Case Report

Sonographically diagnosed and conservatively managed case of polyorchidism: A case report

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Abstract

Polyorchidism is a congenital abnormality with distinct sonographic characteristics. In most cases, sonography is sufficient for diagnosis. In instances of complicated polyorchidism, an MRI may provide further information. Conservative treatment with sonographic follow-up is the best management option in uncomplicated cases. We present a rare case of polyorchidism with no associated complications that were managed conservatively with periodic follow-up imaging.

Keywords: Polyorchidism, Imaging, Accessory testis, Sonography, Conservative treatment

Introduction

Polyorchidism is a rare condition, with approximately 171 cases documented in the literature. The exact cause of polyorchidism is unknown [1]. Initial duplication or an aberrant transverse division of the genital ridge is among many possibilities that have been offered as probable causes. Most polyorchidism patients are young adults, ranging from 15 to 25 years, with a single, usually left-sided supernumerary testis [2–4]. Cryptorchidism in 40% of the cases and testicular torsion in 15% of cases are associated with abnormalities with polyorchidism ([5,6]. Other polyorchidism-related conditions include hydrocele (9%), epididymitis, varicocele, and malignancy in about % [7].

Case Report

Here is a sonographically diagnosed case of polyorchidism. This 17-year-old boy came to our urology department with a complaint of a non-tender mass in the left hemiscrotum that has been present since his childhood. A physical examination...
revealed 3 rounded structures in the scrotum which 2 of them are in the left hemiscrotum. Then he was transferred to the radiology unit to have a scrotal ultrasonographic investigation. A 2.2 cm x 1.5 cm x 1.3 cm measuring accessory testis which has a normal vascularity on color doppler examination was observed through an ultrasound in the left hemiscrotum (Fig. 1). In addition to that, the echotexture of the accessory testis was similar to the other testis and it had its own epididymis. The right and left testis were evaluated as normal in size and vasculature. The supernumery testis has similar echo pattern and good vasculature. Therefore, it was considered to as functional as others testis. No other endocrine abnormalities were identified from this case.

Discussion

Of about 2306 scrotal sonographic examinations had been done in our hospital since the last 6 years. This was our first case of polyorchidism.

Polyorchidism appears sonographically as a scrotal mass with an echo pattern identical to the ipsilateral testicle [8]. The flow parameters of the ipsilateral testis are almost similar to that of the supernumery testis on color Doppler sonography.

Technological improvements in ultrasound (i.e., high-frequency transducers and advanced focusing and computing functions) have enabled the detection of very minute variations in the acoustic properties of superficial soft tissue. Therefore, sonography alone can be used to diagnose polyorchidism [9].

The following are some of the benefits of using sonography to investigate polyorchidism: (1) it provides high-resolution images that make it easy to distinguish a normal testis from a tumor mass; (2) it is flexible, convenient, and quick to use, requiring only a few minutes of scanning time; and (3) it does not expose the patient to radiation, making it suitable for repeated scrotal examinations. When a palpable lump in the groin or scrotum is considered to be an accessory testis, sonography is the most effective noninvasive method for inquiry and pre-operative evaluation [10]. When the results of sonography are unclear, an MRI may be used to confirm the diagnosis.

Conclusion

The current treatment for uncomplicated polyorchidism is conservative, including sonographic observation, with no need for a biopsy of the supernumery testicle for diagnosis or follow-up. In the presence of coexisting conditions, such as cryptorchidism, torsion, or malignancy, surgical treatment is indicated.

Patient Consent

The patient was invited to participate and written informed consent was obtained.

- Consent for publication: The Patient was invited and written informed consent was obtained for his anonymized information to be published in this study.

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