Case Report

Mucinous Adenocarcinoma of the Colon Presenting as a Psoas Abscess and Enterocutaneous Fistula: A Diagnostic Challenge

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ABSTRACT

Mucinous adenocarcinoma, also termed colloid carcinoma, represents a histological variant of colorectal cancer defined by extensive extracellular mucin production. It occurs slightly more often in females and tends to arise in the proximal colon. This uncommon malignancy may manifest with nonspecific or atypical clinical signs. We describe the case of a 37-year-old man, who presented with recurrent right-sided psoas abscesses and a discharging sinus, later complicated by the development of an enterocutaneous fistula. The definitive diagnosis of mucinous adenocarcinoma was established only after histopathological evaluation of the resected specimen. This case report emphasizes the diagnostic difficulty of atypical presentations of mucinous adenocarcinoma and underscores the need to consider an underlying malignancy in patients with recurrent or persistent abscesses.

Keywords: *Mucinous adenocarcinoma, psoas abscess, tuberculosis, enterocutaneous fistula, colorectal cancer*

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INTRODUCTION

Mucinous Adenocarcinoma of colon was first described in early 1923 by Dr Duncan Parham. It has been previously described in many literatures as colloid carcinoma. This variant of Colo-rectal carcinoma is quite rare and often discovered at an advanced stage with a poor prognosis.[1] Key feature of this variety of carcinoma is aberrant and abundant mucin expression and composition, which can be seen on magnetic resonance imaging (MRI) scans. Clinically, mucinous adenocarcinoma often presents diagnostic and therapeutic challenges due to its aggressive behavior, tendency for local invasion, peritoneal dissemination, and relative resistance to standard chemotherapy regimens.[2] Due to this biological nature of the disease and its variable response to treatment, reporting individual cases are valuable in understanding the nature of the disease, the diagnostic pitfalls and management plan. This case report emphasizes the diagnostic difficulty of atypical presentations of mucinous adenocarcinoma and underscores the need to consider an underlying malignancy in patients with recurrent or persistent abscesses.

CASE PRESENTATION

A 37-year-old male admitted into the Department of Surgery, Mugda Medical College Hospital, Dhaka, Bangladesh, in August 2025, with the complaint of discharge from his previous operative wound for 1 week. He underwent three incision and drainage surgeries for a right-sided psoas abscess over the course of the last 10 months and excision of a fistulous tract from a right lumbar wound 3 months back. During his last admission In April 2025, he presented with loin and back pain accompanied by a fever that lasted for 2 weeks. On general examination, he had tachycardia with raised temperature. On abdominal examination, he had a fluctuant swelling in his right iliac fossa. A small opening was visualized in his right lumbar incision wound through which there was a small amount of discharge coming out. He had tenderness and guarding in his right iliac fossa and right lumbar region. He also had tenderness in his right costovertebral angle. The psoas sign was positive. Other systemic examinations, including DRE, were found normal. A diagnosis of psoas abscess was made, and excision of the fistulous tract

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with drainage of the abscess was done through a previous lateral loin incision. The culture of the specimen yielded growth of E. coli. A biopsy of tissue from the psoas region revealed a mucinous adenocarcinoma (metastatic). Subsequently, computed tomography (CT) scans of the chest, abdomen, and pelvis were performed, along with endoscopy and colonoscopy. All these procedures were normal. Tumour markers, however, indicated elevated CEA levels (229.11 ng/ml). As the primary source could not be identified, he was advised to consult with the department of oncology, and a follow-up appointment was scheduled in six months. Since then, he had two additional admissions for wound dehiscence and discharge. Wound swabs were taken, and they were managed as surgical site infections. Treatment was given based on culture sensitivity reports. On his latest admission, he started to experience a gradually increasing discharge. He denied history of constitutional symptoms or any changes in bowel habits. Upon examination, all vital signs were within normal limits. The physical examination was normal, and only a small, discharging sinus was identified through which whitish, non-feculent discharge was emanating. Initially, he was diagnosed as a case of chronic discharging sinus, possibly due to tuberculosis. All his tuberculosis tests done between November 2024 and September 2025 (i.e., MT test and sputum for AFB), along with the QuantiFERON gold test, were found negative. Despite the negative test results, he was still started on anti-tuberculosis medication during the assessment because of the disease's endemic nature. However, the latest magnetic resonance imaging (MRI) scans revealed large right iliopsoas abscess (Fig. 1). Magnetic resonance sinogram showed large right iliopsoas abscess with fistula at the right lateral lower abdominal wall (Fig. 2). Fistulogram showed irregular fistulous track is noted and communicated with the cecum and ascending colon, which was suggestive of entero-cutaneous fistula (Fig. 3). Due to his poor financial condition, further CT scan and colonoscopy were not done; he was diagnosed as a case of entero-cutaneous fistula, possibly as a complication from previous operative procedure, and prepared for exploratory laparotomy.

Peroperatively, a firm growth was found on the upper part of the caecum involving a portion of the ascending colon. The caecum and ascending colon were densely adherent with the lateral wall, and a fistulous tract was identified communicating with the upper part of the caecum. The decision for a right hemicolectomy with dismantling of the fistulous tract followed by ileo-colic anastomosis was taken. His postoperative course was uneventful. Histological specimen consists of a 25 cm long loop of right hemicolectomy specimen including terminal ileum, caecum and part of colon with mesenteric fatty tissue. On opening, the caecal mucosa shows a 4.5 cm tumorous lesion. Histopathological diagnosis was adenocarcinoma, mucin secreting. Grade II, with pathological stage (pTNM): pT3N0Mx and Astler Coller Stage: B2. For tissue labeled as fistulous tract showed wall of fistulous tract with infiltration by mucinous adenocarcinoma.

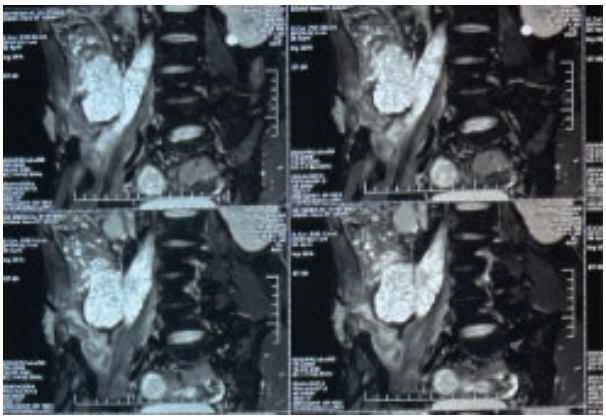

Fig. 1: *MRI scans showing large right iliopsoas abscess.*

Fig. 2: *MR sinogram showing large right iliopsoas abscess with fistula at the right lateral lower abdominal wall.*

Fig. 3: *Fstulogram showing entero-cutaneous fistula.*

DISCUSSION

Psoas abscess is an abscess of the retroperitoneum. Previously they were known to be mainly caused by *Mycobacterium tuberculosis* of the spine (Potts disease).[3] Usually from an occult source, the primary type is caused by haematogenous or lymphatic spread of germs and occurs in immunocompromised persons, including diabetics, alcoholics, intravenous drug abusers, patients with HIV, cancer patients, and people with chronic illnesses. *Staphylococcus aureus* accounts for 88% of all pathogenic microorganisms, with *Streptococci* (5%) and *Escherichia coli* (3%), following closely behind. An infectious process's local extension is the cause of the secondary kind of iliopsoas abscess. The most frequent causes of secondary abscess in affluent nations are chronic inflammatory disorders of the digestive system, including Crohn's disease (60%) appendicitis (16%) ulcerative colitis, diverticulitis, and colon cancer (11%).[4,5] In Bangladesh, one of the main causes of psoas abscess is tuberculosis.

Mucinous colorectal adenocarcinoma accounts for approximately 10–20% of colorectal cancers, though its prevalence in Asian populations is lower (around 4–5%).[5] These tumors are typically located in the right colon and often detected at advanced stages. Compared with conventional adenocarcinoma, the mucinous variant tends to progress more rapidly and demonstrates poorer resection outcomes. Molecularly, it is characterized by overexpression of MUC2 and MUC5AC mucin proteins, frequent activation of the RAS/MAPK and PI3K/Akt/mTOR signaling pathways, and a higher rate of microsatellite instability. It is still unknown how psoas abscess formation occurs in colon cancer patients; it might be due to the tumour outgrowing the blood supply, followed by necrosis and abscess formation when enteric bacteria are present.[5,7] Systemic spread, direct spread, perforation of the afflicted organ, or peritoneal seedling can all cause it. It has also been observed to spread to the psoas lymph nodes, which are situated between the spine and the muscles. The classic presentation of fever, limp, and back discomfort is seen in about 30% of people.[6] Compared to other adnocarcinomas, mucinous adenocarcinoma has higher levels of arylsulphatase and lysozyme enzymatic activity. These two enzymes can break down the proteoglycan barrier, allowing the cancer to invade and spread. Abscesses develop in and around the infiltrating tissues as a result of tumour cells penetrating the intestinal wall and creating internal or exterior fistulas. Colonic cancer should be suspected in patients who come with an unexplained iliopsoas abscess that has no discernible main or secondary aetiology. At stages I and II, the prognosis for patients with colorectal mucinous adenocarcinoma is comparable to that of patients with non-mucinous carcinoma; however, at stages III and IV, the prognosis is noticeably worse.[6-8]

CONCLUSION

Diagnosing psoas abscess can be particularly challenging in regions, where tuberculosis is common, e.g., in Bangladesh. Nevertheless, when an abscess persists or recurs despite adequate antimicrobial or surgical management, clinicians should consider the possibility of an underlying sinister pathology such as malignancy.

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Authors' contribution: All authors were equally involved in patient selection, clinical diagnosis, management and data collection. All of them were equally involved in literature search and review as well as manuscript preparation, editing and final submission.

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