

# KARDİYAK KİST HİDATİK (OLGU SUNUMU)

## CARDIAC HYDATID CYST (CASE REPORT)

Mustafa CERRAHOĞLU, Münacettin CEVİZ, Hikmet KOÇAK, Ahmet BAŞOĞLU  
Azman ATEŞ, İbrahim YEKELER, Şule KARAKELLEĞLU, Ayhan AKÇALI,

Departments of Thoracic and Cardiovascular Surgery (MC, MC, HK, AB, AA, İY), Cardiology (ŞK) and  
Radiology (AA) Atatürk University Research Hospital, Erzurum-TURKEY

### Özet

Atatürk Üniversitesi Tıp Fakültesi Göğüs Kalp ve Damar Cerrahisi Anabilim Dalında ameliyat edilen 2 kardiyak kist hidatik olgusu sunuldu. Birinci olguda bilateral akciğer ve sağ ventrikül ön duvarında yerleşmiş kistler mevcuttu. İkinci olguda ise yine sağ ventrikül ön duvarında yerleşmiş multipl kistler mevcuttu. Preoperatif Ekokardiografi ve Computerize Tomografi (CT) ile tanı konulan vakalar açık kalp ameliyatına alındı. Birinci olguda akciğer ve kardiyak kistler aynı seansda çıkarıldı. İkinci olguda ise kist çıkarıldıktan sonra kist boşluğu biyolojik Fibrin Glue ile yapıştırıldı. Bu makalede Kist Hidatikler gözden geçirildi. Kist boşluğunun kapatılmasında Biyolojik Fibrin Glue'nin iyi bir seçenek olabileceği düşünülmektedir.

**Anahtar kelimeler:** *Hidatik Kist, Kardiyak Kistler*

### Summary

A case of 25 years old who had cyst on right ventricular wall has been reported. The cyst was excised with open heart surgery after diagnosed with CT and Echocardiography. Cyst space was attached using biological fibrin glue. In this paper, we emphasised that biological fibrin glue is appropriate choice for closing up cyst space.

**Key words:** *Hydatid cyst, cardiac cyst.*

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### Introduction

Echinococcosis, an endemic disease on the Asian continent, is caused by the tapeworm *Tenia Echinococcus*, which produces cyst in the liver and other organs <sup>(1)</sup>. It is also endemic to the East Anatolia <sup>(2)</sup>. Hydatid cysts of the heart are rare and account for 0.02% to 2% of all hydatid infestations <sup>(3,4)</sup>. The first cases of cardiac echinococcosis were mentioned by Willialm in 1936 <sup>(5)</sup>. These cysts enlarge slowly <sup>(1)</sup>. The diagnosis is difficult and is based on a series of findings in which hydatid serology and cardiac imaging play important parts <sup>(6)</sup>.

### Case Report

A 25-year-old male patient, being a chepherd and living in Kars City of East Anatolia, was first admitted to Atatürk University Research Hospital complaining of dyspnea, chest pain and fever for the last 15 days. The pain started in epigastric region and radiated to the left part of chest. Dyspnea was greatest in walking and decreased in the sitting position. There was no prior history of cardiopulmonary symptoms and no operation or accident. Physical examination showed a tall, thin man weighing 60 kilograms. His blood pressure was 120/80 mmHg and his pulse was regular with a rate

of 80 beats per minute. On auscultation, he had some brachial rales in bases of the left lung and a grade 2-3/6 apical systolic murmur transmitted along the left sternal border. A chest roentgenogram revealed an enlarged cardiothoracic ratio. The electrocardiogram exhibited deep inverted T wave on leads II, III, aVF, and V3 to V6. In lung function tests, there was mild obstructive respiratory failure with 25% loss of vital capacity. Routine laboratory examinations were normal. The Casoni skin test was positive, and the Weinberg agglutination test was negative. The two-dimensional echocardiography showed the presence of multilocular cysts in the right apical ventricular wall and pericardial effusion. In radiologic examination; B-Mode ultrasonography and computerized axial tomography demonstrated rounded, multilokular, thick-walled cysts in the right apical ventricular wall and pericardial effusion. CT also showed atelectasia in the lower left lung. It was passed through Extracorporeal circulation (ECC), after median sternotomy and standart cannulation. Cyst pouch localized in right ventricle open of myocard and almost opened to pericard space was determined. A number of daughter vesicules and germinative cells were taken out. Cysts pouch was cleaned up with polyvinylidiodin and sticked to gether with biological fibrin glue.

However, the mouth of pouch was repaired with support of suture. After completion of all procedure. It was come out from ECC. There was no problem at postoperative stage. The patient was out at 8th day. Echocardiogram taken at 2nd month of operation did not display any pathology .

### Discussion

Hydatid cyst of the heart is an uncommon lesion. The diagnosis should be suspected in all patients who have signs of a cardiac tumour. The suspicion should be strengthened if a patient comes from sheep-raising areas <sup>(7)</sup>. Echinococcosiasis is endemic in Turkey <sup>(2)</sup>. Cardiac involvement must be considered among the main differential diagnosis of mediastinal masses, arrhythmias and chest pain, especially when the patient comes from endemic areas <sup>(8)</sup>. This case and the previous one involve two patients who arriving in the region where animal feeding is common <sup>(9-10)</sup>. Hydatid cysts involving the heart have the following predominant locations: left ventricle (75%), right ventricle (18%), and interventricular septum (7%). Occurrence in the atrium has been rarely reported. Septal cysts tend to enlarge towards the right ventricle owing to lower pressure. It is very rare for these cysts to enlarge towards the left ventricle <sup>(8-11)</sup>. In this report, there were multiple cysts in the apical region of the right ventricle with intramural locations. The primary cyst is solitary unless a multiple infestation has occurred, which is not impossible. The average size of multiple cysts is 3-5 cm in diameter. In our case, there were multiple cysts and they were 1-5 cm in size. Five stages were recognised in the development of the cardiac cyst. In the first stage, the univesicular cyst becomes implanted in the myocardium. In the second stage, the cyst ruptures either into the pericardium or into cardiac chambers. In the third stage, multiple secondary cysts begin to grow either in the pericardium or in various other parts of the body; the latter possibility, however, is quite rare. In the fourth stage, myocardial cyst may reform itself, it will contain multiple daughter cysts. In the fifth stage, the reformed secondary pericardial or intramural cysts may rupture <sup>(12)</sup>. Our case had multiple cysts, a few of them had ruptured with intramural locations. This condition was consistent with the fifth stage. Cysts are widely seen in left ventricle, since it is more blooded region. Myocardial ischemia and myocardial aneurysm indications may develop as a result of compression <sup>(5,8)</sup>. Conductive disturbances may be seen in septal location as it was happened in our first case <sup>(9)</sup>. Cardiac hydatid cyst can easily diagnosed by simple radiologic examination, electrocardiography and CT <sup>(1,5,8,12,13)</sup>. Removing of cyst with ECC is important method preventing complications <sup>(5,7)</sup>. Biologic

fibrin glue used recently in multiple VSD and aortic aneurysm was used in our case to close up the cyst pouch <sup>(12,14-16)</sup>. The results were encouraging. As a result, cardiac cysts are common in the areas of animal feeding are taking place. It is preferable method to clean up the cyst with ECC and to make it smaller with biologic fibrin glue.

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Correspondence to:

Dr. Mustafa CERRAHOĞLU  
Department Thoracic and Cardiovascular Surgery,  
Atatürk University Research Hospital,  
25240 / Erzurum-TURKEY