

Case Report

Sonographic Appearance of Primary Testicular Lymphoma

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Since the first report of non-Hodgkin lymphoma manifesting as a testicular mass, described by Malassez in 1877 [1], primary testicular lymphoma has attracted attention because of its rarity and poor prognosis. Only a few reports of the sonographic appearance of testicular lymphoma have been published [2]. We describe the sonographic findings in two such cases.

Case Report

A 50-year-old man had an orchiectomy for malignant lymphoma (diffuse histiocytic type) of the right testis. He was referred to our hospital for further treatment. CT and sonographic examination of the abdomen and pelvis did not reveal enlarged nodes. The diagnosis of primary right testicular lymphoma was reached, and he began combination chemotherapy. A month later, nontender swelling of the left testis was noted. Sonograms obtained with a 7.5-MHz transducer with an attached water bath revealed an enlarged testis and a diffusely hypoechoic parenchyma (Fig. 1). In view of the patient's history, a preliminary diagnosis of malignant lymphoma of the testis was made. A biopsy was done with fine-needle aspiration, and the results were suggestive of lymphoma. An orchiectomy was performed, and final histopathology confirmed the diagnosis of malignant lymphoma (diffuse histiocytic type).

Discussion

A malignant lymphoma in which the tumor mass is limited to the testis at the time of clinical onset of the disease is rare. It is seen in approximately 1% of men with non-Hodgkin lymphoma, but can occur in up to 4% of cases of Burkitt lymphoma. It is practically nonexistent in Hodgkin disease [2].

Testicular lymphoma constitutes 1–7% of all testicular tumors [3] and is the most common testicular malignant tumor in men between 60 and 80 years old. Bilateral involvement is even rarer, constituting 23% of all cases of primary testicular lymphoma [4].

Pathologically, lymphomas appear as a diffuse, symmetric enlargement of the entire organ with involvement of epididymis and spermatic cord but without invasion through the tunica vaginalis. The hallmark of lymphoma is an infiltrative growth pattern that tends to surround and compress before destroying the seminiferous tubules. The histologic pattern is that of the poorly differentiated or large cell types [5].

The testis appears to provide a sanctuary for this disease, owing to an apparent "gonadal barrier" that inhibits concentration of chemotherapeutic agents [6]. This means that a patient can get an apparent primary lymphoma in the testis some time after he was apparently cured of primary lymphoma elsewhere.

The sonographic pattern of involvement includes focal or diffuse areas of decreased echogenicity in an enlarged testis [6]. The 50-year-old patient in the case described earlier had diffuse involvement of the testis by lymphoma. Sonograms of a second patient with primary testicular lymphoma revealed focal involvement. This was a 42-year-old man who had had abdominoperineal resection for adenocarcinoma of the rectum 5 years earlier and now had pain and swelling of the left testis. Sonographic examination of the scrotum revealed a well-defined, hypoechoic space-occupying lesion in the cranial aspect of the left testis (Fig. 2). Findings on sonographic and CT examinations of the abdomen and pelvis were normal. A left orchiectomy was performed. The histopathologic diagnosis was malignant lymphoma of the testis (histiocytic type).

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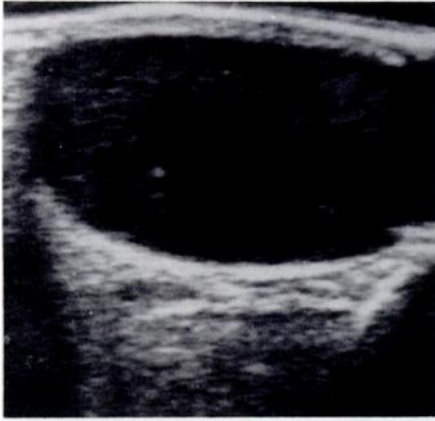
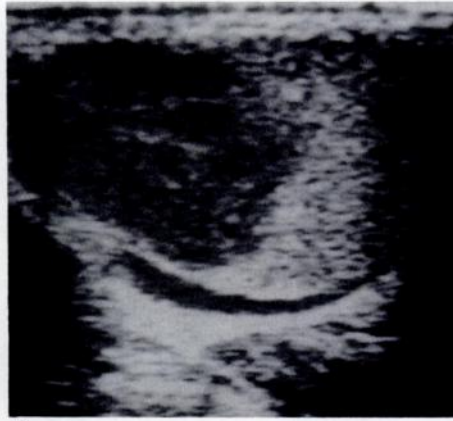
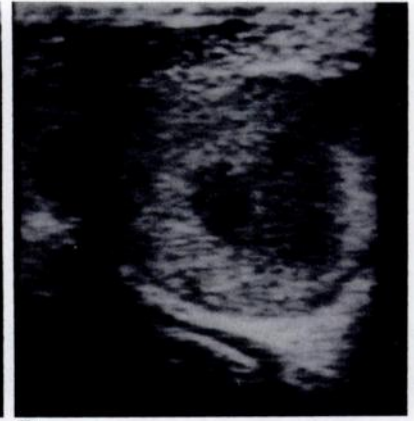


Fig. 1.—Longitudinal sonogram of 50-year-old man with nontender swelling of left testis shows an enlarged testis with generalized reduced echogenicity.



A



B

Fig. 2.—A and B, Longitudinal (A) and transverse (B) sonograms of 42-year-old man with pain and swelling of left testis show a focal hypoechoic area within testis.

The differential diagnosis of an enlarged testis with uniformly reduced echogenicity includes seminoma, leukemia, and orchitis. Occasionally, this disease is seen as an increased echogenic pattern or a focal area of increased echogenicity within a sonolucent testis. Some cases may have an accompanying hydrocele [7].

The prognosis for patients with testicular lymphoma is poor, because it is more lethal than testicular carcinomas [8]. Given the general biological aggressiveness of this disease, local treatment with orchiectomy and irradiation of regional nodes is insufficient, and in most cases chemotherapy is also given [3]. Early detection is important in the epidemiology of testicular lymphoma. The sonographic appearance is not specific for primary testicular lymphoma, but in the proper clinical setting, the diagnosis may be suspected and a biopsy suggested. Sonography plays a significant role in the detection of clinically occult cases and in following up patients with unilateral primary testicular lymphoma to detect dissemination and metachronous involvement of the contralateral testis.

Sonography also can serve as an index or marker in monitoring the effect of treatment.

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