

# RETROPERITONEAL FIBROSIS A CASE REPORT

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## SYNOPSIS

**A case of retroperitoneal fibrosis occurring in a 52 year old male patient is presented. The preoperative diagnosis based on intravenous urography was a right retrocaval ureter. The diagnosis of retroperitoneal fibrosis was made only at operation. The case history, operative findings and treatment are discussed.**

## CASE HISTORY

The patient is a 52 year old male who presented two years ago with a history of several attacks of epigastric and right hypochondrial pain. A routine urinalysis then showed the presence of microscopic haematuria on one occasion which cleared up on repeat examination. He was found to have cholelithiasis with a non-functioning gallbladder for which a cholecystectomy was performed 4 months later. At operation, he was found to have a thick walled gallbladder containing a single pigmented stone. The pancreas was also noted to be indurated, suggestive of chronic pancreatitis.

The patient had a history of chronic eczema of the palms and soles for which he was prescribed corticosteroid cream to apply. He was a heavy smoker and drank occasionally in social gatherings. He had no significant history of taking excessive analgesics.

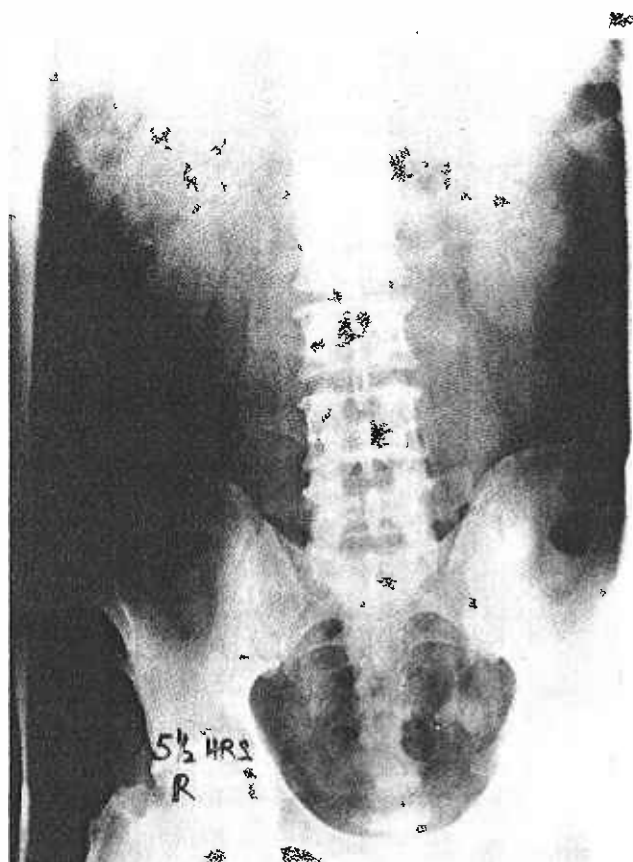
Post cholecystectomy, he remained well until early this year when he presented with a classical history of right ureteric colic. A urinalysis revealed the presence of 10 to 15 red cells. He was treated symptomatically.

The intravenous urogram revealed very interesting features. There was impairment of right renal function. The right ureter was obstructed at the level of the third lumbar vertebra and delayed films and tomograms revealed dilatation of the pelvi-calyceal system. The upper ureter was also dilated and its course and appearance was very suggestive of a retrocaval ureter with obstruction. The left kidney was normal, so was the bladder (Fig. 1).

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A retrograde pyelography was performed. There was no obstruction to the ureteric catheter which could be introduced up to 25cm. On contrast studies, however, the right ureter was shown to take a backward and medial course and the obstruction was shown at the level of the junction between the middle third and upper third. It was not possible to opacify the middle third by gravity or upward injection. The cause of the obstruction was demonstrated to be compression by the inferior vena cava which was opacified by injection of contrast medium into the leg veins (Fig 2). A pre-operative diagnosis of right retrocaval ureter was made.

Exploration of the right ureter was carried out via a right extraperitoneal approach. The right ureter was found to be dilated up to the middle third. Beyond this the ureter was encased in and obstructed by a very dense fibrous tissue in the retroperitoneum. Frozen section of this revealed only inflammatory tissue. The ureter was freed by slow dissection from this encasing fibrous mass. The encased segment of ureter about 5 cm in length was found to be narrowed and slightly fibrotic and would not admit an 8F size Jacques catheter comfortably. A decision was therefore made to split this segment longitudinally and splint it with a 12F size Portex catheter (Davis intubated ureterotomy). In addition, a patch of omentum was brought out through a peritoneal opening and wrapped around the entire length of the ureter. As much of the surrounding fibrous tissue as possible was removed.

Postoperatively, he recovered uneventfully. The splint was removed at three weeks. An associated urinary tract infection due to *Ps. aeruginosa* was controlled with ampicillin and nitrofurantoin. He was



also given a six week course of low dose corticosteroids. A repeat intravenous urography four weeks after the operation revealed good excretion of the contrast medium from both kidneys. There was moderate dilatation of the right calyx and upper third of the ureter which tapered down at the middle third (Fig 3).

The patient is well except for occasional loin ache. His peripheral pulses are good and there is no evidence of venous congestion of the lower limbs.

Histology of the retroperitoneal mass revealed dense fibrous tissue with fibroblastic proliferation



and collagen deposition extending into adipose tissues. There was associated prominent inflammatory infiltrate composed of lymphocytes, plasma cells, eosinophils and a few neutrophils.

## DISCUSSION

Retrocaval ureter is one of the differential diagnosis for retroperitoneal fibrosis (1). However, retroperitoneal fibrosis is a rare condition in Singapore and it is unlikely that this diagnosis could have been arrived at preoperatively in this patient, although the patient had abnormal urinalysis when first seen and was found at cholecystectomy to have induration around the pancreas suggestive of chronic pancreatitis.

The X-ray findings were highly suggestive of a type I retrocaval ureter (2). The dilated upper ureter took a typical inverted J. loop. The typical triad of hydronephrosis with dilated and tortuous upper ureter, medial deviation of ureter and evidence of intrinsic ureteric obstruction (3) were all present in the urographic studies of this patient.

The operative finding of retroperitoneal fibrosis came as a surprise. The time honored procedure of ureterolysis was carried out. However, even after this, the encased segment of the ureter was found rather tight. In view of this, intubated urethrotomy (4) was decided upon although its use had not been described for this condition. In addition, omentum was wrapped around the ureter as described by Blandy and Tressider in the hope of preventing recurrent ureteric obstruction.

The effectiveness of medical treatment in retroperitoneal fibrosis is difficult to evaluate because of proven incidence of spontaneous regression. Regres-

sion has also been described following ureterolysis and even after biopsy alone (5). The use of corticosteroids in retroperitoneal fibrosis has been shown to be beneficial and complete resolution of the disease has been described with its use (6). In this patient, a 6 week course of prednisolone was given postoperatively. So far, his repeat urogram has remained satisfactory and he has no clinical evidence of progression of the disease. The natural history of the disease might be that remission of the ureteric obstruction might eventually occur (7). However, the possibility of recurrent obstruction or contralateral ureteric obstruction still remains.

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