(48.55 g/L) was detected. She received treatment with three courses of chlorambucil and prednisone and responded well.

On current admission blood cell counts were as follows: hematocrit 22%, leukocytes 71.37×10⁹/L (5% neutrophils, 92% lymphocytes with lymphoplasmacytic appearance), platelets 66×10⁹/L. IgM paraprotein level was 60 g/L. Immunophenotype of the leukemic population gave the following results: CD5, CD19, CD23, CD22 ,CD25, cytoplasmic CD79a and FMC7 positive; CD10, CD103, CD38, BB-4 and CD11c negative. SmIg expression in the membrane was strong (Figure 1).

A diagnostic problem that often arises is the differentiation of CLL with lymphoplasmacytoid features from lymphoplasmacytic lymphoma (LL) and splenic lymphoma with villous lymphocyes (SLVL).[3] In all three diseases a paraprotein IgM can be found. LL should always be considered in cases of CD5/CD19/CD23 chronic lymphoproliferative disorders. Although rare, leukemic presentation can be misleading, especially if morphologic and clinical features are not so straightforward as in the case under discussion. Recently, immunophenotypic score systems[4] have been proposed to differentiate between CLL and other chronic lymphoproliferative disorders. This distinction is clinically important since therapeutic implications are derived from a correct diagnosis.[5]

Rosa Manteiga
Luz Muñoz
Josep F. Nomdedéu

Departament d'Hematología, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain

References

1. Bennett JM, Catovsky D, Daniel MT, et al. The French-American-British (FAB) Cooperative Group. Proposals for the classification of chronic (mature) B and T lymphoid leukaemias. J Clin Pathol 1989; 42:567-84.
2. Orfão A, Ruiz-Arguelles A, Lacombe F, Ault K, Basso G, Danova M. Flow cytometry: its application in hematology. Haematologica 1995; 80:69-81.
3. Matutes E, Morilla R, Owusu-Ankomah K, Houlihan A, Catovsky D. The immunophenotype of splenic lymphoma with villous lymphocytes and its relevance to the differential diagnosis with other B-cell disorders. Blood 1994; 83:1558-62.
4. Matutes E, Owusu-Ankomah K, Morilla R, et al. The immunological profile of B-cell disorders and proposal of a scoring system for the diagnosis of CLL. Leukemia 1994; 8:1640-5.
5. Dimopoulos MA, Alexanian R. Waldentröm's macroglobulinemia. Blood 1994; 83:1452-9.

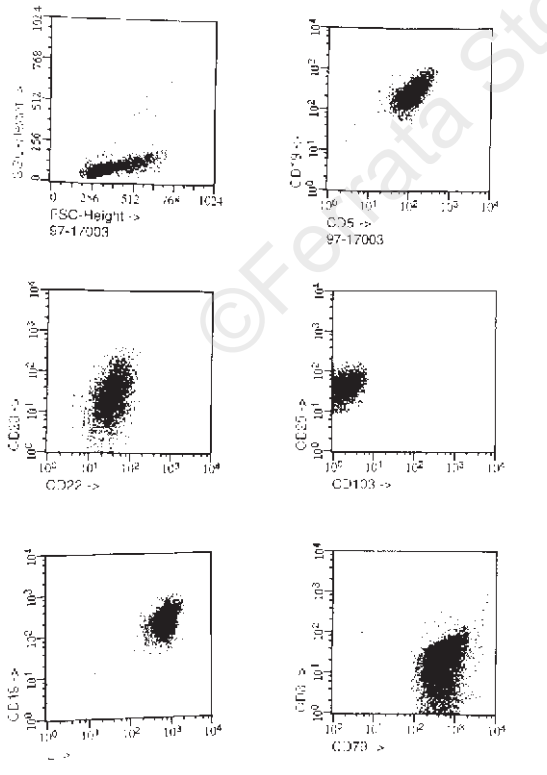

Figure 1. Flow cytograms on peripheral blood.

Correspondence: Dr. Josep F. Nomdedéu, Secció de Marcadors, Departament d'Hematología, Hospital de la Santa Creu i Sant Pau., Avda. Sant Antoni M. Claret 167 08025 Barcelona, Spain. Fax. international +34.3.2919192. E-mail: jfnomde@santpau.es

Leukemic meningitis in a patient with B-cell prolymphocytic leukemia

Sir,

B-prolymphocytic leukemia (B-PLL) has become recognized as a morphologic variant of B-chronic lymphocytic leukemia (B-CLL).[1] Its prognosis and response to treatment are less favorable than those of CLL, with a median of survival of three years. Clinical syndromes related to involvement of the central nervous system by mature B-cell leukemias are rare. To the authors' knowledge, only six cases of meningeal involvement have been reported in B-PLL.[2-4] Here we describe a case with a poor outcome in spite of intensive systemic and intrathecal therapy.

A 75-year-old woman was admitted in our Hospital in June 1995 because of general fatigue and weight loss. Physical examination showed splenomegaly of 3 cm below the costal margin. Laboratory data revealed: leukocytes 84.9×10⁹/L with 85% prolymphocytes, hemoglobin 10.3 g/dL, platelets 116×10⁹/L. Serological tests for hepatitis C virus were positive. Immunophenotyping of peripheral blood demonstrated monoclonal B-lymphocytes expressing CD19 (95%), CD22 (95%), FMC7 (58%), CD5 (98%), CD10 (94%), CD23 (30%) and κ light chain (strong). Bone marrow biopsy showed a diffuse infiltration by prolymphocytes. Thoracic and abdominal CT scans were normal. A diagnosis of B-PLL was made and treatment with chlorambucil and prednisone was given. Two weeks later the patient developed dizziness and diplopia. Neurologic examination showed left 6th nerve palsy without other motor deficiencies. A cerebral CT scan revealed no abnormalities. Lumbar punctures were traumatic and the cerebrospinal fluid (CSF) obtained was not useful for cytologic and biochemical analysis. Bacterial cultures were negative. An Ommaya reservoir was inserted in the patient and intraventricular treatment with weekly methotrexate, cytosine arabinoside and dexamethasone was started. At the same time, systemic chemotherapy with the CHOP regimen was also initiated. After the first cycle of intrathecal chemotherapy the patient showed a marked improvement in the neurologic picture and she became asymptomatic after six cycles. She did well until two months later when right 7th nerve palsy and somnolence developed. Physical examination and hematological studies were similar to those at initial diagnosis. At that time, a cerebral CT scan again showed no abnormalities. CSF analysis revealed an elevated protein content (450 mg/dL) with normal glucose. There were 20/μ prolymphocytes and 300/μ red blood cells. Notwithstanding a new dose of intrathecal therapy, the patient's neurologic status worsened and she died two week later, four months after initial diagnosis.

Symptomatic meningeal involvement is a rare complication in mature B-cell malignancies.[5] In our patient, meningeal leukemia was confirmed by the presence of prolymphocytes in the CSF and by the response to intrathecal therapy. The literature experience suggests that effective control of meningeal disease in mature B-cell leukemias can be achieved with intrathecal chemotherapy.[4] However, the patient described here achieved only a transient complete response and died with uncontrolled meningeal leukemia.

Emilio Pastor
Enric Grau
Esperanza Real

Department of Hematology, Hospital "Lluís Alcanyís", Xàtiva, (València), Spain

References

1. Bennet JM, Catovsky D, Daniel MT, et al. Proposals for the classification of chronic mature B and T lymphoid leukemias. J Clin Pathol 1989; 42:567-84.
2. Lopez Guillermo A, Cervantes F, Blade J, et al. Central nervous system involvement demonstrated by immunologic study in prolymphocytic variant of chronic lymphocytic leukemia. Acta Haematol 1989; 81:109-11.
3. Thiruvengadam R, Berstein ZP. Central nervous system involvement in prolymphocytic transformation of chronic lymphocytic leukemia. Acta Haematol 1992; 87:163-4.
4. Hoffman MA, Valderrama E, Fuchs A, Friedmam M, Rai K. Leukemic meningitis in B-cell prolymphocytic leukemia. A clinical, pathologic and ultrastructural case study and a review of the literature. Cancer 1995; 75:1100-3.
5. Molica S, De Rossi G, Luciani M, Levato D. Prognostic features and therapeutical approaches in B-cell chronic lymphocytic leukemia: an update. Haematologica 1995; 80:176-93.

Correspondence: Emilio Pastor, Servicio de Hematología, Hospital "Lluís Alcanyís", Ctra. Xàtiva-Silla, km. 2, E-46800 Xàtiva (València), Spain. E-mail: abd8861a5@colon.net