

Adenosquamous Carcinoma of Head of the Pancreas: A Case Report

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ABSTRACT

Adenosquamous carcinoma is a rare variant of exocrine pancreatic neoplasm which is characterized by both squamous and adenomatous components. It has aggressive behavior with poor prognosis. We report a case of adenosquamous carcinoma of pancreas in a 39-year-old male presenting with pain in epigastric and hypochondrium region. Clinical diagnosis of chronic pancreatitis with calculi in the main pancreatic duct was made which on histopathological diagnosis revealed a lesion in pancreas with morphological features of adenosquamous carcinoma.

Key words: Pancreas, Adenosquamous carcinoma, Aggressive tumor

INTRODUCTION

Majority of pancreatic malignant neoplasms are invasive ductal carcinomas and have poor prognosis. Pancreatic adenosquamous carcinoma is an unusual variant which is also referred to as adenoacanthoma, mucoepidermoid carcinoma, mixed squamous and adenocarcinoma. Among the exocrine pancreatic tumors, incidence of adenosquamous carcinoma is estimated to be between 0.38% to 10% [1]. These tumors are aggressive with less favorable prognosis. Risk factors for adenosquamous carcinoma are alcohol consumption, tobacco, chronic pancreatitis, genetic predisposition such as

p53, ATM, DALB2, BRCA2 [2]. We report a case of pancreatic adenosquamous carcinoma in 39-year-old male patient due to its rarity of occurrence

CASE REPORT

A 39-year-old male patient came with complaint of pain in the epigastric and right hypochondrium region for 3 months. Pain was radiating to back. No history of altered bowel or bladder habits. Patient is not a known hypertensive or diabetic.

Routine hematological investigations were within normal limits. Post prandial blood glucose level was 240mg/dL and fasting blood glucose level was 100mg/dL. Serum SGPT, creatinine, urea, potassium, albumin, total protein, bilirubin, SGOT were normal. Serum sodium was 132mmol/L and alkaline phosphatase was 38IU/L. Drain fluid amylase was 47IU/L.

On real-time B-mode Ultrasound scan of abdomen pancreas appeared atrophic. Calculous of size 2.1X0.7cms was noted in the main pancreatic duct near head region causing upstream dilation of duct with maximum caliber of the duct measuring 1.8cms in the body region. Clinical diagnosis on ultrasound and CECT abdomen was chronic pancreatitis with dilated main pancreatic duct and multiple calcifications. During surgical exploration

3X3cms hard mass was found in the head of the pancreas with multiple large hard stones in duct all along the gland and Whipples resection was performed. We received distal gastrectomy along with pancreaticoduodenectomy specimen. Cut section of distal portion of stomach and duodenum appeared normal. Cut section of pancreas showed ill circumscribed gray white lesion measuring 5.5X2.6X3cm in the head and uncinate process (Figure 1). Microscopic examination revealed lesion with cuboidal to polyhedral tumor cells arranged in glandular pattern and sheets (Figure 2). Tumor cells were having round to oval nuclei with prominent nucleoli and abundant eosinophilic cytoplasm (Figure 3). Perineural invasion was seen (Figure 4). Depending upon the morphological features histopathological diagnosis of adenosquamous carcinoma of pancreas was given. Also received 13 lymph nodes which showed only reactive hyperplasia. Pathologic stage classification was pT3N0.

Figure 1: Gray white lesion in pancreas with attached intestine and gall bladder



Figure 2: Tumor cells arranged in glandular pattern (H&E, X100)

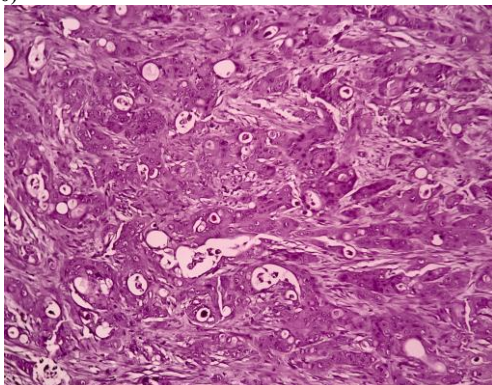


Figure 3: Nests of tumor cells showing squamous differentiation (H&E,X100)

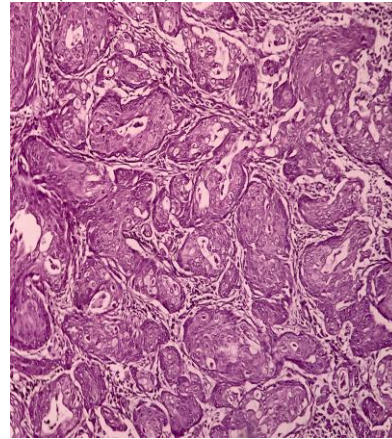
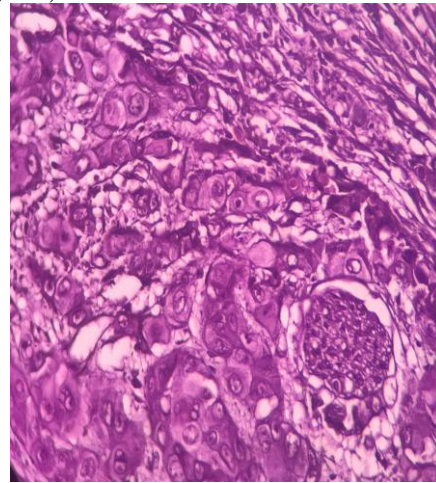


Figure 4: Tumor cells showing perineural invasion (H&E,X400)



DISCUSSION

According to the literature first case of adenosquamous carcinoma was reported by Herxheimer in 1907 and he referred the lesion as “Cancroide”. [3] Pancreatic adenosquamous carcinoma is a rare aggressive tumor which is defined as ductal adenocarcinoma mixed with at least 30% of squamous malignancy [4].

In pancreas squamous metaplasia has been reported in 17% to 48% of cases in autopsy studies. Squamous metaplasia may be found in benign pancreatic cyst wall, chronic pancreatitis and in the main pancreatic duct following stent placement [4].

The pathogenesis of adenosquamous carcinoma is not clearly known. But several theories have been proposed. One such theory is that chronic pancreatitis produces chronic inflammation which leads to squamous metaplasia of ductal cells and the

adenosquamous carcinoma arises from these metaplastic cells [5]. Another theory is collision theory which proposed that 2 distinct neoplastic population of cells arising independently and then subsequently combine to form adenosquamous carcinoma [6]. Third theory suggested that adenosquamous carcinoma arises from pluripotent ductal cells which are capable of malignant differentiation either to squamous cell carcinoma or adenocarcinoma and then combine later giving rise to adenosquamous carcinoma [7]. In the studies done by Yeung V et al (2015) BRCA 1 and 2 mutations were found in some cases of adenosquamous carcinoma. [8]

Clinical presentation was similar to that of primary pancreatic adenocarcinoma. Patient presents with weight loss, anorexia, pain abdomen and with or without jaundice [5]. Computerized tomography (CT) imaging may be helpful in diagnosis. CT imaging showing large infiltrative lesions with the presence of central necrosis is suggestive of adenosquamous carcinoma of pancreas [4]. Kuji et al in his study suggested that Gallium -67 citrate scintigraphy may help in detecting these lesions as they relatively take Gallium-67 and can be visualized by nuclear scanning. [9] On endoscopic ultrasound, lesion appears as hypoechoic solid lesion which is not well defined.[10] Procore biopsy needles are superior than the conventional needles for the diagnosis of pancreatic tumors. [11]

Borazanci et al (2015) in his study on 23 patients described that adenosquamous carcinoma shows squamous cell carcinoma more focally and peripherally located in the tumor, whereas adenocarcinoma component is seen in center of tumor. Transitional zone is present where glandular component blends into the squamous component. [2] In our case also, squamous component was predominantly seen at the periphery and adeno component was present at the center of the lesion. On immunohistochemistry, tumor cells will be positive for CK5/6, CK7, p40, p63 and negative for CK20, p16, CDX2 and p53. [5]

Treatment modality for this aggressive tumor is still unclear. Hsu J et al suggested that survival rate of the patients with adenosquamous carcinoma ranged from 1.12 to 22.42 months (median 4.41 months) which is shorter than those with adenocarcinoma (6.51 months). [12] Treatment with multidisciplinary approach including surgery, intraoperative radiotherapy and locoregional chemotherapy have been reported to improve survival and to inhibit local recurrence and metastasis to liver. [13]

CONCLUSION

Adenosquamous carcinoma of the pancreas is a rare variant of exocrine pancreatic tumors. This tumor has poorly understood pathophysiology and has aggressive behavior when compared to adenocarcinoma. Procore endoscopic ultrasound needle for FNA biopsy may be helpful for early diagnosis as aggressive therapy should be given due to its poor prognosis

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