

# Intrapericardial Organized Hematoma: A Rare Complication After Coronary Surgery, Radiological Findings

## İntraperikardiyal Organize Hematom: Koroner Cerrahi Sonrası Nadir Bir Komplikasyon, Radyolojik Bulgular

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**ABSTRACT** Intrapericardial organized hematoma, which compresses cardiac chambers late after open heart surgery, is extremely rare. We report a case of intrapericardial organized hematoma in a 65 years old man, presenting with congestive heart failure that had a history of cardiac surgery two years ago. An echocardiographic study demonstrated a large heterogeneous mass (86 x 37 mm) located posterior to the left ventricle that severely compressed the left ventricle toward the ventricular septum. Enhanced chest computed tomography (CT), and also multi-detector CT images were obtained. Surgical resection was planned for definitive diagnosis and treatment. The histological findings confirmed the diagnosis of a chronic intrapericardial hematoma.

**Key Words:** Pericardial effusion; hematoma; tomography, spiral computed

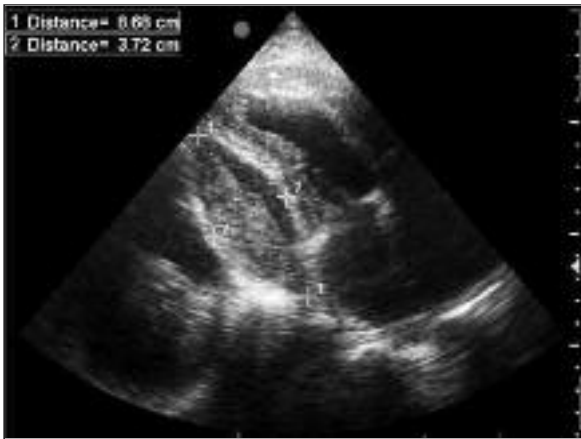
**ÖZET** Açık kalp cerrahisi sonrası geç dönemde oluşan ve kalp odacıklarını komprese eden intraperikardiyal organize hematoma oldukça nadirdir. İki yıl önce kardiyak cerrahi operasyon geçiren ve konjestif kalp yetmezliği şikâyetiyle başvuran 65 yaşındaki erkek olguda, intraperikardiyak yerleşimli organize hematoma ile uyumlu olabilecek radyolojik bulgular mevcuttu. Ekokardiyografide, sol ventrikül posteriorunda yerleşimli ve sol ventrikülü belirgin komprese eden geniş heterojen ekojenitede kitle lezyonu izlendi. Kontrastlı toraks bilgisayarlı toraks tomografi (BT) ve multidedektör BT görüntüler elde edildi. Kesin tanı ve tedavi açısından cerrahi tedavi planlandı ve histolojik bulgular ile tanı doğrulandı.

**Anahtar Kelimeler:** Perikardiyal efüzyon; hematoma; bilgisayarlı tomografi

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Chronic intrapericardial hematoma is a rare disease that occurs after open heart surgery, chest trauma, or epicardial injury. The symptoms are related to the anatomical location. We describe the case of an organized intrapericardial hematoma 2 years after the coronary artery bypass surgery presenting with congestive heart failure.

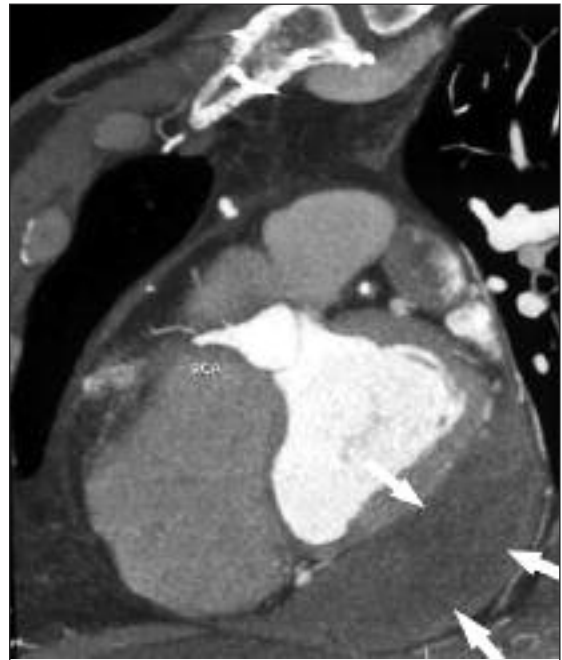
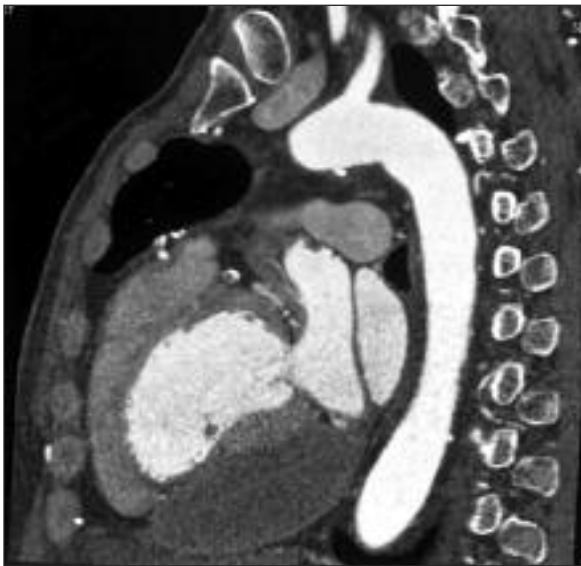
A 65 years old man, who had a history of the coronary artery bypass grafting 2 years previously, was admitted to our hospital as a result of dyspnea on exertion. An echocardiography study showed a heterogeneous mass, 86 x 37 mm, localized posterior to the left ventricle (Figure 1). The mass severely compressed the left ventricle. Enhanced chest computed tomography (CT) also revealed an encapsulated hypo density mass which was not enhanced by the administration of intravenous contrast material, compressing the left ventricle posteriorly (Figure 2). On sagittal and coronal mul-



**FIGURE 1:** An echocardiographic study demonstrated a heterogeneous mass, 86 × 37 mm, localized posterior to the left ventricle.



**FIGURE 2:** Enhanced chest computed tomography showed the hypodense mass, which was not enhanced by the administration of intravenous contrast material, compressed the left ventricle posteriorly (arrows).



**FIGURE 3a:** On sagittal (b) and coronal multi-detector computed tomography images demonstrated a smooth edged mass, with heterogeneous hypo density localized posterior to the left ventricle (arrows).

ti-detector CT images demonstrated a smooth edged mass, with heterogeneous hypo density localized posterior to the left ventricle (Figure 3a, b). Imaging findings showed no specifically diagnosis that the patient has may be complicated cyst or organized hematoma or cardiac mass.

A differential diagnosis from the tumors would have been difficult, and histopathological diagnosis

would be required for definitive diagnosis. Surgical removal of the mass was planned to release the compression of the heart and to confirm the diagnosis. The mass was completely resected through a left thoracotomy, and the histological findings confirmed the diagnosis of a chronic expanding intrapericardial hematoma. The patient's postoperative course was uneventful, and his symptoms improved markedly.

Chronic hematoma as a lesion persists more than 1 month after the initial hemorrhage. This disease can occur at any location in the body. A thorough search of the literature revealed a few cases that occurred after open heart surgery, chest trauma, or epicardial injury.<sup>1-4</sup> In our case, the patient had a history of the coronary artery bypass grafting 2 years ago.

Symptoms and duration before clinical discovery are related to the anatomical location of the hematoma. In the present case, the mass was located posterior to the left ventricle, and it severely compressed the left ventricle toward the ventricular septum. Mitral valve inflow was severely re-

stricted, and the patient developed congestive heart failure. The management of such hematomas should be complete surgical resection at an early stage before cardiac and mediastinal compression.<sup>1</sup>

In conclusion, chronic hematoma remains a rare disease, but should be considered when an expanding mass is found in the chest after cardiac surgery. An earlier surgical resection may be recommended to make a definitive diagnosis and release the symptoms associated with compression by the mass. Echocardiography, computed tomography and magnetic resonance imaging are useful radiological modalities for diagnosis.

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