Symptomatic mediastinal myelolipoma with associated hemorrhagic pleural effusion

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Citation


Abstract

We report the case of an 85 year old female patient who presented a mediastinal myelolipoma associated with hemorrhagic pleural effusion and anemia. Pathologic examination identified zones of acute and old intratumoral hemorrhage. The occurrence of a potential severe pleural complication has not been reported for this tumor, regarded as indolent. Such observation has practical relevance since it contrasts with the suggestion that these tumors may be followed without surgery.

CASE REPORT

An 85 year old female patient with a long term history of hypertension and diabetes sought medical attention due to dyspnea. Thoracic imaging revealed right pleural effusion and a right paravertebral mass. During hospitalization, she was anemic exhibiting hemoglobin values of 9.0 and 8.6 g/dl with polychromasia and normal mean corpuscular hemoglobin concentration. There was no history or laboratorial evidence of hematological disorder besides low hemoglobin. The patient underwent a videothoracoscopy with excisional biopsy and posterior pulmonary decortication. A high amount (not quantified) of serohemorrhagic fluid was drained from right hemithorax. The surgical specimen measured 4.0 x 3.0 x 2.0 cm exhibiting nodular encapsulated appearance and violet external surface. The cut surface exhibited a predominant yellow and lobulated pattern (80%) with frequent foci of violet tonality. At microscopy, the tumor was composed predominantly by mature adipose tissue with foci of hematopoietic tissue (figure 1A-C). Common zones of intratumoral acute and old hemorrhage were observed. Perl’s Iron stain confirmed old zones of hemorrhage (hemosiderophages) thus excluding that extensive areas of bleeding could be only attributable to the surgical procedure (figure 1D-F).
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Figure 1
Figure 1: Myelolipoma exhibited typical hematopoietic areas (hematoxylin-eosin, A: 200x, B: 400x) including the presence of megakaryocytes (C: 1000x). The tumor also had zones of acute hemorrhage observed as diffuse erythrocyte extravasation (D: 100x). Other areas exhibited accumulation of hemosiderophages (E: 400x). Perl’s Iron stain confirmed that brown pigment in routine stain was hemosiderin (Perl’s Iron stain, F: 400x).

Extraadrenal myelolipomas are rare tumors and only 13 cases are reported in English language. The most important differential diagnosis is extramedullary hematopoietic tumor. The latter is usually multiple and associates with hematological disorders, hepatomegaly and splenomegaly (1). This differential diagnosis has been highlighted since the first report of mediastinal myelolipoma (2). Indeed, some reported myelolipomas associated with baseline hematological diseases such as chronic hemolytic anemia would be better diagnosed as extramedullary hematopoietic tumors.

Intratumoral acute hemorrhage in extramedullary hematopoietic tumors have been already reported (3) and was suggested as a feature that may distinguish those tumors from thoracic myelolipomas (4). We present the first case to our knowledge that links myelolipoma to symptomatic hemorrhagic pleural effusion. In the present case, anemia was interpreted as a consequence of intratumoral hemorrhage and pleural effusion. No hematological disease was detected in our patient.

There is a single case report of symptomatic myelolipoma in English language - a patient presenting chest pain which led to seek medical assistance (5). All other cases were detected incidentally at necropsies or imaging evaluation for other conditions (Table). The benign nature of myelolipomas and its tendency to remain asymptomatic led some authors to advocate such lesions can be clinically monitored avoiding surgery (13,14,15). The present work highlights the potential risk of pleural complication which was probably related to tumor hemorrhage thus suggesting that surgical removal should be considered for all patients with mediastinal myelolipomas. To date, our case is the one diagnosed at the oldest age and surgery was a successful treatment.

Figure 2

Table 1: Myelolipomas without baseline hematological diseases in English literature

<table>
<thead>
<tr>
<th>Author, year</th>
<th>Ref</th>
<th>Age</th>
<th>Gender</th>
<th>Location</th>
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<th>Size (emb)</th>
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<td>Right anterior</td>
<td>3.0</td>
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3 Ref: (1) to (11) In-text
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References
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