Abstract:
Extra-pulmonary sites account for 10 of tuberculosis cases. Genito-urinary Tuberculosis accounts for 30 to 40 of all extrapulmonary tuberculosis second only to tuberculous lymphadenitis. The early radiographic findings of renal tuberculosis are fuzzy calyx and moth-eaten appearance. Later on, cavitations, calcifications or a segmental hydronephrosis may develop. This paper reports an unusual radiographic appearance of a renal tuberculosis presenting as a complex cyst.
Keyword: extrapulmonary,tuberculosis, complex cyst.

INTRODUCTION:
Genito-urinary tuberculosis is the second most common form of extra-pulmonary tuberculosis after lymph node involvement. It accounts for 30% to 40% of all extra-pulmonary tuberculosis. Renal tuberculosis is the most common site of genito-urinary tuberculosis. It is usually a sequelae of pulmonary tuberculosis that had occurred at least 10-15 years earlier. The bacilli are usually lodged in the cortex, due its greater blood supply and higher oxygen tension, forming granulomas. These granulomas remain dormant for many years. When the individual’s immunity is compromised, these dormant bacilli get reactivated.
Among the imaging modalities, intravenous urography has traditionally been considered the hallmark. It provides both anatomical as well as the functional details of the kidneys and the ureters. The first recognizable urographic finding of renal tuberculosis is an irregular margin of the calyx with a moth-eaten appearance representing calyceal erosion. "Fuzzy" calyx is another early finding representing mucosal edema producing a slight loss of sharpness of a calyceal margin. Later on hydronephrosis may develop because of infundibular stenosis. Other urographic findings are "hiked up" pelvis, phantom calyx and a non-visualised kidney due to auto-nephrectomy. CT is replacing IVU at many centres. It is equally good at identifying calyceal and infundibular
CASE REPORT:
A 35 years old female came to us with complaints of right loin pain for one year duration. The pain was dull-aching and had gradually been increasing in severity. She had no other specific urinary symptoms. She gave history of treatment for pulmonary tuberculosis 10 years back.
Physical examination was unremarkable. Investigations revealed normal blood counts. Urine for AFB was negative. Routine culture grew E.coli. Ultrasound revealed a mixed echogenic mass measuring around 5x4 cm on the upper pole of the right kidney; rest of the kidney appeared normal.
A CECT of the abdomen was done. It revealed a multiloculated, hypodense, exophytic cystic lesion with thick calcification (both mural and intralesional) measuring 5x3.5 cm occupying the upper and posterior medial aspect of the right kidney with minimal enhancement.
Plain CT showing multiloculated SOL occupying right kidney with calcifications CECT showing the same multiloculated SOL with minimal enhancement

Intra-operative picture showing the right kidney with the lobulated mass

Intraoperative picture showing the right kidney after enucleation of the mass

A pre-operative diagnosis of a Bosniak class 3 cyst was made and it was decided to explore. Intraoperatively, a lobulated, tensely cystic swelling arising from the upper and posterior aspect of the kidney was found. Inadvertent rupture of the cyst revealed putty like material.

A partial nephrectomy was done by enucleation and specimen sent for HPE. The HPE revealed
extensive areas of caseation necrosis surrounded by granuloma and langhans type giant cell suggestive of tuberculosis.

**Histopathology slide showing the caseous granuloma**

**DISCUSSION:**
This case represents an unusual radiographic appearance of a renal tuberculosis. The classical findings of renal tuberculosis on a CT are caliectasis with contracted pelvis, cavitations or calcifications. In this case the appearance was that of a well circumscribed, loculated, exophytic polar lesion with calcifications and minimal enhancement mimicking a cystic RCC. An elaborate search on the internet revealed that only one such case has been reported in 2008. This case also reiterates the fact that in our country where tuberculosis is rampant, renal tuberculosis should be included in the differential diagnosis of a renal SOL especially in a patient with a past history of tuberculosis.

**References:**
1. Campbell-walsh urology tenth edition, 469-474..
