Cardiac Angiosarcoma Presenting as Hemothorax

To the editor: Cardiac angiosarcoma is a rare tumor that usually presents as recurrent pericardial effusion.[1] We report the case of a 33-year-old man with primary cardiac angiosarcoma that presented as hemothorax.

The patient was a 33-year-old man who reported no use of tobacco, alcohol, or street drugs and had no relevant medical history. He presented with rapidly developing pleuritic right chest pain and dyspnea. He had suffered intermittent chest pain during the previous months.

Physical examination showed temperature of 37ºC, blood pressure of 80/60 mm Hg, and heart rate of 89 beats/min. Heart auscultation revealed no murmurs or rubs. Lung sounds were diminished at the base of the right lung.

The leukocyte count was 15 580/µL (86.9% neutrophils), hemoglobin level was 13.5 g/dL, hematocrit 38%, platelet count 198 000/µL, prothrombin activity 69%, and partial thromboplastin time 32.3 seconds. Arterial blood gas analysis without supplementary oxygen showed PaO_2 to be 58 mm Hg, $PaCO_2$ 27 mm Hg, HCO_3 21 mmol/L, pH 7.49, and arterial oxygen saturation 92%.

Posteroanterior and lateral radiographs showed a right pleural effusion of moderate size. A contrast enhanced computed tomography scan of the thorax (Figure) showed pleural effusion and contrast uptake by a large lesion located inside the right atrium, as well as peripheral nodular lesions in both superior lobes. Transthoracic echocardiography revealed marked dilation of the right atrium and a 7.8 cm^2 mass inside the right atrium with a pedicle measuring 1□4□2.6 cm that leaned towards the entrance of the right ventricle. The electrocardiogram was normal. Thoracentesis yielded a sample of bloody pleural fluid with a total protein concentration of 5.1 mg/dL, pH of 7.30, abundant red blood cells, and hematocrit of 43%.

A few hours after admission emergency surgery revealed right atrial infiltration by the tumor, which invaded the right parietal pericardium causing rupture of the adjacent myocardium and pericardium and bleeding into the pleural cavity. The tumoral mass was removed and the free wall of the right atrium and the right lateral pericardium were extirpated, following which the atrium was reconstructed using a pericardial patch. Visual inspection suggested the mass was a highly vascularized tumor.

Histology confirmed the presence of a high-grade angiosarcoma.

Primary cardiac tumors are very rare, with a prevalence between 0.0017% and 2.28% depending on the autopsy series. In adults, approximately 25% are malignant and about a third of these are angiosarcomas.[1] The case we report presented as a hemothorax without signs of heart failure, a form of presentation not described in the literature. Most patients present with symptoms caused by right-sided heart failure or pericardial disease, with angina, or with pulmonary embolism.[2,3] In cases of spontaneous hemothorax vascular invasion by a tumor should be considered among other possible causes of symptoms.[4]

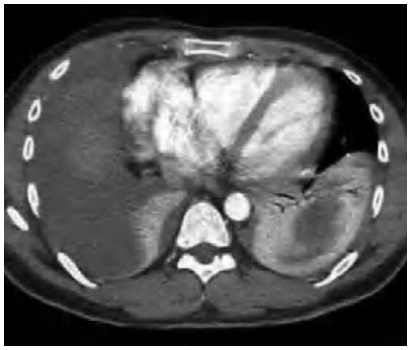

Figure. Computed tomography scan showing a mass in the right atrium and bilateral hemothorax.

Herman et al[5] studied 6 cases of angiosarcoma and reviewed a total of 150 cases in other series in the literature. A year later, Putman et al[6] described a series of 6 cases. Those authors confirmed that angiosarcomas mostly affect men and are most frequently located in the right atrium and the pericardium, presenting with a nonspecific clinical picture due, in most cases, to heart failure. Most of these tumors have metastasized to the lung by diagnosis. Hardly ever does the patient report a history of wasting or fever in the previous months. Because of the rareness of angiosarcoma and its lack of specific symptoms, diagnosis is difficult and is often established after death. Patient survival after complete extirpation of the tumor is longer than after chemotherapy.[6]

Acute hemothorax without traumatic antecedents or evidence of thoracic vascular rupture should lead doctors to consider the possibility of a diagnosis of angiosarcoma.

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