, there was pericardial involvement, which is a rare involvement. In the literature, the echocardiographic features of Ankylosing Spondylitis include thickening of the posterior aortic wall, aortic insufficiency, small pericardial effusions, thickening of the aortic and mitral valve without regurgitation [5,6]. In our case, pericardial effusion is large and it differs from the literature in this respect. As a result, although Ankylosing Spondylitis mostly causes aortic valve involvement, ascending aortic involvement or conduction disturbances, pericardial effusion should also be considered.

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