Primary testicular non-Hodgkin’s lymphoma with atrial mass as an initial presentation of acquired immunodeficiency syndrome

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ABSTRACT

The association between human immunodeficiency virus (HIV) infection and the increased incidence of testicular tumors is a recent well-recognized phenomenon. Testicular tumors in the setting of HIV infection are most frequently of germ cell origin, less commonly lymphomas. We are presenting a unique case of testicular non-Hodgkin’s B-cell lymphoma with associated atrial mass and mediastinal lymphadenopathy. The patient was not known to be HIV positive at the time of presentation. The initial clinical, radiological, and gross pathologic impression was that of seminoma. Discussion of the differential diagnosis and appropriate work up is presented.

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With a frequency of 3%, malignant lymphomas are second only to Kaposi’s sarcoma in acquired immunodeficiency syndrome (AIDS) patients.1 Their incidence has been increasing steadily and they are included in the case definition of AIDS by the Center of Disease Control.2 They are usually associated with late disease and profound immunodeficiency; however, they can be the first manifestation of AIDS.3 Most of the lymphomas seen in the setting of HIV positive patients are high grade non-Hodgkin’s B-cell lymphoma, diffuse large cell type.4 A characteristic feature of AIDS associated lymphoma is the extra-nodal growth, with the central nervous system as a favored location. Compared to lymphomas in non-AIDS patients, they tend to occur in a younger age group, have a higher grade, and spread quickly, which explains their aggressive behavior and poor outcome.5 The association between HIV infection and an increased incidence of testicular tumors is well recognized.4 Testicular tumors in the setting of HIV infection are most frequently of germ cell origin, less commonly lymphomas.5 The objective of presenting this case is to describe the usual features of testicular lymphoma, discuss the differential diagnosis, and the importance of performing immunohistochemical stains to confirm the diagnosis. This case, on clinical, radiological, and gross appearance was thought to be seminoma in a patient not known to be HIV positive. In addition to the testicular mass, the patient had atrial mass that is presumably thought to represent the same pathology.

Case report. A 38-year-old male African American patient presented with chest pain, 45 kg unintentional weight loss, and enlarged, non-tender right testicle. Evaluation for cardiac ischemia as a source of chest pain was negative. Computed axial tomography of the thorax revealed a right atrial mass, with bilateral hilar adenopathy (Figure 1). The right atrial mass was studied by echocardiography during the cardiac cycle, the mass migrated back and forth across the tricuspid valve, causing obstruction of the valve orifice. Ultrasound of the testes showed an enlarged right testicle with abnormal echogenicity, suggestive of tumor replacement. Similar areas of abnormality were noted in the left testicle. Right orchiectomy was performed. The testis weighed 270 grams and measured 11 x 7 x 3.5 cm with a large, white, fleshy, soft, slightly tan mass replacing almost the entire cut surface with no evident necrosis or hemorrhage. Frozen section was not performed and the initial gross pathological impression was seminoma. However, permanent sections of the tumor revealed a monotonous cell population of atypical medium to large lymphoid cells. Microscopic examination showed obliteration of the testicular parenchyma in the involved areas by solid sheets of neoplastic cells, occasionally separated by thin
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Primary testicular lymphoma is generally rare. Before the era of HIV infections it was estimated to comprise 5% of all testicular tumors, with a tendency to occur in the elderly. However, more reports are being published emphasizing a more frequent incidence.4-7 These lymphomas are usually aggressive and mostly of B cell immunophenotype. Similar to ours, cases have been reported with testicular lymphoma as the initial presentation of HIV infection.8 In this setting, these lymphomas tend to occur at a younger age, with higher histologic grade, and apparent worse prognosis.5 For these aforementioned factors, modifications of usual treatment protocols have been suggested.9

Assuming that the atrial mass represents the same pathology is extremely unusual. Cardiac involvement by lymphomas is uncommon, and metastasis from a primary testicular site has not been reported.10,11 Further imaging and pathologic studies would have been useful in identifying the nature of the atrial mass. However, in the absence of a definitive pathologic diagnosis, the differential diagnosis includes thrombus, metastasis, atrial myxoma, or any other primary cardiac tumor.

Although the diagnosis of testicular lymphoma is usually not difficult, attention has to be made to the possibility of lymphoma. Seminoma in particular, may grossly have a similar fleshy white appearance. Microscopically, both tumors occasionally can share some features and misdiagnosis has been reported.12,13

Immunohistochemical stains, including cytokeratin, PLAP, CD20, and CD45 are recommended to confirm the diagnosis. In addition, the diagnosis of testicular lymphoma in young adults should elicit the possibility of HIV infection and trigger appropriate testing.

References