

Testicular torsion in a patient with four testes and the ultrasound findings

Alborz Jahangiri, Arash Moghadam

ABSTRACT

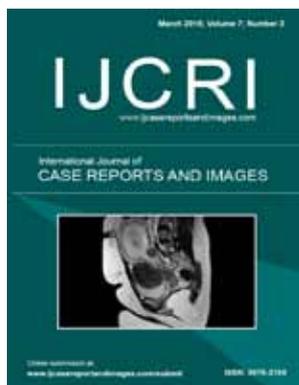
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Case Report: We report a case with four testes and testicular torsion in one testis.

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Keywords: Congenital anomaly, Polyorchidism, Supernumerary testis, Testicular torsion, Ultrasonography

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INTRODUCTION

Polyorchidism is a rare congenital anomaly, which is the presence of more than two testes in the scrotum [1, 2]. The first reported case was in 1880 by Ahlfeld and then in 1895 by Arbuthnot as a surgical discovery. The most common form is presence of three testes in the scrotal sac. The condition is usually diagnosed with sonography [3].

CASE REPORT

A 14-year-old boy presented to the emergency department with sudden onset of left sided testicular pain after playing soccer. He did not report any trauma to the scrotum and he was asymptomatic during the game. He did not have any urinary symptoms. On examination patient had generalized tenderness on the left hemiscrotum. A separate palpable lump also felt in the right hemiscrotum, which was not tender.

Ultrasound of the scrotum showed polyorchidism with two distinct testes within each hemi-scrotum. The upper left testis measured 3.4x2.5 cm with no Doppler flow to the testis and adjacent hyperemia in the epididymis (Figure 1). The lower left testis measured 1.7x3.3 cm with decreased Doppler flow (Figure 2). The right hemiscrotum contained two distinct testes measured 2.3x2.6 cm in the right upper testis (Figure 3) and 3.5x3.3 cm in the right lower testis (Figure 4).

Scrotal exploration was performed immediately. Intraoperative findings revealed bilateral duplicate testis with sharing epididymis and vas deferens between the supernumerary testis and the other testis in each hemiscrotum. Left sided upper testis was found to be torqued with a 720 degrees twist. The testis was reduced and was found to be viable after reperfusion. Orchidopexy was performed for all fours testes. Patient had an uneventful recovery and was discharged the day after.

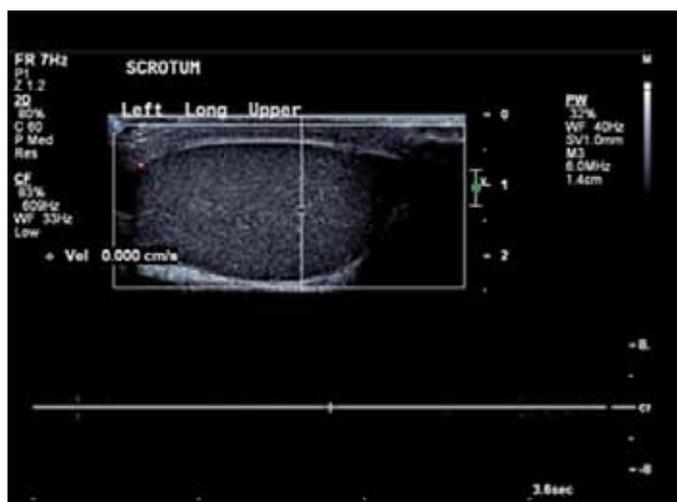


Figure 1: Left upper testis measured 3.4x2.5 cm with absent flow and hyperaemia in the adjacent epididymis.

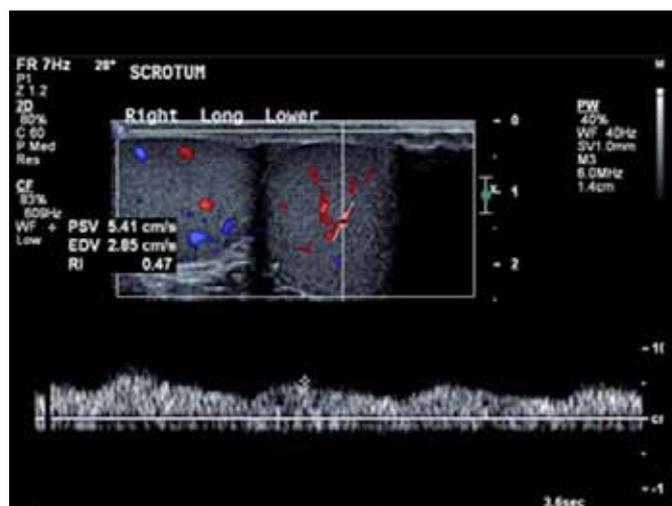


Figure 4: Right lower testis with normal Doppler flow and dimensions (3.5x3.3 cm).

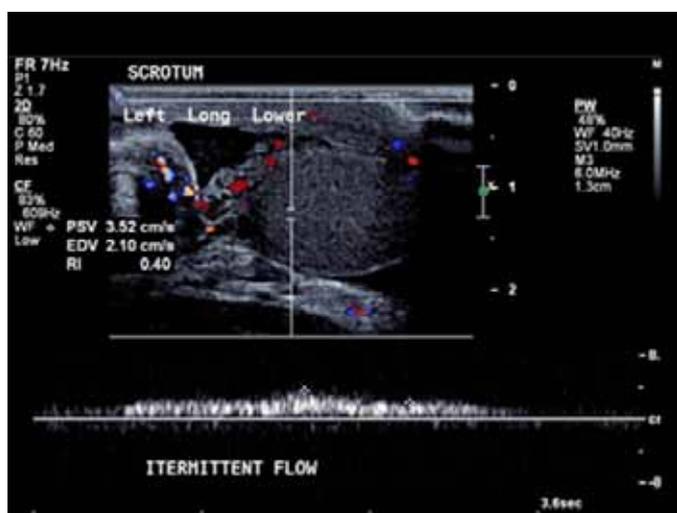


Figure 2: Left lower testis measured 1.7x3.3 cm and decreased Doppler flow to the testis.

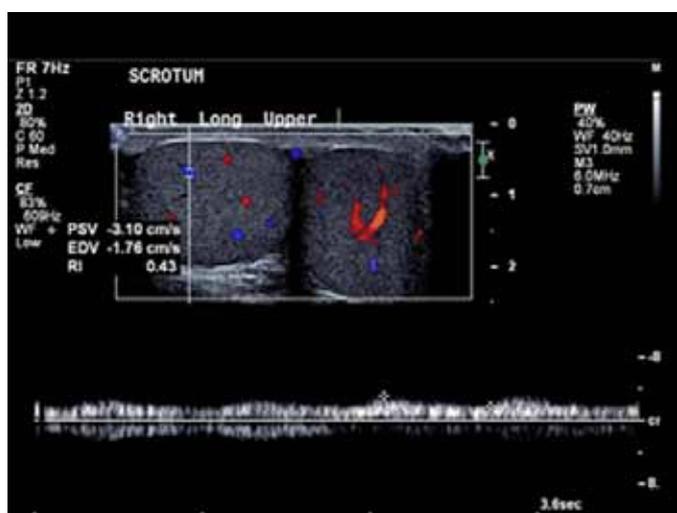


Figure 3: Right upper testis with normal Doppler flow and dimensions (2.3x2.6 cm).

DISCUSSION

Polyorchidism is a rare congenital anomaly of the genital tract with presence of more than two testes usually within each hemi-scrotum [1, 2]. Triorchidism is the most frequent presentation with presence of the supernumerary testis in the left hemi-scrotum [1]. Other locations include inguinal and retroperitoneal region [3]. Bilateral double testes have also been reported [4]. The most common location for the supernumerary testis is within the scrotum, superior or inferior to the other testis and it is diagnosed in early adulthood or adolescence between the ages of 15–25 years [5].

Ultrasonography is the initial tool to diagnose this anomaly with 80–95% sensitivity to differentiate intra and extra testicular masses.

The main finding is the presence of a mass with identical echotexture to the ipsilateral testis with the similar flow characteristics to the ipsilateral testis on the color Doppler sonography [5]. In our case, the flow to the left supernumerary testis was absent and the flow to the left ipsilateral testis was also decreased which raised the suspicion of left sided supernumerary testicular torsion.

Removal of the supernumerary testis and biopsy are not indicated for diagnosis. Polyorchidism is treated conservatively in the absence of complications such as testicular torsion, malignancy and cryptorchidism. Surgical treatment is only indicated when complication are present [6]. The torted testis in our case was viable after reduction and reperfusion. Orchidopexy was performed for all four testes and patient had an uneventful recovery and was discharged a day after the procedure.

CONCLUSION

Polyorchidism with testicular torsion is extremely rare. If suspected, ultrasound with color Doppler needs to be performed to confirm the diagnosis.

Author Contributions

Alborz Jahangiri – Substantial contributor to conception and design, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Arash Moghadam – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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