

Primary squamous cell carcinoma of pancreas mimicking walled-off pancreatic necrosis

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Abstract

Pancreatic carcinoma is a dreaded diagnosis due to its poor prognosis. Squamous cell carcinoma (SCC) of the pancreas is a rare histological variety of pancreatic carcinoma. Its diagnosis is based on ruling out other site of tumor origin. Pancreatic carcinoma can mimic as mass or cystic lesion. We report a case of primary SCC of the pancreas in a 46-year-old male that closely mimicked acute pancreatitis with walled-off pancreatic necrosis.

Key words

Acute pancreatitis, squamous cell carcinoma of pancreas, walled-off pancreatic necrosis

Introduction

Pancreatic cancer has very poor prognosis. There are various histological types of pancreatic cancer with squamous cell carcinoma (SCC) being very rare. Its clinical presentation is similar to that of pancreatic adenocarcinoma with the majority of patients presenting with abdominal pain, jaundice, vomiting, and weight loss.^[1,2] A very large tumor can have cystic degeneration of tumors and mimic a cystic lesion with debris. Here, we are describing a case initially diagnosed as pancreatitis with walled-off pancreatic necrosis (WON), which on subsequent evaluation was found to be having a rare histological type of pancreatic carcinoma.

Case Report

A 46-year-old male alcoholic and smoker had a history of severe epigastric pain abdomen and was diagnosed as acute pancreatitis with necrosis in pancreatic body and tail region

2 months ago elsewhere on the basis of elevated serum amylase and contrast-enhanced computed tomography (CT) of the abdomen. He was managed with oral analgesics and remained pain free for next 2 months. He again presented with severe epigastric pain with radiation to back after binge drinking of alcohol and on evaluation had hypotension, leukocytosis, and a 9.4 cm × 6.5 cm × 5.6 cm intrapancreatic collection replacing the whole of the pancreas with irregular thick enhancing wall with shaggy inner margin [Figure 1]. He was diagnosed as infected walled-off necrosis and underwent urgent ultrasound-guided percutaneous drainage of WON. It drained hemorrhagic fluid with very high amylase levels. The patient was referred to us for endoscopic therapy for persistent drain from the catheter. The fluid analysis had high amylase (877 IU/mL), and the cytological examination of drain fluid revealed the presence of malignant squamous cells. Positron emission tomography-CT showed intense fluorodeoxyglucose uptake (maximum standardized uptake value 10.8) in the periphery of hypodense lesion in the pancreas [Figure 2; black arrow] with no uptake anywhere else in the body. Cytological examination of the image guided fine-needle aspiration from the enhancing lesion confirmed SCC [Figure 3]. An endoscopic transpapillary stent was placed [Figure 4] and he was referred to oncology services for further management.

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Figure 1: Contrast-enhanced computed tomography abdomen: Cystic lesion of pancreas with enhancing periphery

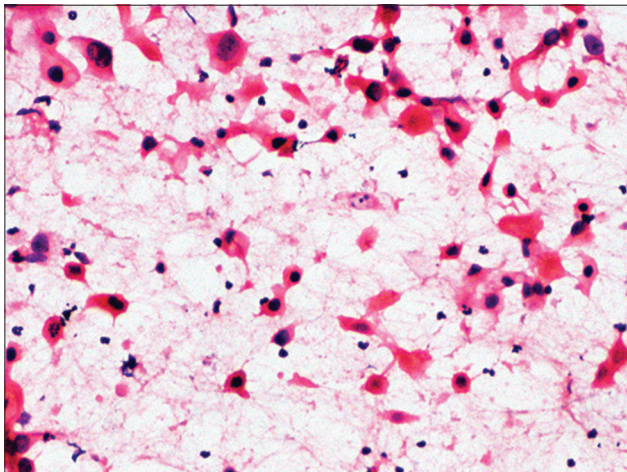


Figure 3: Discrete population of tumor cells showing squamoid differentiation (H and E, ×200)

Discussion

Pancreatic cancer carries a very poor prognosis. There are various histological types of pancreatic carcinoma with adenocarcinoma being the most common type of pancreatic carcinoma. The other types are serous or mucinous cystadenocarcinoma, intraductal papillary mucinous carcinoma, acinar cell carcinoma, solid pseudopapillary carcinoma, and SCC. SCC of the pancreas is very rare, and its clinical presentation is similar to that of pancreatic adenocarcinoma.^[1,2] The normal pancreas is devoid of the squamous cell.^[1-3] However, various theories had been put forwarded for the development of SCC of the pancreas. The various mechanisms which have been proposed for development of SCC in pancreatic location are the malignant transformation of squamous metaplasia of ductal cells, squamous metaplasia in adenocarcinoma, and squamous differentiation with malignant transformation of pluripotent primitive cells.^[1-4]

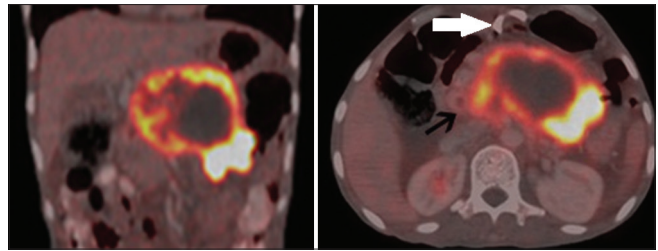


Figure 2: Positron emission tomography-computed tomography: Intense fluorodeoxyglucose uptake (maximum standardized uptake value 10.8) in the periphery of hypodense lesion in the pancreas (black arrow). A percutaneous catheter is also noted (white arrow)



Figure 4: Abdominal X-ray: Transpapillary stent and percutaneous catheter seen

The imaging features of SCC include enhancement of the tumor and fluid filled cavities representing keratinous debris.^[4,5] The enhancement of the tumor on contrast CT and tumor blush patterns on angiography have been reported as key features that help in differentiation of pancreatic SCC from adenocarcinoma.^[3] In our case, the keratin-filled cavity closely mimicked WON and presence of episodic pancreatic pain, elevated amylase, and enhancing wall led on to diagnostic dilemma. It is important to exclude metastasis of SCC to pancreas before labeling it as a primary tumor of the pancreas, and this is more important as there are no cytological features that can differentiate primary from metastatic pancreatic SCC.^[4]

SCC is an aggressive tumor and is usually nonresponsive to chemotherapy and radiotherapy.^[6] Because of their large size as well as dissemination at the time of diagnosis, curative resection is not possible in most cases.

Conclusion

SCC of the pancreas is very rare and because of keratin debris, it may closely mimic cystic lesions of the pancreas.

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Conflicts of interest

There are no conflicts of interest.

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