



**NEPHROCUTANEOUS FISTULA, A RARE PRESENTATION OF TUBERCULOSIS-
CASE REPORT**

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Abstract :

Nephrocutaneous fistula is defined as abnormal communication between the kidney and the skin. A 55 year old, diabetic and hypertensive male presented with complaints of pus discharging sinus over left flank for one month duration. He had undergone open drainage for left sided perinephric abscess before six months. Anemia was evident by haematologic investigation and the pus culture revealed *Proteus* and urine culture, *Klebsiella* organisms significantly. Both USG and CECT revealed contracted left kidney, with the later showing a fibrous like band connecting the left kidney and abdominal wall. Fistulogram was evident as the contrast injected entered left renal pelvis, ureter and bladder. In view of the poor function demonstrated by the DTPA renogram and the persistent fistulous tract, nephrectomy was proceeded with the excision of the fistulous tract. The histopathologic surprise was tuberculosis and the patient was treated with ATT.

Manifestation of GUTB as a fistula per se is very rare and masking the disease by negative investigations but revealing after nephrectomy gives an indication that the disease could exist in the dormant state-producing such pathology.

Keyword : kidney, Tuberculosis, fistula, lumbar region, nephrectomy

Introduction:

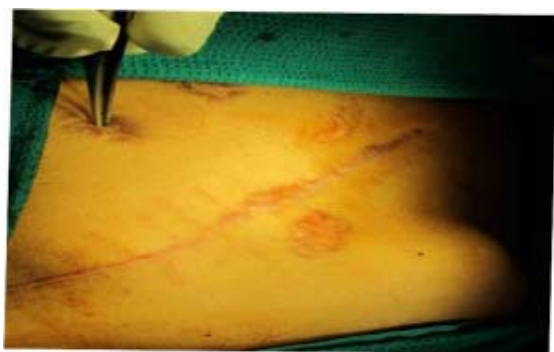
Nephrocutaneous fistula is defined as abnormal communication between the kidney and the skin. The majority of cases result from chronic infections with abscess formation, calculus disease, previous renal surgery, renal trauma, and renal tumours. The associated renal unit is often poorly functioning and is usually treated by nephrectomy (1, 2).

CASE REPORT:

55 year old male with diabetes mellitus and hypertension was admitted with complaints of pus discharging sinus over left flank

for one month duration. Patient underwent open drainage for left perinephric abscess six months back. Post operatively, the drain was kept for 10 days. Operative wound healed by primary intention and there was no surgical site infection. He was discharged on fifteenth post-operative day. On general examination, the patient was obese with mild pallor. On local examination, pus discharging sinus was found over the left flank (fig 1). Laboratory evaluation revealed Hb 7.6g/dl and normal renal parameters. Culture of the pus revealed *Proteus mirabilis* and urine culture showed *Klebsiella* growth. Both were managed with appropriate culture specific antibiotics. Euglycemic status was maintained with insulin injections. Two units of packed cell blood were transfused pre-operatively.

Ultrasound KUB showed contracted left kidney with normal right kidney and lower urinary tract. Contrast enhanced computed tomogram showed contracted left kidney with fibrous band between the kidney and lateral abdominal wall (fig 2). Fistulogram showed contrast freely entering into left renal pelvis, ureter and bladder (fig 3). Diuretic renogram showed 10% of differential renal function of left kidney and normal contralateral kidney.



In view of left contracted kidney with foci of infection and poor function in addition to the fistulous tract, we proceeded with left nephrectomy with complete excision of fistulous tract (fig 4). Post

operative histopathological report showed tuberculous pyelonephritis of the kidney and Category I Anti tuberculosis drugs started (fig 5).

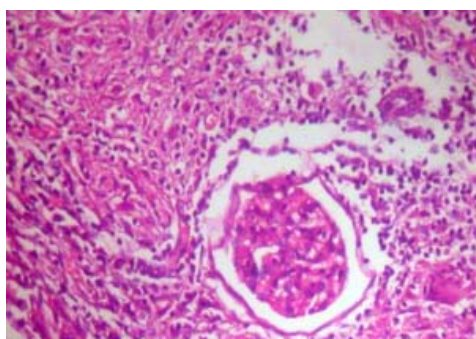
Fistulous opening shown by marker (fig 1)



CT- Axial image left contracted kidney with fistulous tract (fig 2)



Fistulogram (fig 3) Nephrectomy specimen with fistulous opening (fig 4)



Histopathology of tuberculous pyelonephritis(fig 5)

DISCUSSION:

Nephrocutaneous fistula is a rare manifestation of renal disease per se. Fistulae can develop between the kidney and the pleural cavity, lungs and bronchia, bowel, and skin. However, the latter are rare, and whenever they occur, they typically involve patients with a past history of renal surgery (3). The majority of such fistulae present as spontaneous drainage through the lumbar region. The etiologies of nephrocutaneous fistula include calculous disease, renal tuberculosis, trauma, tumors and previous renal surgeries.

Renal tuberculosis may be diagnosed by the identification of *M. tuberculosis* by acid-fast bacilli stain in urine. The culture remains the gold standard for detection of *M*

tuberculosis and demonstrates the sensitivity of various antituberculosis drugs. Recently, the nucleic acid amplification test has demonstrated an effective and important role in the diagnosis (4). Radiological imaging plays important role in identification of early as well as advanced lesions in genitourinary tract.

Muhammad Azhar Qureshi et al reported a case of spontaneous nephrocutaneous fistula with stones in kidney. Patient was treated with nephrectomy and biopsy revealed tuberculous pyelonephritis (5). M. H Farid et al reported chronic spontaneous nephrocutaneous fistula with tuberculous pyelonephritis and renal replacement lipomatosis. It is the result of the atrophy and destruction of renal parenchyma with massive increases in the amount of fat in the sinus and perirenal space (6). **CONCLUSION:** Management of nephrocutaneous fistula is a challenging problem. Therapeutic approaches in these cases were based on patient's renal function and patient's ability to tolerate the surgical procedures like total or partial nephrectomy and always followed by antituberculous drugs.

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