CASE REPORT

Primary Renal Tuberculosis Presented as Giant Cyst at Lower Pole of Kidney

Sunita Singh[1]*, Manoj Kumar[2], Anil Kumar[3], Santosh Kumar[4], S. N. Sankhwar[5]
[1]Research Officer, Department of Microbiology, King George Medical University, Lucknow, India
[2]Additorial Professor, Department of Radiodiagnosis, King George Medical University, Lucknow, India
[3]Surgeon, District Hospital, Etawah, India
[4]Professor, Department of Pulmonary Medicine, King George Medical University, Lucknow, India
[5]Professor & HOD, Department of Urology, King George Medical University, Lucknow, India

[*]**Address for Correspondence:** Dr. Sunita Singh, Research Officer, Department of Microbiology, King George Medical University, Lucknow, India
Received: 16 March 2017/Revised: 25 May 2017/Accepted: 19 June 2017

ABSTRACT- A 76 years old male presented with complaints of fever, weight loss and anorexia for three months and increased frequency and urgency of urine for 20 days. Physical examination of the abdomen showed a lump in right paraumblical region and extending up to inguinal and hypogastrium on right side. Postero-anterior view of chest radiograph was normal. Ultrasound and Computed tomography (CT) of abdomen revealed a giant exophytic right renal cortical cyst of 9.84x9.70 cm (volume 336 mL) size arising from lower pole. Ultrasound guided aspiration of the cystic lesion revealed yellowish coloured, purulent pus of about 280 mL. Ziehl-Neelsen staining and PCR tests of the pus was positive for *Mycobacterium tuberculosis*. Gram's staining and pus culture was negative for other microorganisms. A patient responded to anti-tubercular treatment and finally considered as primary tubercular giant exophytic renal cortical cyst. To our knowledge, this common entity is an extremely rare manifestation.

Key-words- Giant cyst, *Mycobacterium tuberculosis*, PCR, Ultrasound and Computed tomography (CT)

INTRODUCTION

Tuberculosis (TB) continues to be a major health problem in South Asia. Nearly one third of global tuberculosis burden is contributed by India alone [1]. Renal TB is the most common site of extra-pulmonary TB and comprises 15-20% of all extra-pulmonary tuberculosis [2]. Genitourinary tuberculosis is the second most common form of extra pulmonary tuberculosis after lymph node involvement [3]. The kidney is usually the primary organ infected with urinary disease, and other parts of the urinary tract become involved by direct extension [4]. This infection can result in caseation and destruction of renal mass and healing can lead to strictures, obstruction and infection causing renal function loss and failure [1].

Access this article online	
Quick Response Code	Website: www.ijlssr.com
	crossref DOI: 10.21276/ijlssr.2017.3.4.8

CASE PRESENTATION

A76 years-old male presented with complaints of fever, cough, weight loss, anorexia for three months. He had frequency and urgency of urine for 20 days. There was no past history of pulmonary tuberculosis. Physical examination of the abdomen showed right side abdominal swelling. PA view of chest skiagram was normal. USG revealed a large exophytic right renal cortical cyst of 9.84x9.70cm arising from the lower pole (Fig. 1). Plain CT-abdomen revealed a large exophytic right renal cortical cyst arising from lower pole. (Fig. 2) Purulent pus was aspirated from cyst and send for bacterial Culture, Elisa for hydatid disease, Ziehl-Neelsen staining and PCR test. Pus culture and Elisa for hydatid disease was negative. Ziehl-Neelsen staining and PCR tests of the pus was positive for *Mycobacterium tuberculosis*. An ECG finding was normal. Routine investigation including complete blood analysis, blood sugar, and liver function tests were normal limit. Renal function was deranged as evidenced by raised urea level of 34.8 mg/dl and serum creatinine 1.6 mg/dl. Urine culture was shown growth of *Escherichia coli*. Routine urine examination showed plenty of pus cells. Patient consent was obtained.

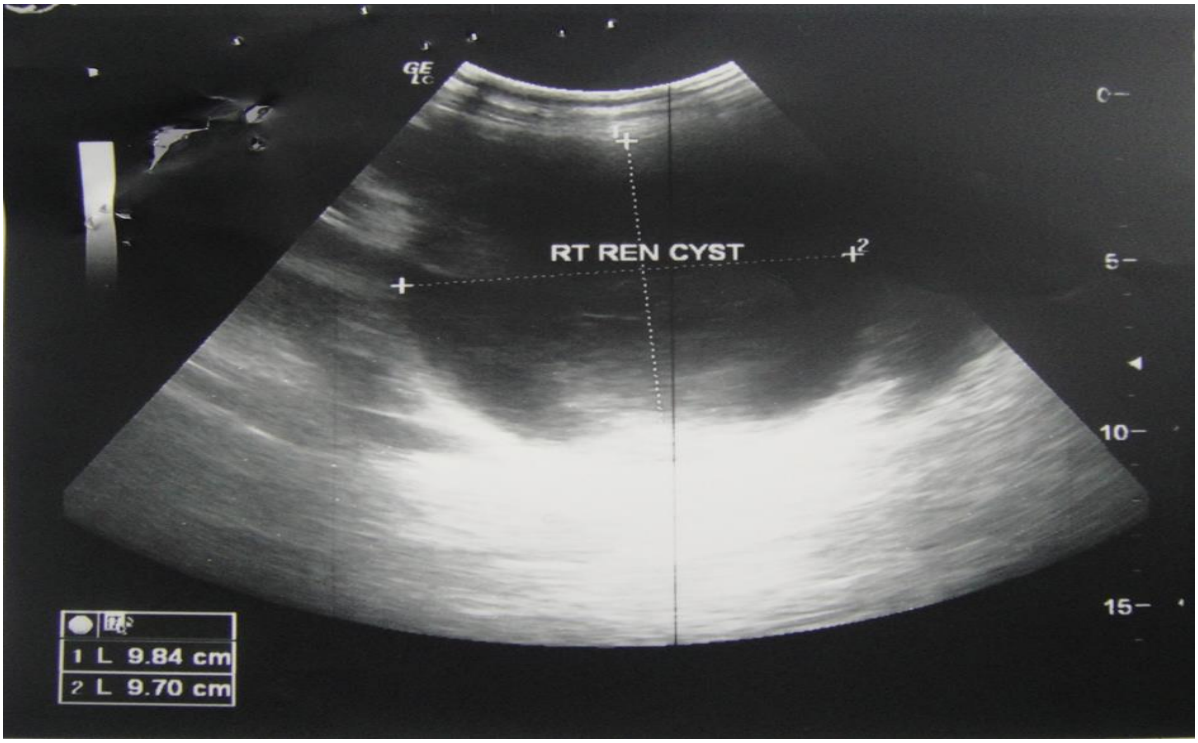

Fig. 1: B-mode USG revealed large unilocular anechoic exophytic renal cortical cyst

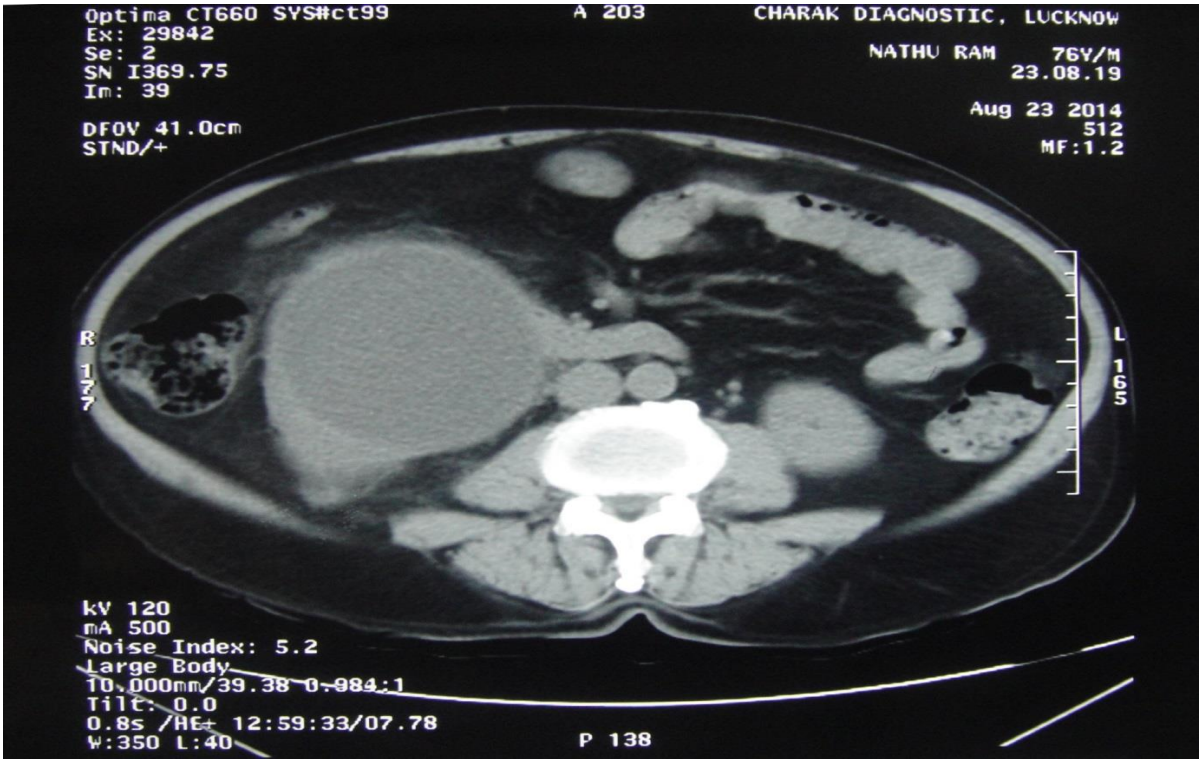

Fig. 2: Axial plain CT-abdomen revealed thick-walled right renal exophytic cystic mass lesion

Differential Diagnosis

- Infected renal cortical cyst
- Hydatid cyst
- Cystic renal cell carcinoma

TREATMENT

USG guided therapeutic aspiration of the cystic ® renal cortical lesion was contemplated with 16 Gauge Lumbar puncture needle. Approximately 300 mL pus was aspirated and the patient was put on ATT.

OUTCOME AND FOLLOW-UP

Abdominal swelling was subsided and residual cavity size was apx. 10 mm just after the therapeutic aspiration. Follow-up USG and CT-abdomen after one month revealed negligible residual fluid and the total resolving cavity size was 14 mm.

DISCUSSION

Renal tuberculosis is not uncommon however, renal tuberculosis presenting as a lower pole renal cyst is very rare. After extensive literature search, we found that such type of cases were least reported. The diagnosis is based on the basis of USG-guided diagnostic aspiration followed by positive PCR for *M. tuberculosis*. In another study a 74-year-old woman presented with a history of fever and left flank pain for three days. The imaging study revealed a huge, complicated cyst in the left kidney causing adjacent mass effect. The renal cyst was removed by laparoscopic deroofing. The histo-pathological examination disclosed renal tuberculosis [5]. Rarely, renal TB can take the form of a well-circumscribed cystic mass with enhancing septations.

CONCLUSION

We were concluded that Patients with complaints of fever, weight loss, anorexia, frequency, urgency and the complicated renal cyst may be tubercular etiology. USG-guided diagnostic and therapeutic options may be a better choice for management instead of other surgical procedures. Ultrasound guided diagnostic renal aspirate approach shortens the overall operating time and avoids complications.

REFERENCES

[1] Najar MS, Bhat MA, Wani IA, Banday KA, Reshi AR, et al. Profile of renal tuberculosis in 63 patients. Indian J. Nephrol., 2003; 13: 104-07.

[2] Langemeir J. Tuberculosis of the genitourinary system. Urol Nurs. 2007; 27: 279-84.

[3] Sharma SK, Mohan A. Extra-pulmonary tuberculosis. Indian J. Med. Res., 2004; 120: 316–53.

[4] Mohan A, Sharma SK. Epidemiology. In: Sharma SK, Mohan A, editors. Tuberculosis. New Delhi: Jaypee Brothers Medical Publishers, 2001: 14–29.

[5] Huang LH, Wen MC, Hung SW, Hsiau YT, Cheng CL, et al. Renal tuberculosis presenting as a complicated renal cyst. Urol., 2012; 80(6): 69-70.

How to cite this article:

Singh S, Kumar M, Kumar A, Kumar S, Sankhwar SN: Primary Renal Tuberculosis Presented as Giant Cyst at Lower Pole of Kidney. Int. J. Life Sci. Scienti. Res., 2017; 3(4): 1148-1150. DOI:10.21276/ijlssr.2017.3.4.8

Source of Financial Support: Nil, **Conflict of interest:** Nil

