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CASE REPORT

A case of retroperitoneal panniculitis with paralytic ileus mimicking a high intestinal obstruction

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ABSTRACT

Background: Retroperitoneal panniculitis is a rare, benign, and nonspecific inflammatory disease that affects the retroperitoneal adipose tissue. The specific cause of the disease is unknown. The diagnosis is evoked by computed tomography (CT) and is rarely confirmed by biopsies. Surgical resection is sometimes attempted for complicated forms. A case of a 22-year-old man was presented who was diagnosed with retroperitoneal panniculitis, further, a literature review was also conducted to compare various presentations, etiologies, and potential treatment modalities.

Case presentation: A 22-year-old man presented to the emergency department with acute abdominal pain and episodes of postprandial vomiting. A physical examination revealed marked epigastric tenderness accompanied by abdominal distension. The blood examination revealed normal lipase and amylase levels. An abdominal contrast-enhanced CT showed retroperitoneal panniculitis complicated by a paralytic ileus. A self-limiting course of the disease was obtained by adopting a conservative approach. After 20 days, there were no abnormal findings on CT and the patient was referred to internal medicine consultation for additional care.

Conclusion: Diagnosis of retroperitoneal panniculitis is a real challenge to surgeons, gastroenterologists, radiologists, and pathologists. Consequently, it is imperative that all hospital practitioners should distinguish between this benign lesion and malignant diseases.

Keywords: Retroperitoneal panniculitis, paralytic ileus, CT scan, conservative approach, case report.

Introduction

Retroperitoneal panniculitis is a rare benign disease of unknown etiology, characterized by non-specific inflammation of retroperitoneal adipose tissue. The pathophysiology of this lesion remains unclear; however, few reports suggested a hypothesis that might be useful in the early diagnosis and for elucidating the pathophysiology [1]. Computed tomography (CT) showed features of retroperitoneal panniculitis, usually highly suggestive, have recently been described clearly. CT-guided or laparoscopic biopsies seem rarely necessary to confirm the diagnosis [1,2].

A case of a 22-year-old man was presented who was diagnosed with retroperitoneal panniculitis, further, a literature review was also conducted to compare various presentations, etiologies, and potential treatment modalities.

Case Presentation

A 22-year-old man developed acute onset of perpetual epigastric pain and intermittent episodes of postprandial vomiting and nausea and presented to the emergency department 24 hours after the beginning of symptoms. There was no significant medical or family

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history. A physical examination revealed marked epigastric tenderness accompanied by abdominal distension without muscular defense. A diagnosis of acute pancreatitis was suspected. However, the blood examination revealed normal lipase and amylase levels. An abdominal contrast-enhanced CT showed a high-density lesion of retroperitoneal panniculus adiposus tissue especially behind the pancreas, with a paralytic ileus (Figure 1).

A final diagnosis of retroperitoneal panniculitis was considered. The symptoms gradually disappeared and white cell count and C-reactive protein returned to normal on day 5. The patient was discharged on day 8 after receiving conservative treatment. After 20 days, there were no abnormal findings on CT and the patient was referred to internal medicine consultation for additional care.

Discussion

Retroperitoneal panniculitis is a rare benign disease characterized by chronic and nonspecific inflammation of retroperitoneal adiposus tissue. Abdominal panniculitis was first reported by Jura in 1924 in mesenteric fat tissue. However, few cases of retroperitoneal panniculitis have been previously described. It usually affects men with a male/female ratio of 1.8 and its incidence increases with age [1-3].

The causes and pathogenesis of retroperitoneal panniculitis are unknown. Infection, autoimmune disease, malignant neoplasm, and previous abdominal surgery have been implicated by some authors [4]. The presented patient was considered to have an idiopathic etiology by reason of the self-limited course.

The disease is often asymptomatic. When present as in the case of the current patient, clinical symptoms are non-specific and include abdominal pain, abdominal fullness, nausea, vomiting, anorexia, pyrexia, change in bowel habits, and weight loss [5]. Physical examination might contain a palpable mass, abdominal tenderness, abdominal distension, muscular defense, and ascites [5,6].

The laboratory profile of retroperitoneal panniculitis is non-specific and generally unhelpful [6,7]. However, with the arrival of the latest imaging technology like high-resolution CT or magnetic resonance imaging, distinguishing retroperitoneal panniculitis from other retroperitoneal lesions with similar imaging features such as lymphoma, lymphosarcoma, liposarcoma, desmoid, and metastatic neoplasm seems feasible [8,9]. The imaging appearance of retroperitoneal panniculitis is visualized usually as a high-density heterogeneous lesion of retroperitoneal panniculus adiposus tissue. Calcification or a fibrous capsule might be seen and generally, no invasion of adjacent structures is present [5-9].

Histological examination is sometimes recommended to confirm the diagnosis, especially for symptomatic and chronic cases. Multiple CT-guided or laparoscopic biopsies are required as an alternative to laparotomy [10].

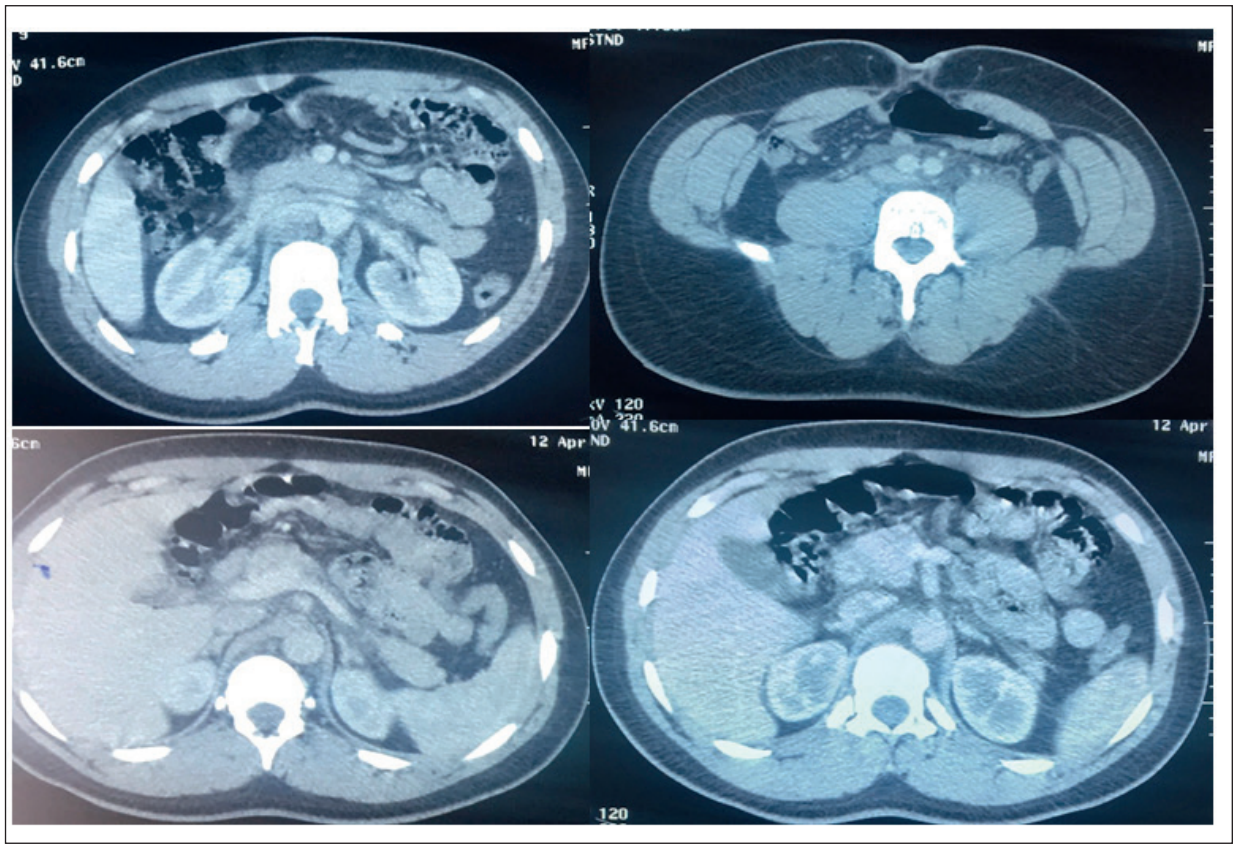

Figure 1. *Transverse CT scan of the abdomen showing a high-density lesion within the retroperitoneal space.*

Retroperitoneal panniculitis resolves spontaneously in the majority of cases and it often runs a self-limiting course. Recurrences are very exceptional. The presented patient developed a paralytic ileus mimicking a high intestinal obstruction. Other rare complications are reported such as ureteral obstruction, reactive pancreatitis, and ascites [1-10].

Treatment is individualized on a case-by-case basis. A limited proportion of cases with persistent symptoms respond well to immunosuppressive therapy (corticosteroids, azathioprine, thalidomide, colchicine, or cyclophosphamide). As a form of therapy for retroperitoneal panniculitis, surgery might be attempted if medical therapy fails with the presence of complications [10].

Conclusion

Despite the rarity of retroperitoneal panniculitis, it is important that surgeons be conscious of its existence because, clinically and radiologically, it might be confounded with malignant disease. Obviously, this distinction is imperative, because patients with this benign lesion might be subjected to a conservative approach. Consequently, diagnosis of this nonspecific inflammatory condition is a real challenge to surgeons, gastroenterologists, radiologists, and pathologists.

List of Abbreviation

CT Computed tomography

Conflict of interest

The author declared that there is no conflict of interest regarding the publication of this case report.

Funding

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Consent for publication

Informed consent was obtained from the patient.

Ethical approval

Ethical approval is not required at our institution for an anonymous case report.

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