HYDROCELE EN BISAC CAUSING BILATERAL HYDRONEPHROSIS: A RARE COMPLICATION

Sir,

Abdominoscrotal hydrocele is a rare entity, with only 84 cases in adults and fewer than 20 cases in children till 1999.[1] Hydrocele usually complicates as hematocele, pyocele, calcification of sac and atrophy of testis. Compression on ureter causing bilateral hydronephrosis and hydroureter is even rarer, with only 2 such cases reported in world literature.[1,2]

A 22-year-old male presented with complaints of swelling right scrotum and lower abdomen since 2 years, along with abdominal pain, vomiting and burning micturition. Examination revealed a large transilluminant scrotal swelling. Another large soft swelling was occupying right abdomen. The abdominal swelling showed cross fluctuation with scrotal swelling. Kidney function test was deranged (urea 79 mg% and creatinine 2.0 mg%) on admission. Ultrasonography showed right abdominoscrotal hydrocele with bilateral grade IV hydronephrosis and hydroureter. After hydrotherapy, serum creatinine returned to normal, and an excretory urography was performed. Excretory urogram showed nonvisualization of right kidney with normal functioning kidney in the left [Figure 1]. Magnetic resonance imaging showed hydrocele en bisac with both sacs communicating intra-abdominally [Figure 2]. A right inguinoscrotal excision of retroperitoneal sac was performed. Postoperative period was uneventful. Repeat ultrasonography done 4 weeks later showed regression of bilateral hydronephrosis and hydroureter. Repeat IVP done 6 months later showed normal-sized kidney and pelvis.

Abdominoscrotal hydrocele is an unusual condition, accounting for only 0.17% of all types of hydrocele,[3] in which scrotal hydrocele has a dumbbell-shaped extension through deep inguinal ring into abdomen, forming an intra-abdominal mass. Dupytren first described it in 1834 as 'hydrocele en bisac.'[3] It is persistent processus vaginalis which has descended through inguinal canal during descent of testis and failed to regress. Fluid accumulation in this space with excessive increased pressure causes transabdominal extension and formation of abdominal mass. The cyst sac may lie preperitoneal or retroperitoneal.[4] Clinical presentation is abdominoscrotal swelling with cross fluctuation, and it is transillumination positive.

Minimal diagnostic aid required is

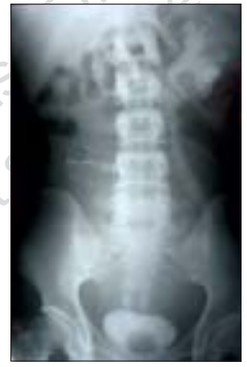

Figure 1: Excretory urogram showing right nonvisualized kidney with left hydronephrosis and hydroureter

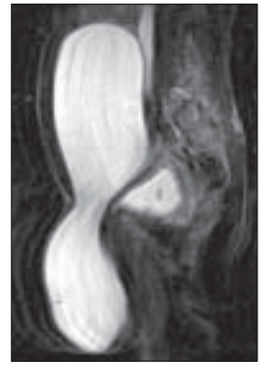

Figure 2: Magnetic resonance imaging showing abdominal and scrotal hydrocele communicating intra-abdominally

ultrasonography. It is the initial investigation of choice and shows cystic unilocular abdominal mass continuous with scrotal cystic lesion and rules out compression of other organs. Excretory urography is required only if there is compression of ureter leading to hydronephrosis. Magnetic resonance imaging provides clear view of the intrascrotal and intra-abdominal anatomy and is an important method of evaluating abdominoscrotal hydrocele today. It shows a dumbbell-shaped fluid-filled mass in a coronal image.[5] Complete excision of the hydrocele sac and abdominal sac has become accepted procedure worldwide. This is quite difficult because of adherence of sac to cord structures and a relative risk of scrotal hematoma developing postoperatively. Most of the authors have recommended long inguinoscrotal incision, but some have succeeded through paramedian incision.

Rare complications reported are hydronephrosis from pressure on ureters,[2] malignant mesothelioma of tunica vaginalis associated with intra-abdominal testis in an abdominoscrotal hydrocele[6] and torsion of upper lobe of sac. The differential diagnoses include lymphangioma of the cord, giant hydronephrosis extending into true pelvis, bladder diverticulum and pelvic neuroblastoma.[7]

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