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A Rare Case Of Peripherally Calcified Supernumerary Testis

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Abstract

Polyorchidism is a very rare congenital anomaly with the presence of more than two testes. There is increased risk of testicular malignancies and torsion of the supernumerary testis. Hence it is important to make a prompt diagnosis when a patient presents with a palpable testicular lump. Most of the cases are diagnosed incidentally. But when a patient presents with a painless long standing testicular lump, a radiological diagnosis must be made. Here we present a 64 year old man who presented with a painless hemiscrotal mass which was present since childhood. Scrotal sonography and MRI revealed a mass with similar echogenicity and intensity to that of the normal testis which favoured the diagnosis of polyorchidism.

Keywords: polyorchidism, congenital anamoly, testis

Introduction

Polyorchidism or Supernumerary testis is the presence of more than two testes. The additional testis may be intrascrotal or extrascrotal. Triorchidism is the most common form of supernumerary testis, whereas tetraorchidism is much rarer [1]. The additional testis is usually found incidentally in an extrascrotal location during surgery for other reasons like inguinal hernia, cryptorchidism, scrotal pain, etc [1,2]. Only about 16% of the patients present with an incidental mass which will require radiological evaluation for the diagnosis [1,3].

Clinical presentation:

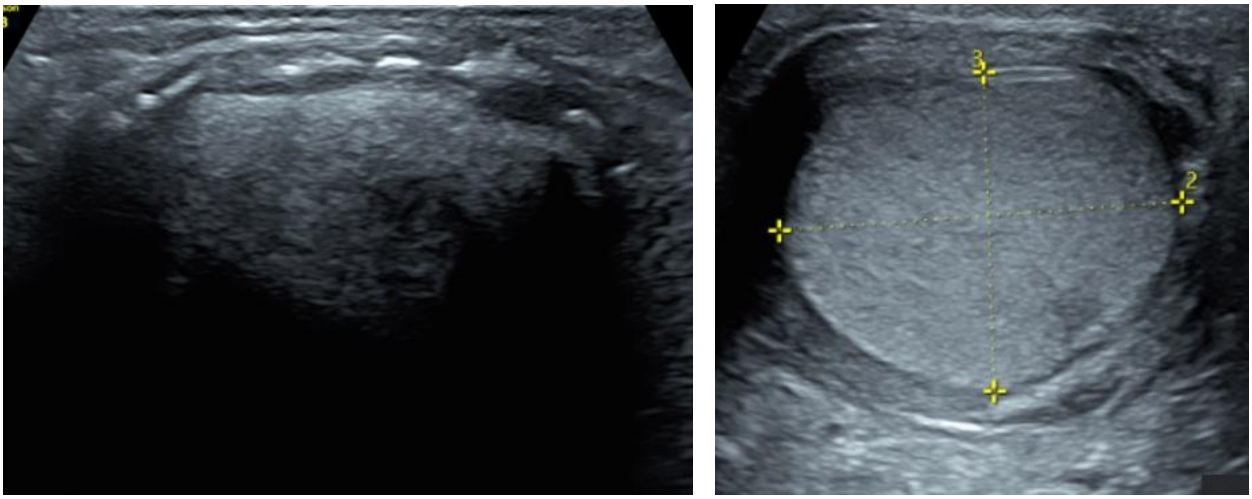
A 64 year old male patient was referred to our department for the evaluation of a right hemiscrotal lump which was present since birth. There was no associated pain with the mass. Examination revealed a mobile 3 x 3x 4 cm mass which was hard in consistency in the right hemiscrotum just above the right testis which was palpated separately. The probable clinical diagnosis at the time was a large epididymal cyst. Ultrasonography scan was then performed to further evaluate the mass.

Investigation:

Ultrasononography of the scrotal region (Figure 1) revealed a normal right testis (4.7 x 3.5 x 2.8 cm) and a normal left testis (3.9 x 3.2 x 2.7 cm). A small simple cyst measuring 3.5 x 3 mm was seen in the right epididymis. In addition a large 4.3 x 4 x 3 cm mass with echogenicity similar to that of testis and peripheral rim of calcifications was noted in the right hemiscrotal cavity adjacent to the right testis. A provisional diagnosis of supernumerary testis was made.

MRI of scrotum (Figure 2) was performed to confirm the above diagnosis. A well defined T1 hypointense and T2 hyperintense oval structure with similar intensity to the normal testis and a peripheral hypointense rim was seen in the right hemiscrotal cavity. A radiological diagnosis of supernumerary testis was thus made considering both the ultrasonographic and MRI findings.

(a) (b)



(c)

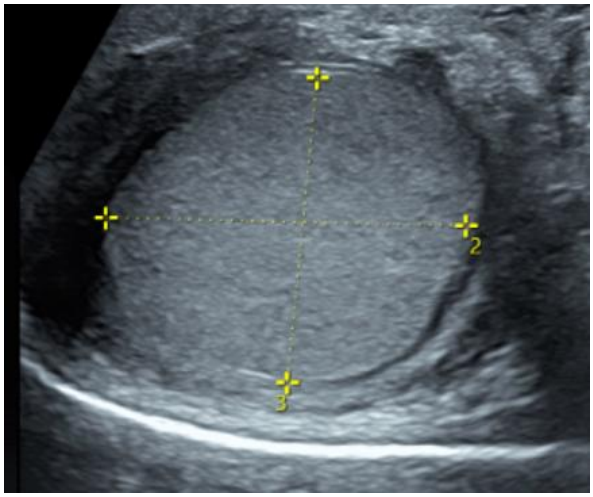


Figure 1: Sonography images of longitudinal and axial sections of scrotum revealed: (a) a mass with echogenicity similar to that of the normal testis with a peripheral rim of calcifications, (b) and (c) Normal right and left testis.

Figure 2: Axial sections of T2-weighted MRI (a) & (b) and T1-weighted MRI (c) showing the presence of a total of T1 hypointense and T2 hyperintense mass in the right hemiscrotal cavity(asterix) with intensity similar to the normal testis. Note the peripheral hypointensity which correlated with the calcifications seen on Ultrasonography.

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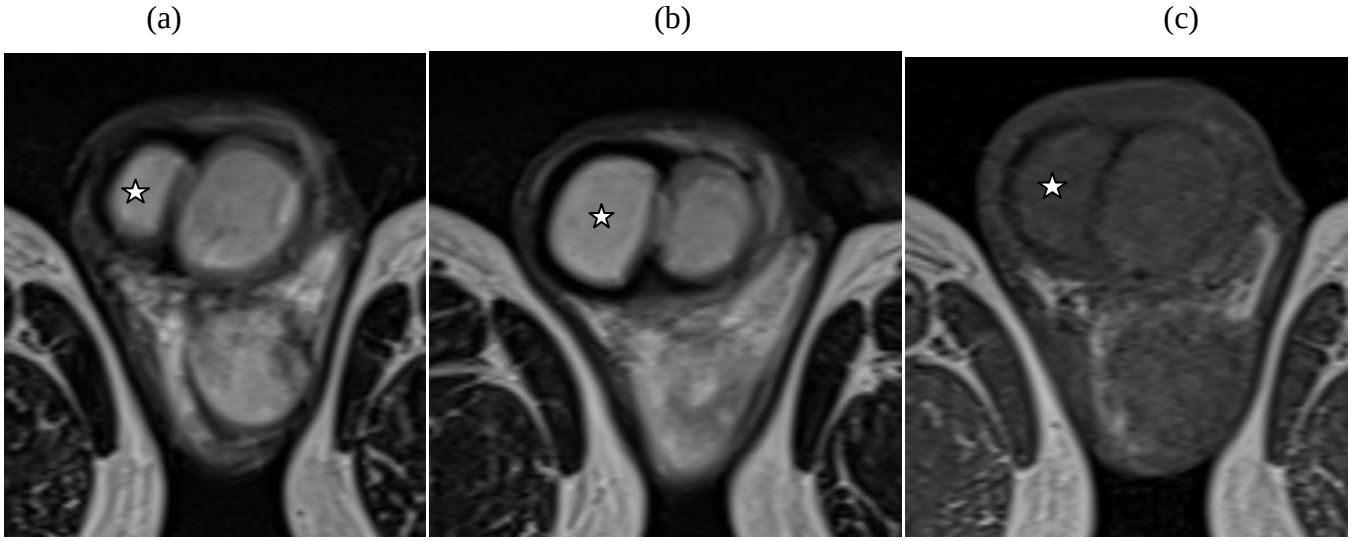

Discussion:

Differential diagnosis of a paratesticular mass poses a significant diagnostic challenge because of the wide spectrum of benign or malignant masses[3]. In addition polyorchidism is a very rare congenital anomaly with less than 200 reported cases worldwide[4]. Considering the patients age, malignant neoplasms like rhabdomyosarcoma, liposarcoma, leiomyosarcoma and undifferentiated sarcomas need to be ruled out[5]. Polyorchidism by itself confers an increased risk of malignant testicular neoplasms.

Supernumerary testis may be further classified based on the presence or absence of epididymis and vas deferens and hence may contribute to the fertility as well[6]. Hence histological diagnosis may not always be possible because of ethical concerns regarding removal of a functioning organ. Hence arriving at a radiological diagnosis coupled with regular watchful radiological surveillance is required for better safety of the patient.

On sonography the supernumerary testis may be found in the inguinal canal, abdominal cavity or the scrotal cavity. The supernumerary testis may be slightly smaller and hypoechoic to the normal testis with similar echopattern[2,5]. Shared epididymis or a supernumerary epididymis may be seen on sonography. Sonography has a high sensitivity and specificity and hence is modality of choice in making a diagnosis. MRI adds to the diagnosis by providing better tissue characterisation and identifying the location in cases where the supernumerary testis is extrascrotal. The supernumerary testis is T1 hypo- to isointense, T2 hyperintense surrounded by a peripheral T1/T2 hypointense tunica albuginea[7].

To conclude, Polyorchidism is a rare congenital condition which requires a prompt radiological diagnosis to avoid surgery in a normally functioning supernumerary testis, especially when there are no complications like torsion or superadded malignancy. In our patient, surgery was not performed and close sonographic follow up was advised as there were no alarming features in the supernumerary testis. This is in keeping with the current consensus of conservative expectant management and close sonological follow up in cases of uncomplicated polyorchidism.

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