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Mesenteric Panniculitis Revealed by Chronic Pelvic Pain in an African Woman: A Case Report

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1. Abstract

Mesenteric panniculitis is a non-specific inflammatory condition of the mesenteric adipose tissue most often revealed by non-specific clinical signs. Therapeutic options have not yet been standardised. Consequently, Its diagnosis and treatment remain a challenge for professionals.

Here, we report a case of mesenteric panniculitis revealed by chronic pelvic pain.

2. Introduction

Mesenteric panniculitis (MP) is a clinically rare mesenteric chronic inflammatory disease [1]. The cause of MP is still unknown and it is most commonly diagnosed incidentally during an imaging study, mainly a computed tomography (CT) [2-4]. A few patients with MP present with an abdominal mass, peritonitis, peritoneal irritation, and ascites [1-3].

We experienced a case of MP revealed by a chronic pelvic pain, which was diagnosed as MP on the basis of imaging features and peritoneal biopsies.

3. Case Presentation

A 50-year-old tunisian woman presented with a two-week history of isolated pelvic pain. She did not have any significant history of another disease and family history was negative for any cancers. This pain suddenly became worse and the patient presented with lower abdominal guarding without palpated mass. There were no abnormalities in the patient's vital signs. Laboratory results showed hyperleucocytosis (11100/mm^3) with polynuclear neutrophiles (71%) and a high C-reactive protein (CRP) levels (125 mg/L). Abdominal and pelvic CT analysis showed a hyper-attenuation of mesenteric fat, complex free fluid in the pouch of Douglas, a smooth thickening and a hyperenhancement of peritoneum. There were neither signs of tubular inflammation nor internal genital organ suppuration. The appendix was normal. The patient underwent an urgent laparotomy in addition to intravenous antibiotics. Surgical findings were pelvic and visceral adhesions, as well as an effusion. Adhesiolysis was carried out without resection. Multiple biopsies of the peritoneum were done and the diagnosis of MP was established based on fat necrosis with inflammatory infiltrate and infiltration by macrophages (Figure 1). There were no evidence of inflammatory bowel disease, pancreatitis, malignancy or any potential infection. Undeed, our patient underwent an upper and lower gastro-intestinal endoscopy, a chest CT, pelvic Magnetic Resonance Imaging, mammography, as well as a screening for melanoma. All these investigations were negative. Immunohistochemistry of lymphoma and Immunoglobulin G4-related disease were also done and were negative.

The patient was started on prednisone 60 mg daily and her symptoms completely resolved within 36 hours. Her blood test returned to normal.

She was reviewed a month later and reported complete resolution of her symptoms.

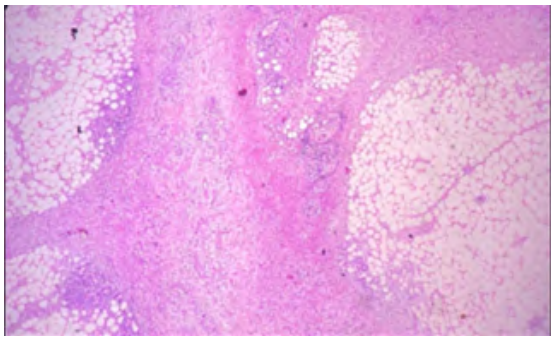

Figure 1: Histology slide showing inflammation of the mesenteric fat

4. Discussion

MP is a rare inflammatory disease of mesenteric adipose tissue with a prevalence ranging from 0.16 to 3.4%. This particularly low prevalence is not only due to the rareness of MP, but also to the fact that it is often an incidental finding diagnosed by CT [1].

MP seems to be two to three times more common in males than in females and is most seen in Caucasian population [2]. Symptoms are non-specific. The most common presenting complaint is abdominal pain. Up to 15% of patients can even be completely asymptomatic when MP is found on the imaging performed for some other reasons [5]. Our patient was symptomatic of pelvic chronic pain.

MP has unknown etiology and can occur independently or in association with other disorders [4]. It knew that it represents the final stage of progression of chronic inflammatory diseases of the bowel mesentery, with a predominance of fibrotic component [6]. At least four different pathologic processes have been proposed as etiologies of development of MP including abdominal surgery/trauma, autoimmune phenomenon, paraneoplastic process, and ischemia/infection [7].

To date, there is no consistent diagnostic standard for MP. Previous data have shown an increase in inflammatory related indicators, such as white blood cells, CRP levels, but specific laboratory test results have not yet been determined [1,4]. Our patient had an inflammatory biological syndrome.

Abdominal CT is an effective exam for diagnostic of MP and is generally based on five well-recognized pathognomonic features comprising the following: a well-defined mass effect, inhomogeneous attenuation of mesenteric fat tissue, small soft tissue nodules, a halo sign and a pseudocapsule [1,8]. Our patient's CT scan doesn't match typical CT findings of MP. The definite diagnosis of MP is established by biopsy and this can be done through laparoscopy or laparotomy as done in our patient. Histological findings consist in variable combinations of loci of fat degeneration and necrosis, non-specific and predominantly lymphocytic inflammatory infiltrate and fibrosis [1].

There is no specific clinical treatment for MP. Treatment options are based on case reports. However, the following have been tried with variable results depending on the stage of the disease, that is, inflammatory symptomatic or fibrotic state: corticosteroids, azathioprine, colchicine, cyclophosphamide, tamoxifen and radiotherapy. Patients with major inflammatory component are thought to be the most receptive to glucocorticoids alone or in combination [9].

Surgical treatment for MP is not recommended, because this disease causes extensive or localized mesenteric inflammatory changes. Furthermore, locations close to large blood vessels are prone to recurrence after local ablation. Intestinal resection, removal of necrosis and intestinal adhesion lysis can be considered for the tumor or corresponding lesion, intestinal obstruction and other serious complications [3]. The disease can resolve and reappear spontaneously over the years.

Our patient accepted to take corticosteroids and she was aware of the side effects that they could induce. She was a good responder to this treatment and two months later, she was asymptomatic.

MP are a benign inflammatory lesion with good prognosis, few recurrences after healing and few serious complications [10].

Our case is unique in that our patient is a woman and this is a disease in men. She is of African origin and the disease is most often seen in Caucasian men. The best treatment option is still unknown. Corticosteroids were effective in our case, which adds to a pool of steroid responders.

5. Conclusion

MP is rare and constitutes a challenge for many professionals, the example of the surgeon, radiologist, pathologist and gastroenterologist. Also, it is essential that this pathology is always included in the differential diagnosis of patients with severe systemic manifestations and high acute inflammatory response markers of unknown etiology, especially when there are demonstrations in the topography of abdomen.

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