



## Case Report

### Perineal Ectopic Testis: A Rare Cause of Empty Scrotum

Muhammed Foysol Ahmed<sup>1</sup>, Mohammed Abdul Momin<sup>2</sup>, Md Tayef Rahman<sup>3</sup>, Md Abdullah Al Mashuque<sup>4</sup>

<sup>1</sup>Assistant Professor, Department of Paediatric Surgery, Jalalabad Ragib-Rabeya Medical College, Sylhet.

<sup>2</sup>Associate Professor, Department of Paediatric Surgery, Jalalabad Ragib-Rabeya Medical College, Sylhet.

<sup>3</sup>Registrar, Department of Paediatric Surgery, Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet.

<sup>4</sup>IMO, Department of Paediatric Surgery, Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet.

#### ABSTRACT

*Ectopic testis bears an important role in causation of empty scrotum. In general, five sites of ectopic testis. These are the superficial inguinal pouch of Denis Browne, the femoral canal, contralateral hemi-scrotum, the perineum and the pubopenile/penile region. A rare case of perineal ectopic testis is reported here. Orchiopexy was performed in that case, and the testis was mobilized and fixed in the left hemi-scrotum.*

**Keywords:** Testis, Perineal ectopic testis, Hemi-scrotum.

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#### INTRODUCTION

An empty scrotum may indicate a retractile testis, an undescended testis, testicular agenesis, or an ectopic testis. By definition, an ectopic testis is one that has emerged from the superficial inguinal ring but fails to reach the scrotum<sup>1</sup>. In descending order, the superficial inguinal pouch, femoral canal, perineum, contra lateral hemi-scrotum (Transverse), and pubopenile/penile are the most common locations for ectopic testis<sup>2</sup>. Very rare sites of ectopic testis include the subumbilical region and the anterior abdominal wall<sup>3,4</sup>. The aetiology of ectopic testis seems unclear, with many explanations in the literature. It may be due to overdevelopment and elongation of one segment of the gubernaculum, genitofemoral nerve anomalies, or obstruction at the entrance to the scrotum<sup>5,6</sup>. Diagnosis can easily be made through physical examination of the ectopic sites with an empty scrotum. Surgical relocation of the testis into

the scrotum is the basis of treatment. We report a rare variety of ectopic testis (Perineal) located below and lateral to the left hemi-scrotum.

#### CASE REPORT

A 10-year-old boy presented with an absence of left testis in the left hemi-scrotum and a swelling in the left side of the perineum since birth. An examination revealed a healthy looking child with a less developed and empty left hemi-scrotum. The contralateral normal testis was present in the respective scrotum. An oval shaped soft mass identical to the testis, measuring about 15 mm x 10 mm, was palpable just below and lateral to the left hemi-scrotum. Its consistency was similar to that of the right testis, eliciting a sickening sensation on mild compression, fixed with the underlying structure, keeping it free from the overlying skin and presented with a positive cough impulse. His penis was well developed and circumcised (Figure-1).

#### Address of Correspondence:

Dr. Muhammed Foysol Ahmed, Assistant Professor, Department of Paediatric Surgery, Jalalabad Ragib-Rabeya Medical College, Sylhet, Mobile: +8801712233401. E-mail: drfoysol77@gmail.com



**Figure-1:** Soft tissue mass in the perineum and empty left hemi-scrotum.



**Figure 3:** Orchiopexy using the dartos pouch technique.



**Figure-2:** Surgical exploration of the left ectopic testis through inguinal incision, showing adequate length of spermatic cord and well developed testis.



**Figure 4:** Scrotum after 3 months of surgery.

An ultrasonogram revealed a normal right testis measuring 20 mm x 14 mm in the right hemi-scrotum and a left testis measuring 18 mm x 12 mm located below the left hemi-scrotum (Left perineal fold). Our clinical diagnosis was left-sided perineal ectopic testis (PET). Surgery was advised. An inguinal crease line incision was made. The inguinal canal was opened. Exploration was done along the spermatic cord and testis by blunt dissection up to the perineum and by lysing gubernaculum. The structures were identified along the inguinal incision. The vas deferens and vascular structures were longer than those on the normal side. The testis was almost normal in

appearance (Figure-2). Orchiopexy was performed following herniotomy and relocating the testis and structures by the dartos pouch technique (Figure-3). The postoperative period was uneventful and the patient has been followed up for three months with clinical examination and a repeat ultrasonogram, which revealed normal testis (20 mm x 15 mm size) in both hemi-scrotum. (Figure-4).

**DISCUSSION**

Testicular maldescent, or cryptorchidism, is one of the most common congenital anomalies of the genitalia, with an incidence of approximately 1% in male

newborns. It is more common on the right side and in premature neonates<sup>6,7</sup>. It is reported that 5% of maldescended testes are ectopic<sup>8</sup>. The major sites of ectopic testes are the superficial inguinal pouch, femoral, suprapubic, transverse (Contralateral hemiscrotum), perineal, and pubopenile/penile<sup>2,3</sup>.

Perineal ectopic testis (PET) was first described in 1786 by John Hunter. PET is a rare anomaly, constituting less than 1% of all cases of undescended testis<sup>9</sup>. Approximately 175 cases have been reported in the literature, and 80% of these are unilateral<sup>10</sup>.

Testicular development and descent from the abdomen to the scrotum is a complex and multistage process that occurs from the 7th to 35th weeks of gestation. Normal migration of the testis is thought to be under the influence of androgenic hormones and certain mechanical factors. Any disturbance in this process leads to maldescent that could be in its normal pathway (True undescended testis) or an abnormal pathway (Ectopic testis)<sup>6,7</sup>.

The exact cause of testicular ectopic testis is unknown, but various theories, such as "Tails of Lockwood" and more recent ones involving the role of the genitofemoral nerve, have been put forward to explain ectopic testicular migration. According to "Tails of Lockwood" theory, gubernaculum is inserted into the scrotum, perineum, scarpa triangle, and the root of the penis. The scrotal insertion was considered dominant in normal descent. An ectopic testis occurred when a dominant pull was directed by minor gubernacular tails. Hutson proposed that the mislocation of the ipsilateral genitofemoral nerve causes the gubernaculum to migrate to the wrong site<sup>6,11,12</sup>.

Diagnosis of ectopic testis is made clinically and complemented with ultrasonography. An empty scrotum with a soft perineal mass on the ipsilateral site is very suggestive of PET. Some cases of ectopic testes are diagnosed antenatally with the help of ultrasound at 38 weeks of gestation and confirmed in the postnatal period by clinical examination<sup>9</sup>.

Undescended and ectopic testes are associated with a number of complications like trauma, torsion, tumors, and infertility (In bilateral cases) if they are left untreated. It is generally accepted that undescended testis may not be operated on before 6 months of age, but surgery for ectopic testis should be carried out before the age of 6 months, even if it is not associated with inguinal hernia. Any attempt to move an ectopic testis into the scrotum with hormone therapy is ineffective<sup>6,13</sup>.

## CONCLUSION

Surgery is the treatment for perineal ectopic testis. It is not technically challenging as the spermatic cord is long, which makes orchiopexy relatively easy in comparison to other varieties. However, to assess functional outcome, self-examination and long-term follow-up are mandatory.

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