

Secondary bilateral synchronous testicular plasmacytoma

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Section: Uroradiology & genital male imaging

Area of Interest: Genital / Reproductive system male

Haematologic

Imaging Technique: Ultrasound

Case Type: Clinical Cases

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Patient: 58 years, male

Clinical History:

A 58-year-old man presented with a 2-month history of painless and progressive enlargement of both testicles. Past medical history included multiple myeloma in complete remission after radiotherapy and chemotherapy. On physical examination the right testicle was hard and enlarged.

Imaging Findings:

Scrotal sonography showed a 2.2 x 1.4 cm hypoechoic solitary mass with hypervascularity affecting the mid portion of the left testicle. The right testicle was diffusely affected and it was nonhomogeneous and more enlarged than the left testicle. The right testicle also had a circumscribed mass with predominantly hypo-echogenic pattern affecting the upper and mid portion. The tumour did not involve the epididymis and there was no inguinal lymphadenopathy. The cremasteric and deferential arteries of the spermatic cord demonstrated a normal high-resistance waveform. The patient underwent a biopsy of both testicles. UGFNAB – (Ultrasonically guided fine needle aspiration) – confirmed the presence of massive plasmacytoma localisations. Immunohistochemical studies showed exclusive positive intracytoplasmic staining for light chains (k) and the cells were positive for the leukocyte common antigen CD138.

Discussion:

Testicular cancer is the most common cancer affecting men between the age of 15 and 35. Ultrasound of the scrotum can detect intrascrotal masses with a sensitivity of nearly 100%. Virtually all malignant testicular tumours are basically hypoechoic compared with the normal testis, though they often contain hyperechoic and cystic areas. Plasmacytoma is a very infrequent plasma cell neoplasm that involves bone marrow or extramedullary sites. Testicular infiltration by plasma cells happens in only 2% of cases of all plasma cells neoplasm [3]. Testicular plasmacytomas are assumed to have an incidence ranging between 0.03% and 0.1% of all primary and secondary tumours of the testis [1]. Most of the cases had previous or concurrent multiple myeloma. Synchronous bilateral involvement is extremely infrequent, as less than 5 cases were found in medical literature. Although there is no specific echo pattern, the most frequent sonographic presentation in plasmacytoma is a hypoechoic solid mass with hypervascularity.

The imaging findings combined with the medical history and the clinical symptoms (progressive enlargement of testis with no pain) raise the suspicion of plasmacytoma. Biopsy results confirm the diagnosis.

Treatment includes surgery (orchietomy) and in specific cases also radiotherapy and chemotherapy. Prognostic is

worse when multiple myeloma is associated [2].

Differential Diagnosis List: Secondary bilateral testicular plasmacytoma, Lymphoma, Spermatocytic seminoma, Unplastic seminoma

Final Diagnosis: Secondary bilateral testicular plasmacytoma

References:

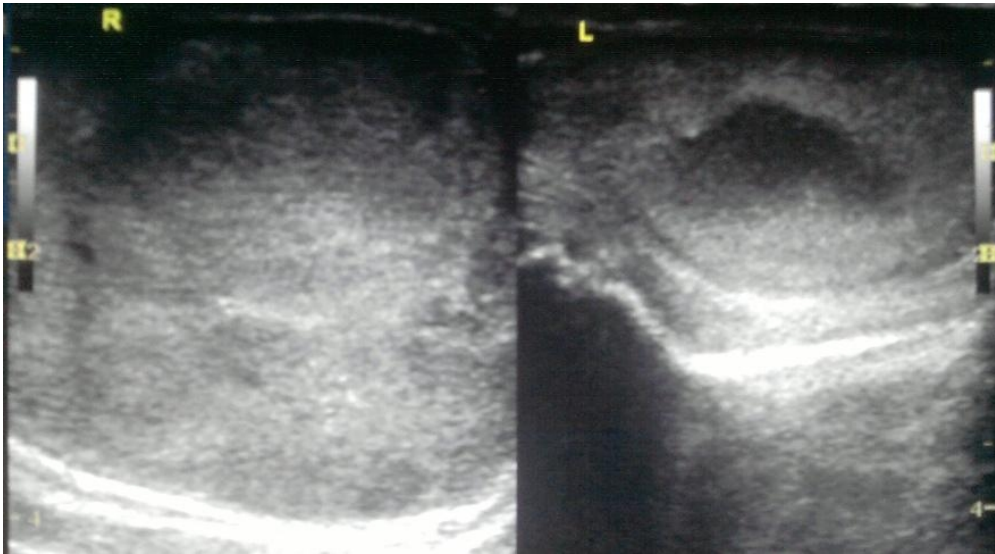
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Figure 1

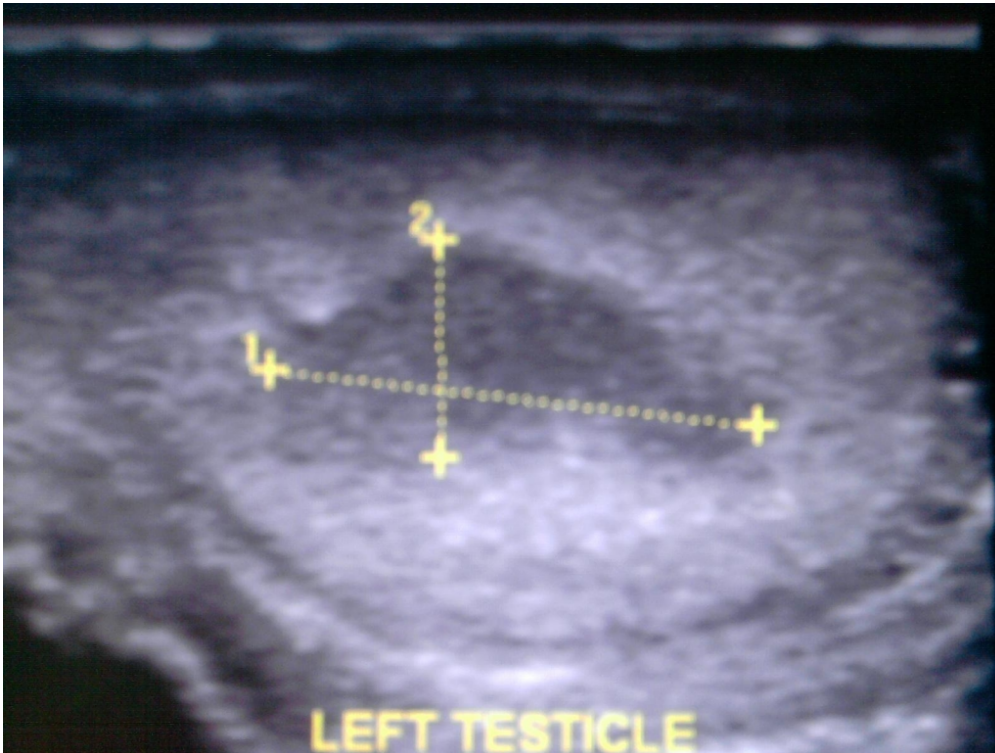
a



Description: Nonhomogeneous and enlarged right testicle. Hypoechoic solitary mass affecting the mid portion of the left testicle. **Origin:**

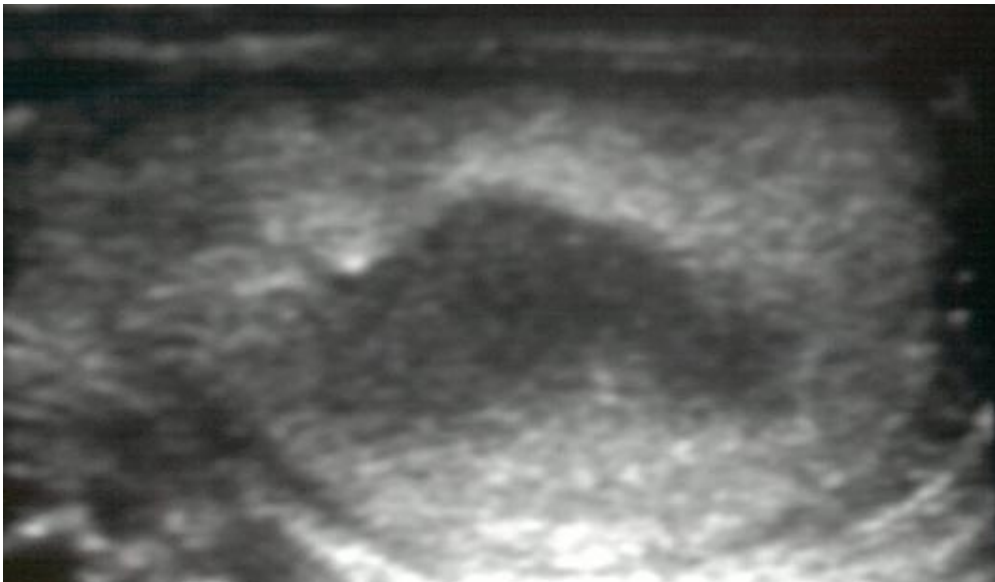
Figure 2

a



Description: A 2.2 x 1.4 cm mass with predominantly hypo-echogenic pattern affecting the mid portion of the left testicle. **Origin:**

b



Description: A hypoechoic mass affecting the mid portion of the left testicle. **Origin:**

Figure 3

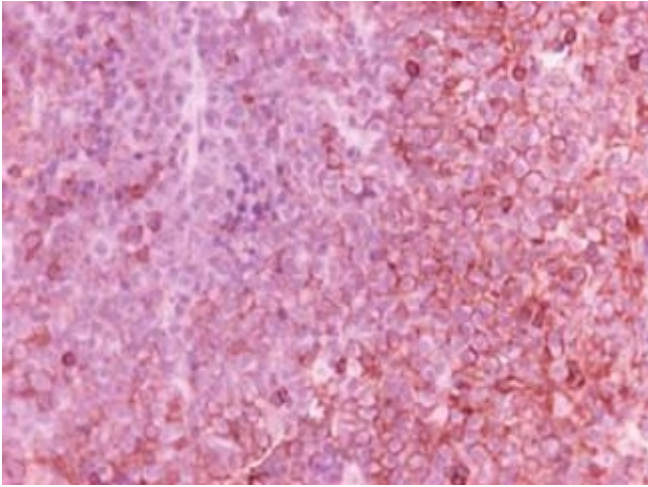
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Description: The right testicle was diffusely affected and it was nonhomogeneous and enlarged. The right testicle also had a circumscribed mass with predominantly hypo-echogenic pattern. **Origin:**

Figure 4

a



Description: The cells were positive for the leukocyte common antigen CD138. **Origin:**