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Case Report

Pancreatic panniculitis: case report

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ABSTRACT

Pancreatic panniculitis is a rare condition, affecting 2 to 3% of patients with pancreatic diseases, such as acute pancreatitis or pancreatic carcinoma. The clinical manifestations of panniculitis are painful erythematous nodules, predominantly affecting the lower limbs. From an anatomopathological point of view, the subcutaneous nodules are made of fat necrosis and vacuolated macrophages. The treatment consists in resolving the underlying diseases. We present the case of a 56-year-old female, admitted on the Emergency Department, who presented with acute abdominal pain and subcutaneous erythematous nodules. The combination of laboratory data, clinical and anatomopathological results confirmed the pancreatic panniculitis, in an underlying acute pancreatitis. The treatment focused on the resolution of the pancreatic disease.

Keywords: Pancreatites, Panniculitis, Adipose tissue, Ghost cells

INTRODUCTION

Pancreatic panniculitis is a clinical entity that occurs in 2 to 3% of patients with pancreatic disorders, and in about 40% of these cases may be related with malignancies. Pancreatic panniculitis may precede the detection of the pancreatic disease by about 1-7 months and in cases of pancreatic neoplasia, it may be associated with increased risk of metastasis and/or associated with disease severity.

The most frequent cause of pancreatic panniculitis is: acute or chronic pancreatitis, pancreatic neoplasia (most often the acinar cells type), pancreatic pseudocysts, pancreas divisum or pancreatic trauma.[1]

First described in 1883 by Chiari, pancreatic panniculitis consists of necrosis of subcutaneous adipocytes, which form painful erythematous nodules, that appear predominantly in the lower limbs. They less frequently may occur in upper limbs and chest. These nodules may be isolated and can present a floating sign. In advanced cases, can ulcerate and produce a viscous drainage.[2]

The etiology is not clear. In the case of acute pancreatitis, pancreatic enzymes such as trypsin, promote these skin changes, possibly by increasing blood permeability. This process allows lipase to hydrolyze fat and form the necrotic nodules. The diagnosis of this entity is made by biopsy with anatomopathological study, because adipocytes lose their nucleus and form the so-called ghost cells.[3]

A case of pancreatic panniculitis is presented in a patient with acute pancreatitis, recalling its rarity and the fact that it is a dermatological sign that may reflect the severity of a pancreatic disorder.

CASE REPORT

A 56-year-old female patient referred to our Emergency Department, (Coimbra Hospital University Center) for

abdominal pain in the upper quadrants with 2 days of evolution. She referred small pruritic skin nodules that started in the lower limbs, which expanded to the left upper limb (Figure 1). These nodules appeared simultaneously with the abdominal pain.

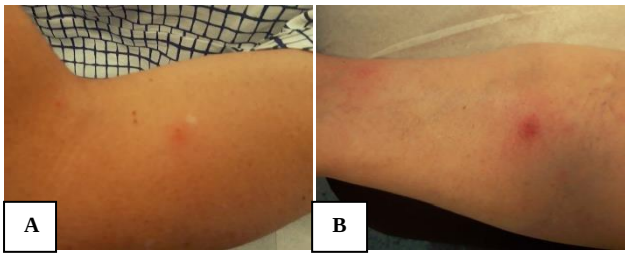

Figure 1: Subcutaneous erythematous nodules in (A) upper limb and (B) lower limb.

No nausea or vomiting were present. The patient also denied, changes in intestinal transit or polyarthralgias. She had no relevant personal or family history.

The physical examination, showed that the patient had fever, with pain on epigastric palpation, but without any palpable masses. Inspection of the lower limbs and left upper limb identified small erythematous nodules with about 1 cm in diameter, painful to the touch, but without exudate.

Complementary exams revealed 341 U/l amylasemia and 194 U/l lipasemia, with slight changes in liver function tests and slight elevation of C-reactive protein. The ultrasound showed vesicular lithiasis, bile duct dilation of 11 mm and two small liver nodules that were already present in previous exams. With these findings, the diagnosis of acute lithiasic pancreatitis was reached.

During the hospitalization, with conservative treatment, the patient improved and amylasemia and inflammatory parameters declined.

A skin biopsy of the nodules was performed, and it showed subcutaneous cell tissue with some anucleated adipocytes (ghost cells), with the final diagnosis of panniculitis in relation to pancreatitis (Figure 2).

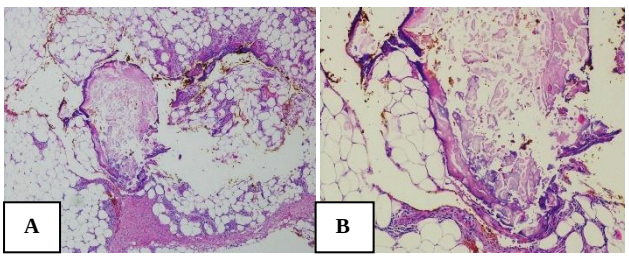

Figure 2: Anatomopathological diagnosis of panniculitis, (A) necrosis area and (B) anucleated adipocytes (ghost cells).

Subsequently, complementary exams such as, computed tomography excluded other possible diagnoses such as pancreatic neoplasia.

The definitive diagnosis of pancreatic panniculitis associated with edematous lithiasic acute pancreatitis was established.

At seven weeks follow-up, the patient improved skin pigmentation and had no complaints of abdominal pain.

DISCUSSION

Pancreatic panniculitis is a rare clinical entity, usually associated with pancreatic disorders and in the majority of cases is linked to a more reserved prognosis. Although the pathophysiology is not fully understood, it is known that pancreatic enzymes are involved in this process and that their appearance is favored by higher values. These reports and the discrepancy between the relative frequency of the disease and the frequency of pancreatic panniculitis suggest the involvement of additional factors.[4]

It is manifested by painful cutaneous nodules, preferably of the lower limbs, which may or may not be, associated with spontaneous drainage of viscous content, due to liquefactive fat necrosis. The appearance of these cutaneous nodules may precede, be simultaneous or subsequent to the appearance of the usual clinic of pancreatitis.

This entity is sometimes associated with polyarthralgia, secondary to intraosseous fat necrosis, which is a rare clinical syndrome of panniculitis, pancreatitis and polyarthritis (PPP syndrome).[5]

Given the difficult association of nodules with pancreatitis and its rarity, the definitive diagnosis is by biopsy with anatomopathological study.[6-7] The treatment of these lesions improves only with the treatment of the underlying disease. In this case, the conservative measures for the treatment of acute pancreatitis treated the pancreatic panniculitis. Topical treatments do not favor the disappearance of these lesions.[8]

Further investigation of the underlying pathogenesis is imperative, as the appearance of these lesions in pancreatic neoplasms is associated with worse prognosis.

CONCLUSION

Pancreatic panniculitis is a clinical entity mainly associated with acute pancreatitis.

Further investigation of the underlying pathogenesis is imperative, as the appearance of these lesions in pancreatic neoplasms is associated with worse prognosis.

However, due to the rarity of pancreatic panniculitis, its diagnosis can easily go unnoticed.

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