中文題目：黃色肉芽腫性腎盂腎炎

英文題目：Xanthogranulomatous pyelonephritis

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Background

Xantogranulomatous pyelonephritis (XGPN) is a rare chronic inflammatory disease of the kidney and easily misdiagnosed as renal cell carcinoma (RCC).

Case presentation

A 54-year-old man presented with anorexia and body weight loss of 5 kg in one month. His medical history included type 2 diabetes mellitus, mental retardation, and dementia in bed-ridden status. On admission,though the patient didn't present with fever, laboratory findings showed an elevated neutrophil count (12,940/ml), elevated C-reactive protein(195.4 mg/L) and positive urine culture with Streptococcus agalactiae.

Since physical examination revealed a tender left flank mass, an ultrasonography (US, Fig-1) and followed computed tomography (CT, Fig-2) revealed left renal multiple thick-walled cysts and a staghorn stone.

The intravenous antibiotic was upgraded gradually from Cefazolin, Ceftazidine and finally to Levofloxacin, however , leukocytosis, high CRP and pyuria was not controlled. A sonography-guided renal biopsy was then arranged to evaluate the nature of the cystic kidney and the pathology result(Fig-3) was xantogranulomatous pyelonephritis (XGPN).

Nephrectomy (Fig-4) was arranged as the curative therapy. Dense adhesion between left kidney and perirenal fat was noted during operation. The patient expired 4 weeks later due to surgical related complication.

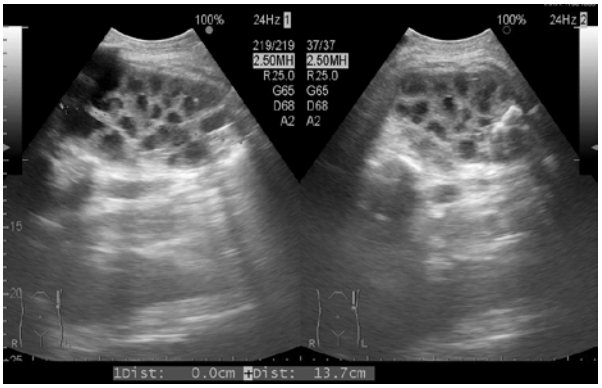

Fig-1, abdominal ultrasonography
Left kidney with multiple thick-walled cysts/septums and renal stone

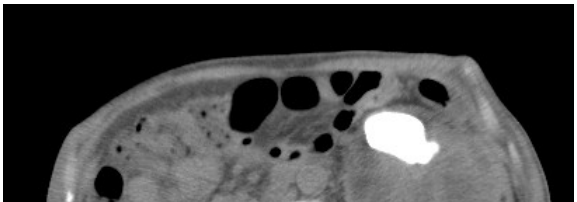

Fig-2, abdominal contrast CT

An enlarged left kidney with a 4.3cm renal stone noted. There was also minimal enhancement of left renal parenchyma and dilatation left renal calyces

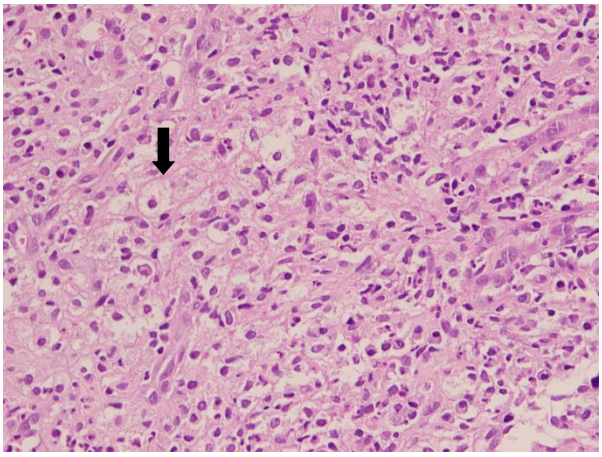

Fig-3, pathology of renal biopsy

The renal parenchyma revealed mixed inflammatory infiltrate with foamy macrophages(black arrow) and lympho-plasmacytic inflammation

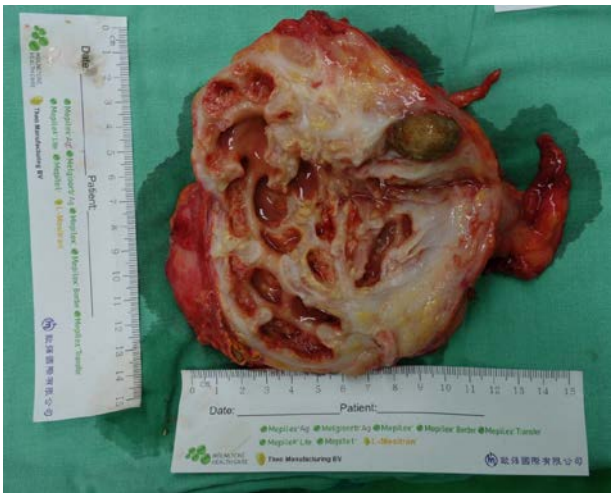

Fig-4, nephrectomy specimen

Abscess and hemorrhage were present. Pelvic stone is noted with dilated pelvis and calyces. Yellow plaques were noted all over the specimen.

Discussion

Question 1: What is the xanthogranulomatous pyelonephritis ?

Answer:

It is first described by Schlagne-haufter in 1916. Xanthogranulomatous pyelonephritis is a granulomatous inflammation of the renal parenchyma due to chronic urinary tract obstruction and

infection often associated with renal stones. Its common symptoms are flank pain, lower urinary tract symptoms, fever, palpable mass, gross hematuria, anorexia and weight loss.

Question 2: What is the common urine culture in xanthogranulomatous pyelonephritis ?
Answer:
Escherichia coli and Proteus mirabilis.

Question 3: Which image examination is better for diagnosing xanthogranulomatous pyelonephritis?
Answer:
Computed tomography is the better examination for xanthogranulomatous pyelonephritis. Xanthogranulomatous pyelonephritis can be divided to two forms by CT: diffuse (83%-90%) and focal (10%-17%). The diffuse form with classic “bear paw sign” from dilated caliceal spaces, which revealed a rim enhancement. Focal formxanthogranulomatous pyelonephritisis is “the great imitator”, as it is often misdiagnosed as a renal mass.

Question 4: How do we manage xanthogranulomatous pyelonephritis?
Answer:
Initially a conservative (appropriate antibiotic treatment) therapy should be considered. Surgery is considered if poor response toantibiotic treatment. Nephron-sparing surgery is warranted in focal XGP, but diffuse XGP will require nephrectomy with resection of all other involved tissue in most cases.