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Pubo-Penile Testicular Ectopia (ETPP) of the Infant of 4 Months about a Case

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Abstract

Pubo-penile testicular ectopia is a rare congenital malformation whose etiopathogenesis remains poorly understood. It represents other testicular ectopias less than 1% of all testicular migration disorders. We report a clinical observation of a 4-month-old infant who consulted for swelling at the root of the penis associated with vacuity of the right hemi scrotum. An inguinal ultrasound was performed which confirmed the presence of the right testicle. An orchidopexy was performed at 4 months of life by an inguinal approach, the postoperative course was simple with a follow-up of 6 months.

Keywords

Pubo-Penile Testicular Ectopia, Infant, Early Orchidopexy

1. Introduction

Pubo-penile testicular ectopia (PTPE) is a rare congenital anomaly. It is defined by an abnormal situation of the testicle due to an aberrant migration of the testicle which can be located at the root of the penis [1]. Most often unilateral [2], the causes underlying these abnormalities of testicular migration are still poorly understood and may be multifactorial [3] [4] [5] [6] [7]. Its diagnosis is only clinical and must be made from birth, this pathology is evoked in front of an ovoid mass at the root of the penis associated with an empty hemi-bursa. Therapeutic management is surgical, recently around 3 years and now offered between 6 and 24 months.

However, few studies have been carried out in Africa on pubo-penile testicular ectopia, none of which in Guinea. This is the reason why we report an observation in order to raise the diagnostic problems and the therapeutic modalities.

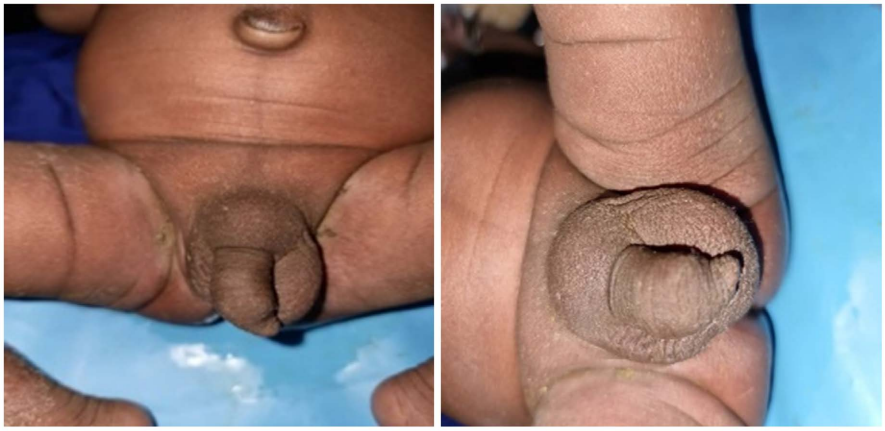
2. Observation

Infant I.K, 4 months old, male, born at term from an eutocic delivery, weighing 5700 g, seen in consultation for congenital swelling at the root of the penis.

The anomaly was noted by the parents during the bath marked by a swelling at the root of the penis, an absence of the testicle in the right scrotum, requiring a consultation in our pediatric surgery department for treatment.

The clinical examination finds an ovoid mass at the root of the penis (Figure 1(a)), which is normal in size, uncircumcised, this mass is well circumscribed, of firm consistency approximately 1 ml in size, mobilizable in relation to the plane under -lying. There is also hypotrophy with vacuity of the right hemi scrotum (Figure 1(b)). The left testicle palpated in the purse approximately 2 ml in volume.

The inguinal ultrasound performed revealed a vascular mass at the root of the penis (Figure 2).



(a) (b)

Figure 1. (a) Mass at the root of the penis, (b) vacuity of the right hemi bursa.

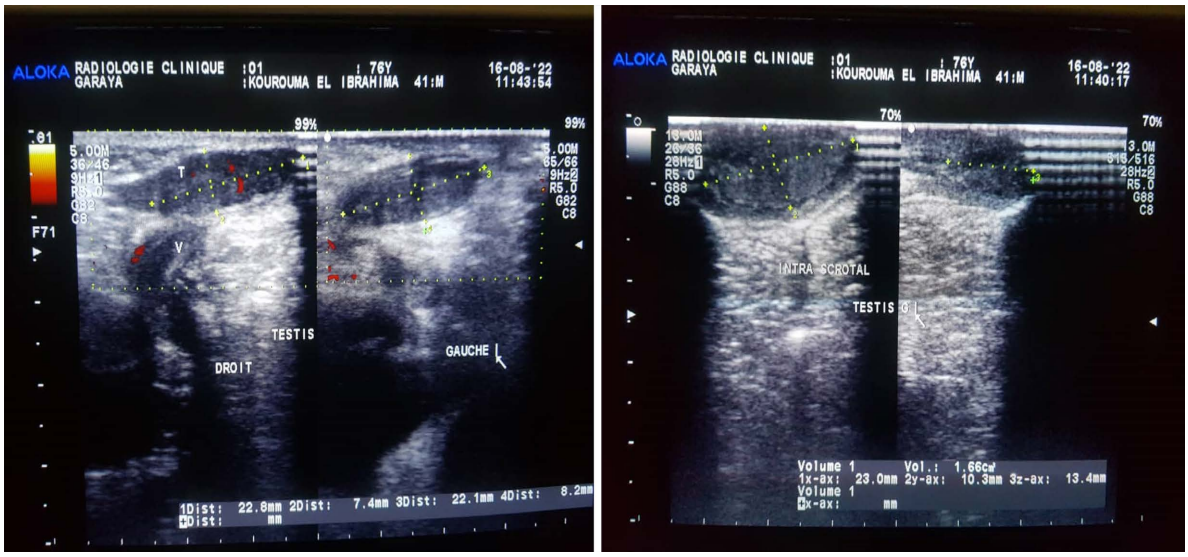


Figure 2. Ultrasound view of the right testicle at the base of the penis.

The indication of a surgical exploration was posed, we approach by an incision of 3 cm inguinal level (**Figure 3(a)**), after the individualization of the elements of the cord then release of the lower attachments by a meticulous dissection (**Figure 3(b)**), the exploration put evidence of a normal-looking right testis with good epididymal insertion, no associated hernia and sufficient length. Let's make a drilling of the path through the upper orifice of the scrotum followed by the lowering of the right testicle between the skin and the dartos (**Figure 3(c)**). The postoperative course was simple and the child was examined after 6 months, the two (2) testicles were in place, of normal size and appearance.

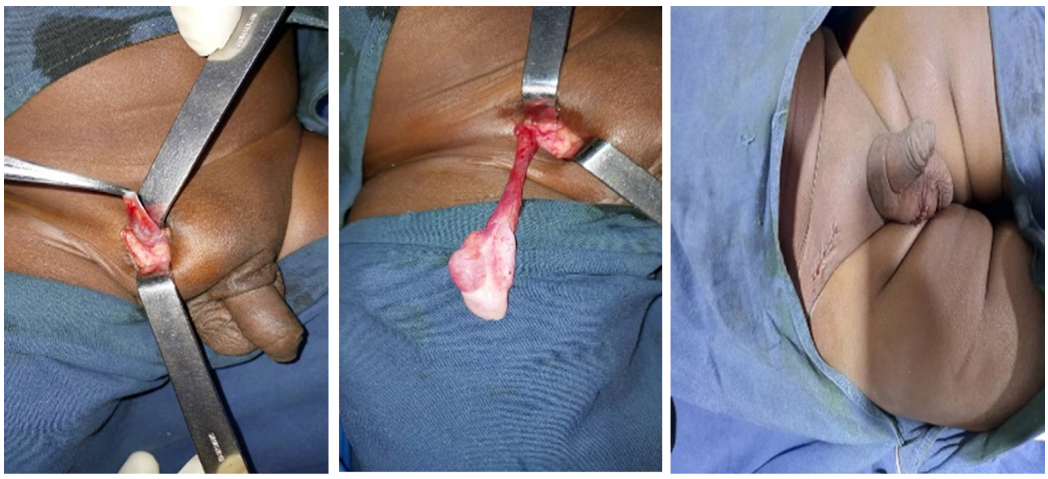
3. Discussion

Pubo-penile testicular ectopia is a rare congenital anomaly characterized by aberrant migration of the testicle localized at the root of the penis [1]. Along with other testicular ectopias, it represents less than 1% of all testicular migration disorders [8]. This frequency should not make it a trivial condition because it exposes in the long term to the risk of subfertility, or even testicular cancer. True testicular ectopia can be located at the femoral, pubo-penile, penile or crossed intrascrotal level [2] [5] [7]. These locations have been confirmed by several authors.

The mechanism of testicular migration as well as that of its abnormalities remains unknown.

It is currently accepted that the gubernaculum testis plays an essential role in this migration, especially the scrotal bundle which is the most important that the testis follows [9] [10]. It should be remembered that the gubernaculum testis is not a tractor but a guide, a precursor.

It appears that testicular migration abnormalities are not due to a single mechanism. For all ectopias we can legitimately invoke a development of the gubernaculum. Anomaly of Hypotheses have been put forward that may be the cause of a testicular migration anomaly which are among others: a mechanical anomaly first of all which has often been invoked and described by a shortness of



(a) (b) (c)

Figure 3. (a) Incision at inguinal level, (b) dissection of cord elements, (c) orchidopexy.

the spermatic vessels or of the vas deferens, a narrowness of the inguinal canal, a fibrous filling of the scrotal opening. Then a defect in the secretion of gonadotropin of central, diencephalic or pituitary origin and finally the testicle itself which could be abnormal and present primary lesions preventing for example the secretion or the action of dihydrotestosterone.

So in true testicular ectopia, it is the mechanical theory that is incriminated [1] [11] which is characterized by anomalies of the gubernaculum testis and the genitofemoral nerve which innervates it would cause the migration of the ectopic gubernaculum testis [1] [10]. To a location the diagnosis of testicular ectopia is only clinical [4] [7] [12], the examination is carried out in supine position on a relaxed child, it is necessary to take your time, to place one of the parents at the child and approach him patiently with warmed hands. It is manifested by an emptiness of the hemibursa, the presence of an ovoid mass at the root of the penis, of firm consistency, well circumscribed, mobilizable in relation to the deep plane, which was the case in our patient who had a mass at the root of the well-circumscribed penis of firm consistency, mobilizable in relation to the deep plane.

For some authors [4] [13] [14], after a well-conducted examination, it is useless to perform an inguino-scrotal ultrasound. But this was not the case in our patient who had performed an inguino-scrotal ultrasound to orient us on the nature and appearance of the mass seen as this is the first case we have encountered.

The majority of authors plead for an early surgical treatment before 3 years, because testicular malposition leads to early and progressive histological alterations. The number of germ cells within an ectopic testicle decreases from the age of 1 an [14] [15] [16] [17]. Thus, early testicular lowering has shown, in animal experiments, an improvement in testicular development and spermatogenesis [13] [17] and in humans better testicular growth.

The theoretical age of orchidopexy has therefore been lowered (possible from 6 months). In our patient, orchidopexy was performed at 4 months, which is less than the age indicated in the literature.

The treatment aims to lower the testicle into the scrotum. This would preserve fertility and detect in time the occurrence of malignant degeneration since 5% of operated children have a risk of developing a testicular tumor of different histological types [16] [14]. The inguinal approach allows a good exploration and a good dissection in the case where the length proves to be insufficient the presence of a hernia or associated. Orchidopexy is usually done without difficulty because the length of the spermatic cord is always sufficient [2].

The success rates are nevertheless high in the case of palpable testicles [4].

Long-term monitoring should be observed for any testicular lowering due to the risk of testicular atrophy, degeneration, and fertility disorders [7].

4. Conclusions

PTE is a rare congenital anomaly, characterized by an abnormal situation of the testis. The mechanism of testicular migration as well as that of its abnormalities

remains obscure. Diagnosis is easy, marked by the presence of a mass at the root of the penis associated with an emptiness of the hemibursa. Orchidopexy remains the treatment of choice.

The procedure has success and complication rates similar to those seen in older children. There is better testicular growth postoperatively when the intervention is carried out early.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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