

Isolated Agenesis of Epididymis in Cryptorchidism - A Case Report

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Case Report

Abstract: Undescended testis frequently associated with epididymal malformation, range from simple epididymal elongation to more complex forms, such as complete disruption between the testis and epididymis. The cause of cryptorchidism is multifactorial, although possible causes and risk factors, such as endocrine disorders, anatomical abnormalities and environmental and genetic factors, can explain the etiology of this phenomenon. Epididymal abnormalities may associated with severe impairment in sperm maturation and hindered transportation, with the future intrascrotal or extra scrotal position of the testis or early surgical repair being of little importance in terms of fertility. Our case suggests that blind ended vas may be associated with testis so one should search end of spermatic vessels if encountered with blind ended vas.

Key words: Undescended testis, epididymal malformation, xenobiotics.

Introduction

Undescended testis frequently associated with epididymal malformation, range from simple epididymal elongation to more complex forms, such as complete disruption between the testis and epididymis (Koff, 1990). This classification based on the relation between testis and epididymia, the length of epididymis and the configuration of epididymis. But Marshall and Shermeta, 1979 divided this anomaly into 3 groups, including agenesis of the epididymis, atresia of the epididymis and loop or elongated epididymis. This association explained by hypothesis that development of epididymis & obliteration of process vaginalis need common stimulus (Han and Kang 2002).

Case report

In the present case of 3 years old male child brought to surgical OPD at BPS GMC for Women, Khanpur Kalan, Sonapat, Haryana by his father with history of absent of right testis since birth. On examination right sided testis was non palpable. On Ultrasound study right testis illustrated in right inguinal canal with no other obvious abnormality in abdomen.

After routine investigation inguinal exploration was done. Per operatively (Fig: I) testis was located at deep inguinal ring with size of 11 x 18 mm and epididymis could not be appreciated and vas had course away from spermatic vessels and blind ended. Testis could be easily mobilized in scrotum and placed in subdartous pouch.



Fig 1: Illustrate the blind ended Vas with course away from the testicular vessels and absence of epididymis

Discussion

The epididymis, located between the efferent ducts and the vas deferens, is a male accessory organ characterized by a single coiled tubule duct with an estimated length of 5–7 m in men (Sullivan, 2004; O'Hara et al., 2011). The testis and the caput epididymis arise from the genital ridge, whereas the body of the epididymis and vas deferens are derived from the mesonephric tubules and the wolffian duct respectively. Union by canalization of the rete testis and mesonephric tubules begins at 12 weeks and probably is completed at puberty (Cromie, 1978). Han and Kang, 2002 reported 61% incidence of abnormal epididymis in undescended testis. Out of that most common anomaly was incomplete attachment of the caput epididymis, followed by detachment of caput and cauda epididymis. He also observed epididymal anomalies were strongly associated

with the patency of the processus vaginalis irrespective of testicular descent. He hypothesized that a common stimulus, possibly androgens, may be required for the epididymal development and obliteration of the processus vaginalis. The cause of cryptorchidism is multifactorial, although possible causes and risk factors, such as endocrine disorders, anatomical abnormalities and environmental and genetic factors, can explain the etiology (Nieschalag et al., 2000). The development and maintenance of the epididymis depends on androgens. Through the influence of lifestyle, environmental factors or prenatal exposures to compounds, xenobiotics (substances that are foreign to an organism but can produce adverse effects or damage under specific conditions of use) can act as endocrine disruptors that reduce testosterone synthesis and androgenic signaling. The epididymis is therefore a potential target for the toxic effects of xenobiotics, which may then influence male fertility (Smithwick and Young, 2001; Marty et al., 2003). Blind ended vas usually seen in testicular vanishing syndrome (testes vanished at some point following induction of masculinization, possibly as a result of an intrauterine vascular accident or testicular torsion) gave us the signal to terminate the exploration when we found absent testis with a blind-ending vas plus vessels on one or both side in an operation for impalpable testis (Lou, 1994). Our case suggests that blind ended vas may be associated with testis so one should search end of spermatic vessels if encountered with blind ended vas.

Summary

The possibility of epididymal anomaly should be considered in case of cryptorchidism. Status of epididymis should not be overlook by surgeon during orchidopexy. Early successful orchidopexy alone may not ensure subsequent fertility despite the presence of normal germ cells.

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