CASE REPORT

Pancreatic panniculitis

Karim Mahawish,¹ Isoken T Iyasere²

¹Department of Elderly Care,
Warrington Hospital,
Warrington, UK
²Warrington Hospital,
Warrington, UK

Correspondence to
Dr Karim Mahawish,
k.mahawish@nhs.net

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SUMMARY

We present the case of a 55-year-old Caucasian man presenting with polyarthritis, weight loss and multiple tender cutaneous nodules. Abnormal liver function tests prompted imaging of the liver which demonstrated liver metastases. Biopsy of the liver lesions confirmed the diagnosis of metastatic pancreatic neuroendocrine carcinoma.

BACKGROUND

The patient presented with painful skin lesions and a painful polyarthritis which ultimately were found to be due to underlying pancreatic carcinoma. PPP syndrome refers to the recognised triad of pancreatitis, polyarthritis and panniculitis, a rare manifestation of pancreatic disease. The histological findings of biopsies taken of the skin lesions identified changes pathognomonic of pancreatic disease, however not the underlying cause. This case increases awareness of pancreatic panniculitis and the differentials, facilitating earlier diagnosis and treatment.

CASE PRESENTATION

A 55-year-old Caucasian man presented with multiple, tender, erythematous nodules measuring 1–3 cm in diameter over his lower limbs which had migrated proximally over a 4-week period. These were associated with polyarthritis involving the knees and ankles bilaterally and weight loss. He denied any abdominal pain. He had no medical history of note and aside from simple analgesics recently started to counteract the pain, was on no regular medication. He recalled an insect bite during a visit to Bavaria some 2 months previously. On examination, there were no palpable axillary, cervical or inguinal lymph nodes. Cardiorespiratory examination was unremarkable. Abdominal examination identified a palpable irregular liver edge 2 cm below the costal margin. Examination of the skin demonstrated multiple, tender, reddish-brown nodules on both upper and lower limbs and trunk (figure 1). Examination of the knee joints demonstrated bilateral swelling and the presence of a right knee effusion.

INVESTIGATIONS

Laboratory investigations demonstrated an elevated C reactive protein 228 mg/L, isolated elevation in γ -glutamyltransferase 120 IU/L, with the remainder of liver function tests within normal limits. Serum amylase was 48 U/L, within normal limits. Autoantibody screen, ASOT titres, serum ACE and chest X-ray were normal. The right knee joint was

aspirated, revealing turbid acellular fluid with no crystals, no pus cells, no organisms or malignant cells.

X-rays of the knees were reported as normal. An abdominal ultrasound was performed demonstrating multiple focal liver lesions, confirmed on CT of the abdomen to be multiple metastatic lesions in the liver (figure 2) and a mass in the uncinate process of the pancreas.

DIFFERENTIAL DIAGNOSIS

Erythema nodosum was considered the likely diagnosis initially and the patient started on prednisolone. Other conditions which may present with nodular lesions such as erythema induratum (seen in tuberculosis), lupus profundus and Weber-Christian disease (cutaneous nodular eruptions running a relapsing–remitting course before resolving) were considered unlikely. Nodular skin lesions may also be seen in patients with α 1-antitrypsin deficiency. While Lyme disease is endemic to South Germany, our patient's skin lesions were not characteristic of this and so this possibility was discounted.

TREATMENT

The patient experienced mild benefit from the prednisolone, however remained in considerable pain from the skin lesions and inflammatory joint disease. A number of strategies were tried to overcome this including lignocaine patches, escalating doses of opiate analgesics, bilateral femoral nerve blocks and cortisone injections of both knees, all with limited success.

OUTCOME AND FOLLOW-UP

Following review by the hepatologists, a liver biopsy was performed. Histological appearances and immunostaining demonstrated findings consistent with metastatic pancreatic neuroendocrine carcinoma. Panniculitis was confirmed on subsequent skin biopsy, demonstrating necrotic fat, mild inflammation extending to the dermis, hyperkeratotic epidermis, but no evidence of malignancy.

The case was discussed at the hepatobiliary multidisciplinary meeting. Unfortunately, the extent and severity of disease rendered him unsuitable for definitive treatment. Following discussions with the patient and family, the patient opted for hospice care.

DISCUSSION

Panniculitis occurs in 2–3% of patients with pancreatic disease¹ and may be the presenting feature in up to 40% of cases.² Panniculitis is thought to result from the release of lipase and amylase from the damaged pancreas. In our patient, though

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Figure 1 Lesions consistent with pancreatic panniculitis can be seen on the trunk.

Figure 2 CT of the abdomen demonstrating multiple metastatic lesions in the liver.

amylase was normal, other case reports have described elevated levels of amylase and lipase. It is hypothesised that these enzymes are released from the damaged pancreas into the

bloodstream and are finally deposited in adipose tissue, resulting in localised fat necrosis. These lesions may progress to ulceration, releasing a yellow exudate. PPP syndrome whereby panniculitis and polyarthritis occur in the presence of pancreatic disease is a recognised phenomenon and has been described previously.³ Acute/chronic pancreatitis and pancreatic carcinoma are most commonly associated with panniculitis; however, they have also been observed in patients with pancreatic pseudocysts and post-traumatic pancreatitis. Histopathological findings on skin biopsy are pathognomonic of pancreatic panniculitis. Resolution of these lesions can be seen following treatment of the underlying pancreatic disorder (eg, pancreatitis).⁴ The prognosis is poor in cases of pancreatic carcinoma.

Learning points

- ▶ Pancreatic panniculitis should be considered as a differential in patients presenting with erythematous nodular skin lesions.
- ▶ CT imaging of the abdomen is highly accurate in the detection of pancreatic malignancy. Pancreatic disease presents in a heterogeneous manner and clinical presentation alone cannot be relied on.
- ▶ Multidisciplinary input from a range of specialties including gastroenterology, dermatology, pathology, oncology and palliative care may be necessary.

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Competing interests None.

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