Metastasis-induced Pancreatitis: Case Report

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Abstract: This report aims to highlight the importance of malignancy exclusion in the absence of common aetiology in acute pancreatitis. An 83-year-old woman presented acutely with pancreatitis. There had been no history suggestive of gallstones disease and she rarely consumed alcohol. Subsequent ultrasound scan revealed no gallstones but multiple liver metastatic lesions. Further carcinomatosis involving the pancreas, right ovary, pelvic lymphatics and nodular disease of the lungs was demonstrated on computed tomography. Immuno-histochemistry of liver biopsy showed positivity for markers suggestive of metastasis arising from lung small cell carcinoma. The case was discussed at the lung multidisciplinary meeting and the patient was referred for community palliative care. Early diagnosis of metastasis induced pancreatitis allows immediate institution of palliative care, if not suitable for aggressive pharmaco-surgical intervention.

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Introduction

Acute pancreatitis is a common and potentially life-threatening medical emergency. Whilst gallstones and excessive alcohol consumption account for 95% of all causes of pancreatitis in United Kingdom, malignancy must be excluded in the event of other aetiology if optimal management is to be achieved.

Small cell lung carcinomas occasionally metastasise to the pancreas but rarely induce acute pancreatitis, especially as the initial manifestation of the disease. Little knowledge is available as to how best manage these patients. This article intends to present such a rare condition and review of the literature.

Case presentation

An 83-year-old Caucasian woman presented as an emergency with generally unwell, shortness of breath and upper abdominal pain. Clinical examination revealed epigastric tenderness and the clinical diagnosis of acute pancreatitis was supported by her admission serum amylase of 1,242 IU/litre. The patient had minimal past medical history: atrial fibrillation and hypertension only on aspirin and simvastatin. She had never smoked and rarely consumed alcohol.

Ultrasound scan (USS) (Figure 1) demonstrated an enlarged liver containing multiple metastatic lesions. No gallstones were seen and the common bile duct had a normal calibre. Consequent computed tomography (CT) (Figure 2) of thorax, abdomen and pelvis revealed carcinomatosis involving the pancreas, right ovary, pelvic lymphatics and nodular disease of the lungs accompanied by bilateral pleural effusion. Serum tumour markers (carcinoembryonic antigen, Ca-199, Ca-125 and alpha-feto protein) were unhelpful as all their levels were raised.

Subsequently, an USS guided biopsy was performed on one of the liver lesions. Immuno-histochemistry of the biopsy showed positivity for pancytokeratin, nuclear TTF-1, chromogranin, CD56 and synaptophysin. There was failure to stain for CK7, CK20 and HSA. The immunophenotype suggested metastasis arising from lung small cell carcinoma.

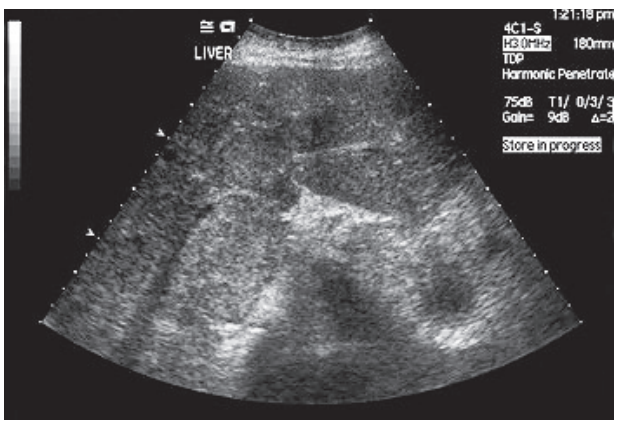

Figure 1 – Liver ultrasound scan demonstrated multiple liver metastatic lesions.

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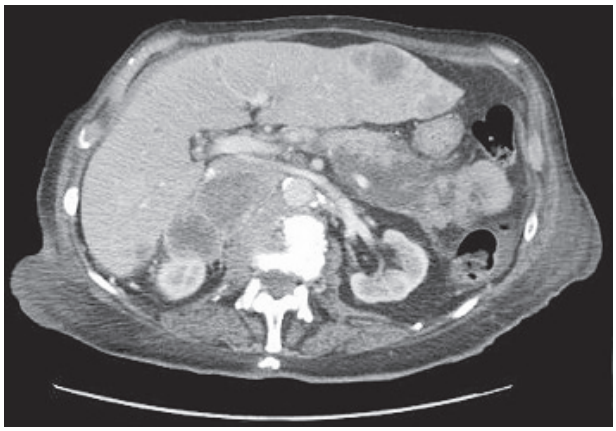

Figure 2 – Computed tomography abdomen demonstrated cystic secondary deposits in the head and tail of pancreas.

Although this patient had recovered from her acute pancreatitis and was discharged home, she died 7 weeks later in the community following multidisciplinary decision for palliation.

Discussion

Metastatic-induced acute pancreatitis is often diagnosed incidentally during investigation for the common aetiology for pancreatitis. There are only a few tumour types, which pre-directionally metastasize to the pancreas: renal cell, skin squamous cell, prostatic, breast and small cell lung carcinoma. There are scattered reports (Tanaka et al., 2009) that some patients with metastatic induced pancreatitis as an initial presentation of small cell lung carcinoma dramatically improved their conditions following chemotherapy. However, such rare entities render difficulties in randomising patients with and without chemotherapy in order to assess for morbidities and survival benefit.

Our patient's small cell lung carcinoma presented for the first time as metastatic induced pancreatitis. However, many reports have illustrated pancreatitis as a complication in known small cell lung carcinoma patients (Woo et al., 2006). Interestingly, post-mortem examinations often detect pancreatic metastasis in 24% of small cell lung carcinoma patients. As small cell lung carcinoma is sensitive to chemotherapy, it may be worthwhile staging the pancreas in these patients. The argument against such routine staging is that the pancreatic metastasis would also respond to the systemic chemotherapy.

Generally speaking, there are no standard treatment algorithms for metastatic-induced acute pancreatitis from small cell lung carcinoma. Prognosis is often poor with a median survival period of 12 days (Stewart et al., 1993) without chemotherapy from the onset of pancreatitis compared with an additional median survival benefit of 99 days with chemotherapy in another series (Huang et al., 2005). Similar findings were reported in a case-controlled study demonstrating

a survival advantage of the chemotherapy group (162 days) compared with those without chemotherapy (25 days) – $p<0.01$ (Liu et al., 2009).

Although our reported patient did not receive any chemotherapy for her small cell lung carcinomatosis, the authors firmly believe that such early diagnosis could potentially optimise patient management by aggressive pharmaco-surgical intervention. Furthermore, our patient received early institution of palliative care, which lasted 7 weeks.

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