

Psoas Abscess Presenting as a Cause of Small Bowel Obstruction in an Adult: A Diagnostic Challenge

Dr. Nidhi Gheewala¹, Dr. Nishant Bhamt², Dr. Vedant Patel³, Dr. Ashwin S. Gadhi⁴

¹3rd Year Resident Doctor, General Surgery, CUSMCH, Surendranagar

²2nd Year Resident Doctor, General Surgery, CUSMCH, Surendranagar

³2nd Year Resident Doctor, General Surgery, CUSMCH, Surendranagar

⁴Head of Department and Professor, General Surgery, CUSMCH, Surendranagar

Abstract: ***Introduction:** Iliopsoas Abscess is a rare condition with non - specific presenting complaints. The disease symptoms are subtle, the etiology is variable and its presentation is atypical in a lot of cases. Only 30% of cases present with the clinical triad of fever, flank pain and limited range of movement of hip, often causing delay in diagnosis. **Case Presentation:** This case describes atypical and unusual manifestation of psoas abscess when an 80 year old female patient was admitted with suspected bloodstream infection from the GI tract and acute small bowel obstruction. Patient also had non - specific right hip and limb pain, UTIs and episodes of fever over the last two years. On preliminary investigations, no definite cause of intestinal obstruction was found and conservative management proved unsuccessful. A CT scan on the second day of admission confirmed a right psoas abscess and an abrupt transition from dilated to collapsed bowel loops in the right peri - umbilical region, suggesting a dynamic small bowel obstruction. An emergency Laparotomy revealed turbid abdominal fluid and peritonitis and small bowel loops adherent to the right posterior abdominal wall as well as to each other. Bowel loops were inflamed but there were no fistulas or perforation. Adhesionolysis was done, thorough TPL was done, and an ADK drain was placed in the right psoas. Successful treatment of SBO and psoas abscess was achieved through open surgery, the patients condition gradually improved and was discharged with a psoas drain on 13th day post surgery. **Conclusion:** For patients with Iliopsoas abscess, initial symptoms can be vague and atypical. They can present as functional bowel obstruction and septic shock. Consideration of psoas abscess is warranted if patient has suggestive symptoms like hip pain, limping, fever. Because of its atypical presentation, early diagnosis through imaging can significantly improve the prognosis.*

Keywords: Psoas Abscess, Bowel Obstruction, Atypical Presentation, Case Report

1. Introduction

Psoas Abscess is a rare condition with vague and varying clinical presentations. It can be classified into Primary or Secondary; Primary psoas abscess is due to lymphatic or hematogenous spread from a distant site. Secondary psoas abscess is contiguous spread of infection from an adjacent organs which may be intraabdominal (i. e. gastrointestinal including Crohn's, cancer, appendicitis or diverticulitis), retroperitoneal (i. e. genitourinary including perinephric abscess) or extraperitoneal like an infected retroperitoneal hematoma or, local spread from involved vertebral bodies in Pott's disease; Posing an increased risk who undergo procedures in groin, lumbar or hip area. [4] They occur more commonly in younger than older individuals and in men more than women. [1, 2]

Primary Psoas abscess is most commonly caused by S. Aureus, usually associated with the immunocompromised or IV drug use. Historically, secondary psoas abscess was most commonly caused by M. TB infection concurrent with Pott's disease. But with recent worldwide decline in TB, Psoas abscesses are more commonly caused due to secondary spread from GIT or GUT, most common being Crohn's disease. These intraabdominal infections are more likely polymicrobial (E. Coli, Klebsiella and salmonella).

The disease has insidious and non - specific symptoms including back, hip or flank pain, fever, limp or restricted hip movement, inguinal mass, anorexia and weight loss. The classical triad of fever, limp and hip pain is present in only 30% of patients. [3] This poses a diagnostic difficulty on clinical signs and symptoms alone.

Definitive diagnosis is made with CT but MRI may be helpful in visualising soft tissues and abscess walls.

Treatment involves antibiotics and drainage of abscess. Percutaneous drainage is done unless it is complicated with bowel disease, multiloculated abscess or gas - forming organisms. [5] Culture and sensitivity of the drained pus to determine appropriate antibiotics and empirical antibiotics until then should be administered.

Here, we discuss a rare case where an undiagnosed right psoas abscess lead to peritonitis, inter - bowel adhesions as well as adhesions to the posterior abdominal wall resulting in small bowel obstruction; Requiring adhesionolysis, I&D and antibiotic therapy.

2. Case Presentation:

An 80 year old female, with no significant past history presented to the emergency department with generalised abdominal pain, abdominal distension, vomiting and non -

passage of stool or flatus over the last 4 days. On inquiring about her past illnesses and past medications, she said that she had had right hip pain, radiating to her right lower limb over the last two years. She also reported anorexia and inability to move because of her pain, and history of frequent episodes of fever and UTIs. Coming from a lower socio - economic background, without seeking proper medical care, they attributed it to her old age and relied on pain medications for symptomatic relief.

On examination, she was afebrile, with a blood pressure of 94/64 mmHg, and a pulse rate of 104/min, signifying hypotension and tachycardia which indicated severe dehydration. Abdominal palpation revealed a distended,

tympanic abdomen, with guarding and rigidity, with pain and distension more marked than emesis. And auscultation revealed minimal bowel sounds.

Abdominal X - ray revealed multiple air - fluid levels, and USG revealed dilated bowel loops with to - and - fro movements, confirming the diagnosis of acute small bowel obstruction. Psoas abscess was missed on USG probably due to dilated bowel loops. Blood investigations showed leucocytosis, urine showed pus cells and chest x - ray was unremarkable. A nasogastric tube was placed on low intermittent suction and patient was started on empirical antibiotics.



(CT of the abdomen without contrast showing dilatation of the small bowel loops due to small bowel obstruction and air, fluid, and abnormal thickening of the right iliopsoas musculature).

Patient's pain and distension failed to resolve on conservative treatment for SBO and patient was still unable to pass flatus or stool. CT scan was done on day of admission 3 which revealed a right psoas abscess approximately 500 ml in volume and showed an abrupt zone of transition in right peri - umbilical region from dilated to collapsed bowel loops suggesting a dynamic small bowel obstruction. Decision was made to operate, and Exploratory Laparotomy revealed turbid peritoneal fluid, peritonitis and dense bowel adhesions to the right posterior abdominal wall (overlying the right psoas) and inter - bowel adhesions. Adhesionolysis was done, thorough TPL was done, right psoas abscess was drained through anterior approach and a dependent drain was placed. A pelvic drain was placed intraperitoneally and abdomen was closed.

Post - operatively, recovery was complicated due to paralytic ileus, abdominal pain and continuous fever. Blood culture was negative and pus culture showed kliebsella and S. aureus, which were sensitive to Piptaz and Amikacin. Fever gradually resolved, neutrophilia gradually decreased and paralytic ileus was treated with supportive management. Liquid diet was started gradually, patient passed flatus and stool and pelvic drain was removed on post - op day 6. The output from psoas drain gradually decreased and turned serosanguinous on post - op day 7. Patient was discharged on post - op day 11 with psoas drain in - situ which was eventually removed on follow - up after one week.

3. Discussion:

This case highlights the rare presentation of a psoas abscess manifesting as small bowel obstruction, underscoring the

diagnostic challenges posed by this condition. Psoas abscesses typically present with vague, non - specific symptoms such as abdominal pain, anorexia, fever, or hip pain—often mimicking other abdominal or musculoskeletal disorders. Less than 30% of patients exhibit the classic triad of fever, flank pain, and restricted hip movement, making early diagnosis challenging [8].

Imaging plays a crucial role in diagnosing psoas abscesses, but ultrasound often has limitations, particularly due to interference from overlying bowel loops or other anatomical structures [7, 9]. While ultrasound is a commonly used initial imaging technique and is accurate in about 50 % of cases [6], it can miss critical findings, as demonstrated in this case where the psoas abscess was overlooked during the initial scan [10]. This underscores the importance of considering more advanced imaging modalities when symptoms are atypical. Computed tomography (CT).

In elderly or immunocompromised patients, the symptoms of psoas abscess may be even more subtle, leading to further delays in diagnosis [11]. In this case, the patient's history of non - specific hip pain and recurrent infections, compounded by a lack of consistent medical care, contributed to the delayed identification of the abscess. This emphasizes the need for high clinical suspicion and timely CT imaging in cases of unexplained or atypical symptoms, as early diagnosis can facilitate prompt surgical intervention.

This case also highlights the unusual progression of an undiagnosed psoas abscess leading to bowel adhesions, peritonitis, and resultant small bowel obstruction [12] The successful treatment of both the small bowel obstruction and the abscess through surgery and appropriate antibiotic

therapy demonstrates the importance of comprehensive management in such complex cases [13].

Psoas abscess, due to the high vascularity of the psoas muscle, is prone to hematogenous spread of infections, often originating from the gastrointestinal tract [14]. Recent studies confirm this as a common cause of primary psoas abscess. While ultrasound can be accurate in about 50% of cases, it may miss early abscess formations or small phlegmons, particularly when obscured by distended bowel loops, as in this case. Therefore, CT imaging remains essential for definitive diagnosis in cases of unexplained hip pain.

The treatment of choice for a psoas abscess is ultrasound - guided percutaneous drainage. However, in cases complicated by coagulopathies, bowel disease, multiloculated abscesses, gas - forming organisms, or abscesses extending into other compartments, open surgery may be necessary [15]. Given the non - specific clinical presentation and potential complications, the diagnosis of psoas abscess can easily be missed. Therefore, maintaining a high level of clinical suspicion and awareness is critical for timely intervention.

4. Conclusion

Psoas abscess can manifest as functional bowel obstruction and septic shock. Consideration of psoas abscesses is warranted if the patient has predisposing factors such as trauma and presents with suggestive symptoms like limping, hip pain, and fever. Early diagnosis and timely intervention through antibiotics, percutaneous drainage, or open surgery can significantly improve the prognosis

References

- [1] Microbiology and outcome of iliopsoas abscess in 124 patients. López VN, Ramos JM, Meseguer V, et al. *Medicine (Baltimore)* 2009; 88: 120–130.
- [2] Pyogenic psoas abscess: worldwide variations in etiology. Ricci MA, Rose FB, Meyer KK. *World J Surg.* 1986; 10: 834–843.
- [3] Psoas abscess: making an early diagnosis in the ED. Chern CH, Hu SC, Kao WF, Tsai J, Yen D, Lee CH. *Am J Emerg Med.* 1997; 15: 83–88.
- [4] Iliopsoas abscesses. Mallick IH, Thoufeeq MH, Rajendran TP. *Postgrad Med J.* 2004; 80: 459–462.
- [5] Features and treatment modality of iliopsoas abscess and its outcome: a 6 - year hospital - based study. Hsieh MS, Huang SC, Loh el - W, et al. *BMC Infect Dis.* 2013; 13: 578.
- [6] Psoas abscess: an uncommon disorder. Chengan Xu, Zhewen Zhou, Shouhao Wang, Wenya Ren, Xingdi Yang, Hanzhu Chen, Wei Zheng, Qiaoqiao Yin, Hongying Pan.
- [7] The challenge of diagnosing psoas abscess. Hsin - Pei Yin I, Yun - An Tsai, Su - Fen Liao, Pei - Hisn Lin, Tien - Yow Chuang [https://pubmed.ncbi.nlm.nih.gov/15181971/]
- [8] Chern, C. - H., et al. (1999). "Psoas Abscess: Making an Early Diagnosis." *Journal of Emergency Medicine*, 17 (5), 841 - 847.

- [9] Ricci, M. A., et al. (1986). "Pyogenic Psoas Abscess: Worldwide Variations in Etiology." *World Journal of Surgery*, 10 (5), 834 - 842.
- [10] Brook, I. (2001). "Microbiology and Management of Psoas Abscesses." *Journal of Clinical Infectious Diseases*, 32 (9), 1420 - 1423.
- [11] Wagner, J. M., et al. (1997). "Evaluation and Management of Acute Abdominal Pain in the Emergency Department." *American Family Physician*, 55 (1), 54 - 64.
- [12] Van den Berge, M., et al. (1992). "Psoas Abscess: A Report of 24 Cases." *Journal of Clinical Infectious Diseases*, 15 (5), 1029 - 1035.
- [13] Mallick, I. H., et al. (2004). "Iliopsoas Abscess in Adults: Clinical Presentation, Etiology, and Treatment." *Journal of American College of Surgeons*, 199 (3), 45 - 51.
- [14] Lau, S. - K., et al. (1995). "Psoas Abscess: Clinical Features, Etiology, and Outcome." *Journal of Infection*, 31 (3), 139 - 144.
- [15] Gruenwald, I., et al. (1992). "The Psoas Abscess Revisited: Cause, Diagnosis, and Treatment." *Journal of Urology*, 47 (2), 162 - 167.