

A CASE OF GIANT HYDRONEPHROSIS OF URETEROPELVIC JUNCTION OBSTRUCTION PRESENTING AS A PALPABLE ABDOMINAL MASS

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INTRODUCTION

Giant hydronephrosis caused by congenital uretero-pelvic junction (UPJ) obstruction is a rare urological entity. In 1939, Stirling first defined it as the presence of more than one liter of fluid in the collecting system. It is seen more often in males than in females (2.4:1) and more often on the left side (1.8:1)^{1,2}. It is usually secondary to ureteropelvic junction obstruction, stones and congenital abnormalities. Most of the cases are usually diagnosed and treated in infancy or childhood. However, some patients remain asymptomatic until later in life. Adults may present with intermittent abdominal or flank pain, renal insufficiency, urinary tract infection or gross hematuria after minor episodes of trauma^{3,4}.

We report a case of a unilateral giant hydronephrosis in an adult presenting as a palpable abdominal mass secondary to UPJ obstruction.

CASE REPORT

A 23-year-old woman presented with a two-month history of a left quadrant palpable abdominal mass. Apart from lower urinary tract symptoms such as nocturia and frequency, her medical history was unremarkable. Physical examination revealed a grossly distended abdomen; the upper margin of distension was at the level of the epigastrium and the lower one at the suprapubic region. The urine contained microscopic amounts of blood and a few leucocytes. Abdominal ultrasound demonstrated a very large cystic mass on the left side of the retroperitoneum and a normal right kidney. On excretory urogram, a normal right kidney was seen, but the left kidney could not be visualized. A cystic mass resembling a non-functioning, grossly enlarged left kidney of 27 x 28 x 30 cm in diameter involving the entire

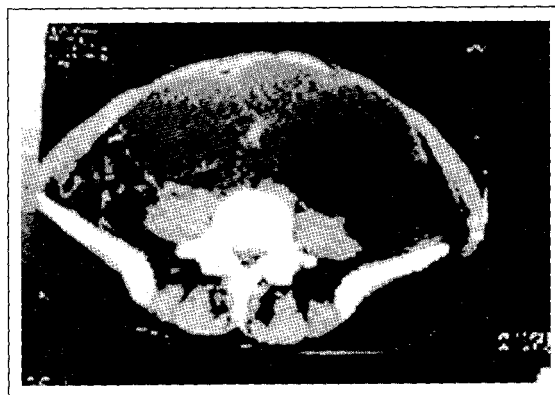


Fig. 1: Computed tomography (CT) of the retroperitoneum showing giant hydronephrosis

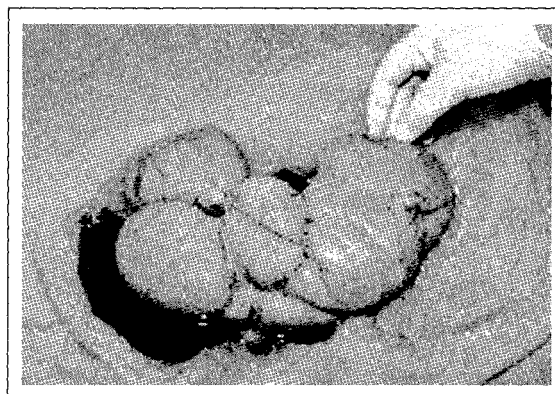


Fig. 2: The surgical specimen of the giant hydronephrotic kidney after the operation

retroperitoneal space from the left sub-diaphragmatic area to the bladder was shown on computerized tomography (Fig.1). Because DMSA renal scintigraphy and excretory

urogram confirmed a non-functional left kidney, we did not drain the kidney with a percutaneous nephrostomy. No reflux was demonstrated on voiding cystourethrography. The patient's laboratory findings were within the normal range. Hydatid serology was negative. On exploration, a left giant hydronephrosis with a liquid content of approximately 4.5 liters was seen at the ureteropelvic junction. Since most cases of UPJ obstruction are functional, passage of a 4 Fr. ureteral catheter through the UPJ area was attempted. However, it was not possible, which led us to the assumption of a stricture at the ureteropelvic junction.

The hydronephrotic kidney was seen to involve the whole retroperitoneal space crossing midline to the right and pushing down the bladder inferiorly. The hydronephrotic sac was thin and since dissection of the kidney was very easy, a left nephrectomy was performed without opening the sac and draining off the liquid (Fig. 2).

The patient's recovery in the postoperative period was uneventful, and the pathologic result of the specimen was reported as hydronephrotic end-stage kidney with fibrosis.

DISCUSSION

Giant hydronephrosis caused by congenital UPJ obstruction is a rare urological entity, defined arbitrarily as over 1.0 liter of fluid in the collecting system. Hydronephrosis may increase rapidly in adult life without warning⁵. Adults with this condition may present with intermittent abdominal or flank pain, renal insufficiency or urinary tract infection⁴. Our patient presented with a palpable abdominal mass only. DMSA renal scintigraphy and excretory urogram demonstrated a non-functional left

kidney, for this reason we did not drain the kidney with a percutaneous nephrostomy. A very easy dissection during the operation enabled us to perform nephrectomy without opening the hydronephrotic sac.

The diagnosis of a possible giant hydronephrosis should be taken into consideration not only in children but also in adult patients in the presence of a retroperitoneal liquid mass in a very large diameter without other pathological signs. However, a multicystic dysplastic kidney, hydatid disease, squamous cell carcinoma of the renal pelvis with giant hydronephrosis⁶ and duodenal obstruction due to ureteropelvic junction obstruction⁷ should be included in the differential diagnosis of such case.

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