True Duplication of the Vas Deferens

Pages with reference to book, From 97 To 98

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Introduction

Congenital anomalies of the vas deferens discovered during hemiorrhaphy are uncommon. Congenital absence of vas seen in 1% boys, may be associated with renal agenesis[1]. The abnormalities of vas are often associated with cystic fibrosis and cryptorchidism[2]. Cases of duplicate vas deferens are rare. Most of these cases are accompanied by unilateral renal hypoplasia and ectopia of the ureter, that mimics a supemumeraiy vas[3]. The following seems to be a unique case of true duplication of vas deferens found incidentally during inguinal herniorrhaphy in a 60 years old man with normal renal anatomy.

Case Report

A 60 years old man presented in the surgical out-patient with a right inguinal hernia. At operation, dissection of the inguinal canal contents showed an indirect hernia sac placed anterior to the spermatic cord that contained the vas deferens and the spennatic vessels. It was separated and dissected out upto the deep inguinal ring. At the deep inguinal ring, another vas like structure having whip cord consistency was identified. This structure was followed distally and found to merge into the epididymis at its upper pole. Proximally, this accessory vas entered the deep inguinal ring. The original vas appeared nonnal arising clearly from the tail of the epididymis, running through the canal and into the deep ring (Figure).

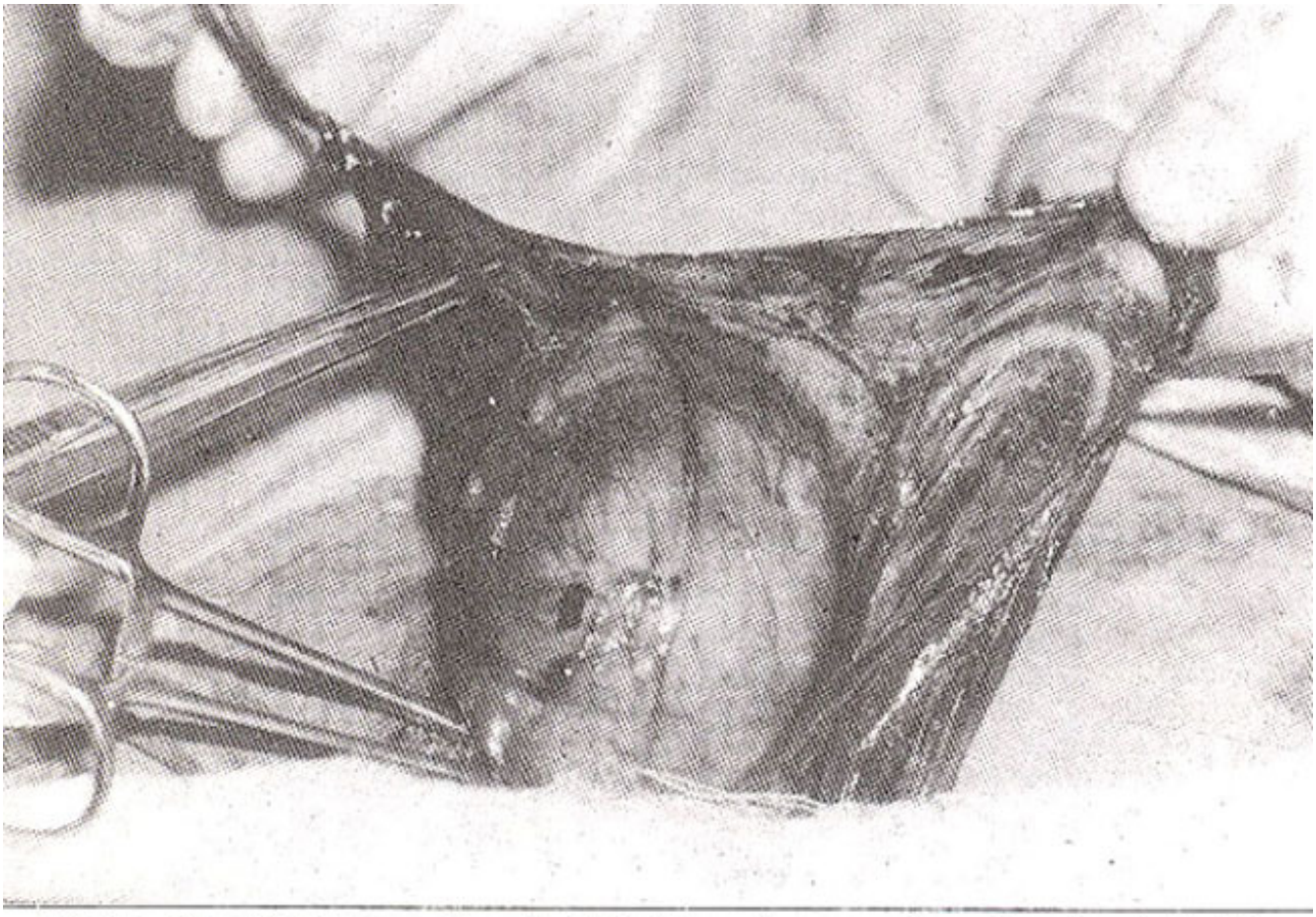

Figure. Showing true cord on the left side and accessory cord on the right side.

The testis looked somewhat larger in size but the epididymis was normal. Both accessory and original vas deferentia were saved. After transfixing the sac, standard inguinal herniorrhaphy was performed. Postoperatively, the patient recovered uneventfully. A subsequent renal ultrasound and intravenous pyelogram showed neither renal nor collecting system abnormality.

Discussion

True duplication of the vas deferens is a rare anomaly, mostly reported to be intra-abdominal3. Rarely, an accessory atretic vas deferens is demonstrated during cadavenc dissections[4]. Can reported a case of apparent bilateral duplication ofvas deferens while doing avasectomy[5]. He is of the opinion that one of them is probably an elongated vas aberrens inferior (of Hailer). Ectopia of the vas deferens is a rare congenital anomaly; such cases are associated with anorectal anomalies as well as uréterni ectopia and distal mesonephric duct anomaly. Watanabe reported a case of crossed ectopia of left vas deferens associated with right mairotated, hydronephrotic kidney, left renal hypoplasia and the right ureter with ectopic opening into the right seminal vesical[6]. Popek examined 599 hernia sacs in 427 consecutively operated male patients. True vas deferens and epididymis were identified to give an incidence of 0.33%[7]. In our case the accessory vas was clearly defmed, it was traced proximally and distally and was saved. The testis was of relatively larger size.No other congenital anomaly was found on postoperative ultrasound and IVU.

The vas deferens is derived from the distal part of the mesonephric duct, whereas the proximal part develops into epididymis. Gibbon[8] introduced the new concept of proximal vas precursor (PVP) to

explain the embryological basis of various abnormalities of the vas deferens and ureter. The PVP is the segment along the mesonephric duct that occupies an intermediate position between the upper and the common mesonephric duct (CMD). This segmentdifferentiates into the vas deferens and seminal vesicles. The more caudal CMD gives rise to a ureteral bud which grows towards the metanephros forming glomerulus and collecting system for the future kidney. This is the reason that sometimes ureter opens into the vas, seminal vesicle or prostatic urethra.

Gotoh et al[9] explained the embryological basis of double vas with renal dysgenesis. According to him the accessory vas is a vasated ureter arising ectopically from the PVP (because of its bipotent capability) instead of the CMD and growing towards the metanephric mesoderm resulting in renal dysgenesis. Nesbitt and King[10] also used the concept of PVP to explain the embryology of ectopic vas deferens.

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