

## CAS-014

### *Streptococcus pyogenes* pyelonephritis: two cases seen within weeks of each other.

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#### Background

*Streptococcus pyogenes* (Group A Streptococcus-GAS) is a very unusual uropathogen. We describe the clinical, radiological and typing findings in two cases of invasive GAS urosepsis.

#### Case descriptions

Case 1: a 53-year-old female on hemodialysis presented with fever, lower abdominal pain, nausea, and vomiting. Computed tomography (CT) showed right pyelonephritis, with features suggestive of right pyonephrosis and mild cystitis but no obstructing lesion (Figure 1a). Turbid urine was aspirated via percutaneous nephrostomy. GAS was isolated from both the urine and blood cultures.

Case 2: a 63-year-old female with metastatic colon adenocarcinoma complained of abdominal discomfort and urinary frequency at a routine clinic visit. Urine culture grew GAS. She did not receive antibiotics until one week later when she was hospitalized with fever, right abdominal pain, and a positive right renal punch. A CT scan showed right hydroureteronephrosis secondary to mass effect from retroperitoneal metastases (Figure 1b). Blood cultures grew GAS. The urine culture was sterile, but it had been collected 12 hours after the initiation of antibiotics.

Typing showed *emm* 49 in case 1 and *emm* 89 in case 2. Both patients were allergic to penicillin and were treated with cefazolin with good clinical response.



Figure 1. CT scans showing right pyelonephritis and pyonephrosis in case 1 (a) and right hydroureteronephrosis in case 2 (b).

#### Discussion

The occurrence of two cases of GAS urosepsis within a few weeks of each other prompted concern that they were due to cross infection; typing reassured us that they were not. Ready availability of typing can dissipate anxiety and restore calm.