



Case Report

Triple Testes – A Rare Case

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Abstract

Polyorchidism is a very rare congenital anomaly, less than 200 cases reported in literature. Triorchidism is commoner in polyorchidism, mostly extra testes found in left side. We report a case of two years old patient with incidental finding of third testis during orchidopexy for left palpable undescended testis.

Keywords: Undescended, polyorchidism, triorchidism, orchidopexy.

Introduction

Polyorchidism is an uncommon congenital anomaly that is defined by presence of more than two testes in a man. The supernumerary testes may be present in scrotum or in inguinal canal or even intra-abdominally. It is a very rare congenital disorder, with fewer than 200 cases reported in medical literature.^[1] Polyorchidism is frequently associated with additional urological pathologies such as undescended testis, inguinal hernia, testicular torsion, hydrocoele, malignancy and infertility.^[2,3]

Case Report

We report a case of triple testes, an incidental finding during left orchidopexy for left undescended testis. A two years old male child

was brought to the hospital with the complaints of swelling in the left inguinal region. Patient was diagnosed as a case of left palpable undescended testis. On clinical examination, left scrotum was empty with a firm swelling present at left deep inguinal ring of size 0.5 × 0.5 cm and right testis was palpable normally in the right scrotum. After investigations, the patient was posted for left orchidopexy/orchidectomy surgery under spinal anaesthesia. Intra-operatively it was found that the spermatic cord had two vas-deferens. There were two sacs present in the left inguinal canal (Figure-1, 2). First sac was present in mid inguinal area with soft flabby atretic testis which was excised. Second sac was present at deep inguinal ring with soft testis of size 0.5× 0.5 cm. Sac was opened

and orchidopexy (fixation) was done at the upper half of left scrotum.

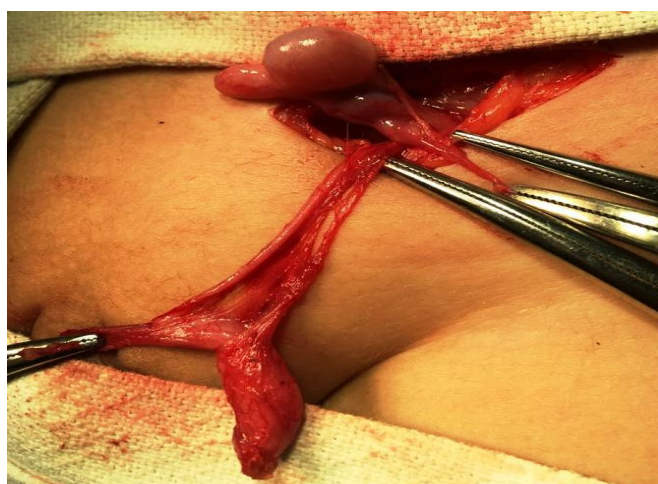


Figure 1: Intra-operative view of left inguinal canal showing two testicles.



Figure 2: Another view of left inguinal canal showing two testicles.

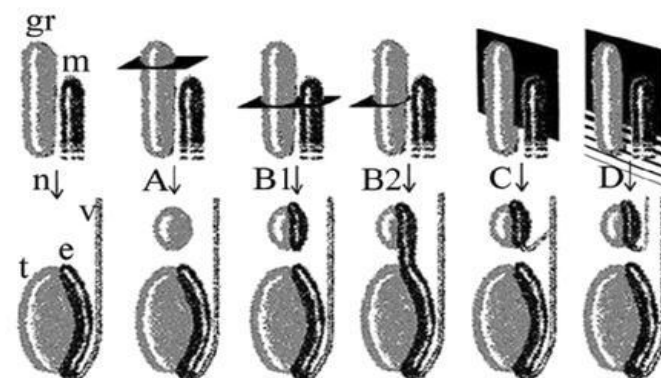


Figure 4: In a normal embryo (n), at about 6 weeks of embryonic life, the primordial testis develops from the primitive genital ridge (gr) medial to the mesonephric duct (m). At about 8 weeks of embryonic life, the primordial testis (t) takes shape, and the epididymis (e) and vas deferens (v) arise from the mesonephric (Wolffian) duct. [8]

Discussion

Polyorchidism is the occurrence of more than two testes. It is a very rare congenital anomaly of the genital tract. [4,5] The condition is usually asymptomatic. A man who has polyorchidism is known as a polyorchid. Though the first histologically proven case was reported by Ahlfeld in 1880, Arbuthnot Lane reported the first case found at surgery in 1895. [2,6,7]

Classification: Polyorchidism occurs in two primary forms: type A and type B (Figure 3). [1]

- a) Type A: the supernumerary testicle is connected to a vas deferens. These testicles are usually reproductively functional. Type A is further subdivided into:
 - i. Type A1: complete duplication of the testicle, epididymis and vas deferens.
 - ii. Type A2: the supernumerary testicle has its own epididymis and shares a vas deferens.
 - iii. Type A3: the supernumerary testicle shares the epididymis and the vas deferens of the other testicles.
- b) Type B: the supernumerary testicle is not connected to a vas deferens and is

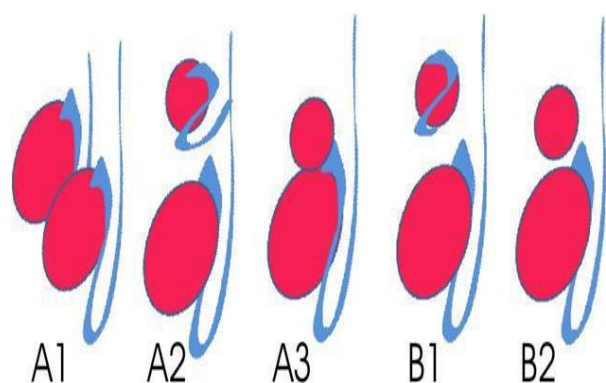


Figure 3-Classification of Polyorchidism. [9]

therefore not reproductively functional.

Type b is further subdivided into:

- i. Type B1: the supernumerary testicle has its own epididymis but is not connected to a vas deferens.
- ii. Type B2: the supernumerary testicle consists only of testicular tissue.

On the basis of the embryologic development, Leung classified polyorchidism into four types (Figure 4). In type A, the supernumerary testis lacks an epididymis and vas deferens. It happens when the division separates a small part of the genital ridge not in contact with the mesonephric ducts (rete testis). In type B, the supernumerary testis has its own epididymis. Depending on the degree of division, the supernumerary testis may be connected longitudinally to the epididymis of the normal testis and its vas deferens (B2), or it may lack any connections to the normal testis (B1). The division of the genital ridge occurs in the region where the primordial gonads are attached to the mesonephric ducts (rete testis). In type C, the supernumerary testis has its own epididymis and shares the vas deferens with the regular testis in a parallel fashion. This variant results from incomplete longitudinal division of the genital ridge and the proximal portion of the mesonephric duct. In type D, complete longitudinal duplication of the genital ridge and mesonephric duct occurs, with resultant complete duplication of testes, epididymides, and vas deferens. This type may be associated with an ipsilateral duplicated ureter and is the least common.^[8] It is believed to result embryologically from an abnormal division of the genital ridge.^[4]

Embryological theories responsible for polyorchidism include:

- i. degeneration of parts of the mesonephric components;
- ii. Duplication of the genital ridge; or
- iii. Division of the genital ridge.

There is an increased risk of malignancy if supernumerary testicles are detected.^[6]

Differential diagnosis: Possible differential considerations include scrotal hernia, bilobed testicle, crossed testicular ectopia, testicular tumour.^[9]

Management: Because polyorchidism is very uncommon, there is no standard treatment for the condition. Prior to advances in ultrasound technology, it was common practice to remove the supernumerary testicle.^[10] Several cases have been described where routine follow-up examinations conducted over a period of years showed that the supernumerary testicle was stable.^[1]

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Conflict of Interest- None

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