

Serous effusions in hematopoietic malignancies

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Introduction: Hematopoietic malignancy is often complicated by pleural effusions and ascites. The present study attempted to characterize the cytologic features of hematopoietic malignancies presenting as serous effusions.

Methods: We reviewed Papanicolau and hematoxylin–eosin–stained smears of pleural and ascitic fluids of 15 patients, in which the diagnosis was histologically confirmed and the fluid cytology was reported as positive for malignancy.

Results: The patients were 10 men and 5 women, with an average age of 58 years (range, 26–81 years). Ten patients had pleural effusions and 5 patients had ascitic fluid. Three patients had both pleural effusion and ascitic fluid. The histologic diagnoses of the patients were classified as diffuse large B–cell lymphoma (6), peripheral T–cell lymphoma, unspecified (4) and angioimmunoblastic type (1), precursor T–lymphoblastic lymphoma (2), plasmacytoma (1), and acute myeloid leukemia (1). Precursor T–lymphoblastic lymphoma showed sheets of medium sized lymphoid cells with finely stippled chromatin and irregular, sometimes convoluted nuclei, plasmacytoma showed mature and immature plasma cells, and acute myeloid leukemia showed various stages of myeloid cells with blasts. Diffuse large cell lymphomas were characterized by two cell populations of large blastoid cells and mature small lymphocytes, whereas peripheral T cell lymphomas, unspecified type, showed variable sized lymphoid cells with small, medium and large lymphoid cells. However, the case with predominantly large cells was difficult to be differentiated from diffuse large B cell lymphoma. Angioimmunoblastic type T cell lymphoma contained mixture of mature eosinophils, plasma cells and histiocytes, in addition to large atypical lymphoid cells. Lymphoglandular bodies were frequent, but mesothelial hyperplasia was not significant. Thirteen patients died and mean duration of life from the first diagnosis was 146 days (range, 14–600 days).

Conclusion: The recognition and correct histologic typing were possible in body fluid cytology, if the morphologic characteristic of the specific entity is familiar. The presence of pleural effusion and/or ascitic fluid at the time of presentation is associated with poor outcome of hematologic malignancies.