

Bilateral PSOAS Abscess - One of the Largest of its Kind - Case Report

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Abstract: PSOAS Abscess is a less known illness with varied signs and symptoms depending on multiple factors like size, location, duration, etc. We report a case wherein a young lady presented with complaints of persistent pain in lower back associated with gradual weight loss and lassitude over several months. Imaging revealed a bilateral PSOAS abscess measuring 22 cm on the right side, which was probably among the largest of its kind. She was managed with pigtail drainage and anti-tubercular therapy leading to gradual but complete recovery. There are multiple studies related to PSOAS Abscess in Medical literature, however to the best of our knowledge, PSOAS abscess as large as 22 cm is yet to be reported. It is prudent to document such cases so as to have a better understanding about the extent of disease progression and have a high index of suspicion for early diagnosis and treatment of the disease.

Keywords: PSOAS Abscess, Weight Loss, Pain, Lassitude, Imaging

1. Introduction

PSOAS muscle abscess is located in the ilioPSOAS retrofascial compartment, which is the posterior boundary of the retroperitoneum. Hence it can extend from mediastinum superiorly to thigh inferiorly^[1]. It can present with the classic triad of fever, flank or back pain and PSOAS spasm, which is seen in only about 30% of the patients^[2]. Other symptoms include malaise, weight loss, restricted hip-movement or even lump abdomen^[3]. In this context, increase in pain on hip-extension and decrease in pain on hip-flexion is classically described as the “PSOAS Sign”^[4]. PSOAS abscess can be diagnosed by imaging wherein CT/MRI are most sensitive. Image guided percutaneous drainage and course of targeted antibiotics is the treatment of choice. Less frequently more invasive open drainage is required^[3].

2. Clinical Presentation

30 years old lady presented to our hospital in eastern India, with 02-month history of fever- on and off, and pain in abdomen, back and pelvis while walking. She gave history of unintentional weight loss one year back, however nothing significant was detected on evaluation. She gave no history of any surgery or implants or steroid-usage or any gastrointestinal / genitourinary complaints or high-risk behavior.

On admission, she weighed 38.6 kilograms, was afebrile with normal pulse & blood pressure. Abdominal examination revealed diffuse abdominal swelling over right flank and right iliac fossa, which was tender on deep palpation. She had restricted right hip elevation and limited forward bending.

Investigations revealed raised C-Reactive Protein of 24 mg/l and ESR of 70 mm/h, with Hb 9.2 gm/dl and TLC 10,000/cmm with predominant polymorphs of 77%. PBS showed normochromic and normocytic anemia. Her liver

function and kidney function tests were within normal limits. Ultrasound revealed a large elongated cystic lesion with multiple tiny echogenic foci within, seen extending from right lumbar region to right iliac fossa, measuring 14x6 cm (CC x AP),? Mucocele of Appendix, with advice to undergo CECT Abdomen & Pelvis. CECT showed bilateral PSOAS collections- right sided collection was ~ 220 x 55 mm and left was 74 x 27 mm, with destructive changes of D11-L1 vertebral bodies. Final impression given was Bilateral PSOAS Abscess with Pott’s Spine.

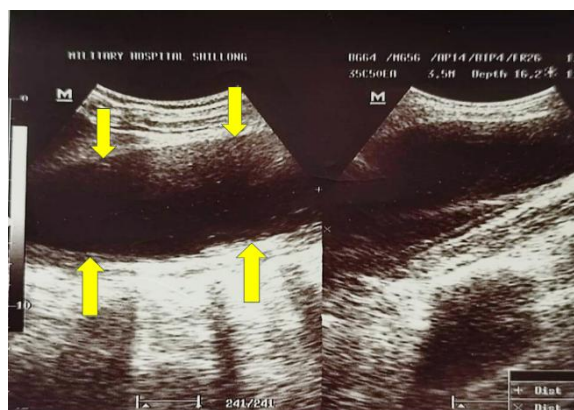


Figure 1

Ultrasound shows large elongated cystic lesion ~14x6 cm, extending from right lumbar region to right iliac fossa

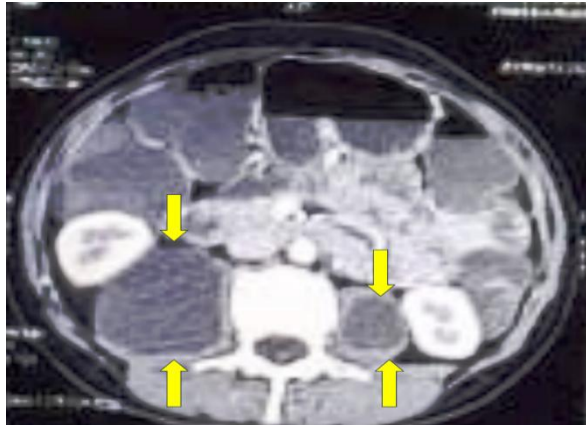


Figure 2

CECT Abdomen – Transverse Plane showing Bilateral PSOAS Abscess

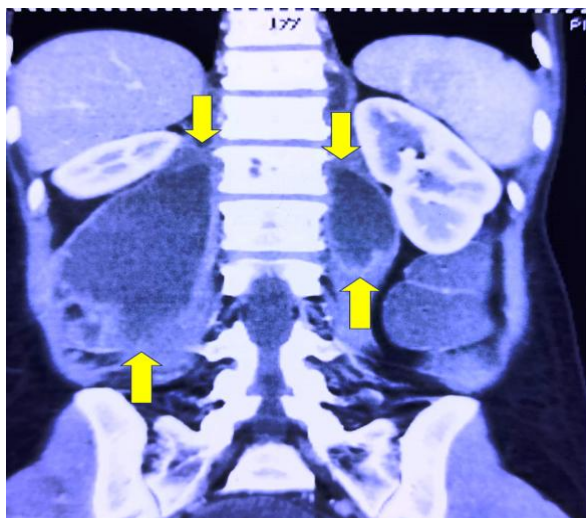


Figure 3

CECT Abdomen – Coronal Plane showing Bilateral PSOAS Abscess displacing ipsilateral kidneys

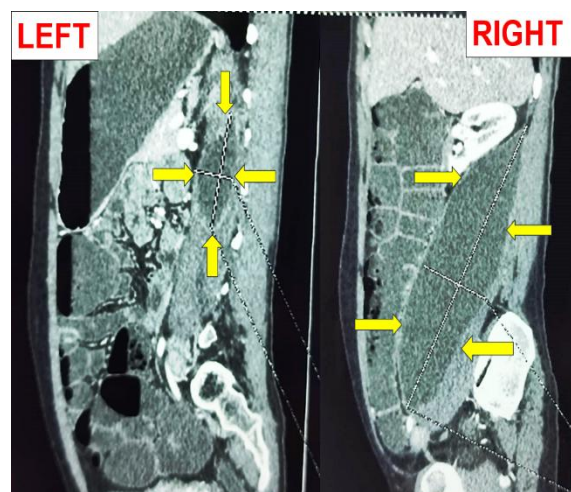


Figure 4

CECT Abdomen – Sagittal Plane showing Bilateral PSOAS Abscess

(Right side ~ 220 x 55 mm & Left side ~ 74 x 27 mm)

The patient was managed with USG guided percutaneous drainage with pigtail insertion. At first, approximately 450 ml pus was drained during the procedure and later a total of 1050 ml pus was collected in pigtail drainage over next 04

days. Subsequently, pigtail drain was removed on 5th day. Repeat ultrasound revealed resolution of PSOAS abscess collection and patient had significant improvement in pain and hip movements.

The pus was whitish in color and revealed lymphocytic predominant with high Adenosine De-Aminase value of 268 units/L. Microbiological studies confirmed Mycobacterium tuberculosis. She was treated with initial 05 days of injection Amoxi-Clav and later started on weight-adjusted Anti-Tubercular regime of quadruple therapy (Isoniazid, Rifampicin, Pyrazinamide and Ethambutol). Later after 02 months, Dual therapy was continued.

On subsequent monthly follow-up for 01-year, patient showed progressive improvement with complete resolution of her symptoms and gained weight over next few months.

3. Discussion

Ilio-PSOAS Abscess (IPA) was first described by Mynter in 1881, wherein he referred it as Psoitis^[1]. In early 20th century, the incidence was 0.4/1,00,000^[3]. This was probably owing to difficult diagnosis – insidious onset, non-specific complaints and poor imaging modalities. However, with advent of better imaging in the present era, PSOAS abscess is a fairly well-known disease especially in tertiary care centers.

On initial presentation of a suspected patient, it is important to differentiate between mechanical pain and inflammatory pain. Mechanical pain is typically acute in onset, worsen with physical activity, relieved on rest and not associated with morning stiffness. Whereas inflammatory pain is insidious in onset, worsen with rest, relieved with physical activity and often associated with morning stiffness^[4].

PSOAS abscess can be primary or secondary depending on presence or absence of underlying disease. Primary abscess comprises about 1/3 of the cases and majority 2/3 are secondary abscess^[6]. Primary PSOAS muscle abscess occurs probably as a result of hematogenous spread of an infectious process which is more common in patients with Diabetes, IV drug abuse, AIDS, Tuberculosis, Renal failure, Malignancy & Immuno-suppression. This local hematogenous spread is attributed to the rich venous plexus of the PSOAS muscle^[5]. On the other hand, Secondary PSOAS abscess can result from pathologies of surrounding organs like appendicitis, diverticulitis, Crohn's Disease or perforated colon, renal infections and spondylodiscitis. In general, Primary PSOAS abscess have a better prognosis than secondary abscess^[1].

Microbiological studies reveal that primary abscess is mainly due to Staphylococcus, Streptococcus, Pseudomonas, Hemophilus, Proteus, etc. whereas secondary abscess is caused by mostly enteric organisms like E coli, Enterobacter, Salmonella, etc.^[3]. In developing countries, Tuberculosis is still a major cause of secondary PSOAS abscess^[2].

With advances in modern imaging technologies, minimally invasive drainage is the recommended treatment along with

regional epidemiological patterns of susceptibility^[6]. Studies have suggested that the cutoff for non-invasive antibiotic alone treatment and invasive drainage treatment be between 3-6 cm^[6,7]. Modern interventional radiologists consider CT-guided drainage to be superior to USG-guided drainage due to interference of overlying bowel gas, multiloculated abscess and assessment of pathologies in adjacent organs^[8]. Few centers have also reported drainage using latest Navigation guided systems^[6].

The cause of death in untreated cases is usually septic shock^[2] with few studies suggesting mortality rates ranging between 8-44%^[10].

As per the available medical literature, the previous largest documented PSOAS abscess measured 19-20 cm^[3,9], whereas we report this case with size of 22 cm in the largest dimension. It is prudent to document such cases to assess the progression of the disease process which can adversely affect the prognosis and impact the final outcome.

4. Conclusion

In view of vague non-specific complaints of patients, high index of clinical suspicion and early imaging are the keys to diagnosis of any PSOAS Abscess.

Informed Consent

Informed consent was obtained prior to performing the procedure, including permission for publication of all photographs and images included herein.

Conflict of interests

The authors have none to declare.

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