

Malignant Mesothelioma Pericardium

Abstract

Malignant mesothelioma is the most common primary tumor of the pericardium the clinical presentation is varied and aggressive, with high mortality even with cancer treatment. We report the case of a woman of 56 with recurrent pericardial and requirement of surgical procedures for resolution, which initially presented pericardial liquid negative for malignancy and subsequent decision malignant mesothelioma was diagnosed spill. He joined our institution for therapeutic assessment and finally died of refractory heart failure.

Keywords: Heart tumor; Malignan mesothelioma; Pericardial effusion

Case Report

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Introduction

Malignant cardiac tumors are a rare and aggressive entity with high mortality, even with proper treatment. Represent approximately 25% of primary cardiac tumors [1]. Malignant mesothelioma is the most common primary tumor of pericardium [2] and unlike its counterpart, pleural mesothelioma is not related to exposure to asbestos [3]. It is more common in men and although it can occur at any age prevalent in adults. It usually affects both leaves, visceral and parietal, can invade the underlying myocardium.

Malignant mesothelioma distinguishes three histological types: epithelial (67% of cases), sarcomatoid (7% of cases) and mixed [4]. The clinical presentation includes oligosymptomatic, chest pain, dry cough or dyspnea may have hemodynamic changes with pericardial effusion, constrictive pericarditis and cardiac tamponade. In all types of mesothelioma prognosis it is poor with a median survival one year after diagnosis [5].

56 year old woman, hypothyroid. Consultation with a history of recurrent cardiac tamponade in the last 8 months. Was initially performed pericardial puncture fluid obtained being negative for tuberculosis, rheumatoid and oncological diseases. In a second event, pericardium-peritoneal window and window pleural subsequently pericardium prior occlusion is performed. In further analysis of pericardial fluid it is reported positive for malignant mesothelioma sarcomatoid subtype pericardium. The patient evolved with progressive heart failure being referred to our institution transesophageal echocardiogram (TEE) which shows left ventricular (LV) with medium-apical hypokinesia, right ventricle (RV) with severe global hypokinesia, eco image refringente with commitment to medium-basal segments of the RV and postero-septal and lateral VI is performed and mild pericardial effusion.

Computed tomography (CT) thoraco-abdominopelvic adding to report ETE, nodular image in the left atrium (AI) with pericardial effusion with enhancement of parietal and visceral sheets is performed.

Palliative behavior is decided. The patient evolved with refractory heart failure and died.

Discussion

Malignant mesothelioma is not only a rare disease, but also aggressive and poor prognosis. Since the clinical presentation is varied, the diagnostic approach must be methodical and detailed. A complete medical history may reveal asbestos exposure, suggesting a mesothelioma originated in pleura, with subsequent metastasis or local invasion into the pericardium. The electrocardiogram (ECG) shows characteristic of this pathology changes, however small amplitude in leads the horizontal plane can suggest us myocardial infiltration or significant pericardial effusion [1-6]. In the chest radiograph can be evidenced in bottle silhouette, typical of pericardial effusion. In our case, bilateral pleural effusion with significant venocapillary congestion is observed due to heart failure (Figure 1).

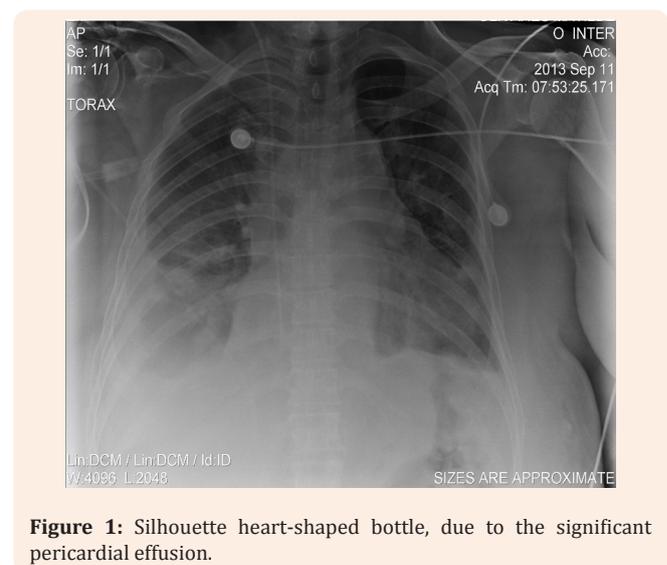


Figure 1: Silhouette heart-shaped bottle, due to the significant pericardial effusion.

Transthoracic echocardiography and TEE are very useful for the assessment and initial diagnostic approach. From its use can be assessed ventricular function, valvular commitment, myocardial or pericardial infiltration. Whenever suspected, we are in the presence of a malignant tumor, the use of TAC, if possible with intravenous contrast is recommended, and/or magnetic resonance imaging (MRI) of the chest. The image provided by these studies is useful because not only value the structure under study, but help in tumor staging, making treatment decisions [7].

Pericardial mesothelioma can manifest as pericardial effusion, sometimes accompanied by pericardial nodules or plaques. Diffuse involvement of the pericardium can simulate cardiac tamponade or constrictive pericarditis. Mesothelioma patients in advanced stages may have widespread metastases and prognosis

is poor. History and imaging findings depend on the degree of pericardial involvement. The chest CT scan shows irregular and diffuse thickening of the pericardium, associated with stroke. These findings are also found in NMR study which also can be characterized myocardial infiltration with great accuracy [8,9].

With respect to our patient (Figure 2 & 3), inter consultation with the oncology team performed the use of MRI versus CT with intravenous contrast was assessed. While it is true that through cardiac MRI can be assessed in more detail myocardial infiltration and can set other differential diagnoses [10], that option was not taken into account for two reason. First extension and myocardial infiltration had already been established by ETE, and secondly from cytology, had already established the diagnosis of certainty.

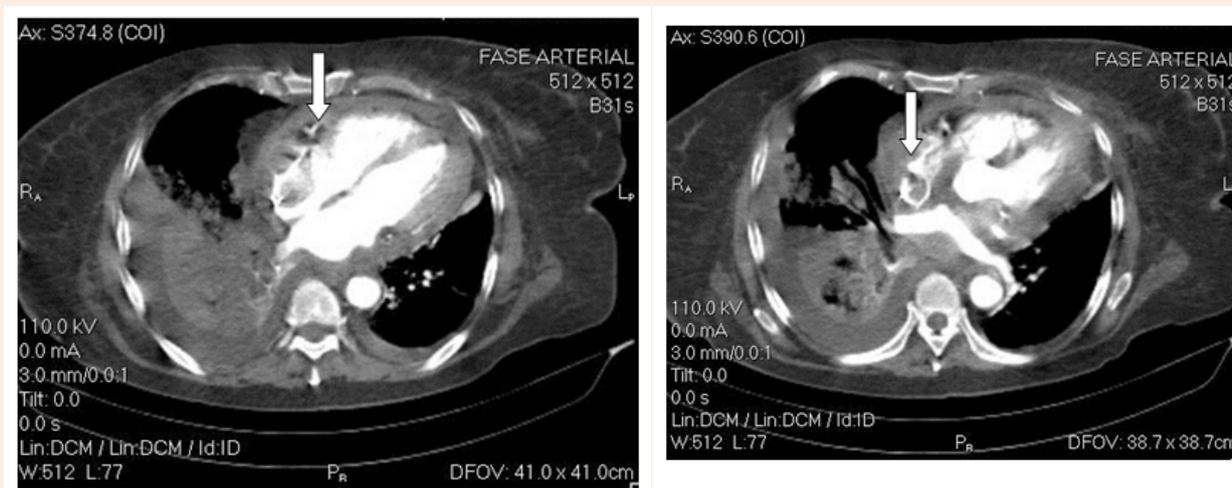


Figure 2 & 3: The TAC, in its arterial phase, showing in detail the myocardial structure, extent and infiltration (arrows) of the tumor mass and surrounding structures. These data are essential for the heart surgeon when deciding whether the patient is liable to surgical resolution and what technique should address.

Regarding the use of TAC, one of the most important aspects is the staging. It is known that the expansion of mesothelioma is continuity and because of the history of pleuro-pericardial window and pericardium-peritoneal, was desired to rule out infiltration and peritoneal leaves peural respectively. It is noteworthy that the choice of using contrast CT has been used in other lines of reported cases [11-13] and is considered the ideal method for the diagnosis and monitoring of such pathology [14].

Given the evidence provided by ETE and TAC, the medical team and rejects the transplant surgical option. Treatment of malignant mesothelioma of pericardium needs a multidisciplinary approach that includes clinical cardiologist, cardiovascular surgeon, oncologist and specialist in cardiac imaging. If the patient was candidate for surgical resolution, the purpose of it is the maximum possible resection, cardiac reconstruction and taking biopsy material. Not possible excision of the tumor, it can always raise heart transplant and when the tumor has not infiltrated adjacent structures or distant metastases are observed.

It should be noted that the infiltrative and aggressive nature of this tumor makes survival is very low, low surgical chance and the possibility of high recurrence.

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