

## Case Report

### Polyorchidism a rare cause of scrotal masses in the child a case report

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**Abstract:** Scrotal masse due to polyorchidism is not frequent in children. We report 1 case of polyorchidism associated an hydrocele in an eight years old boy. The diagnostic of the scrotal masses was done by physical examination. Cure of hydrocele was done with a conservative management of the polyorchidisme based on clinical and sonography surveillance of supernumerary testicle.

**Keywords:** polyorchidism, triorchidism, scrotal masses supernumerary.

#### Introduction

Polyorchidism is a rare urogenital malformation characterized by the presence of more than two testicles confirmed by histology. The first case was reported by Ashfeld in 1880 from autopsy data [1]. Triorchidia is the most common clinical presentation. The prognosis is dominated by the risk of torsion, cancer degeneration and infertility [2]. This anomaly is often associated with a disorder of testicular migration or a pathology of the peritoneo-vaginal canal [3]. We report a new case of polyorchidism associated with cryptorchidism and persistence of the peritoneo-vaginal canal.

#### Observation

An 8-year-old child with no previous pathological history was seen in consultation for painless right Inguino-scrotal masse since birth. Physical examination showed a right communicating hydrocele and an homolateral painless masse (figure 1).



Fig 1 : Clinical aspect of the scrotum with a mass clearly visible

The left testis was palpable in left inguinal region. No other genitourinary abnormality was present. On inguinal exploration two testes with separate epididymis and vas deferens fusion were found in the right inguinal canal type C (figure 2).



Figure 2 : Intraoperative figure showing two testes with separate vas deference.

There was an associated right persistant of peritoneo-vaginal duct. Both testes were brought down into the right hemiscrotum and closure of peritoneovanal duct was done. After two years of follow up patient's condition is uneventful.

Type	Description
A	Commonest. The supernumerary testis lacks an epididymis and vas deferens.
B	The supernumerary testis has its own epididymis often connected longitudinally with the epididymis of the normal testis.
C	The supernumerary testis has its own epididymis and shares a vas deferens with the normal testis.
D	The rarest form in which there is complete longitudinal duplication of the genital ridge and mesonephric duct, forming complete duplication of the testis, epididymis and vas deferens.

**Figure 3 : Types of polyorchism according to Leung [3].**

### Discussion

The ethiopathogenesis of polyorchidism is not well understood, the most probable theory would be a transverse or longitudinal division of the urogenital crest by peritoneal folds before the eighth week of intrauterine development [4]. This division can interest even level of the mesonephric duct and explains the volume inequality of the two gonadal formations [4]. The literature reports only a hundred cases of polyorchidism, a figure that is probably underestimated because the pathology is mostly asymptomatic, of fortuitous discovery during surgery of inguinal hernia or hydrocele or other urogenital anomalous [2]. Triorchidia is the most classic clinical presentation of polyorchidia; it is characterized by a hypotrophic supernumerary testis with respect of the adjacent testis and a contralateral normal testis as found in our patient [5].

Triorchidism is usually described in a patient between the ages of 15 and 25 years [5]. Our case makes the particularity of the younger age of our patient. The inguinal topography in our patient is the most frequent because the supernumerary testis sit in 75% of the cases in intra scrotal [4]. Indeed, the supernumerary testis usually presents as an intra-scrotal mass which may pose the problem of differential diagnosis with a testicular or para testicular tumor [4]. The diagnosis can be corrected by ultrasound, which tests a supernumerary testis with the same echogenicity as the normal testis. The color Doppler ultrasonography can provide further informations on the arterial flow of the testicles [2]. In case of doubt, the MRI makes the diagnosis by revealing the same characteristics between two testes (intermediate signal intensity on T1-weighted images and high signal intensity on T2-weighted images) [4, 2]. In our case the diagnosis of polyorchidism was based on physical examination only, so radiological investigations were not done. Hydrocele associated with polyorchidism as present in our case is globally seen in 9% of cases. The management of polyorchidism is controversial, several authors are currently advocating conservative treatment before a macroscopically healthy and potentially functional supernumerary testis [2, 4-10]. This conservative treatment is justified because a regular clinical examination associated with an ultrasonography of the testis and a dosage of the testicular tumor markers can detect earlier

malignancy of the testis which is in order of 1% to 7% [3]. In our patient, his young age and the normal appearance of the testis explain our attitude. Because of his rarity the malignant potential of polyorchidia, is probably underestimated. Malignancy is more related to the frequent association with cryptorchidism [2].

### Conclusion

Polyorchidism is a rare pathology of the genitourinary tract. The prognosis is mainly dominated by the risks of torsion, malignancy infertility. Advances in biology and medical imaging enable effective monitoring of supernumerary testis and thus avoid unnecessary radical surgery in mostly young subjects.

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