Case Report

Squamous Cell Carcinoma of the Pancreas

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Abstract

Squamous cell carcinoma (SCC) of the pancreas is a controversial entity of uncertain origin, as the pancreas is entirely devoid of squamous cells. Cases of pancreatic carcinomas that exhibit primary squamous morphology are rarely described in the literature. We report a case of primary SCC of the pancreas in a 66-year-old woman with complaints of epigastric pain of five months duration. Imaging studies demonstrated a solid tumor in the body of the pancreas that invaded the superior mesenteric (SMA) and celiac arteries, as well as regional lymph nodes. Cytological examination of an endosonography-guided fine needle aspiration (EUS-FNA) specimen confirmed the diagnosis of well-differentiated SCC of the pancreas. On the basis of diagnosis and examinations prior to chemotherapy, we did not detect any SCC lesions that might have metastasized to the pancreas. Primary SCC of the pancreas is a rare entity that comprises 0.05% of all exocrine pancreatic carcinomas. The clinical profile and biological behavior of pancreas SCC are similar to typical pancreatic ductal adenocarcinomas.

Keywords: Carcinoma, Iran, pancreas, squamous cell

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Introduction

Pancreatic malignancies are divided into two main groups, endocrine and non-endocrine. Non-endocrine cancers may have five different sources: ductal, acinar, connective tissue, mixed cell type and uncertain origin.[1] Ductal carcinomas can be either adenocarcinoma or squamous cell carcinoma (SCC). Ductal or acinar cells with a classic adenomatous morphology comprise the majority of non-endocrine pancreatic malignant tumors; pure SCC of the pancreas is considered to be a rare type of pancreatic ductal carcinoma. Hence if primary SCC of the pancreas is diagnosed, the search for other primary tumors is mandatory. Hereby, we report a patient with primary SCC of the pancreas and describe the clinicopathological features which distinguish primary from secondary pancreatic SCC.

Case Report

A 66-year-old woman was admitted to our hospital for an endosonography evaluation. She suffered from epigastric pain for the past five months. She was a non-smoker with no respiratory symptoms. The patient's medical history was positive for diabetes mellitus, cardiovascular disease, gallstones and partial nephrectomy due to nephrolithiasis. Physical examination was unremarkable. Laboratory findings that included tumor markers (CEA, CA 19-9 and SCC antigen) were within normal limits. Abdominal sonography reported a hypoechoic solid mass, 40 × 33 mm in size, located in the body and tail of the pancreas; the common bile duct (CBD) and portal vein (PV) were normal. She underwent an abdominal CT scan which showed the presence of a hypodense solid mass located in the body of the pancreas. EUS further confirmed a 35 × 40 mm hypoechoic solid mass in the body of the pancreas with invasion to the superior mesenteric artery (SMA) and celiac artery (Figures 1A and 1B). Cytologic study was positive for SCC and further confirmed by immunohistochemistry (Figures 1C and 1D). To determine a primary source for the SCC, the patient underwent chest, mediastinal, abdomen and pelvic CT scans, an ear-nose-throat workup, upper gastrointestinal endoscopy, and dermatological, uterine, vaginal and urinary bladder evaluations, all of which did not reveal any other source of SCC. The patient was placed on a combined gemcitabine and oxaliplatin chemotherapeutic regimen. As she could not tolerate the combined regimen, it was reduced to gemcitabine. The patient was followed for nine months. According to her follow-up CT scan on April 2012, the pancreatic mass measured 6 cm with the presence of metastatic lesions in her liver and carina of the trachea. The patient died in early July 2012.

Discussion

Primary SCC of the pancreas is a rare entity that comprises 0.05% of exocrine pancreatic carcinomas.[2] The histogenesis of pancreatic SCC is still unclear but there are several hypotheses, namely a) bipotential primitive cells that are capable of differentiating into either glandular adenocarcinoma or SCC[3]; b) SCC that originates from a mixed adenosquamous carcinoma in which the glandular components are not visible[4]; c) malignant transformation of squamous metaplasia due to chronic inflammation[5]; and d) a pre-existing adenocarcinoma with squamous metaplasia that transforms into SCC[4]. Squamous metaplasia of ductal columnar cells as a response to an inflammatory condition has been commonly observed.[6] The transformation into SCC is an unusual occurrence either in this clinical course or in experimentally-induced pancreatic tumors.[7] The prominent feature might be a desmoplastic response secondary to chronic inflammation.[8]

The clinical profile and biological behavior of pancreatic SCC are similar to typical pancreatic ductal adenocarcinomas. The symp-

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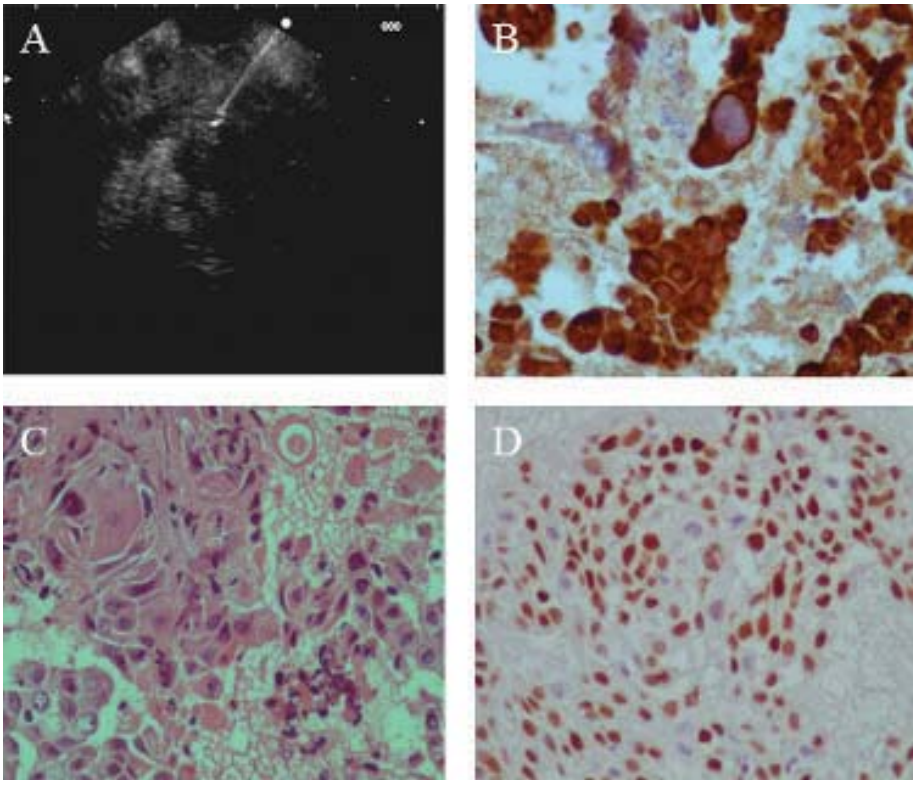

Figure 1. A) Endosonography-guided fine needle aspiration (EUS-FNA); **B, C, and D)** Pathologic findings indicated a pure, well-differentiated squamous cell carcinoma (SCC) (H&E, original magnification: 300× and IHC).

toms include anorexia, weight loss, nausea and vomiting, abdominal and back pain, and fatigue. If angiography is done, a tumor blush may be detectable.[9] Endoscopic retrograde cholangiopancreatography (ERCP) may also reveal extravasations of the contrast medium into the cystic component of the tumor.[10] The accepted modality for investigating pancreatic tumors is endosonography-guided fine needle aspiration (EUS-FNA).[11] Regional lymph node involvement and liver metastases are common with this tumor. The survival from the time of diagnosis is similar to that of pancreatic adenocarcinoma.[7] Different therapeutic modalities have been used in the treatment of this tumor and include various chemotherapeutic regimens and radiotherapy. None have been proven effective.[12] SCC of the pancreas is rare, therefore there are no definite statistics regarding the prognosis. However, according to previous case reports the prognosis is poor. To compare with symptomatic treatments, chemotherapy has increased the median survival from one to six months.[13] This patient, a case of primary SCC of the pancreas, survived for nine months. Considering the rarity of this tumor an extensive search for another source was performed which did not show any other primary site for this SCC.

Conflict of interest

The author has no potential conflicts of interest.

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