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surgery

POLYORCHIDISM: A RARE CASE REPORT AND REVIEW OF LITERATURE

KEY WORDS:

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ABSTRACT

A Polyorchidism is a rare anomaly characterized by the presence of more than two testicles. Usually, the migrating testicle remains on its side of the body but may end up in an unusual position e.g., in the superficial tissue of the inguinal region above the external ring, in the area of the base of the penis, in the upper part of the thigh, in the region of the perineum or the pelvic cavity. Increased risk of malignancy should be taken into consideration in patients with nonscrotal supernumerary testes. We present 1 case report of an 8-year-old boy with an empty left scrotum but the right scrotum has palpable testes. The diagnosis was made primarily on clinical findings and radio imaging. Laparoscopic orchidopexy was done.

INTRODUCTION

A Polyorchidism is a rare anomaly characterized by the presence of more than two testicles [1]. Usually, the migrating testicle remains on its side of the body but may end up in an unusual position e.g., in the superficial tissue of the inguinal region above the external ring, in the area of the base of the penis, in the upper part of the thigh, in the region of the perineum or the pelvic cavity. Increased risk of malignancy should be taken into consideration in patients with nonscrotal supernumerary testes [2]. The condition was first reported in 1886 by Von Lenhossek. It is termed also as testicular pseudo-duplication, unilateral double testis, and transverse aberrant testicular mal-descent. The exact incidence is now known, and till now less than 150 cases are reported in the literature [3-5].

An inguinal hernia is always present on the affected side. This condition is classified into 3 types based on the associated anomalies: type 1which is the most commonest type and accounts for 50% of cases, in this type, there is associated inguinal hernia alone, and type2: which comprises around 30% of the cases and is associated with inguinal hernia and Mullerian duct structures whether rudimentary or persistent, and type 3 which comprises 20% of the cases and is associated with inguinal hernia and other anomalies such as hypospadias, scrotal abnormalities, and pseudo-hermaphroditism[4].

CASE REPORT

The 8-year-old boy was having an empty scrotum with left side intermittent inguinal swelling noted by his mother and did ultrasonography of the inguinoscrotal area. Ultrasonography report suggestive of two oval intraabdominal testes-like structures measuring 13.6 × 9 mm and 9×4mm located in the Para vesical region. Right testis could not be located either in the scrotum or in the inguinal canal. Diagnostic Laparoscopic was planned.

On diagnostic laparoscopy, there was evidence of a closed right side deep inguinal ring with vas and vessels entering into the deep inguinal ring. On the left side, two testes were located in the left Para vesical region just beneath the deep inguinal ring with a single vas and vessel. And atrophic testis on the right side.

Laparoscopic peritoneal dissection is done to mobilize both testes on the left side adequately till they can be brought down to the scrotum easily. Both testes were fixed into the left side subdartos puch of hemiscrotum with absorbable sutures due to common vas and common cord vessels. On right side inguinal canal exploration done to locate the right-side testis, there was evidence of small atrophic right-side testis like nubbing. Right side orchidectomy was performed. The patient had an uneventful procedure and had no postoperative complications.

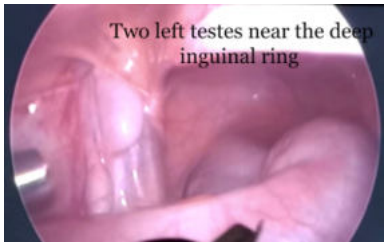

Fig.1: On Diagnostic laparoscopy left side two testes with common vas and cord vessels near the deep inguinal ring.

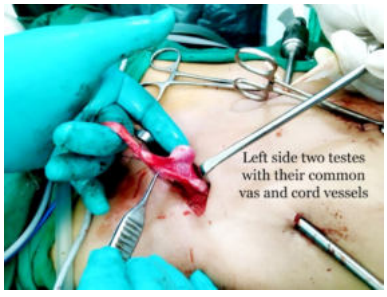

Fig.2: Mobilisation of both testes through inguinal canal after adequate laparoscopic peritoneal fold dissection

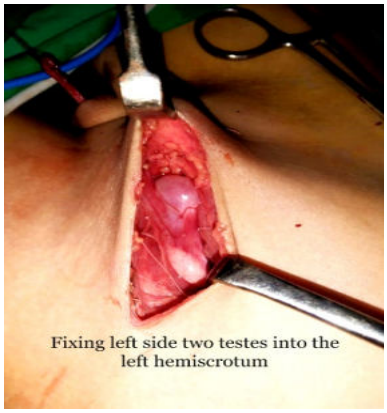

Fig.3: Fixing both left-sided testes into the left side subdoartos pouch created in the left side hemiscrotum

DISCUSSION

According to literature,148 cases of unilateral double testicles described since 1886, when Von Lenhossek reported a necropsy finding [2]. Unilateral double testicles are also termed Crossed Testicular Ectopia (CTE). The exact etiology of this condition is not well known till now, but some theories are proposing that both testes may arise from the same genital ridge, early adherence and fusion of the developing Wolffian ducts during embryonic development, or one of the testes during its descent causes the second testis to follow it [4].

Karyotyping may be required in some cases especially if associated with other congenital anomalies of the genitalia or in case of ambiguous genitalia, in cases of true crossed testicular ectopia the karyotype is always 46XY [6]. In a meta-analysis performed by Bergholz and Wenke (8) in 2009, it was found that the median patient age was 17 years and most cases of polyorchidism were confined to the left side (65%) [7]. The clinical signs and symptoms consist of scrotal pain, which may be intermittent. Many patients never experience clinical symptoms, and the diagnosis might be incidental [8]. Our patient had no signs and symptoms regarding scrotal pain. The most important risk factor for malignancy is the nonscrotal location of the supernumerary testis. We have informed them about the risk of malignancy to our patient's parents. The majority of supernumerary testes are located in the scrotal (66%), inguinal (23%), or abdominal (9%) positions We had asked our patient's parents for follow-up after 6 months for the next surgical procedure. Patients usually need long-term follow-up because such patients may have future fertility problems and there is an increased risk of the development of testicular cancer [4].

CONCLUSION

Polyorchidism is a very rare anomaly; other names are unilateral double testis and crossed ectopia testis. Ultrasonography remains the best tool for these patients' evaluation, diagnosis, and follow-up. A laparoscopic orchidopexy is one of the best treatment options for therapeutic purposes.

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