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General Surgery

A RARE CASE OF DUPLICATED VAS DEFERENCE DISCOVERED ACCIDENTALLY DURING VARICOCELECTOMY-CASE REPORT

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ABSTRACT Duplication of vas deference is a rare congenital anamoly in which two vas deference coexist with in the spermatic cord. Duplication of vas deference can be found during hernia surgeries, vasectomy, and varicocelectomy, performed on the spermatic cord or around the spermatic cord. However it is estimated that the incidence of duplication of the vas deferens under reported and under-recognised. Unless anomalies of the vas deferens are recognised by surgeons, it will be difficult to reduce vasdeferens injuries and achieve a satisfactory surgical outcome. We report a case of duplication of vas deferens discovered during routine varicocelectomy in department of general surgery, Shanthiram medical college .

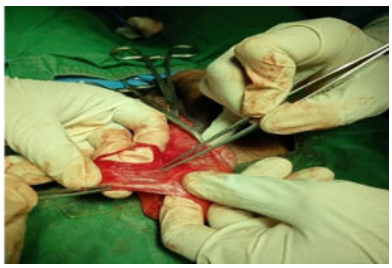
KEYWORDS : Double vas deferens, varicocelectomy

INTRODUCTION:

Duplication of the vasdeferens, a rare congenital anomaly of the pelvic anatomy, is often an incidental finding during surgeries involving the spermatic cord, such as inguinal hernia repair, varicocelectomy , orchidopexy and vasectomy.

CASE REPORT :

A 30 years male patient came to surgical OPD with complaining of pain in left side of scrotum from 4 months, which is dragging type, aggrevates on doing physical activity, and relieved on taking rest.Patient also complains of increase in the size of the left hemiscrotum while working for a long duration of time. Visible enlarged veins are noted over the left hemiscrotum, with a swelling of approximately 3x2cms is noted.On palpation left spermatic cord is thickened compared to the right spermatic cord and given as grade 3 varicocele on ultrasound scrotum. After reassurance to patient, varicocelectomy was done. Double vas deferens was identified during cord exploration (pointed with forceps).



DISCUSSION:

Isolated duplication of vas deferens is a rare congenital anamoly with the estimated incidence of vas anamolies being less than 0.05% in the general population[1] .Anatomic variations of the vas deferens include absence , duplication, ectopia, hypoplasia, and diverticulum, with true duplication the rarest congenital anomaly. Although vasdeferens duplication is generally an isolated occurrence, it can also be present with other congenital abnormalities such as ipsilateral renal agenesis or cystic fibrosis, but no cases of associated genitourinary system abnormalities have been reported[2]. Duplication of vasdeferens difficult to diagnose on physical examination because of its infrequent occurrence. Pathological evaluation, imaging, and histological examination can enhance clinical acumen. Intraoperative Doppler helps to differentiate the vas deferens from surrounding vasculature which can prevent iatrogenic injury[3] . Considering the prevelance of surgeries involving the spermatic cord and neighbouring structures, duplication of the vas may under documented and under recognized. Associated iatrogenic injuries including scarring of the vas deferens, formation of sperm granuloma, and chronic pain [4] .However, the most serious medico-legal complication is infertility, mandating prompt re exploration in suspected cases [5]. Spermatozoa are highly antigenic and trigger an inflammatory reaction that eventually forms a nodule surrounding the defect, resulting in postoperative groin pain and requiring anastomosis of the severed vas deferens[6] .Duplication of vas deferens is also associated with unsuccessful vasectomies, prompting readmission and re-sterilization to achieve the desired outcome[7]. Usg of the whole abdomen and genitourinary tract should be performed to eliminate the possibility of genitourinary tract anomalies such as testicular ectopia and renal agenesis[2]. USG has more than 95% sensitivity in detecting renal anomalies 10 and can also be used to rule out postoperative complications of laproscopic hernia repair such as recurrence of hernia, hematoma and abscess[8]. In few cases postsurgical semen analysis after vasectomy detected spermatozoa for several months[9]. Surgeons must be aware of this anatomic variant to reduce the risk of injury and postsurgical adverse results, as the rate of hernia repair surgeries annually is high worldwide. Liang et al introduced a classification system for vas deferens anomalies[10].

Type 1: Classic duplicated vas deferens in spermatic cord with no polyorchidism.
Type 2: multiple vasa deferntia associated with polyorchidism.
Type 3: double vas deferens composed of an ectopic ureter ending in ejaculatory system.

CONCLUSION :

Duplication of vas is a rare finding, it is likely under reported and under recognised. Failure to recognise this variation can result in injury to the vas deference or an ineffective vasectomy. Following identification of a suspected duplicated vas, the structure should be tracked from the internal ring down to the epididymis and intraoperative Doppler should be performed. Post operatively, renal and bladder imaging can be considered though there have been no reported cases of non testicular genito-urinary anamolies associated with duplicated vas deferens.

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