

Case Report

Abdominoscrotal Hydrocele with Hydronephrosis

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ABSTRACT

Abdominoscrotal hydrocele is a congenital disorder usually seen in children. This is a report of an adult with abdominoscrotal hydrocele causing right sided hydro-ureteronephrosis. Several explanations for this abnormality

are suggested, but the exact etiology is still not known. The diagnosis is confirmed by ultrasound or computed tomography (CT) and complete surgical excision is recommended.

KEYWORDS: congenital, cyst, scrotum

INTRODUCTION

Abdominoscrotal hydrocele presents as an abdominal mass, scrotal mass or due to its pressure effects on adjacent structures. It is a unique situation in which a scrotal mass protrudes through the inguinal canal into the abdominal cavity forming an intra abdominal mass.

This rare anomaly should be considered in the differential diagnosis of abdominal mass with hydrocele.

CASE HISTORY

A twenty year old male came with a progressive swelling on the right side of the scrotum for five years. On physical examination there was a 15 x 15 cm cystic mass occupying mainly the right side of the abdomen and a right sided 8 x 8 cm scrotal mass (Fig. 1). Cross-fluctuation was present between the scrotal and the abdominal mass. The right testis could not be felt. Computed tomography (CT) revealed a cystic intra abdominal mass extending through the right inguinal canal (Fig. 2) into the right hemiscrotum and the presence of the testis (Fig. 3). There was right hydroureteronephrosis (Fig. 4) with ureteric compression at the level of the pelvic brim (Fig. 5 and Fig. 6).

Through a midline extraperitoneal approach (Fig. 7), total excision of the hydrocele sac and hernioplasty was carried out. The abdominal part of the cyst was extraperitoneal extending through the inguinal canal into the right hemi scrotum. Pathological examination of the cyst wall confirmed its derivation from the tunica vaginalis.



Fig. 1: Gross appearance of the abdominoscrotal mass prior to surgery

DISCUSSION

Abdominoscrotal hydrocele is a rare entity in adults and has an unclear etiology. One theory is that the hydrocele starts intraabdominally and

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Fig. 2: Communication between the scrotal and abdominal sac through the inguinal canal on a CT scan



Fig. 3: Testis within the scrotal hydrocele sac on a CT scan



Fig. 4: Hydronephrosis on the right side demonstrated on a CT scan



Fig. 5: Compression of the ureter in the true pelvis by the hydrocele as seen on a CT scan



Fig. 6: Retrograde ureterogram showing ureteric narrowing

extends through the inguinal canal into the scrotum^[1]. Another theory suggests that when the pressure in the scrotum exceeds the intraabdominal pressure, the hydrocele is pushed from the scrotum through the inguinal canal into the extraperitoneal intra-abdominal site. Clinical demonstration of cross-fluctuation helps in the diagnosis and sonography is diagnostic. The exact site of compression causing hydroureteronephrosis can be made out with additional investigations like CT

and Magnetic resonance imaging. Although the abdominoscrotal hydrocele is a painless, progressive swelling, it may present with symptoms of torsion at the level of the inguinal canal^[2]. Surgical approaches include scrotal, inguinal, inguinoscrotal and abdominal with total excision of the sac to avoid recurrence^[3,4]. Pathological examination of the specimen is mandatory to rule out malignant mesothelioma^[5].



Fig. 7: Dissected intra abdominal sac by a midline extraperitoneal approach

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