

Case report

SPONTANEOUS NEPHROCUTANEOUS FISTULA IN TUBERCULOUS PYELONEPHRITIS: AN UNUSUAL OCCURRENCE

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ABSTRACT

Nephrocutaneous fistula has an uncommon incidence and occur usually as a complication of operative procedures on kidneys, renal injuries (penetrating or iatrogenic), renal uroliths, renal tumors and chronic UTI with resultant perirenal abscesses. The most common causes identified are renal calculi and chronic renal tuberculosis. We intend to highlight a case of a woman aged 35years, complaining of watery discharge through the skin in the right lumbar region for the past six months. A fistulogram was done which showed the passage of contrast dye in the collecting system. The patient underwent a simple nephrectomy on the concerned side and recuperated without any complication in the postoperative period.

Keywords: Kidney, Fistula, Renal tuberculosis, Nephrocutaneous.

INTRODUCTION

Spontaneous nephrocutaneous fistula (NCF) is a rare develop condition. Majority secondary to postoperative, trauma, chronic urinary tract infection, renal stones¹. Few cases as a complication of xanthogranulomatous pylonephritis has also been reported to the literature², however occurrence of this condition due to renal tuberculosis is a rare phenomenon. The fistula may be internal (the fistulous communication between kidney and adjacent viscera like colon, duodenum, or jejunum) or external, like nephrocutaneous fistula.³We report a rare case of Spontaneous nephrocutaneous fistula due to renal tuberculosis.

CASE REPORT

Complaints - A 35 year old female presented with complaint of insidious onset watery discharge from her right flank for 6 months. There was no history of loin pain, back pain, lump in abdomen, fever, frequency of

urination or burning micturition at any time during the course of illness. She never underwent any surgical intervention in the past. There was also no history of previous purulent discharge.

Examination -The physical examination revealed a fistulous orifice in the skin on the right lumbar region with surrounding induration. Examination of chest, abdomen, spine and genitourinary systems was unremarkable. There was no lymphadenopathy. On examination watery discharge was of ammoniacal smell. Culture and sensitivity of the discharge and urine were sterile. X-ray chest, spine and KUB were normal. Routine blood tests including renal functions were normal and patient was not found diabetic.

Investigation - A fistulogram was done which showed the passage of contrast dye in the right collecting system travelling down freely up to the ureter and bladder (Figure 1). Excretory urography revealed nonfunctioning right kidney with normal function opposite side. Ultrasound abdomen revealed small right kidney with significant cortical loss and fistula site biopsy was inconclusive.

Treatment- In view of non functioning right kidney, nephrectomy was planned with excision of the fistula. Intraoperatively shrunken, atrophic kidney was found adhered to the surrounding tissue and perinephric fat with caseous material filled in (Putty kidney). After careful separation from surrounding tissue simple nephrectomy was performed by excision of the entire fistulous tract including skin and subcutaneous tissue.

Histopathology - Histopathological examination of the specimen showed tuberculous pyelonephritis. The postoperative period was uneventful. Patient was started on antitubercular drugs and was discharged on the seventh post-operative day.



Fig 1: Fistulogram showing passage of contrast agent to the right collecting system freely up to the bladder

DISCUSSION

Spontaneous nephrocutaneous fistula without previous surgical history is rare.⁴ Most of the cases reported in the literature was associated with chronic UTI, renal tumors, renal tuberculosis and nephrolithiasis. Patients often overlook minor complaints of backache and flank pain; such neglected cases often harbor an underlying perinephric abscess⁵ that may lead to the genesis of a spontaneous NCF. A review of literature suggests renal calculus being the most common cause followed by tubercular and xanthogranulomatous pyelonephritis and reflux disease.^{6,7} However some

reports favor open surgical procedure being commonest.⁸

Tuberculous pyelonephritis usually starts in renal parenchyma and ureters and bladder are secondarily involved. The mode of spread is hematogenous. Three pathological stages have been described. At any stage, when there is significant fibrosis and outlet obstruction, the pus may find its way along the path of least resistance-forming renocutaneous, reno-colic or reno-pleural fistula. The case under discussion had total outlet obstruction in proximal ureter due to progressive fibrosis and obstruction causing atrophic, putty kidney and renocutaneous fistula.

The clinical features related to renal tuberculosis are variable and range from simple fatigue, anorexia and weight loss, to the attacks of loin pain and haematuria. Other features depend upon the stage of disease and involvement. extent of Apart from routine investigations, culture and sensitivity of urine, abdominal ultrasound, fistulography, excretory urography and DTPA renal scintigraphy are important diagnostic tools.

Early changes are best detected by excretory urography / pyelography while chronic changes are evaluated with the help of ultrasound or CT scan. Plain films are helpful in detecting lesions in the lungs and areas of calcification in kidneys, adrenals and adjacent lymph nodes. The standard treatment of nephrocutaneous fistula is nephroureterectomy with complete debridement of affected perirenal fat, muscles, and subcutaneous tissue. The surgery is followed by anti-TB regimen and long-term follow-up.

Classification of TB Pyelonephritis

I: Nondestructive (infiltrate) tuberculosis of kidney

II: Initial destruction (papillitis or small, by diameter about 1 cm, single cavity);

III: Marked destruction (caverns or policavernosial tuberculosis one of kidney segments);

IV: Total or subtotal destruction (policavernose tuberculosis, tubercular pyonephrosis, calcification).

They distinguish three forms of tuberculosis: tuberculoinfiltrative, ulcerous and scar.

CONCLUSION

We highlight here the rarity of spontaneous nephrocutaneous fistula and renal tuberculosis as an important differential diagnosis to be kept in mind in the Indian scenario.

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