

Case Report

Triple Testes - A Rare Case

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Received: 02/10/2015

Revised: 23/10/2015

Accepted: 23/10/2015

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 47 year old patient with incidental finding of third testis during inguinal hernia operation.

Key words: Polyorchidism, Polyorchism, Triple Testes, Orchiectomy, Rare.

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 (Bergholz R *et al.*; 2009). Polyorchidism is frequently associated with additional urological pathologies such as undescended testis, inguinal hernia, testicular torsion, hydrocoele, malignancy and infertility (O'Sullivan DC *et al.*; 1995), (Spranger Ret *et al.*; 2002).

CASE REPORT

We report a case of triple testes, an incidental finding during left inguinal hernia operation. A 47 year old male patient came to hospital with complaint of swelling in left inguinal region. Patient was diagnosed as a case of left indirect inguinal hernia. On clinical examination of scrotum both testes were present but left

testis was smaller than right. After investigations, patient was posted for surgery under spinal anaesthesia. Intra-operatively it was found that spermatic cord contained two separate vas deferenses, one was connected to testis in scrotum and the other testis present in the inguinal canal (Figure-3). Orchiectomy was done of inguinal testes. Hernioplasty was done for inguinal hernia. Later on, ultra-sonic examination of right side showed presence of single testis on right side.

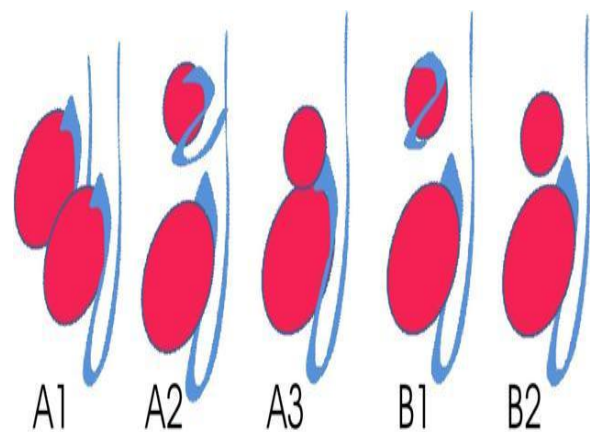


Figure 1- Classification (Dr. Matt A. Morgan *et al.*).

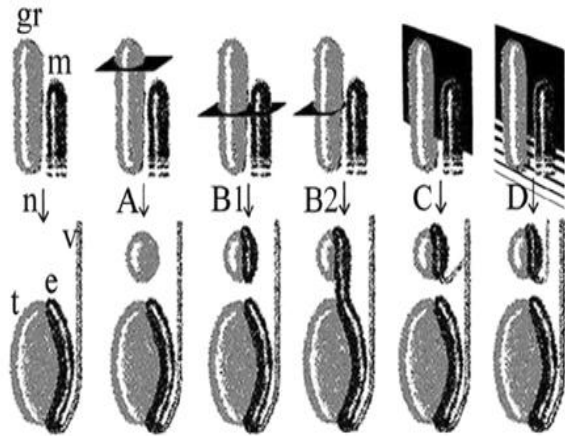


Figure 2: In a normal embryo (n), at about 6 weeks of embryonic life, the primordial testis develops from the primitive genital ridge (gr) medial to the mesonephric duct (m). At about 8 weeks of embryonic life, the primordial testis (t) takes shape, and the epididymis (e) and vas deferens (v) arise from the mesonephric (wolffian) duct (John B. Amodio *et al.*; 2004).



Figure 3: Intra-operative view of left inguinal canal showing two testicles.

DISCUSSION

Polyorchidism is the incidence of more than two testes. It is a very rare congenital anomaly of the genital tract (Woodward PJ *et al.*; 2003), (Sheah K *et al.*; 2004). 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 (O'Sullivan DC *et al.*; 1995), (Ahlfeld F *et al.*; 1880), (Lane A.; 1895).

Classification: Polyorchidism occurs in two primary forms: type A and type B (Figure 1) (Bergholz R *et al.*; 2009).

➤ Type A: the supernumerary testicle is connected to a vas deferens. These testicles are usually reproductively functional. Type a is further subdivided into:

- Type A1: complete duplication of the testicle, epididymis and vas deferens.
- Type A2: the supernumerary testicle has its own epididymis and shares a vas deferens.
- Type A3: the supernumerary testicle shares the epididymis and the vas deferens of the other testicles.

➤ Type B: the supernumerary testicle is not connected to a vas deferens and is therefore not reproductively functional. Type b is further subdivided into:

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

On the basis of the embryologic development, Leung classified polyorchidism into 4 types (Figure 2). 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 (John B. Amodio *et al.*; 2004).

It is believed to result embryologically from an abnormal division of the genital ridge (Woodward PJ *et al.*; 2003). 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 (Ahlfeld F *et al.*; 1880).

Differential diagnosis: Possible differential considerations include scrotal hernia, bilobed testicle, crossed testicular ectopia, testicular tumour (Dr. Matt A. Morgan *et al.*).

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 (Leung, A. K.; 1988). Several cases have been described where routine follow-up examinations conducted over a period of years showed that the supernumerary testicle was stable (Bergholz R *et al.*; 2009).

REFERENCES

1. Bergholz R.; Wenke K. (2009). "Polyorchidism: A Meta-Analysis". *The Journal of Urology* 182 (5): 2422-2427. Doi:10.1016/j.juro.2009.07.063.
2. O'Sullivan DC, Biyani CS, Heal MR. Polyorchidism: causation and management. *Postgrad Med J.* 1995; 71: 317-18.
3. Spranger R, Gunst M, Kuhn M. Polyorchidism: a strange anomaly with unsuspected properties. *J. Urol.* 2002; 168: 198.
4. Woodward PJ, Schwab CM, Sesterhenn IA (2003) From the archives of the AFIP: extra testicular scrotal masses: radiologic-pathologic correlation. *Radiographics* 23:215-240.
5. Sheah K, Teh HS, Peh OH. Supernumerary testicle in a case of polyorchidism. *Ann Acad Med Singapore.* 2004;33:368-70.
6. Ahlfeld F. Die Missbildungen des Menschen. In: Ahlfeld F, Eds. A Book. Leipzig, Germany: Grunow; 1880: 126.
7. Leung, A. K. (1988). "Polyorchidism". *American Fam Physician* 38 (3): 153-156.
8. John B. Amodio, Majid Maybody, Christya Slowotsky, Karen Fried, Christopher Foresto, Polyorchidism: Report of 3 Cases and Review of the Literature. *J Ultrasound Med.* 2004; 23:951-957.
9. Dr Matt A. Morgan and Dr Vasileios Rafailidis *et al.* Polyorchidism. <http://radiopaedia.org/articles/polyorchidism>.

How to cite this article: Barolia DK, Sethi D, Atal D *et al.* Triple testes - a rare case. *Int J Health Sci Res.* 2015; 5(11):403-405.
