

Mesenteric Panniculitis Associated with Acute Pancreatitis

Fatima Belabbes^{1,2*}, Reda cherkaoui^{1,2}, Leila Abdallaoui^{1,2}, Rajaa Lafhel^{1,3}, Jihane Habi^{1,4}, Anass Nadi^{1,2}, Hanane Delsa^{1,2}, Fedoua Rouibaa^{1,2}

¹Department of Gastroenterology and Proctology, Cheick-Khalifa International University Hospital, Casablanca, Morocco

²Department of Gastroenterology and Proctology, 3Emergency Department, 4Radiology Department, Mohammed VI University of Health Sciences (UM6SS), Casablanca, Morocco

ABSTRACT

Introduction Mesenteric Panniculitis (MP) is a rare condition which presents as abdominal pain. It is characterized by chronic non-specific inflammation of the adipose tissue of the mesentery of the small intestine and colon. The specific etiology of this disease is unknown. However, the association between acute pancreatitis and MP is rarely described in literature. **Presentation of Case** We present a case of a 62 year-old woman with severe abdominal pain of acute onset. The patient has no particular medical history apart from hypertension and cholecystectomy. A computed tomography (CT) scan revealed a diagnosis of MP associated with stage A Balthazar pancreatitis, and the patient rapidly responded to steroid treatment. **Discussion** MP has been known to present as an acute abdomen. However, an associated acute pancreatitis is hitherto rarely reported in the literature. This case highlights the critical importance of early recognition in order to mitigate the possibility of poor outcomes. It is crucial for gastroenterologists to be aware of such etiologies of abdominal pain when evaluating patients who present with other wise typical symptoms presumptive of pancreatitis. **Conclusion** This case report underlines the importance of further research concerning the relationship between MP and acute pancreatitis. Our case emphasizes that MP may drastically improve under Corticotherapy (CT). In general, MP is a symptomatic, fortuitously discovered and therefore remains untreated.

INTRODUCTION

MP is also called adhesive mesenteritis is a rare disease. It is defined by chronic inflammation of the mesenteric fat. It mainly affects the mesentery and more rarely the mesocolon [1]. Its pathophysiology is poorly understood and non-specific. The regional increase in mesenteric fat density or 'misty mesentery' is a non-specific feature on abdominal CT which can be due to the infiltration of the mesentery by fluid or fibrous tissue. It can also be due to infiltration by inflammatory cells as in acute pancreatitis. The clinical symptom is very variable. MP is most often discovered incidentally on X-rays. However, the need to obtain a histological diagnosis frequently necessitates the use of surgery [2]. Here, we describe a case of MP in a patient with acute pancreatitis presenting with abdominal pain. Our observation reflects the rarity of this association in the literature.

CASE REPORT

A 62 year-old woman presents in the emergency room with severe abdominal pain for a week, of pancreatic type, radiating towards the back, associated with food vomiting without transit disorders or externalized digestive bleeding with preservation of the general condition. The patient has hypertension being managed by amlodipine and has a history of cholecystectomy. She had no known allergies. Clinical examination found an afebrile patient (temperature at 36.2°), with stable hemodynamic status; the abdominal examination showed pain in the epigastrium and left flank, and normal bowel sounds. Rectal examination was unremarkable. Clinical examination of other systems was normal.

Blood analysis showed a significantly raised lipase at 192 UI/L, white blood cells at 8550, CRP <1, blood glucose at 0,49 g/L, with normal electrolytes, renal function, liver functions and triglycerides. The serology of viral hepatitis B, C and E, serology of cytomegalovirus and Epstein virus were negative and the autoimmune balance sheet and the IgG4 dosage were normal. The quantiferon was negative. CT scan showed densification mesenteric fat in the left flank suggesting acute mesenteric panniculitis associated with Stage-A Balthazar pancreatitis. It did not show dilation of the bile ducts (**Figures 1 and 2**).

Received September 23rd, 2021 - Accepted October 22nd, 2021

Keywords Pancreas; Pancreatology; Pancreatic drugs; Acute pancreatitis; Mesenteric panniculitis; CT scan treatment

Abbreviations MP Mesenteric panniculitis; CT Corticotherapy

Correspondence Fatima Belabbes, Reda cherkaoui, Leila Abdallaoui, Rajaa Lafhel, Jihane Habi, Anass Nadi, Hanane Delsa and Fedoua Rouibaa

Department of Gastroenterology and Proctology
Cheick-Khalifa International University Hospital
Casablanca, Morocco

Tel 00212648990124

E-mail fatima.belabbes.hck@gmail.com



Figure 1. CT scan in axial section after injection of contrast product in the portal phase showing densification of the mesenteric fat (blue circle) comprising a few nodules (yellow arrow) and exerting a mass effect on the digestive loops around (red arrow).

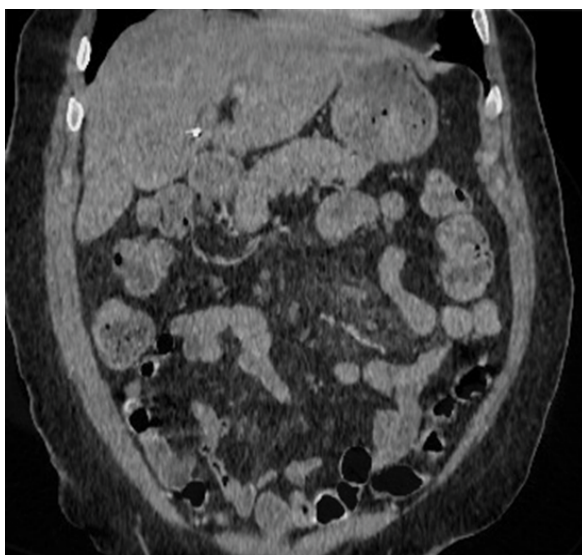


Figure 2. Coronal CT scans after injection of contrast product in the portal phase revealing mesenteric panniculitis.

The biliary MRI was normal; it did not show dilation of the bile ducts or gallbladder. The patient was started on prednisolone 1mg/kg daily and was monitored closely. Patient also experienced conservative management with analgesia (paracetamol), hydration and fasting. During follow-up, patient remained stable and patient's symptoms regressed and pain disappeared entirely within five days. She was discharged on the 7th day of admission after significant clinical and laboratory improvement. During ambulatory follow-up, the patient presented complete resolution of the symptoms and biochemical results.

DISCUSSION

MP is a non-specific inflammatory process affecting the fatty pedicle of the mesentery; it is described as retractile sclerosing mesenteritis in 1924 by the Jura [3]. Currently, this pathology can no longer be considered rare since its prevalence oscillates between 0.5 and 3% of abdomino-pelvic scans [4]. But the association between this pathology and acute pancreatitis is rarely described in the literature.

Sclerosing mesenteritis affects adults; it is more common in men than in women. The specific cause of MP is not known and the exact mechanism of pathogenesis is not clear. The hypothesis of an inflammatory reaction of the mesenteric fatty tissue in response to a pre-existing or coexisting pathology, through excessive enzymatic degradation or an inadequate autoimmune response has been raised [1].

It is characterized by the variable association of inflammatory lesions, necrosis and sclerosis of the mesenteric adipose tissue. According to some authors; sclerosing mesenteritis is associated with several pathologies including digestive or extra-digestive tumors or autoimmune pathologies. Multiple case reports of mesenteric panniculitis have detailed the history of chronic infections including tuberculosis [5].

An association of MP and malignancy, mainly lymphoma was previously indicated in the literature. But, the association with acute pancreatitis is rarely described

in the literature [6]. Pancreatitis is the most common process associated with inflammation of the small-bowel mesentery but virtually all other inflammatory diseases of the gastrointestinal tract including cholecystitis, appendicitis, diverticulitis, inflammatory bowel disease, and infective peritonitis may also result in inflammatory changes in the adjacent mesentery [7].

MP may be associated with many autoimmune pathology, it has been suggested that the disease process may be associated with pancreatitis and IgG4-related disease. Some series have shown that a subset of patients with sclerosing mesenteritis have lesions that stain abundantly for IgG4 [8].

In our observation, the patient had the igG4 assay negative. The main problem posed by this entity is the positive diagnosis preoperatively. The diagnosis of MP is CT and its discovery can be accidental or during an abdominal scan requested during an assessment of abdominal pain, fever, and diarrhea, abdominal mass or occlusive syndrome. The asymptomatic form represents 30 to 90% [5]. Other clinical manifestations occur in the presence of chronic inflammation and may include weight loss, fever and fatigue.

In our observation, the patient had consulted for acute pancreatic-type epigastralgia with food vomiting and the first diagnosis to be made was acute pancreatitis. Its diagnosis is scannographic and is defined by an increase in the density of the mesenteric fat called "misty mesentery" associated with tissue nodules within this infiltration [4]. The preoperative diagnosis is very difficult and was only made in very few patients before the resection procedure was performed [9]. In our case the diagnosis was scannographic.

The rarity of this pathology means that its treatment is not yet standardized. The therapeutic means are based on case observations or small series of cases. The goals of this treatment of this pathology are the reduction of the degree of the mesenteric inflammation and the regression of the symptoms of the disease [10].

The indications are controversial. Though there is no specific medical treatment, symptomatic treatment can be started to alleviate the symptoms. Empirical medical treatment is based on anti-inflammatory drugs or immunosuppressants [2] and surgical treatment is reserved for the treatment of obstructive digestive or vascular complications. Bowel resection, elimination of necrosis and lysis of bowel adhesion may be considered for the tumor or corresponding lesion and bowel obstruction [11].

In our observation the patient was initially put on conservative treatment for suspected acute pancreatitis.

The course of mesenteric panniculitis is most often spontaneously favourable as it is usually benign. Complications such as obstructions or perforations have

been described [12]. The outcome in our patient was favorable with corticosteroids and antispasmodics.

CONCLUSION

MP is a benign entity that occurs in dependently or in association with other disorders and whose pathogenesis remains unknown. It is one of the rarest gastroenterological diseases. Diagnosis of this benign, non-specific inflammatory disease is a challenge for gastroenterologists, radiologists, surgeons and pathologists.

The radiological characteristics, notably scenography, generally pathognomonic, have recently been clearly defined. A surgical biopsy is rarely necessary. There is no standardized treatment and they can be anti-inflammatory or immunosuppressive agents. The objective of this case report is to educate clinicians about this rare disease and to highlight this rare association of adipose panniculitis and acute pancreatitis.

INFORMED CONSENT AND PATIENT DETAILS

The authors declare that this report does not contain any personal information that could lead to the identification of the patient. Informed consent was obtained from the patient and his son before the death of the patient.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no competing interest.

REFERENCES

1. Guettrot-Imbert G, Boyer L, Piette J-C, Delèvaux I, André M, Aumaître O. Mesenteric panniculitis. *Rev Med Interne*. 2012; 33:621–627. [PMID: 22658529].
2. Mehta P, Reddivari AKR, Ahmad M. A case report of mesenteric panniculitis. *Cureus*. 2020; 24; 12:e6764. [PMID: 32015937].
3. Hussein MRA, Abdelwahed SR. Mesenteric panniculitis: An update. *Expert Rev Gastroenterol Hepatol*. 2015; 9:67-78. [PMID: 25220299].
4. Buragina G, Magenta Biasina A, Carrafiello G. Clinical and radiological features of mesenteric panniculitis: A critical overview. *Acta Biomed*. 2019; 90: 411–22. [PMID: 31910164].
5. Gunduz Y, Kara RO. Mesenteric panniculitis: A case report and review of the literature. *Acta Gastroenterol Latinoam*. 2013; 43:312-315. [PMID: 33321028].
6. Mohamed H, Mehdi C, Ikram M, Myriam M, Habib B, Adnene C. Mesenteric panniculitis associated with acute pancreatitis: about a case. *Pan Afr Med J*. 2016; 24:206. [PMID: 27795801].
7. The "misty mesentery": Mesenteric panniculitis and its mimics. *AJR Am J Roentgenol*. 2013; 200:W116-W123. [PMID: 23345375].
8. Burns RL, Bhavnagri SJ. Undiagnosed Sjögren's syndrome presenting as mesenteric panniculitis. *Case Rep Rheumatol*. 2016; 2016: 7207638. [PMID: 27366340].
9. Jerraya H, Khalfallah M, Nouira R, Dziri C. Mesenteric panniculitis: An unusual cause of epigastric pain. *J Clin Diagn Res*. 2015; 9:PJ01. [PMID: 26816946].
10. Aravamudan VM, Khan SR, Natarajan SK, Hussain I. The complex relationship between mesenteric panniculitis and malignancy — A holistic approach is still needed to understand the diagnostic uncertainties. *Cureus*. 2019; 11:e5569. [PMID: 31695988].

11. Aarı C, Ünsal E, Hakgüder G, Soylu A, Özer E. Pediatric mesenteric panniculitis: Three cases and a review of the literature. *Turk J Pediatr.* 2019; 61:798-803. [PMID: 32105017].

12. Neves Z, Segura Ú, Valente A, Pacheco MH, Malhado J. Panniculitis – A Rare Manifestation of Acute Pancreatitis. *GE Port J Gastroenterol.* 2015; 22:117-120. [PMID: 28868388].
