Diagnosis and management of pericardial mesothelioma

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Introduction: Pericardial mesothelioma is a rare condition with a reported prevalence <0.002%, with different clinical picture and clinical manifestations that include constrictive pericarditis, cardiac tamponade, and heart failure or pericardial tuberculosis. Here we present a rare case of pericardial mesothelioma of 30 years old female patient who presented by dyspnea and cardiac tamponade. MRI of the heart was showing pericardial mass where biopsy leaded the diagnosis of sarcomatoid mesothelioma of the heart.

Case Report: Female patient, 30 years old, presented, in May 2016, with chest pain and dyspnea. She was missed diagnosed as a case of congestive heart failure causing bilateral pleural effusion which had a mild improvement of symptoms with treatment of heart failure. Upon her follow up, her physician noticed pericardial thickness during echocardiography where CT and MRI was requested showing pericardial mass invading right atrium. Biopsy and pathological examination was showing poorly differentiated bland spindle cells with a collagenous stroma. Immunohistochemistry was done showing the following: 1- Pan cytokeratin positive on neoplastic cells; 2- Calretinin positive 10% of neoplastic cells; and 3- Vimentin and actin positive on neoplastic cells. This revealed the diagnosis of pericardial sarcomatoid mesothelioma invading right atrium. The patient had good supportive care including management of heart failure that was caused by filling defect of right atrium and impaired cardiac motility due to peri-cardiac mass, and chest tube fixation to drain bilateral pleural effusion. After improvement of general condition, the patient performance status was improved and she began chemotherapy in the form of ifosfamide and doxorubicin. Now she ended two cycles with good tolerance and clinical response.

Discussion: Pericardial mesothelioma accounts for approximately 6% of all mesotheliomas; approximately 120 cases have been reported. It has been reported at any age with male predominance of 3:1. Diagnosis of primary pericardial mesothelioma is usually late due to misdiagnosis with other conditions of pericardial diseases. Radiologically: Most cases presented with pericardial mass with or without effusion but still any specific radiological features that can differentiate pericardial mesothelioma from other pericardial neoplasms, but in some literatures it was described that chest radiography in patients with pericardial mesothelioma typically demonstrates cardiac enlargement, evidence of pericardial effusion, an irregular cardiac contour, or diffuse mediastinal enlargement and MR imaging also readily demonstrates cardiac encasement by a soft-tissue pericardial mass, as well as an associated pericardial effusion; but sometimes the presentation occurs with multiple pericardial masses. Treatment guidelines specific for pericardial mesothelioma is not yet established but, like other sarcomatoid mesothelioma, surgery for this case was not an option, so we began treatment of this case with ifosfamide and doxorubicin.

Biography

Rasha Aboelhassan is an Oncology Consultant at the Nasser Institute Hospital for Research and Treatment. She’s an expert in Medical Oncology, 3Dimension Radiation Therapy (3DCRT) and Intensity Modulated Radiation Therapy (IMRT), Cancer Research and Supportive Care. She’s an optimistic oncologist with experience over 20 years; and she’s the Principle Investigator of many international clinical trials working on new treatment for lung cancer, soft tissue sarcoma and lymphoma. She also has many online publications in the field of supportive care, breast cancer and rare cancers. She honoured a certificate of appreciation from Egyptian Ministry of Health and Cairo Medical Syndicate for her dedication towards her work.

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