



Penile Ectopic Testis: An Uncommon Cause of an Empty Scrotum

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Authors' contributions

Authors AAA and GA were the surgeons who performed the surgery. The first three authors conceived and designed the study. All authors have made significant contributions in drafting the paper in terms of relevant literature search, critical analysis and interpretation of data and final approval of the manuscript for submission.

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Case Study

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ABSTRACT

An ectopic testis is any testis that presents outside the line of its normal descent after exiting the external inguinal ring. Sites for ectopic testes include the superficial inguinal pouch of Denis Browne, femoral, suprapubic, contralateral hemiscrotum, perineum and pubopenile region. This case describes yet another rare site of ectopic testis in an 11 year boy. The diagnosis was essentially clinical complimented by ultrasonography. Scrotal repositioning was successfully achieved.

Keywords: Penile ectopic testis; gubernaculum; orchidopexy.

1. INTRODUCTION

Ectopic testis is thought to result from an abnormality in the final phase of testicular

descent after the testis has exited the external inguinal ring only to lie at a location different from its normal pathway [1] unlike an undescended testis in which the testis follows the path of

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normal descent but fails to reach the scrotum[2]. Ectopic sites include superficial inguinal pouch, femoral canal, suprapubic region, contra-lateral scrotum and the perineum[3]. Rare sites of ectopia include the anterior abdominal wall and the penile shaft[3,4].

The aetiopathogenesis has been linked to an abnormal fixation of the distal end of the gubernaculum with the resultant ectopic location of the testis[5].

Ectopic testes do not descend on their own and therefore early surgery is advised in childhood[3,6].

2. CASE PRESENTATION AND MANAGEMENT

An eleven old year old boy presented with a painless swelling on the dorsum of the penis with an empty left hemiscrotum. The swelling was present at birth. The delayed presentation was as a result of the painless nature of the mass and he coming from a remote area of Ghana, where access to specialized medical services is not readily available. The parents only became concerned because the swelling has been gradually increasing in size over the last few months.

On physical examination, he had signs of puberty and an oval mass on the dorsum of the penile shaft. The mass was non tender, smooth surface with cord structures extending from the left groin attached to it. The left hemiscrotum was underdeveloped and empty. He had a normally descended right testis. He had a well developed and circumcised penis. (Fig. 1&2).



Fig. 1. AP view of penile ectopic testis



Fig. 2. Lateral view of penile ectopic testis

A clinical diagnosis of penile ectopic testis was made and ultrasonographic findings were consistent with a normal testis. Doppler studies visualized the testicular blood supply.

The goal of management was to reposition the penile ectopic testis into the left hemiscrotum. Surgery involved an oblique groin incision extending to the dorsum of the penis.

The ectopic testis was identified and delivered with the cord into the wound. There was no associated patent processus vaginalis and the cord length was adequate for repositioning of the testis into its originally destined position.

A tunnel was created to gain access to the left hemiscrotum and a dartos pouch created to accommodate the testis (Fig.3& 4).



Fig. 3. Left testis repositioned in the left hemiscrotum

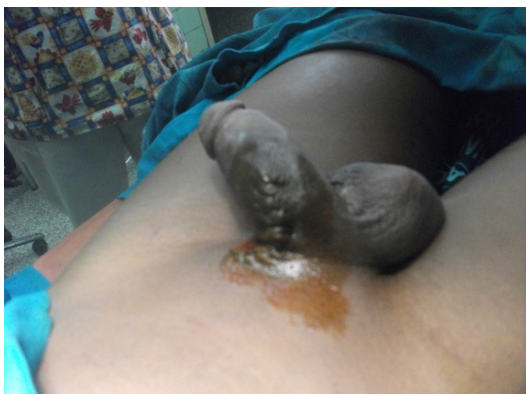


Fig. 4. Penis after wound closure

There was no postoperative complication. Patient has been followed up for three months with clinical examination and repeat scrotal Doppler ultrasonography which revealed normal testes.

3. DISCUSSION

An ectopic testis is defined as any testis that presents outside the line of its normal descent after exiting the external inguinal ring [7]. The cause of ectopic testis remains unclear[3]. In a review article by Heyns CF and Hutson JM, several theories to explain ectopic testis were extensively discussed. These include: Gubernacular abnormalities, genitofemoral nerve defects, epididymal factors, mechanical obstruction, decreased intra-abdominal pressure, asymmetric growth of the cord structures compared with the inguinal canal and hormonal abnormalities [5]. The main sites of testicular ectopia include the superficial inguinal pouch of Denis Browne, femoral, suprapubic, penile, contralateral hemiscrotum and perineum[6]. Penile ectopic testis is an uncommon congenital anomaly in which the testis is located along the penile shaft or its base [1,6].

Similar cases have been reported in literature. In India, a 19year old presented with a penile ectopic testes [8], another case was reported in Lisbon, Portugal of a 14 year old boy from Sao Tome e Principe [4], Ongom PA also reported a similar case in a 14 year old boy in east Africa [6]. In Nigeria it has been reported in a 14 year boy [9]. In all these cases, the patients presented late, the diagnoses were made clinically complimented with ultrasonography and subsequently managed as the case in point. The exception to these was the case of Pugach JL et al. [1] who had to employ laparoscopy to confirm

the direction of the cord structures before open definitive surgery.

The treatment of ectopic penile testis is not technically challenging as the spermatic is long and makes orchidopexy relatively easy[3].

4. CONCLUSION

In conclusion, any penile mass in the presence of an empty hemiscrotum should alert the surgeon to have a high index of suspicion to consider an ectopic testis as the likely diagnosis until proven otherwise.

CONSENT

All authors declare that written informed consent was obtained from the parents of this patient for publication of this case report and accompanying images.

ETHICAL APPROVAL

Not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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