

Case Report

Polyorchidism: a rare case report

Mehulkumar K. Vasaiya*, Samir M. Shah, Vikram B. Gohil

Department of Surgery, Sir T. Hospital and GMC, Bhavnagar, Gujarat, India

Received: 05 October 2020

Revised: 19 November 2020

Accepted: 20 November 2020

***Correspondence:**

Dr. Mehulkumar K. Vasaiya,

E-mail: mehulv91@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Polyorchidism is a very rare genitourinary anomaly defined with the presence of more than two testicles. Polyorchidism is associated up to 40% with undescended testicles. The present report is about an incidentally detected triorchidism case with left side, one atrophic and second Normal testis. A 4 years old child, diagnosed with left side undescended testis revealed during orchiopexy polyorchidism with distinct epididymis and vas deferens. Whereas one of the testis was in regular size, the other was atrophic. Orchidectomy was conducted on the atrophic testicle and sent for histopathological examination (HPE), orchiopexy to the normal size testicle. The atrophic testicle excised was referred histopathological analysis and was diagnosed as left side undescended atrophic testis. The patient discharged on 2nd postoperative day, was considering as normal during postoperative evaluation made on 5th postoperative day. Polyorchidism is a rare genitourinary abnormality, and its management is still controversial. Yet, we believe that orchidectomy is to be conducted in atrophic testicle cases.

Keywords: Polyorchidism, Triorchidism, Management

INTRODUCTION

Polyorchidism is a very rare genitourinary anomaly defined with the presence of more than two testicles.^{1,2} Incidence of polyorchidism is very rare congenital anomaly of urogenital system with less than 200 cases reported in medical literature since 1885. Furthermore, testicular malignancies are reported in 4% to 6% of these cases, and polyorchidism is most commonly encountered during exploration for other abnormalities, such as inguinal hernia, cryptorchidism, and testicular torsion.

The present report is about an incidentally detected triorchidism case with double undescended testes on left side with one atrophic and second normal size testis.

Normal size testis was intraabdominal and atrophied testis was in inguinal region. A 4-year-old child, diagnosed with undescended left testicle revealed incidentally during

intra-operatively polyorchidism with distinct epididymis and vas deferens.

CASE REPORT

A 4 years old child presented with left side empty scrotum (left side undescended testis) with normal right side testis in scrotum since birth

On clinical examination: left side testis was not palpable and absent in scrotum. Right testis was in scrotum with normal in size and shape

After investigation ultrasonography (USG) report s/o right side testis normal and left side testis not seen in scrotum, p/o ectopic, atrophied or absent left testis.

Computed tomography (CT) abdomen with pelvis s/o left scrotal sac is empty, left testis is small in size and intraabdominal at the level of deep inguinal ring

suggestive of left undescended testis with size of 12×9×12 mm planned for left side orchidopexy.

Intraoperative finding

On exploration, one testis was intraabdominal which was situated just below the deep ring with approximately. size of 11×10×13 mm, during further dissection we found another testis like structure in inguinal canal near superficial inguinal ring which was of approximately 12×6 mm size with distinct vas deferens. Considering intraabdominal testis normal.

This extra testis like structure was excised and sent for histopathological examination (HPE).

Orchidopexy performed for left normal testis. Patient was discharged on 2nd postoperative day.

Histopathology report suggestive of undescended testes.



Figure 1: Double testicles with vas deferens.

HISTO PATHOLOGY LABORATORY	
LABORATORY SERVICES SIR. T. HOSPITAL	
BHAYNAGAR - 384001, GUJARAT, INDIA	
PH : 91 278 2427524, 2435219, 2423250, EXT : 1162	
Name : DHRUV RAVIBHAI RATHOD	Age/Sex : 4 Yrs./M
Ref By : DR.	Date : 20/03/2019
	Report ID : 848
	Word : 15/9
	Rea No. : 62195
HISTOPATHOLOGY REPORT	
REPORTED ON : 03/04/2019	
H. P. No. : 848/19 A-B	
SPECIMEN : LT SIDED TESTES	
Clinical Diagnosis : LEFT SIDED UNDESCENDED TESTES	
Gross Examination	
1.5x0.5cm sized brownish firm tissue received.	
Microscopic Examination	
Section shows fibromuscular tissue and congested capillaries in stroma. There is also presence of congested seminiferous tubules at places. There is no evidence of malignancy in studied section.	
Above findings are consistent with clinical diagnosis of undescended testis.	
End Of Report	
Classifying By : CS	
Transcription By : CS	
Dr. Shaila N. Shah PROF & HOD.	Dr. Alpesh Goswami ASSO. PROF.
Dr. Parth Goswami ASST. PROF.	Dr. Sahil Shah TUTOR
Dr. Sagar Kakadi DR. RESIDENT	
HISTOPATHOLOGY REPORT	

Figure 2: Histopathology report.

DISCUSSION

The first histological description of polyorchidism was published in 1880 by Ahlfeld. The first clinical case was reported by Lane in 1895. Polyorchidism is a very rare anomaly, which is defined by the presence of more than two testicles. Triorchidism—three testicles—is the most common form of polyorchidism, in which an extra testicle is usually found on the left side.

The exact etiology of polyorchidism is still unknown. However, it could be related to an embryological developmental abnormality during the formation of the testicles.

Usually, patients present with an undescended testis. However, they are significantly prone to develop a testicular atrophy/torsion and malignancy.

Most patients with polyorchidism have a normal 46, XY karyotype. However, chromosomal abnormalities such as a 46, XX karyotype with XY mosaicism and deletion of the long arm of chromosome 21 have been reported. In polyorchidism, secondary sexual characteristics are the same as in typical individuals of similar age. The management of polyorchidism has been the subject of controversy. With recent improvements in imaging studies, an increasing number of cases are diagnosed via USG or magnetic resonance imaging (MRI). Some of these cases have been left in situ and followed conservatively. The management of polyorchidism should usually be resection of the dysplastic testicle without a duct. Although there are no clear guidelines to determine which cases can be followed conservatively, recent data support watchful waiting in the absence of concomitant abnormalities and if testicular malignancy can be ruled out safely.^{3,4,5}

CONCLUSION

Polyorchidism is a rare congenital anomaly that is unfamiliar to most of surgeon. The management of polyorchidism should usually be resection of the dysplastic testicle without a duct. To date, its management has generally involved surgery and removal. However, recent evidence supports that these cases may be followed conservatively when clinical findings and imaging technique detect no complications or suspicion for malignancy, torsion, hernia, or cryptorchidism.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Amodio JB, Maybody M, Slowotsky C, Fried K, Foresto C. Polyorchidism: report of 3 cases and review of the literature. J Ultrasound Med. 2004;23(7):951-7.

2. Artul S, Habib G. Polyorchidism: two case reports and a review of the literature. *J Medic Case Rep.* 2014;8(1):464.
3. Balasar M, Sönmez MG, Oltulu P, Kandemir A, Kılıç M, Göğür YE, Pişkin MM. Polyorchidism; unilateral, one atrophic undescended double testicles. *Urol Ann.* 2017;9(2):208-10.
4. Leung AK. Polyorchidism. *Am Fam physician.* 1988;38:153-7.
5. Sağlam HS, Önel FF, Avcı E, Ergüven A. Report of a boy with polyorchidism and a review of current knowledge regarding this unusual anomaly. *Turk J Urol.* 2013;39(2):119-21.

Cite this article as: Vasaiya MK, Shah SM, Gohil VB. Polyorchidism: a rare case report. *Int Surg J* 2021;8:398-400.