Congenital total absence of pericardium in a patient with left lung lower lobe bronchiectasis

Sol akciğer alt lob bronşektazisi olan bir hastada konjenital total perikart yokluğu

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Introduction

Congenital absence of the pericardium is a rare condition, which is usually encountered incidentally in surgical procedures or autopsies (1, 2). We reported a patient with total agenesis of the pericardium. The anomaly was missed despite of the abnormal chest X-ray and computed tomography findings.

Case Report

A 32-year-old man was referred to our clinic for surgical treatment of left lower lobe bronchiectasis. His major complaint was productive cough with sputum and frequent respiratory tract infection. He was also complaining about atypical chest pain, which had no relation with exercise or posture.

On physical examination, his apical impulse was displaced to the left and pulmonary sounds were decreased in the left lower zone with some bronchial rales. Examination of the other systems was unremarkable. The preoperative laboratory parameters were in normal range. The preoperative electrocardiogram (ECG) showed incomplete right bundle branch block and nonspecific T-wave changes (Fig. 1).

In chest X-ray, the heart was displaced to the left with the prominence of the pulmonary artery.

The bronchiectatic lung tissue of the left lower lobe superposing on the heart shadow was seen. The contour of the left hemi-diaphragma was disappeared because of the position of the heart and the left lung (Fig. 2). Thoracic computed tomography showed left lower lobe bronchiectasis and compensatory hypertrophic right lung with cardiac displacement to the left (Fig. 3). Additionally, a part of lung tissue inserted between the ascending aorta and the main pulmonary artery was seen (Fig. 4). The echocardiography performed preoperatively had been reported to have right ventricular enlargement and mild pulmonary insufficiency.

The patient underwent a left posterolateral thoracotomy for left lower lobectomy of the lung. The total agenesis of the pericardium was seen during operation (Fig. 5, 6). Heart and the other structures seemed to be normal except the macroscopic findings of the left lower lobe

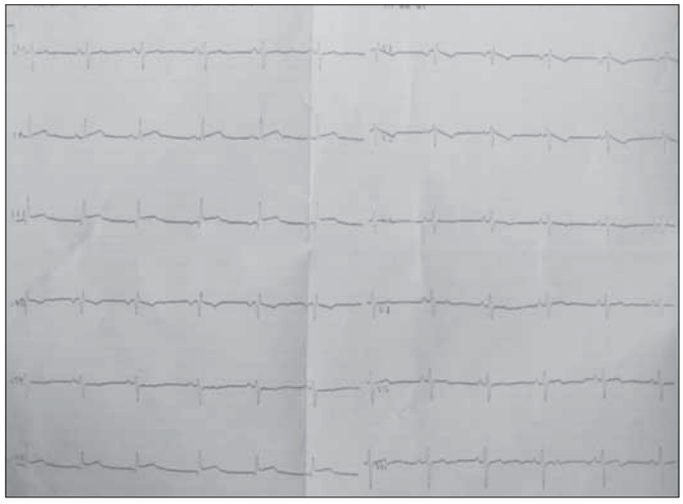

Figure 1. Preoperative electrocardiogram

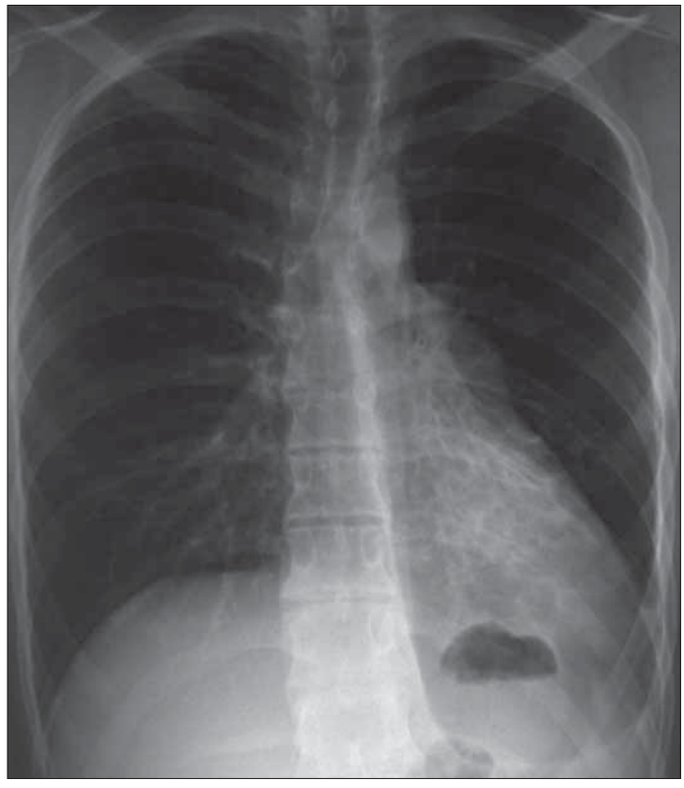

Figure 2. Preoperative chest X-Ray

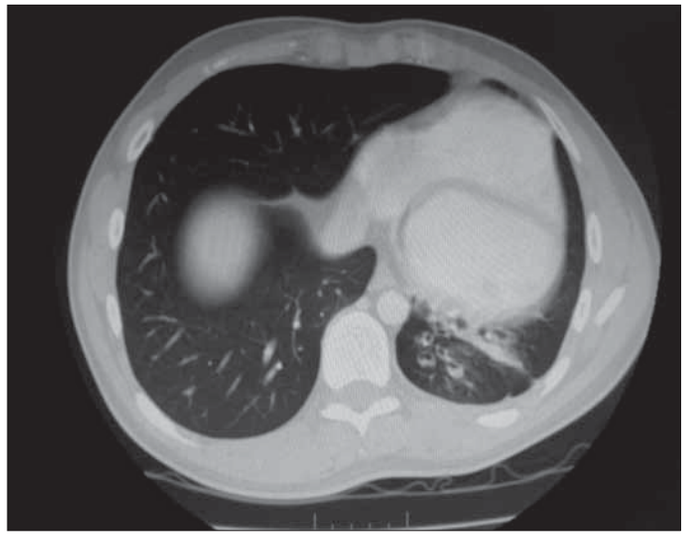

Figure 3. Preoperative thorax computed tomography. Left lower lobe bronchiectasis and compensatory hypertrophic right lung with cardiac displacement

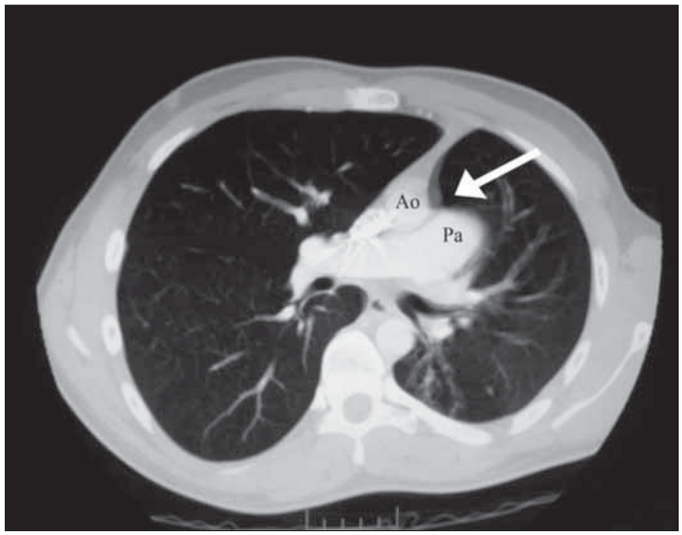

Figure 4. Preoperative thorax computed tomography. White arrow: A part of lung tissue inserted between the ascending aorta and the main pulmonary artery

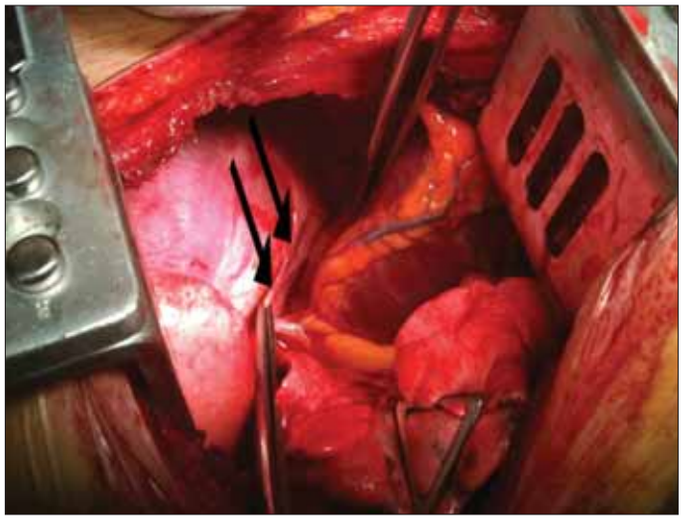

Figure 5. Peroperative image. Black arrows: Immature pericardial tissue

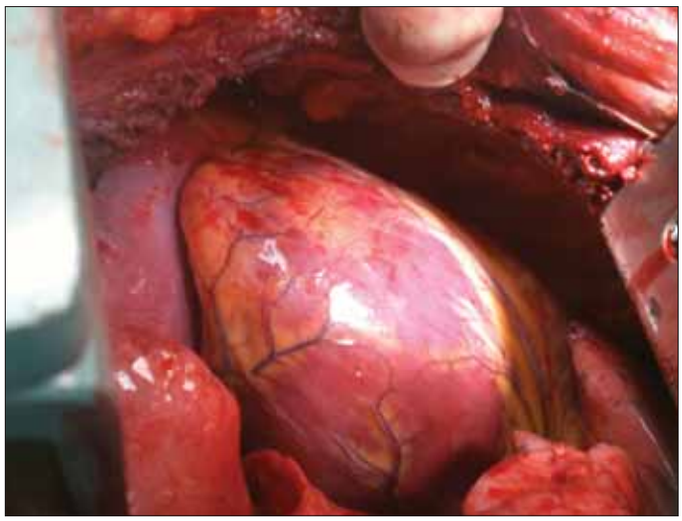

Figure 6. Peroperative cardiac image of heart without pericardium

bronchiectasis. The visceral pleura of the affected lung was seemed to be intact. Left lower lobectomy was performed without any complication. The patient was discharged from the hospital in the 5th postoperative day.

Discussion

Congenital absence of the pericardium is usually overlooked as in our case. It is may be due to the rarity of the anomaly or to the concomitant situations. Approximately 30% of patients with pericardial agenesis have additional anomalies such as atrial septal defect, bicuspid aortic valve, patent ductus arteriosus, tetralogy of Fallot, pulmonary sequestration, bronchogenic cyst and congenital diaphragmatic hernia (2, 3). Bronchiectasis as in our case with pericardial agenesis has been also reported (4). Pericardial agenesis has no specific finding and it can also be asymptomatic. Chest pain, palpations, dyspnea or dizziness can be detected (5). Our patient had an atypical chest pain but the whole attention was given to the symptoms of the bronchiectasis. The chest pain was thought to be pleuretic due to the frequent pulmonary infections. Displacement of the apical impulse into the mid axillary line as in our patient (1, 5, 6) and recurrent pulmonary infections which was also seen in the bronchiectatic patient was described with the pericardial absence (2).

Incomplete right bundle branch block and ST-T wave abnormalities in precordial leads as in our patient can be seen as the ECG changes (1, 2, 7). Echocardiography provides valuable information which may support the diagnosis (6). But the expectancy of this the anomaly is the most important point otherwise it can easily be missed during performing the echocardiography. Unusual echocardiographic window, abnormal ventricular septal motion, enlarged right ventricle during systole can accompany to pericardial agenesis as echocardiographic findings (2, 6) and these findings have reported in our patient at the echocardiography performed postoperatively (Video). Additionally, the angulation between the interatrial and interventricular septum was remarkable (Fig. 7).

Chest X-ray usually shows a marked displacement of the cardiac silhouette to the left without tracheal deviation (1, 3, 5, 7, 9). We think that it is an important clue in pericardial agenesia especially when any other explanations could not be made about the displacement of the heart in chest X-ray. In left sided bronchiectatic patients similar but not that much movement of the heart can be seen because of the volume loss and compensatory enlargement of the contralateral lung. CT and MRI are capable to determine the extent of the defect, herniation of structures and additional anomalies (8). Computed tomography can show prominence of the main pulmonary artery and the interposition of the lung tissue between the aorta and the main pulmonary artery as in our patient (5, 8).

Usually complete defects as in our case or small defects which herniation of the heart is not possible do not need any intervention (9, 10). In partial defects if herniation is probable pericardiectomy or pericardioplasty must be considered (1). At the other hand, resection of the bronchiectatic tissue is much more appropriate with this congenital anomaly, because the anomaly is thought to be harmful by exposing the heart directly to pulmonary infections (5).

Conclusion

Although pericardial agenesis is a very rare anomaly, it must be remembered in the patients with nonspecific chest complaints, especially when abnormal radiographic and cardiac studies accompany the situation.

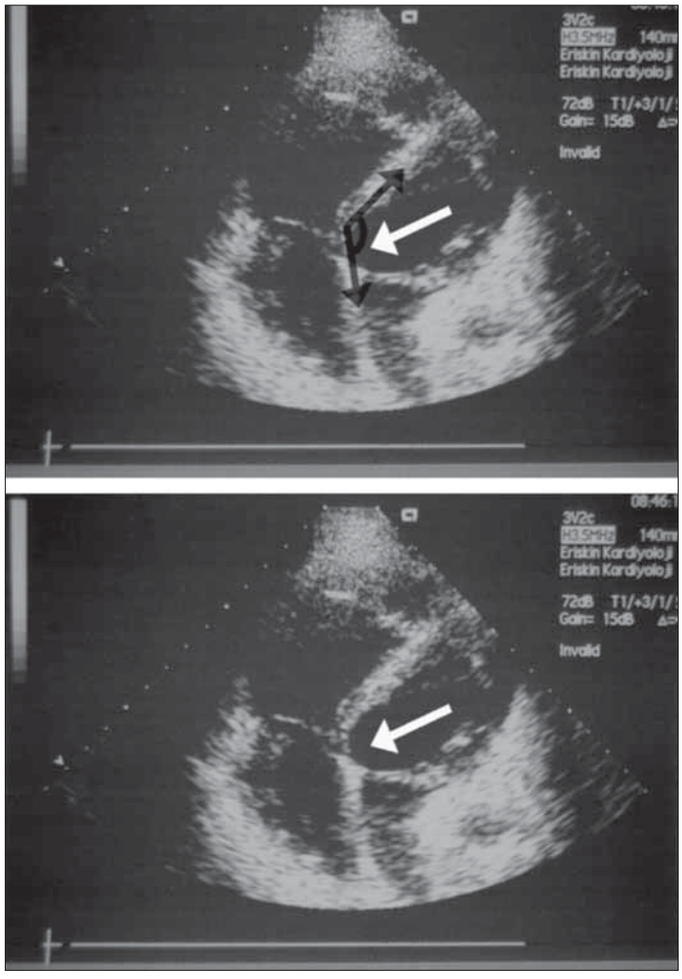

Figure 7. Postoperative echocardiography. White arrow: Angulation between the interatrial and interventricular septum

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Infected giant left atrial myxoma: an unusual phenomenon

Enfekte dev sol atriyal miksoma: Olağan dışı bir fenomen

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Introduction

Myxomas, as other primary cardiac tumors, occur rarely. The most common symptoms are typical of mitral stenosis or peripheral embolism. Cardiac myxomas may simulate infective endocarditis but are rarely actually infected. Infected myxoma leads to numerous diagnostic and therapeutic difficulties. We report a case of an infected cardiac myxoma that presented in a manner similar to bacterial endocarditis.

Case Report

A 47-year-old male was admitted to the hospital with a 2-month history of progressive weakness and fever. His medical history was negative for endocarditis risks. On admission, the patient had a fever of 38°C, blood pressure of 110/80 mmHg, and heart rate of 90 bpm. A grade II/IV systolic murmur was noted at the cardiac apex. Bilateral pulmonary rhonchi was heard and expiration was prolonged. No evident mucocutaneous signs of endocarditis, embolic episode or organomegaly were observed. Blood cell counts and serologic studies disclosed a mild inflammatory response with a white blood cell count of 11800/mm^3 and a C-reactive protein concentration of 25.82 mg/dl. Other laboratory findings were normal except for an elevated increase of the erythrocyte sedimentation rate (ESR) (46 mm/h) and a mild anemia (hemoglobin, 11.5 g/dL). Chest X-ray and electrocardiogram were normal. Blood cultures were positive for *Streptococcus viridans*. Transthoracic echocardiogram showed a mobile left atrial mass with small pedicle attached to the lower part of the interatrial septum, 56x44 mm in size, prolapsing into the left ventricle through the mitral valve. The mean gradient across the mitral valve was 12 mm Hg. Mild regurgitation was also observed (Fig. 1, 2). After antimicrobial therapy with combination of ampicillin and gentamycin for two weeks, a stable patient was operated and a giant tumor fixed to the lower part of the atrial septum was excised. Histological examination of the material showed myxoma cells and microabscess formation (Fig. 3, 4). Postoperatively, antibiotic therapy was continued for