Acute pancreatitis and non-Hodgkin's lymphoma

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Summary: We report two patients presenting with acute pancreatitis, the aetiology of which was subsequently proven to be non-Hodgkin's lymphoma. Histological confirmation of tumour-associated pancreatitis is essential so that appropriate therapy can be planned.

Introduction

Acute pancreatitis is occasionally associated with primary adenocarcinoma of the pancreas¹ or pancreatic metastases from stomach, bronchus, tonsil and melanoma.^{2,3} One case of abdominal lymphosarcoma presenting with acute pancreatitis has been reported.⁴ We report two cases of abdominal lymphoma presenting with pancreatitis.

Case reports

Case 1

A 38 year old woman presented with a 4-day history of dull, central abdominal pain associated with vomiting. Examination revealed generalized abdominal tenderness with normal bowel sounds. Serum amylase, white cell count, barium meal and ultrasound examination were all normal. Her pain settled, and she was discharged after 7 days. An out-patient oral cholecystogram was normal.

The patient was re-admitted 2 weeks later with a similar history, but on this occasion, the pain radiated through to her back. Her serum amylase on admission was 3,000 IU/l; prognostic factor grading⁵ suggested a mild attack, and liver function tests were normal. She was treated with intravenous fluids, nasogastric suction and analgesia. During the following week her amylase returned to normal, but over the ensuing 3 weeks she became jaundiced with a steady rise in her serum bilirubin, alkaline phosphatase and serum transaminases. Abdominal ultrasound, 5 days after admission, showed swelling of the head of the pancreas with areas of low echogenicity, suggesting early

pseudocyst formation. A second examination, 7 days later, showed no change in the pancreas, but the biliary system was dilated.

A percutaneous transhepatic cholangiogram confirmed a dilated biliary system with complete obstruction of the common bile duct, suggesting carcinoma of the pancreas (Figure 1).

She was transferred to the Glasgow Royal Infirmary. On admission she was jaundiced with liver function tests suggesting obstruction. A third ultrasound scan showed a large multi-lobulated mass inferior to the pancreas, anterior to the aorta and encircling the superior mesenteric vessels. It extended inferiorly to the aortic bifurcation. Percutaneous fine needle aspiration biopsy suggested a lymphoma.

Figure 1 Percutaneous transhepatic cholangiogram of patient 1: (oblique view) showing complete obstruction of the distal common bile duct (distal to the cystic duct junction) with proximal dilatation.

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At laparotomy, the ultrasound findings were confirmed. A large mass was arising from the small bowel mesentery extending posterior to the pancreas, and displacing the gland anteriorly. This mass continued superiorly alongside the aorta, and was palpable above the lesser curve of the stomach; frozen section biopsy confirmed lymphoma. The patient underwent an ante-colic gastrojejunostomy and a cholecystojejunostomy and made an uneventful recovery.

Histopathological examination of the tumour revealed a mixed small and large cell lymphoma with sclerosis. She was treated with combination chemotherapy and abdominal radiotherapy, enjoyed good health for 6 months, but died of disseminated disease 11 months after discharge.

Case 2

A 55 year old women presented with 3-month history of epigastric discomfort, and occasional vomiting. Abominal examination revealed a mass in the left hypochondrium. Barium meal examination revealed extrinsic compression of the greater curve of the stomach, and this was confirmed endoscopically. Chest radiography, intravenous urography, barium enema, full blood count and liver function tests were all normal. Abdominal ultrasound revealed a large cystic lesion in the left hypochondrium. Her serum amylase at this time was elevated at 354 IU/l; the diagnosis was one of resolving acute pancreatitis with pseudocyst formation.

Laparotomy revealed inflammation throughout the pancreas with an indurated pseudocyst in the tail with a haemorrhagic capsule. The cyst was incised producing profuse haemorrhage which required packing. Frozen section examination of the cyst wall was unhelpful. The abdomen was closed bringing the pack out of the upper end of the wound.

Six days later the patient was transferred to the Glasgow Royal Infirmary, where a second laparotomy was carried out. The pancreas was inflamed throughout its length, and there was free turbid fluid in the peritoneal cavity. The pack was removed, revealing necrotic tissue in the 'pseudocyst' from which further biopsies were taken. A gastrostomy and a feeding jejunostomy were inserted. The abdomen was lavaged and closed after placing a large tube drain down to the necrotic tail of the pancreas.

Histopathological examination of the tissue revealed a high-grade non-Hodgkin's lymphoma. Combination chemotherapy was commenced one month postoperatively using cyclophosphamide, adriamycin, etoposide and bleomycin. Over the following 12 days she developed bilateral malignant pleural effusions and ascites. Despite appropriate treatment she gradually deteriorated and died 56 days after her second laparotomy. Post-mortem examination re-

vealed widespread malignant lymphoma throughout the peritoneum and pleural cavity, involving the hilar lymph nodes and pericardium.

Discussion

After excluding gallstones and alcohol as the cause of pancreatitis, the less common aetiological factors must be sought. Tumours, both benign and malignant, are occasional causes of pancreatitis.^{1,2,3,6} Mild focal pancreatitis is often found in resection specimens from patients with pancreatic carcinoma, but clinical presentation with pancreatitis is encountered less frequently. Significant pancreatitis was found in 26 of 255 consecutive patients presenting with pancreatic and peri-ampullary carcinomata.¹ When acute pancreatitis occurs in association with pancreatic and peri-pancreatic malignancy, it seems likely that the pancreatitis is secondary to obstruction caused by the tumour. In the first of our patients the pancreas was displaced anteriorly by retropancreatic nodal involvement with lymphoma, but it was not until the patient became jaundiced, probably due to tumour compressing the lower end of the common bile duct that further investigation suggested carcinoma of the pancreas. The episode of acute pancreatitis in this patient settled clinically and biochemically, and there was only minimal evidence of pancreatic inflammation at the time of her laparotomy and no obvious necrosis.

The second patient presented with a mass in the left hypochondrium and a 3-month history consistent with pancreatitis with pseudocyst formation. The elevated serum amylase level on admission, together with an abdominal ultrasound, which suggested a pseudocyst led to a laparotomy. The finding of an inflamed pancreas with a cystic lesion in its tail was considered consistent with the preoperative diagnosis. At the second laparotomy, 6 days later, there was continuing inflammation of the pancreas, and evidence of ascites, probably due to a combination of acute pancreatitis and the tumour itself. The diagnosis of lymphoma was confirmed by further biopsy of material in the 'pseudocyst'. The cause of this patient's pancreatitis was probably similar to that in the first patient, in that the peripancreatic nodes around the head of the pancreas were also involved by the malignant process.

In the first patient, the diagnosis of lymphoma was suspected from the ultrasound-guided percutaneous fine needle aspiration biopsy. This technique is safe and accurate, and a positive biopsy may avoid an unnecessary laparotomy in patients in whom non-surgical forms of treatment may be more appropriate. Complications are uncommon, but include a small risk of malignant seeding of the needle tract and occasionally, pancreatitis.⁷

It is important to obtain histological confirmation of tumour-associated acute pancreatitis. Patients with abdominal lymphoma may respond to chemotherapy and radiotherapy with significant clinical improvement whereas these modalities are of little benefit in the management of patients with metastatic disease. An accurate diagnosis may avoid surgery in some patients, and in others may allow a planned bypass procedure if this is considered appropriate.

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