Echocardiographic Image of Primary Mediastinal Sarcoma with Pericardial Invasion

Imagem Ecocardiográfica de Sarcoma Primário de Mediastino com Invasão de Pericárdio

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Primary mediastinal sarcoma is rare, corresponding to less than 1% of all soft tissue sarcomas and less than 10% of all primary mediastinal tumors.

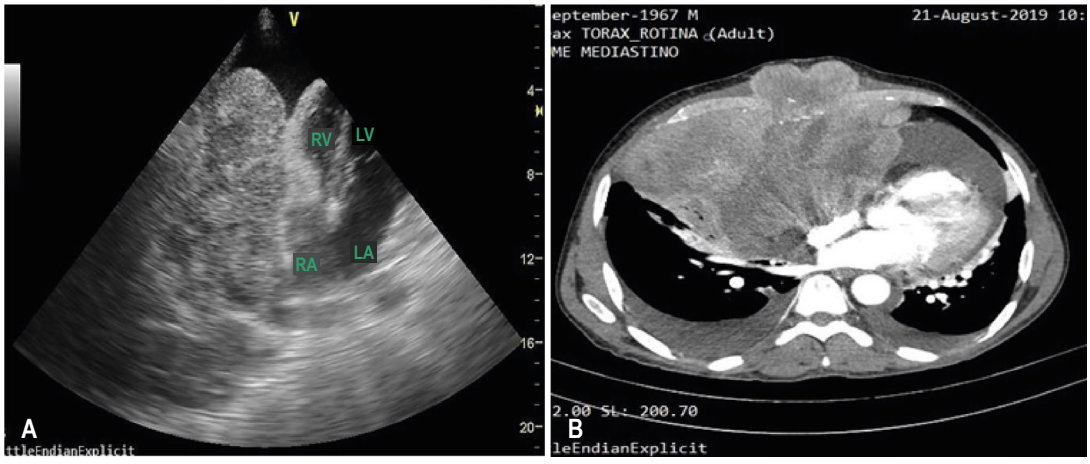
A 52-year-old man with signs and symptoms of cardiac tamponade underwent echocardiography of the right ventricle, which revealed significant pericardial effusion and an extensive heterogeneous mediastinal mass measuring approximately 15 × 8 cm in the pericardial space in close contact with the right chambers and causing diastolic collapse. The diagnostic hypothesis was a pericardial or mediastinal neoplastic process invading the pericardium. Subsequently, an immunohistochemical study confirmed a high-grade fusiform/pleomorphic cell sarcoma.

Authors' contributions

Research concept and design: Melo KPB and Maia RJC; data acquisition: Melo KPB, Maia RJC; data analysis and interpretation: Melo KPB and Maia RJC; statistical analysis: Melo KPB, Maia RJC; manuscript writing: Melo KPB, Maia RJC; critical review of the manuscript for intellectual content: Melo KPB, Maia RJC, Siqueira BJ, Araújo MLSC, Souza ACBM.

Conflict of interest

The authors have declared that they have no conflict of interest.



RV, right ventricle; LV, left ventricle; RA, right atrium; AE: LA, left atrium

Figure 1 – *(A) Transthoracic echocardiogram image showing a large pericardial effusion in an expansive process with close contact with the right cardiac chambers, mainly the right atrium. (B) Chest computed tomography image showing a large heterogeneous mass in the lower mediastinum with diffuse contrast medium uptake invading the sternum and the pericardium. The lesion deflects the heart to the left and is compressing the right heart chambers.*

Keywords

Echocardiography; Mediastinal neoplasms; Pericardium; Sarcoma.

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Manuscript received 8/23/2020; revised 9/1/2020; accepted 9/23/2020

DOI: 10.47593/2675-312X/20213401eabc139

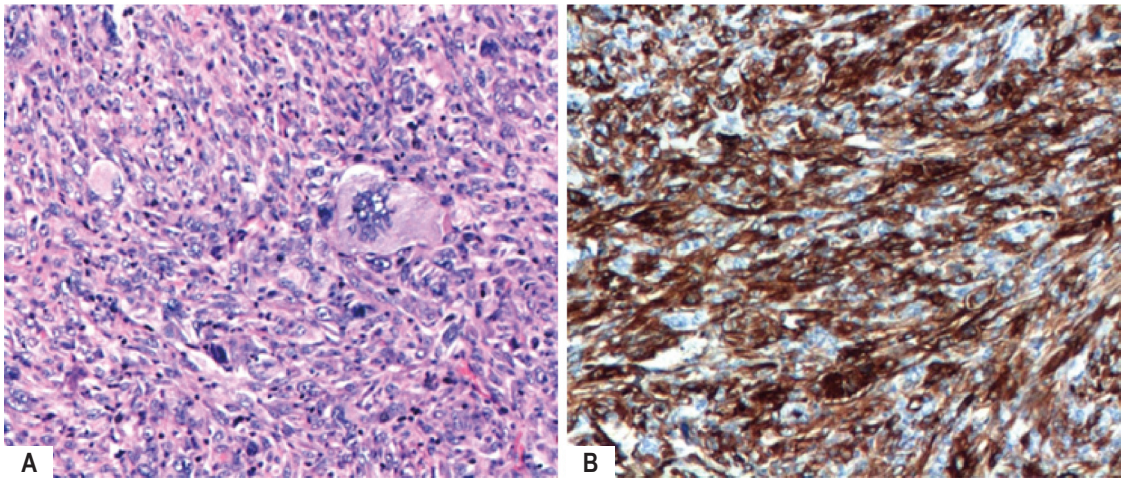

Figure 2 – *(A) Histopathological analysis showing malignant neoplasm composed of fusiform and pleomorphic cells with eosinophilic cytoplasm showing frequent atypical mitosis figures. Findings compatible with the diagnosis of high-grade fusiform/pleomorphic cell sarcoma. (B) Immunohistochemical study showing smooth muscle actin expression, indicating smooth muscle or myofibroblastic differentiation. High-grade leiomyosarcoma is one considered possibility.*