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CASE REPORT

Pancreatic Serous Cystadenocarcinoma – A Case Report

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ABSTRACT

True malignant cystic neoplasms are rare tumors and account for only about 1-3% of all pancreatic tumors. Serous cystadenocarcinomas are very rare and to the best of our knowledge, about 15 cases have been reported in the literature so far. A 45 years old female presented with complaints of upper abdominal pain radiating towards back. CT scan upper abdomen showed a large heterogeneous mass arising from the body of the pancreas. It was inseparable from the spleen. A distal pancreatectomy with splenectomy was planned. The specimen received weighed 860 grams. Pancreas measured 13×11×9 cm. There was a 10×10×9 cm tumor with lobulated external surface. Microscopic examination revealed small cyst lined by cuboidal cells having clear cytoplasm and round predominantly uniform hyperchromatic nuclei. The tumor cells demonstrated glycogen in Periodic Acid Schiff (PAS) stain. The tumor invaded the splenic parenchyma. Foci of dystrophic calcification were present. The tumor was diagnosed as cystadenocarcinoma. Cystic neoplasms of pancreas are rare tumors but they should be thoroughly investigated as these lesions tend to have potential for malignant transformation.

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Key words: Pancreas; Cystadenocarcinoma

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INTRODUCTION

True malignant cystic neoplasms are rare tumors and account for

only about 1-3% of all pancreatic tumors^[1]. These tumors include serous and mucinous cystic neoplasms and have variable biological behaviors. Mucinous cystic tumors carry a significant potential for malignancy. In contrast, serous cystic neoplasms are considered benign and often observed with serial imaging. In the absence of symptoms, surgical management is not usually recommended^[2].

Serous cystadenocarcinomas are very rare and to best of our knowledge, about 15 cases have been reported in the literature so far^[2]. Mean age is 68±2 years and there is female preponderance (2:1) compared to males. We present a case of 45 years old lady having serous cystadenocarcinoma with invasion into spleen.

CASE REPORT

A 45 years old female presented with complaints of upper abdominal pain radiating towards back. Initial laboratory investigations revealed mild elevation of serum amylase level. General physical and systemic examinations were unremarkable. On ultrasound abdomen, there was a cystic tumor in the body of pancreas. After initial symptomatic treatment, CT scan abdomen was planned. However, the patient lost to follow up. After about a year of her initial show up she presented again with severe upper abdominal pain, weight loss and anorexia. CT scan abdomen was done; unenhanced (left) and portal venous phase (right) CT scan through the upper abdomen showed a large heterogeneous mass arising from the body of the pancreas. The mass had punctuate internal calcification and revealed moderate enhancement in the portal venous phase. It was inseparable from the spleen, with areas of obvious invasion (arrow) (Figure 1).

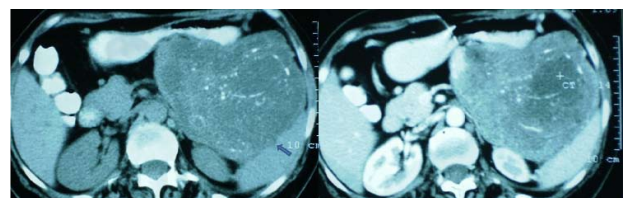


Figure 1: CT scan demonstrating a large mass measuring 7×6 cm in head of pancreas with obvious invasion in spleen (arrow).

Upon surgical consultation, a distal pancreatectomy with splenectomy was planned because of large size of tumor and extension into the spleen. Patient underwent exploratory laparotomy. The specimen received weighed 860 grams. Pancreas measured 13×11×9 cm. There was a 10×10×9 cm tumor with lobulated

external surface. Cut surface showed variable sized cystic spaces filled with serous fluid. The tumor was grossly extending into the splenic parenchyma (Figure 2). Microscopic examination revealed small cyst lined by cuboidal cells having clear cytoplasm and round predominantly uniform hyperchromatic nuclei (Figure 3). The tumor cells demonstrated glycogen in Periodic Acid Schiff (PAS) stain (Figure 4). The tumor invaded the splenic parenchyma (Figure 5). Foci of dystrophic calcification were present. The tumor was diagnosed as cystadenocarcinoma. The patient is doing well 9 months after surgery.



Figure 2 Pancreatic tumour infiltrating in to spleen.

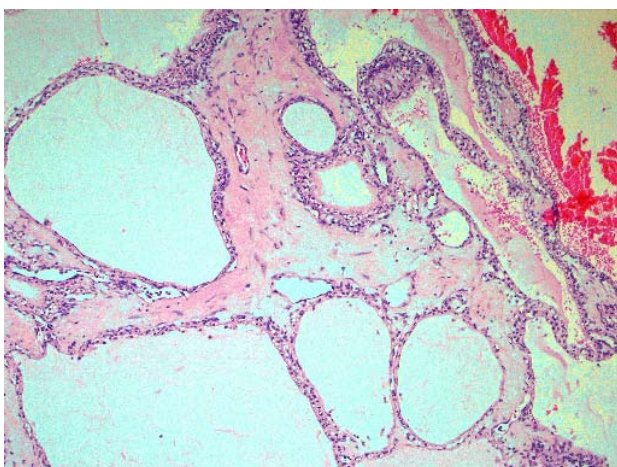


Figure 3 Serous cystadenocarcinoma with large cystic spaces lined by cuboidal cells.

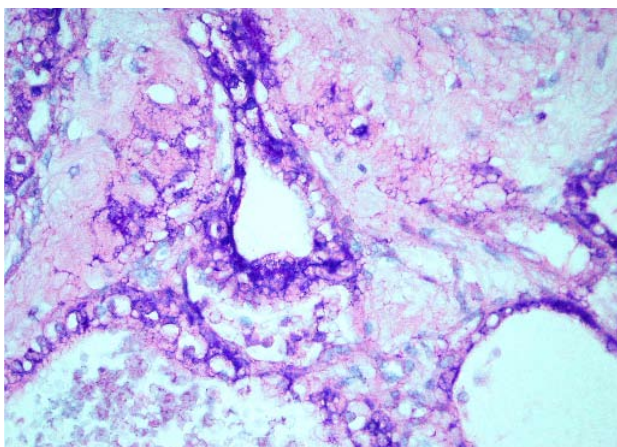


Figure 4 Pancreatic cystic tumor with positive PAS stain showing presence of glycogen.

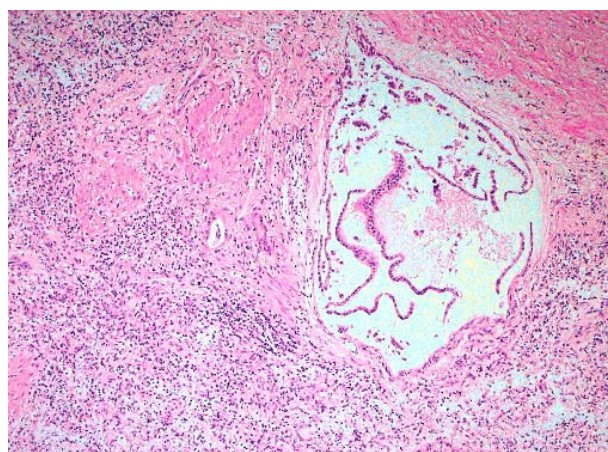


Figure 5 Serous cystadenocarcinoma pancreas infiltrating into spleen.

DISCUSSION

Pancreatic serous cystadenocarcinoma is very rare tumor^[3]. These tumors usually arise in the background of serous cystadenomas. Serous cystadenocarcinomas can not be distinguished from its benign counterpart solely on the basis of histological parameters, except for local invasion and distant metastasis^[4]. Therefore thorough careful gross and microscopic examination is mandatory to look for invasion. Our case showed both gross and microscopic extension into spleen.

First case of pancreatic serous cystadenocarcinoma was reported by George *et al* in 1989^[5] that showed serous cystadenocarcinoma of pancreas with invasion in stomach, spleen and liver. Shitanku *et al* in 2005^[6] in his case report showed infiltration of serous cystadenocarcinoma into spleen in 85 years old female who survived for 10 years after distal pancreatectomy and splenectomy. Later on in 2007 Galanis *et al*^[7], reported two cases of serous cystadenocarcinoma of pancreas with synchronous and metachronous lesions in liver. R.Gupta *et al* in 2007 reported a case of 42 years old female who presented with gradually enlarging abdominal mass. Imaging studies revealed a large cystic lesion in pancreas. A pathological diagnosis of macro-cystic serous cystadenocarcinoma of pancreas was made^[8].

In 2009, Jonathan C King *et al* reported a case of pancreatic serous cystadenocarcinoma in a 70 years old male who presented with upper GI bleeding and abdominal pain^[9]. There was duodenal ulcer with no evidence of malignancy on endoscopy. CT scan showed a cystic mass in head of pancreas which increased from 6.5 cm to 8 cm over a period of 3 months. A pancreaticoduodenectomy was performed. On histological examination, he was labeled as a case of serous cystadenocarcinoma with duodenal, vascular and neural invasion. In most of the cases, the tumor was widespread with local invasion into multiple organs along with distant metastasis. One case also presented with portal vein thrombosis^[10]. Asymptomatic serous cystadenomas are currently managed conservatively. However it is very difficult to differentiate between benign and malignant serous tumours preoperatively. Therefore any rapid increase in size and worsening of symptoms should raise a suspicion of malignant transformation. Serous cystadenocarcinomas are slowly growing neoplasms. Even at advanced stage, palliative resection may be helpful^[9].

CONCLUSION

Cystic neoplasms of pancreas are rare tumors but they should be thoroughly investigated as these lesions tend to have potential for malignant transformation.

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