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Pulmonary multinodular relapse of non-Hodgkin's lymphoma

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We describe here a case of pulmonary multinodular relapse of non-Hodgkin's lymphoma following autologous stem cell transplantation.

A 44-year-old patient was admitted for autologous peripheral stem cell transplantation. His diagnosis was diffuse large cell B lymphoma, stage II with bulky disease. After an initial complete remission he had relapsed and a second partial remission was achieved with ESHAP chemotherapy.

Transplantation was performed without incidences; in computerized tomography (CT) revealed two small para-aortic lymph nodes, which were evaluated by gallium scan showing their residual nature, thus the patient was considerd to have achieved complete remission. Radiotherapy was administered to the bulky zone and a new CT showed no change in the size of residual nodes, but small nodular images appeared in the lung parenchyma. Chest radiography showed a pattern of small, ill-defined nodular images (Figure 1). At this point, six months after transplantation, the patient's only complaint was mild cough, with no dyspnea or fever. Physical examination yielded no significative findings. The platelet count was 35×10^9/L, attributed to delayed recovery of platelets after transplantation. Several tests were performed in order to determine the nature of the pulmonary disease.

Except for the platelet count, the rest of the blood count was within normal ranges as were the lactate dehydrogenase concentration and arterial O_2 saturation. Mantoux test and serology for *Aspergillus* were negative and so, too, was cytomegalovirus antigen detection. Fibrobronchoscopic findings were nonspecific; cytological analysis of bronchoalveolar lavage (BAL) specimens demonstrated a hemorrhagic background and the presence of hemosiderin-laden macrophages. Bacteriologic cultures and fluoroscopy for *Mycobacteria* were negative. This led to the diagnosis of alveolar hemorrhage, prompting an intensive schedule of platelet support in order to maintain the platelet count above 50×10^9/L.

Three weeks later, the patient's status remained unchanged, and a new radiograph showed the growth of nodules. In view of this progression, regardless of the patient's good status, an open lung biopsy was performed. Histopathologic findings led to the diagnosis of lung infiltration by lymphoma, with a nodu-

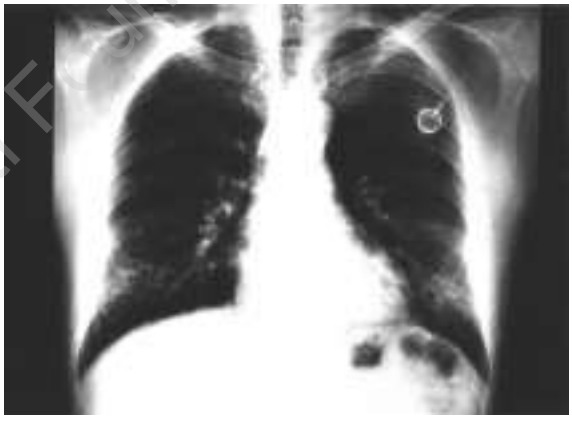

Figure 1. Chest radiography: nodular opacities, predominantly in basal zones.

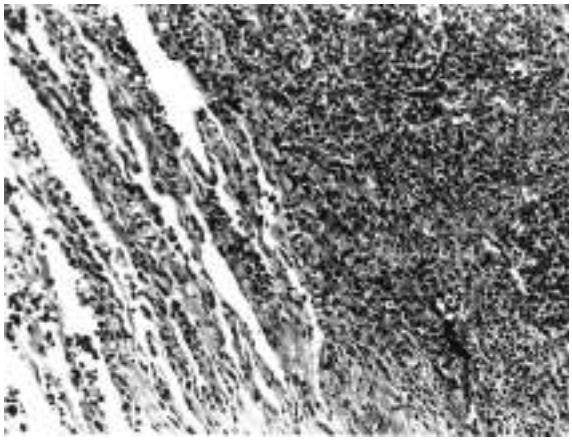

Figure 2. Lung biopsy: diffuse large cell B lymphoma, nodular infiltration (200 x).

lar pattern (Figure 2). The final diagnosis was pulmonary relapse of lymphoma, since no nodal involvement was assessed.

After bone marrow transplantation, pulmonary complications occur in 40% to 60% of patients.[1,2] Most of these have nonspecific radiologic features, requiring additional diagnostic procedures. Among those occurring in the late post-transplant period, idiopathic interstitial pneumonia, cryptogenic organizing pneumonia, restrictive and obstructive diseases as well as infectious complications usually have vague radiologic features in common which do not permit a diagnosis. Although CT may be able to provide more specific diagnoses with greater confidence, these complications can not be easily characterized by x-ray imaging.[3] Nodular low-density, ill-defined opacities have been described in lung involvement of lymphomatous relapse, but several other patterns have been found: alveolar infiltrates, interstitial infiltrates and combinations of these; thus, no specific pattern can be considered as diagnostic.[4] On radiological grounds, diffuse alveolar hemorrhage (DAH) and lymphomatous relapse are indistinguishable. Clinical signs and symptoms are nonspecific, but DAH is usually found in the immediate post-transplant period, with a rapidly fatal clinical course,[5] while relapse usually progresses more slowly, depending on the growth rate of the tumour. On the other hand, BAL from patients with lymphoma may yield bloody returns with hemosiderin-laden macrophages, which has been considered the hallmark of DAH. Thus, radiologic evolution with growing nodular lesions was an important clue leading to the diagnosis, although in order to make the diagnosis an open lung bopsy was required. The possibility of relapse must be borne in mind when approaching a differential diagnosis of pulmonary complications after bone marrow transplantation.

Key words

Non-Hodgkin's lymphoma, pulmonary relapse

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Pathologic rupture of the spleen as the initial manifestation in acute lymphoblastic leukemia

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Pathologic splenic rupture is a rare and life-threatening complication of acute leukemia. It is even more uncommon as the initial manifestation, and only a few cases has been reported in the literature. Early recognition of this complication is vital because the prognosis is fatal without immediate treatment by splenectomy. We report the case of a spontaneous spleen rupture irreversibly complicating the onset of acute lymphoblastic leukemia in a 19-year-old man, in spite of splenectomy. In our case abdominal ultrasound was a good, non-invasive diagnostic test. Therefore, we believe that the course of the underlying disease and the physical condition of the patient dramatically influenced the disease evolution.

Spontaneous rupture of the spleen has been reported in many diseases associated with splenomegaly, e.g. infectious diseases, inflamatory diseases, and hematological malignancies.[1-4] Non traumatic rupture of the spleen is a rare and life-threatening complication of acute leukemia.[1-10] However, the splenic rupture as the initial symptom of acute leukemia is extremely unusual and only a few cases are reported in the literature.[5-10]

We report the fatal course of a patient with acute lymphoblastic leukemia (ALL) in which pathologic rupture of spleen was the initial manifestation of the disease.

A 19-year-old man was admitted to hospital with a two week history of weakness, nausea, vomiting and epigastric pain. There was no history of fever or bleeding diathesis. On admission, he had a petechial rash and severe pain in the left upper quadrant of the abdomen radiating up to the left scapula. Physical examination showed an acutely ill patient with a petechial rash on his legs, thorax and abdomen, without lymphadenopathy and with painful abdominal distension. He was pale, tachycardic and had a blood pressure of 60/40 mm Hg. The peripheral blood count showed hemoglobin 71 g/L, leukocyte count 640×10^9/L with 100% lymphoblastic cells and platelet count 68×10^9/L, fibrinogen 103 mg/dL, prothrombin time 25%, partial thromboplastin time 50". Additional results of laboratory tests were AST 692