

## Abdomino-scrotal hydrocele in 35 years old: A case report

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**Abstract:** Abdomino-scrotal hydrocele is a condition usually affecting children. It is unusual to find an abdomino-scrotal hydrocele in middle aged adult. Most of the patients are asymptomatic except cystic abdominal mass and discomfort occasionally. We hereby report an unusual presentation of abdomino-scrotal hydrocele at age of 35 years and presenting as large cystic abdominal mass extending into scrotum.

**Key words:** Hydrocele, Cystic mass, Abdomino-scrotal, Abdominal, Scrotal.

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Abdomino-scrotal hydrocele is a very rare condition with 200 cases reported in literature. Most patients are younger than 5 years. Fluid-filled cavities in both abdominal and scrotal compartments with communication through inguinal canal are diagnostic of abdomino-scrotal hydrocele. Differential diagnosis of a huge cystic swelling in abdomen in a male patient includes mesenteric cyst, urachal cyst, pseudopancreatic cyst, hydatid cyst, lymphangioma, hydronephrosis, abdomino-scrotal hydrocele.

### Case Report

A 35 year male presented with progressive abdominal distension for 6 months. Distension was confined predominantly in lower half of the abdomen (Figure 1). Swelling was noticed over lower abdomen in the beginning, but it gradually extended in upward direction involving upper abdomen associated occasionally with constipation. There was no voiding discomfort. There was no history of severe pain, trauma, dysuria, haematuria or melena. A huge abdominal mass extending from inguinal crease to costal margin was revealed on physical examination. Cystic scrotal swelling was present on right side of

the scrotum. Both abdominal and scrotal swellings revealed cross-fluctuation. Ultrasound of abdomen showed large cystic abdominal mass confined to lower half and moderate right-sided hydrocele (Figure 2). Abdomino scrotal CT showed large cystic abdominal mass extending into right inguinal canal & scrotum (Figure 3a & Figure 3b).

Abdomino-scrotal hydrocele was the final diagnosis. The diagnosis of abdomino-scrotal hydrocele was suspected on clinical examination due to cystic mass occupying abdomino-scrotal region with positive cross fluctuation test. USG was very suggestive of diagnosis as it revealed an anechoic collection in the abdomen and associated right hydrocele. A CT scan of abdomen and scrotum was diagnostic as large cystic abdominal collection extending into right scrotal sac was noticed.

Total excision of the abdomino-scrotal hydrocele was done. The surgical approach was through an inguinal approach. Complete evacuation of fluid with resection of tunica vaginalis and ligation of the peritoneal cavity was done.

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### Correspondence

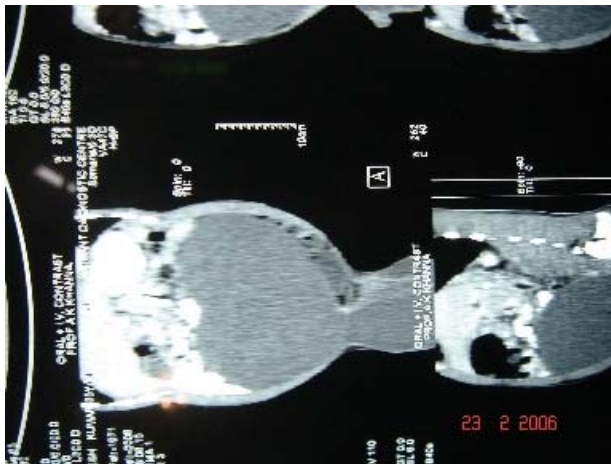
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**Fig 1:** Clinical photograph of cystic abdomino-scrotal mass



**Fig 2:** USG showing abdominal and scrotal anechoic collection.



**Fig 3a:** CT scan showing large cystic abdominal collection and scrotal hydrocele.



**Fig 3b:** CT scan showing large cystic abdominal collection

### Discussion

First report of abdomino-scrotal hydrocele dates back to 1834 by Dupuytren in medical literature<sup>1</sup> but since then nearly 200 cases have been reported<sup>2</sup>. Most cases are unilateral but bilateral cases have been reported<sup>3</sup> and most patients are younger than 5 years. Abdomino scrotal hydrocele (ASH), also known as hydrocele- en- bisac, consists of large scrotal hydrocele that communicates in an hourglass fashion

with a large abdominal component through the inguinal canal. Simple cystic abdominoscrotal mass may be presenting feature<sup>4</sup> or it may be discovered due to compression on adjoining structures e.g. hydroureter and hydronephrosis<sup>4, 5</sup> unilateral leg oedema<sup>6</sup>. Partial torsion of abdominal component may lead to acute abdomen<sup>7</sup>.

Different conditions may resemble abdomino-scrotal hydrocele creating a diagnostic dilemma e.g. mesenteric cyst, urachal cyst, pseudopancreatic cyst, hydatid cyst, lymphangioma, and hydronephrosis. Mesenteric cysts are cystic and mobile if situated in leaf of mesentery. Huge urachal cyst occurs in adult and may be associated with urinary problems. Pseudopancreatic cyst occurs after acute pancreatitis and abdominal pain is definitely preceded. Hydatid cyst is gradually progressive abdominal distension of longer duration. Upper abdomen is commonly involved and lower abdomen is rarely involved in hydatid cyst. Lymphangioma may give rise to cystic abdominal mass with swelling occupying retroperitoneal region predominantly. Hydronephrosis usually gives rise to cystic abdominal mass in advanced cases when destruction of renal cortex & accumulation of fluid turns kidney into a bag of water. Cystic abdominal masses should be examined and USG of abdomen should be done to establish the nature of the swelling e.g. cystic & complex cystic and extension of swelling e.g. retroperitoneal, intraperitoneal, properitoneal. Diagnosis is usually established by USG of abdomen only in most cases. Some cases may require computed tomography (CT), magnetic resonance imaging (MRI) and injection of contrast into cyst to help in diagnosis

Ultrasound of abdomen is investigation of choice for establishing diagnosis of abdomino-scrotal hydrocele<sup>8</sup>. CT, MRI and injection of contrast into cyst are other modalities to help in the diagnosis<sup>6, 8</sup>. Several mechanisms were suggested to explain the pathophysiology, but the exact mechanism is not clear. The most acceptable explanation was the increased pressure in the scrotal area which leads to pushing up of the proximal end of the hydrocele sac into abdominal cavity by {One-way valve effect}<sup>1, 4, 8</sup>.

The surgical approach for abdomino-scrotal hydrocele may be abdominal, inguinal, scrotal & combined. Excision of the abdominoscrotal hydrocele is the treatment of choice. Small abdominal component may be approached through inguinal & scrotal route. Large abdominal component require laparotomy to avoid injury to the vas deferens & testicular artery. Excision of the sac, ligation of the peritoneal cavity and repair of the inguinal canal are important components of surgery. Scrotal approach is recently being recommended<sup>9</sup> but inguinal approach remains the best due to effectiveness in dealing both scrotal as well as abdominal components. There is no report of recurrence after surgery and spontaneous resolution has never been reported.

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