

CASE REPORT

Pancreatic Metastases from Ovarian Carcinoma – Diagnosis by Endoscopic Ultrasound-Guided Fine Needle Aspiration

Hadzri M Hasmoni, MBBCh (Wales) MMed (UKM), Rosemi Salleh, MMed

International Islamic University Malaysia, Department of Internal Medicine, Jalan Hospital Campus, Kuantan, Pahang 25150, Malaysia

SUMMARY

Pancreatic metastases are very uncommon and originate most commonly from lung, colon, breast and kidney cancer. Ovarian adenocarcinoma has been reported as a primary site of pancreatic metastasis, but its diagnosis has rarely being reported by endoscopic ultrasound guided fine needle aspiration (EUS-FNA). We report a case of multiple metastases to the pancreas from ovarian carcinoma occurring four years after original resection of the primary tumour. Our patient presented with severe epigastric pain which was initially treated as acute pancreatitis. Further imaging modalities showed multiple large pseudocystic lesions in the pancreatic head and body. Subsequent EUS-FNA confirmed that the lesions were metastatic disease from an advanced ovarian carcinoma. She underwent palliative chemotherapy and the pancreatic lesion showed receding size.

KEY WORDS:

Pancreatic metastases, ovarian carcinoma, endoscopic ultrasound, chemotherapy

CASE REPORT

A 60 year-old lady with prior history of stage IIIC ovarian carcinoma was referred to the Gastroenterology Unit, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan for the evaluation of multiple pancreatic masses. She was diagnosed with the ovarian cancer in 2006. Staging of the disease showed involvement of the right ovary and para-aortic lymph nodes. She underwent debulking surgery with total abdominal hysterectomy and bilateral salpingo-oophorectomy and omentectomy with lymph nodes clearance. The histology showed serous subtype tumour with papillary projections. She was then given three weekly intervals of carboplatin for six cycles. She showed good response initially. Unfortunately, she had a recurrence in 2008 when she presented with malignant ascites, and was treated successfully with another cycle of chemotherapy (carboplatin and taxol). She remained disease free after that.

She presented with severe epigastric pain which was associated with nausea and vomiting. On examination there was a mass per abdomen around the epigastric area which was tender. She was treated as acute pancreatitis based on clinical and biochemical results. Subsequent trans-abdominal ultrasound showed multiple pseudocysts within the pancreas, with the largest measuring 4.7 x 3.6cm. Computed

tomography (CT) scan of the abdomen showed multiple homogenous lobulated, non-enhancing lesions at peripancreatic region especially at pancreatic head region, splenic hilum and adjacent to the transverse colon area. Endoscopic ultrasound revealed multiple cystic lesions with heterogenous appearance at the head and body of the pancreas. Endoscopic ultrasound guided fine needle aspiration (EUS-FNA) was performed (Figure 1) and the result showed pancreatic papillary adenocarcinoma which was morphologically identical to the surgical specimen of her ovarian mass (Figure 2). Immunohistochemistry studies revealed the tumour was positive for CK7 but negative for CK20, and her CA 19-9 level was 101.5. A final diagnosis of advanced, recurrent ovarian carcinoma with metastases to the pancreas was made. She was then treated with palliative chemotherapy which consisted of topotecan and gemcitabine. She is currently into her 5th of six cycle of chemotherapy. She tolerated the treatment and repeated CT scan of the abdomen showed a reduction in pancreatic metastases tumour size.

DISCUSSION

Metastatic ovarian cancer to the pancreas is very rare. In fact, pancreatic metastatic itself is rare. The commonest primary tumours which can cause metastases to the pancreas are lung cancer, breast cancer, renal cell carcinoma, malignant melanoma, carcinoma of gastrointestinal origin and prostate cancer¹. It usually arises by direct extension from retroperitoneal or mesenteric lymph nodes or from isolated metastases to the pancreatic parenchyma². We believe that the pancreatic metastases in our patient were due to the direct extension from retroperitoneal in view of her previous history of malignant ascites secondary to recurrent ovarian tumour. Interestingly, the commonest site of metastasis is the head of pancreas. This has been consistently reported in previous publications^{1,3} and it was also true for our patient.

Clinical presentation of secondary metastases to the pancreatic is mainly asymptomatic. If symptomatic, they are similar to those seen in primary pancreatic carcinoma such as abdominal pain, back pain, weight loss, nausea, malaena, jaundice, gastrointestinal obstruction, upper gastrointestinal bleeding and diabetic ketoacidosis. Most of the pancreatic lesions, especially cystic in nature, have been assumed to be primary pancreatic carcinoma^{3,4}. The patients in these reports were initially treated as primary pancreatic carcinoma. Eventually these cystic lesions were found to be essentially

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Corresponding Author: Hadzri M Hasmoni, International Islamic University Malaysia, Department of Internal Medicine, Jalan Hospital Campus, Kuantan, Pahang 25150, Malaysia Email: hadzrihasmoni@yahoo.com



Fig. 1: Linear array endosonographic image of a large cystic mass in the head of pancreas with heterogenous solid area and FNA needle in-situ.

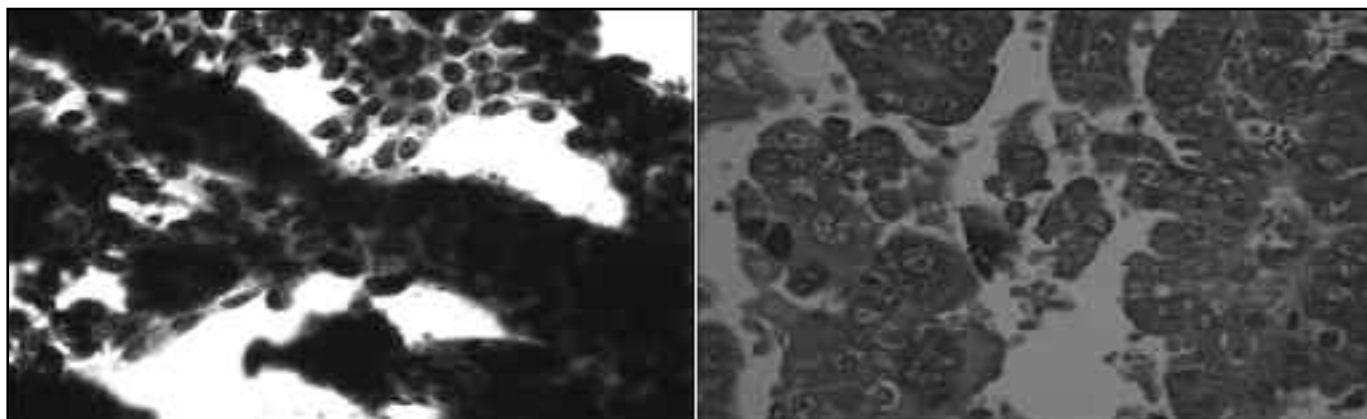


Fig. 2: View of cytological picture (left) demonstrating abnormal pancreatic cells with adenocarcinoma and papillary features which is morphologically similar to the view of histopathological picture (right) of previous ovarian mass.

secondary tumour from the ovary. With the availability of EUS guided FNA cytology and biopsy, the proper treatment can be given with confidence and clear justification by obtaining the tissue specimen. It has been shown that EUS features are not diagnostic to differentiate between a primary or secondary pancreatic metastasis in a case of focal pancreatic lesions. Simultaneous EUS-FNA allows cytodagnosis and can have a decisive influence on the selection of appropriate therapeutic strategies⁵.

This is the second case report illustrating the use of EUS guided FNA to diagnose pancreatic metastases from ovarian carcinoma. The first case was reported by Silva *et al*¹. They described a rare malignancy, an ovarian malignant mixed Mullerian tumour, which had metastasize to the pancreas. Due to the low incidence of pancreatic metastasis, most masses of the pancreas are assumed to be primary pancreatic neoplasms³. The importance of tissue samples for cytology and histology evaluation together with immunohistochemical studies had been demonstrated in differentiating between primary and secondary pancreatic malignancy^{1, 3-5}.

CONCLUSION

EUS guided FNA in conjunction with immunohistochemistry is a useful tool for diagnosing pancreatic lesion and mass. Although pancreatic metastases are rare, we still need to exclude the diagnosis for any pancreatic lesion.

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