

Case Report on Rare Case of Reno-Colic Fistula Secondary to PUJ Obstruction

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DOI: [10.36347/sjmcr.2023.v11i05.051](https://doi.org/10.36347/sjmcr.2023.v11i05.051)

Received: 11.04.2023 | Accepted: 17.05.2023 | Published: 21.05.2023

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Abstract

Case Report

In this case report, a 65 year old man presented with complaints of pain and swelling in left flank region referred to Department of Radiodiagnosis, Sri Aurobindo Hospital, Indore (M.P) for CT Abdomen. The chest x-ray film showed left pleural effusion. An abdominal ultrasound was done which demonstrated enlarged hydronephrotic left kidney with internal echoes within. Computed tomography was done, which revealed a fistulous tract between large bowel and left kidney at the level of splenic flexure, evident by rectal contrast entering the left renal pelvicalyceal system. There was no dilatation of ureter suggesting long standing PUJ obstruction. On the basis of the radiological studies a diagnosis of renocolic fistula was made.

Keywords: Non-functioning kidney, Renocolic fistula, CT scan, Pyohydronephrosis, PUJ obstruction.

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INTRODUCTION

Reno-colic fistula is a rare condition which was first described by Hippocrates. There are about 130 total cases which have been reported till now [1]. Most common segment of bowel involved is the ascending and descending colon, although the sigmoid colon and caecum have also been involved in few cases.

Reno-colic fistula can occur either spontaneously, due to obstruction or due to trauma. Spontaneous reno-colic fistulae usually occur as a result of primary renal pathology, which can be secondary to renal tuberculosis, xanthogranulomatous pyelonephritis or obstructive pyonephrosis [2, 3]. Trauma usually forms the minority of cases of which mostly iatrogenic cause following open or percutaneous surgical procedure was found to be most common. Other known causes are non-calculous pyonephrosis, perinephric abscess and rupture following gross hydronephrosis. Renal malignancy and papillary necrosis have been implicated in a small number of cases.

Rayer in 1841 presumed that the fistula developed following a long standing obstruction, which leads to renal infection with probable perirenal abscess. Rayer was of the opinion that the lesion was primarily the result of chronic renal inflammation which

produced a perirenal abscess that ultimately ruptured and drained into the colon [4].

Our patient presumed to have PUJ obstruction, which is an uncommon cause of reno-colic fistula.

CASE REPORT

A 65 year-old man presented with complaints of pain and swelling in left flank region and was referred to Department of Radiodiagnosis, Sri Aurobindo Hospital, Indore (M.P) for CT Abdomen. He also complained of constipation with few episodes of vomiting. There was no history of diabetes, hypertension, or any previous surgical exploration. On physical examination abdominal distension with hyperactive bowel sounds and tenderness in left flank region was noted. The patient was afebrile, with normal blood pressure and other vital signs were stable.

Upon admission, complete blood count showed anemia with hemoglobin of 8.4 g/dL. Platelet and leucocyte count was within normal limits. The creatinine was 1.0 mg/dL, urea 26mg/dL. Prothrombin time/International Normalized Ratio – 1.0.

Chest x-ray revealed left sided pleural effusion with bowel shadows in left renal fossa without any

radio-opaque shadows [Fig-1a]. Post x-ray, USG whole abdomen was done which revealed enlarged left kidney

with gross hydronephrosis and internal echoes within the left pelvi-calyceal system [Fig-1b].

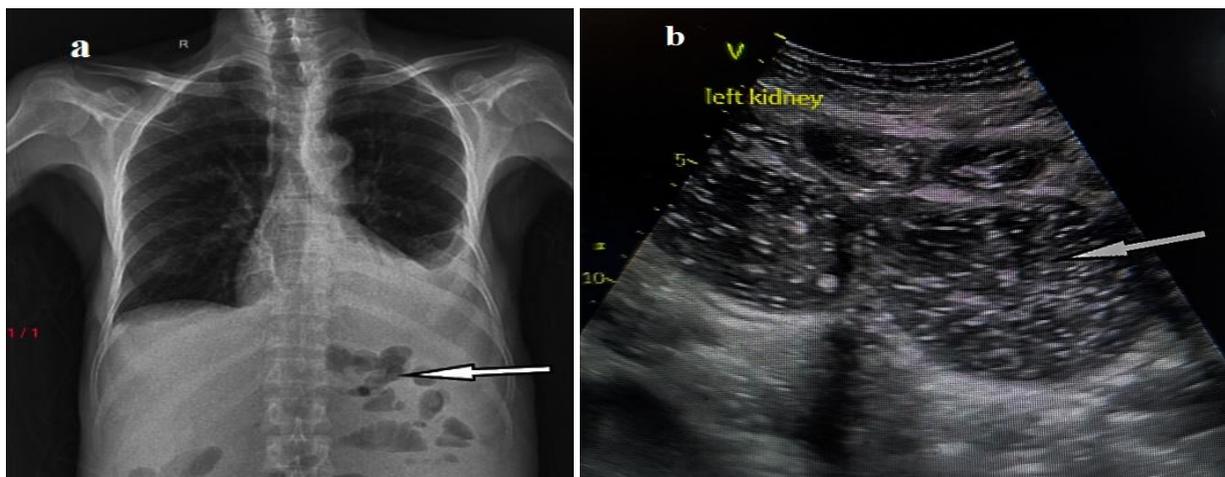


Figure 1: (a) Chest x-ray with abdomen showing left sided pleural effusion with bowel shadows in left renal fossa (white arrow) (b) Ultrasound abdomen showing gross hydronephrosis having internal echoes and causing paper thinning of cortex (white arrow)

CT abdomen revealed enlarged left kidney with gross hydronephrosis and paper thinning of cortex with abrupt narrowing at PUJ [Fig. 2-a]. On administration of oral and rectal contrast, it was found to leak into the pelvicalyceal system of the left kidney

through an approximately 10mm long fistulous tract noted in transverse colon at the level of splenic flexure which was communicating with the upper anterior pole calyx of left kidney [Fig. 2-b].

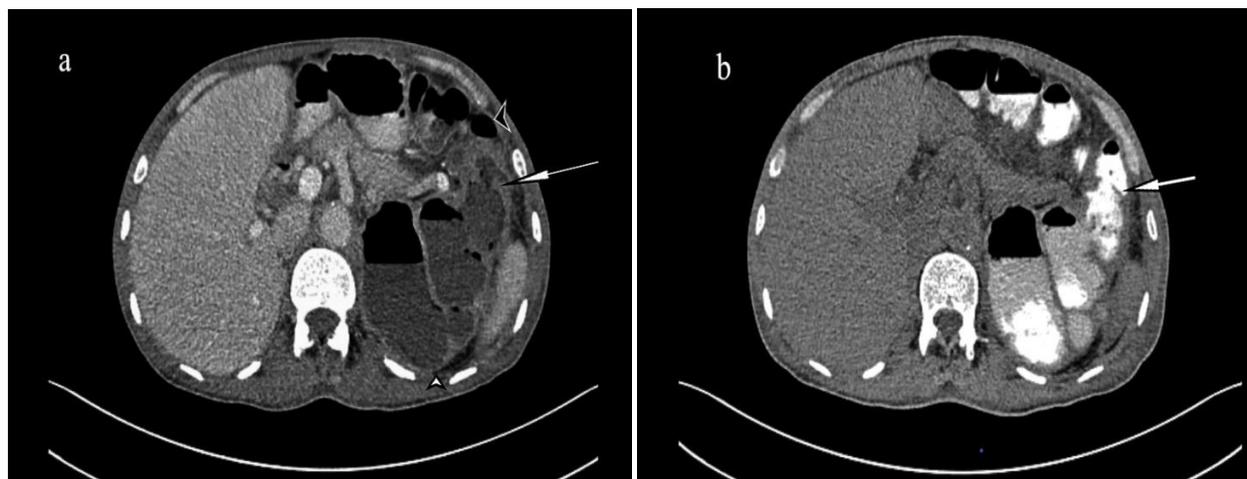


Fig-2: (a) Axial CT image of patient revealed gross hydronephrosis in left kidney (white arrow head) with a fistulous tract (white arrow) and distended bowel loops (black arrow head) (b) Axial CT image of patient with rectal contrast media in left pelvicalyceal system via the fistulous tract at splenic flexure (white arrow)

On the basis of radiological investigations diagnosis of renocolic fistula was confirmed as result of PUJ obstruction and patient underwent left nephrectomy with resection of affected colon.

A 1 month follow up CT scan was done which showed multiple peripherally pockets of collections in left renal fossa and left para colic gutter with ascites and moderate bilateral pleural effusion [Fig-3(a, b)].

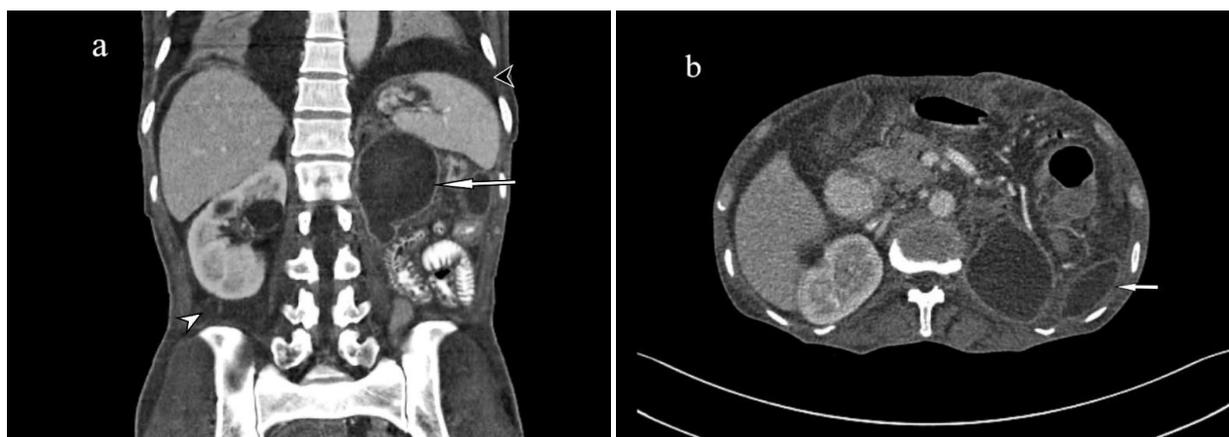


Fig-3(a, b): Coronal and axial contrast enhanced CT images of patient revealed multiple peripherally enhancing pockets of loculated collection in left renal fossa (white arrow) with pleural effusion (black arrow head) and ascites(white arrow head)

DISCUSSION

Reno-colic fistula is a rare entity. It is an abnormal connection between the pelvicalyceal system of the kidney and colon. Chronic obstruction and delayed treatments leads to impaired renal function and chronic inflammation of kidney and surrounding structures, and in result development of fistula [5]. However with increased availability of radiological investigations and early diagnosis, these fistulas have now become rare.

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