

# A Mysterious Recurrent Psoas Abscess

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## Citation

M Zakkar, K Mo, A Abtin, L Jiao. *A Mysterious Recurrent Psoas Abscess*. The Internet Journal of Surgery. 2004 Volume 6 Number 2.

## Abstract

Psoas abscess is a rare clinical entity with vague clinical presentation(1,4,8,9). Clinical diagnosis of this condition is usually difficult although classical manifestations of fever, flank or back pain with limitation of hip movement may help clinicians in early recognition of psoas abscess by imaging abdomen with either ultrasound or computed tomography (CT)(1,4,6)

We report a case of unusual secondary psoas abscess characterised by a recurrent spontaneous resolution and re-accumulation requiring intervention.

## CASE REPORT

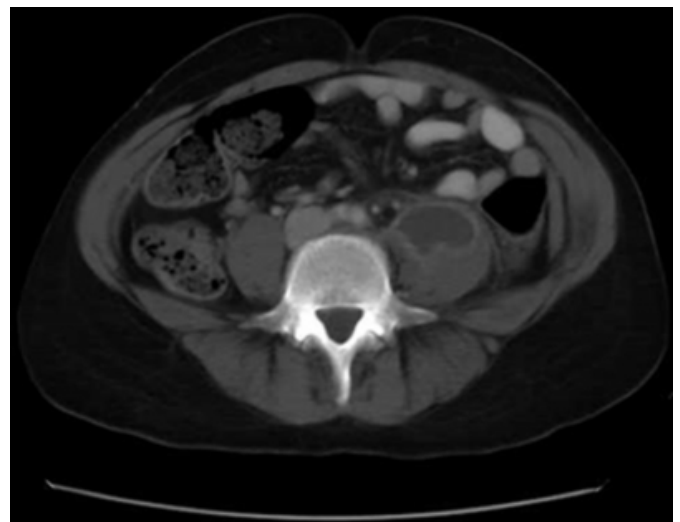
A 40-year old female presented with a two-day history of fever, diarrhoea and vomiting associated with left iliac fossa pain. She had no significant past medical history except a simple left nephrectomy which was carried out a year earlier for chronic pyelonephritis. She was on no regular medication at the time of admission.

On examination, she was pyrexial of 37.8 °C with a tachycardia of 105 beats/min.

Abdominal examination revealed a localized tenderness with guarding in the left iliac fossa, and normal bowel sounds.

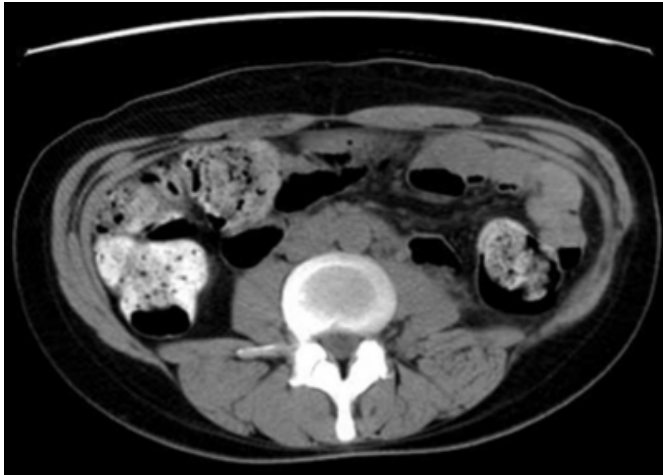
Initial blood tests showed a leucocytosis of 15.5 and a raised CRP level of 289. However, she had a normal haemoglobin level and renal function. Both abdominal and chest x-ray were also unremarkable, and urine dipstick was negative (subsequent urine culture negative as well).

Figure 1



A provisional diagnosis of acute diverticulitis was made and she was started on intravenous antibiotics. Then, an abdominal CT was carried out one-day post- admission which surprisingly showed a left psoas abscess measuring 7.1 x 3.6 x 2.3cm (fig 1).

Figure 2



In light of this finding, a percutaneous drainage of this abscess under a CT guidance was arranged. However, over the next few days, the patient began to feel better, and both the white cell count (WCC) and CRP returned to normal. At the time of the drainage procedure, it was noted on CT that the psoas abscess had almost completely resolved (fig2). The percutaneous procedure was therefore abandoned. Clinically, the patient remained well and was discharged home with follow-up plans for a repeat examination and CT scan.

A month later, she represented with similar symptoms, and a raised WCC of 15.9 and CRP of 110. Again, she was pyrexial and had a normal renal function, and urine dipstick again was negative with no subsequent growth.

Figure 3



A repeat CT scan of the abdomen showed re-accumulation of the left psoas collection measuring 2.4 x 1.4 x 2cm and a dilated ureteric stump. It was then felt that this could be an accumulation of urine secondary to an ureteric reflux from the ureteric stump following her previous left nephrectomy for chronic pyelonephritis. To investigate this further, she had an ureterogram via a 5FG ureteric catheter introduced through the left ureteric orifice. This confirmed the clinical suspicion of the presence of an ureteric reflux revealing a cavity in the left psoas muscle communicating with the left ureter (fig3). Subsequently, she underwent a laparotomy for abscess drainage and ligation of the ureteric stump from which she made an uneventful recovery and was discharged home. A follow-up CT scan showed no re-accumulation.

### DISCUSSION

A psoas abscess is a rare condition that can be extremely difficult to diagnose (<sub>4,7,8</sub>). This frequently leads to a delay in making the diagnosis and a consequently prolonged hospital stay and an increased morbidity rate (<sub>10</sub>). The typical triad of fever, flank pain, and limitation of hip movement is present only in 30% of cases (<sub>4</sub>). Other symptoms include malaise, anorexia, lower back pain, a palpable mass, or pyrexia of unknown origin (<sub>2,6,8</sub>).

Laboratory tests such as raised leucocytes count and

inflammatory markers are useful in the evaluation of suspected psoas abscess, but none are universal findings.

As in most clinical scenarios, diagnosis is aided (confirmed) by appropriate radiological investigations. CT scanning has proved superior to ultra sound scanning and is considered the radiological investigation of choice (1,9).

Psoas abscesses can be classified into primary or secondary depending on the underlying cause. A primary psoas abscess has no obvious focus of infection being most prevalent in young patients and more common than secondary abscesses.

*Staphylococcus aureus* is the causative pathogen in most cases (8,9). Others include streptococcus and *E.coli* (8). A secondary psoas abscess occurs by direct spread from contiguous structures, causative pathogens including *E.Coli*, and other enteric bacteria (8,9). The source of infection is usually a diseased gastrointestinal tract. Despite its close anatomical relation, the urinary tract has been less frequently associated with abscess formation (2,7,9).

Very few cases of psoas abscess following nephrectomy have been reported in the literature. The aetiology is thought to be related to spread of an acute vesical infection through the ureter (2,7). In this case, it was directly due to an ureteric reflux from the ureteric stump as repeated urine culture showed no significant growth on different occasions.

Treatment of psoas abscess involves the use of appropriate antibiotics as well as drainage of the abscess. Drainage may be percutaneous or surgical. CT-guided drainage has been proven to be both effective and minimally invasive in dealing with this condition (3,5), and has been advocated as the method of choice. Surgery is only indicated when

percutaneous drainage fails, or when the abscess is multi-locular (1,3).

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