

Isolated Cardiac Hydatid Cyst

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ABSTRACT

Hydatid cyst disease is common in our part of the world. Cardiac hydatid cyst is its rare manifestation. We report this case of 48-year male having isolated cardiac hydatid cyst, incidentally found on computed tomography. This patient presented in medical OPD of Combined Military Hospital, Lahore with one month history of mild retrosternal discomfort. His general physical and systemic examinations as well as ECG were unremarkable. Chest X-ray showed an enlarged cardiac shadow with mildly irregular left heart border. Contrast enhanced CT scan of the chest showed a large well defined multiloculated non-enhancing cystic lesion with multiple daughter cysts involving wall of left ventricle and overlying pericardium. Serology for echinococcus confirmed the diagnosis of hydatid cyst. Patient was offered the surgical treatment but he opted for medical treatment only. Albendazol was prescribed. His follow-up echocardiography after one month showed no significant decrease in size of the cyst.

Key Words: Cardiac hydatid disease. Pericardium. Computed tomography.

INTRODUCTION

Cardiac involvement is a rare presentation of hydatid cyst disease, accounting for approximately 0.5 - 2% of all hydatidosis cases.¹ Echinococcus granulosus reaches the heart structures through systemic circulation or by extension from adjacent structures.² Left ventricle is the most common site involved followed by right ventricle, pericardium, pulmonary arteries and inter ventricular septum.^{3,4} Clinical presentation with isolated cardiac hydatid cyst can vary from being completely asymptomatic with incidental diagnosis on imaging to non-specific symptoms of chest pain, dyspnoea on exertion, retrosternal discomfort, cardiac tamponade⁵ and acute coronary syndrome.⁶ Although the serological tests are the most important diagnostic tools but imaging techniques like computed tomography and magnetic resonance imaging can be valuable in early detection and treatment of cardiac hydatid cysts.

The authors present this unusual case of an asymptomatic patient with isolated pericardial hydatid cyst disease.

CASE REPORT

A 48-year male resident of Lahore, farmer by profession, presented in medical OPD of Combined Military Hospital, Lahore, with one month history of mild retrosternal discomfort. There was no past history of diabetes, hypertension, asthma, ischemic heart disease or any other chronic illness. On general physical

examination, he was conscious and well oriented, afebrile with blood pressure of 130/85 mmHg and heart rate of 90 beats per minute. Examination of the respiratory, cardiovascular system and abdomen were unremarkable. ECG revealed normal sinus rhythm tachycardia. Chest X-ray showed enlarged cardiac shadow with mildly irregular left heart border with clear lung fields. Contrast enhanced CT scan of the chest showed a large well defined multiloculated non-enhancing cystic lesion with multiple daughter cysts involving wall of the left ventricle and overlying pericardium. It measured 12.7 x 11.8 x 9.7 cm with few scattered calcifications noted within its wall (Figure 1). Echocardiography findings were consistent with multiloculated cystic nature of the lesion and wall calcifications without any valvular dysfunction. Ultrasound and CT of the abdomen did not reveal any abnormality. A provisional diagnosis of cardiac hydatid cyst was made and serology for echinococcus confirmed our diagnosis. Patient was referred to the department of cardiac surgery for resection of cyst. He refused the surgical treatment and opted for medical treatment only. Albendazol 800 mg/day was prescribed. His follow-up echocardiography after one month showed no significant decrease in size of the cyst.

DISCUSSION

Hydatid disease primarily involves the liver (50 - 70%) and lungs (20 - 30%).³ Involvement of the heart is its rarest presentation. Presentation is variable ranging from completely asymptomatic to non-specific chest pain, palpitation, and rarely congestive cardiac failure and cardiac tamponade. This patient had mild retrosternal discomfort without any shortness of breath. Echocardiography is the imaging modality of choice but CT and MRI can be equally useful in detection of hydatid cysts involving the heart with an added advantage of

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Figure 1: Contrast enhanced axial and coronal CT images showing a non-enhancing multiloculated cystic lesion involving wall of left ventricle and overlying pericardium.

detection of multi-visceral involvement. The characteristic features of hydatid disease like cystic multiloculated nature are easily delineated by cross-sectional techniques thus narrowing the differential diagnosis. More specific signs include presence of daughter cysts and calcification of the cyst wall.^{7,8} The possible differentials include left ventricular aneurysm, heart tumors such as atrial myxoma, angiosarcoma and pericardial cyst.⁹ Serology for echinococcus is useful to confirm the radiologic diagnosis of hydatid disease, however, studies suggest that sensitivity of this is low with false negative results up to 50%.⁶

Definitive treatment of cardiac cyst is surgical excision. Anti-helminthic drugs are used in the pre-operative and postoperative periods. Use of medical treatment alone has not proved to be curative. The patient refused surgery and even after one month of medical treatment negligible decrease in size was noted. Different surgical options that are available include cystotomy followed by cystectomy, enucleation and filling of cavity using biological glue.¹⁰

Although cardiac hydatid cyst is a rare disease, no case has been reported in local journals so far. This case report clearly demonstrates that even in asymptomatic patients with retrosternal chest pain and enlarged cardiac shadow on chest X-rays, there should be a high index of suspicion for cardiac hydatid cyst. Contrast enhanced CT of chest can be the imaging modality of choice in conjugation with serology for confirmation of echinococcus. Surgical resection of the cyst followed by extended course of antihelminthic drugs offer the best available treatment option.

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