Giant Hydronephrosis

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Introduction

A 65-year-old female presented to Gynecology outpatient department with complaints of intermittent abdominal pain, abdominal distension, mild fever, generalized weakness and decreased appetite since 6 weeks clinical examination revealed generalized abdominal distension, grade IV ascites with fluid thrill (Fig. 1). Vaginal examination revealed boggy of pelvic peritoneum. Clinically a diagnosis of either ascites or large ovarian cyst was made. Ultrasonography revealed a cystic lesion, occupying the whole peritoneal cavity and pushing bowel upwards and towards left. Cystic lesion had multiple septations and most probably arising from right ovary. Another noteworthy finding was right kidney and ureter could not be identified. The blood investigations revealed mild elevation of blood urea (48 mg/dL) and serum creatinine (1.4 mg/dL). Furthermore, intravenous urography was performed and showed a normal left kidney and ureter, however, there was no contrast medium excretion on the right side. The probable diagnosis of either cystic lesion arising from right kidney or hydronephrotic kidney was made.

Subsequently, a diagnostic and therapeutic laparotomy was performed. When peritoneum was opened in midline, the cyst presented as a retroperitoneal mass, measuring approx $30 \times 25 \times 20$ cm, which is superiorly adhered to inferior surface of liver, inferiorly into the pelvic cavity and lifting the cecum, appendix and ascending colon anteriorly (Fig. 2). The right renal hilar vessels and ureter, which were collapsed, could finally be identified. The turbid, seropurulent fluid was aspirated from the hydronephrotic kidney. Totally 15 litres of fluid was drained. The hydronephrotic right kidney was deficient of any residual renal cortex parenchyma. Which was also confirmed on histopathological specimen of right nephrectomy.

Although both clinical symptoms and the enormous size of the cystic lesion in this case had created diagnostic dilemma, later which turned out to be a giant hydronephrosis. Giant hydronephrosis is a rarely encountered entity that may mimic progressive and benign abdominal cystic tumors. Approximately just more than 200 cases have been

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Fig. 1 Generalized abdominal distension

Fig. 2 After the incision of peritoneum in midline, the retroperitoneal cystic lesion has lifted the cecum, appendix and ascending colon anteriorly

reported. Giant hydronephrosis is defined when the adult renal pelvis contains more than 1 liter of urine [1] or, in childhood, more than one day of urine volume or contents of the sac equalled to average daily urine output for that age. The radiographic criteria are: kidney that occupies a hemiabdomen, which meets or crosses the midline and which is at least 5 vertebrae in length [2].

The most common cause of giant hydronephrosis is congenital ureteropelvic junction (UPJ) obstruction. Other causes being Flap-like mucosal folds, Polar or aberrant vessels, Ureteric kinks and High pelvic insertions of the ureter. Giant hydronephrosis is a slowly progressive disease, and a huge abdominal mass or distended abdomen may be

the only sign. Occasionally, patients present with flank pain, hematuria or recurrent urinary tract infection. Uremia may occur in gross bilateral disease. Differential diagnoses of giant hydronephrosis are ascites, intraperitoneal cysts (mesenteric or choledochal), retroperitoneal cysts (renal or adrenal or pancreatic pseudocysts) and ovarian cysts [3]. Historically, the correct pre-operative diagnosis has been made in less than 50% of cases.

Awareness of this condition by the clinician and radiologist would enable prompt diagnosis and appropriate therapy. Treatment depends upon anatomical configuration and functional status of renal units. In very poorly functioning unit with gross infection, nephrectomy is the procedure of choice [4]. Other treatment options in a functional kidney are percutaneous nephrostomy, reduction pyeloplasty with nephropexy calycoureterostomy and calycozystostomy/Boari flap calycovesicostomy [5].

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