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Case report of a rare variant of polyorchidism

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ABSTRACT

Polyorchidism is a rare type of developmental anomaly. It is defined as presence of more than one testis on the same side. Supernumeary testis with separate epididymis and separate vas deferens is a very rare variant of polyorchidism. We present a case of triorchidism presenting as cryptoorchidism in a six month old infant which on inguinal exploration was found to have double testes with separate vas deferens and epididymis. We closely followed the patient for two years after orchidopexy and found no complications or malignant change.

Polyorchidism is a rare anomaly of the urogenital system. It is defined as presence of more than one testis on the same side. About 140 cases have been reported till date [1–4]. Approximately 50% of the cases are detected between 15 and 25 years of age [5]. The majority of patients are asymptomatic or present with painless inguinal or scrotal masses, undescended testis, and rarely, torsion of the supernumerary testis [6]. We present a case of triorchidism presenting as cryptoorchidism in a six month old infant.

1. Case

A six month old infant presented in OPD with absent testis on left side. Physical examination revealed palpable testis in left inguinal region. No other genitourinary abnormality was present. Patient was considered a case of undescended testis and orchidopexy was planned. On inguinal exploration, two testes with separate epididymis and vas deferens were found in the left inguinal canal. Both testes were brought down into the left hemiscrotum. After a follow up of two years patient's condition is uneventful.

2. Discussion

Polyorchidism is a rare congenital anomaly and 140 cases have been reported in the literature till date [1–4]. Various classification systems have been given in literature. On the basis of embryologic development, Leung classified polyorchidism into 4 types [3]. In type A, the supernumerary testis lacks an epididymis and vas deferens. In type B, the supernumerary testis has its own epididymis. In type C, the supernumerary testis has its own epididymis and shares the vas deferens with regular testis in a parallel fashion. In type D, complete longitudinal duplication of the genital ridge and mesonephric duct occurs with resultant complete duplication of testes, epididymides and vas deferens. Type B is the commonest with type B and C constituting approx-

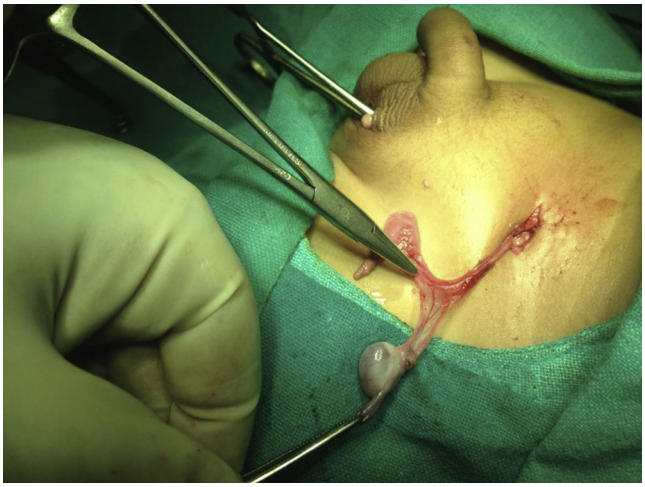

Fig. 1. Intraoperative figure showing two testes with separate vas deference.

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imately 90% cases [3]. Type D is very rare. Type D seems to fit our case most appropriately.

Approximately 75% of the supernumerary testes are intrascrotal with another 20% located in the inguinal canal and 5% in the retroperitoneal area [7,8]. The most common anomalies associated with polyorchidism are inguinal hernia (30%), undescended testis (15%–30%), testicular torsion (13%), hydrocele (9%), varicocele (<1%), hypospadias (<1%), anomalous urogenital union (<1%) and malignancy (<1%) [9]. Our case had type D triorchidism presenting as undescended testis in inguinal canal (Fig. 1).

Polyorchidism can be diagnosed by color Doppler ultrasonography and MRI [10,11]. The supernumerary testis has echotexture and vascular flow similar to normal testis [10,11]. MRI is very helpful if ultrasound diagnosis is not certain. The MRI characteristics of supernumerary and normal testes are similar (intermediate signal intensity on T1-weighted ages and high signal intensity on T2-weightedimages) [10]. In our case the diagnosis of polyorchidism was not entertained preoperatively based on physical examination, so radiological investigations were not done.

The management of polyorchidism is controversial. Orchiectomy of the supernumerary testis is one option because of risk of malignancy. If there is no malignancy, patients can be followed up conservatively [1,2]. In our case both the testis were brought down into scrotum. Two years of follow up is uneventful.

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