

## CASE REPORT

# Endoscopic Diagnosis of Squamous Cell Carcinoma of the Pancreas Invading the Stomach

Surinder S Rana<sup>1</sup>, Deepak K Bhasin<sup>1</sup>, Kapil Jain<sup>1</sup>,  
Ritambhara Nada<sup>2</sup>, Saroj K Sinha<sup>1</sup>, Kartar Singh<sup>1</sup>

Departments of <sup>1</sup>Gastroenterology, and <sup>2</sup>Histopathology, Post Graduate  
Institute of Medical Education and Research (PGIMER). Chandigarh, India

### ABSTRACT

**Context** Squamous cell carcinoma of the pancreas is an unusual tumor due to the absence of squamous cells in the normal pancreas. Its clinical presentation is similar to that of adenocarcinoma of the pancreas and is usually diagnosed intraoperatively or at autopsy. **Case report** We report a 50-year-old male who presented with obstructive jaundice and symptoms suggestive of gastric outlet obstruction. Contrast-enhanced computerized tomography revealed a heterogeneous enhancing mass in the head of pancreas and upper gastrointestinal endoscopy revealed an ulcerated polypoidal lesion in the stomach; the endoscopic biopsies taken from this region revealed infiltration of the lamina propria with malignant squamous cells. **Conclusion** A rare case of squamous cell carcinoma of the head of the pancreas presenting with obstructive jaundice and gastric outlet obstruction and in which diagnosis was established by endoscopic biopsies of the stomach has been described.

### INTRODUCTION

Squamous cell carcinoma of the pancreas is a rare tumor with a reported incidence of 0.5 to 2% of all pancreatic malignancies [1, 2]. The normal pancreas is entirely devoid of squamous cells; however, during inflammatory episodes such as chronic pancreatitis squamous metaplasia of the ductal columnar cells has been observed in 9-64% of the cases examined at autopsy [1, 2, 3]. Despite this frequency of squamous cell metaplasia, its transformation to squamous cell carcinoma is a rare event [2]. Most cases of squamous cell carcinoma of pancreas have been diagnosed intraoperatively or at autopsy [2, 3]. We present a rare case of squamous cell carcinoma of the head of pancreas which presented with obstructive jaundice and gastric outlet obstruction and was diagnosed on histopathological examination of the gastric biopsy specimens.

### CASE REPORT

A 50-year-old male presented to us with a history of non-colicky pain of 2-month duration which was localized to the upper abdomen and radiated to the back. It was intermittent in nature, severe in intensity and aggravated by meals. This pain was accompanied by a history of post-prandial non-bilious vomiting containing partially digested food particles and progressively increasing jaundice with clay-colored stools. There was no history of fever or pruritus. These complaints were accompanied by a significant loss of appetite and weight. There was a history of smoking and alcohol consumption. Examination revealed an icteric patient with a non-tender, hard abdominal mass in the upper abdomen.

Investigations revealed normal hemoglobin, a total leukocyte count, renal function tests and serum electrolytes. The serum bilirubin was 28 mg/dL (reference range: 0-1 mg/dL) with a conjugated fraction of 21 mg/dL and serum alkaline phosphatase was 826 IU/L (reference range: 40-128 IU/L). The other biochemical parameters were normal. Contrast-enhanced computerized tomography (CECT) of the abdomen revealed a large heterogeneous enhancing mass in the head of the pancreas (Figure 1) causing dilation of the main pancreatic duct and obstruction of the lower common bile duct with asymmetric mural thickening of the antropyloric region and the first and second part of the duodenum with multiple enlarged lymph nodes at the porta, peripancreatic and upper

Received July 14<sup>th</sup>, 2008 - Accepted October 1<sup>st</sup>, 2008

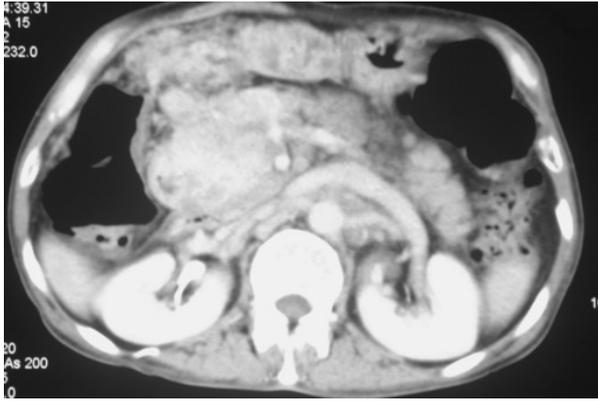
**Key words** Carcinoma, Squamous Cell Cholangiopancreatography, Endoscopic Retrograde; Pancreatic Pseudocyst; Pancreatitis, Chronic

**Correspondence** Surinder Singh Rana

Department of Gastroenterology, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh-160012, India  
Phone: +91.172.274.9123; Fax: 91-172.274.4401

E-mail: drsurinderrana@yahoo.co.in; sonalisurinder@yahoo.co.in

**Document URL** <http://www.joplink.net/prev/200903/29.html>

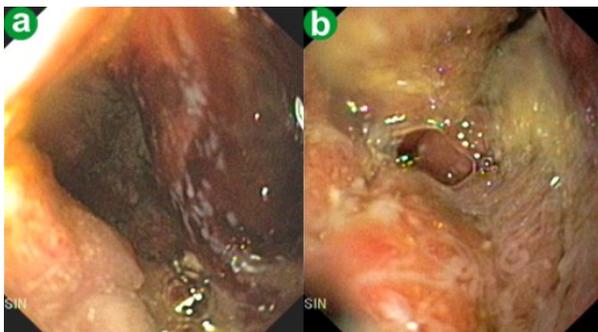


**Figure 1.** CECT abdomen: heterogeneous enhancing mass in the head of the pancreas.

retroperitoneal region. There was the presence of ascites. Upper gastrointestinal endoscopy revealed a normal esophagus with ulcerated polypoidal lesions in the antropyloric region causing distortion and obstruction of the lumen beyond which the endoscope was not negotiable (Figure 2). The biopsies taken from this region revealed intestinal metaplasia with infiltration of the lamina propria with malignant squamous cells (Figure 3). The oropharyngeal and nasal examination and subsequently performed CECT of the neck and chest were normal. In view of the disseminated malignancy and poor general condition of the patient, palliative treatment was advised. Because of symptomatic gastric outlet obstruction and refusal of enteral stent placement, a feeding jejunostomy tube was placed. Metastatic deposits, along with free fluid in the peritoneal cavity, were noted intra-operatively. Cytological examination of the peritoneal fluid revealed the presence of malignant squamous cells. Following establishment of adequate enteral nutritional access, the patient was discharged and advised to follow up in the oncology clinic.

## DISCUSSION

Squamous cell carcinoma is a rare malignancy of the pancreas and its exact cell of origin is not known. It is speculated to have originated from either a primitive cell capable of differentiating into either squamous or glandular carcinoma, an adenocarcinoma undergoing



**Figure 2.** Endoscopic images. **a.** Narrowed and distorted antropyloric region. **b.** Close-up view showing ulcerated unhealthy mucosa.

squamous transformation, malignant transformation of the squamous metaplasia of the ductal epithelium or an aberrant squamous cell undergoing a malignant change [4].

The clinical presentation of squamous cell carcinoma is similar to that of adenocarcinoma with patients presenting with upper abdominal and back pain, anorexia, weight loss, nausea, vomiting, and obstructive jaundice [5]. The heterogeneous appearance of the mass on abdominal CECT, as seen in our case, with fluid-filled cavities representing necrotic keratinous debris is seen in patients with squamous cell carcinoma of the pancreas [6]. Other radiological features of squamous cell carcinoma of the pancreas include enhancement of the tumor on CECT and tumor blush on angiography, suggesting increased vascularity of the tumor [7, 8].

Squamous cell carcinoma of the pancreas usually carries a poor prognosis. Because of widespread dissemination at the time of initial diagnosis or surgery, curative resection is not possible in most of cases, as also happened in our case [2]. Although there are reports of the use of chemotherapeutic agents including an objective response to gemcitabine in unresectable tumors, the response to various chemotherapeutic agents as well as radiotherapy is not encouraging and the prognosis of this malignancy remains poor [2, 8, 9, 10].

In conclusion, we have described a rare case of squamous cell carcinoma of the head of the pancreas presenting with obstructive jaundice and gastric outlet obstruction and in which diagnosis was established by endoscopic biopsies of the stomach.

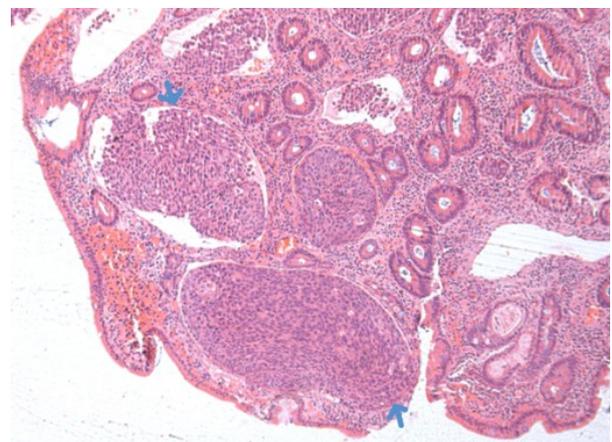
---

**Conflict of interest** The authors have no potential conflicts of interest

---

## References

1. Baylor SM, Berg JW. Cross-classification and survival characteristics of 5,000 cases of cancer of the pancreas. *J Surg Oncol* 1973; 5:335-8. [PMID 4355621]



**Figure 3.** Photomicrograph shows intestinal metaplasia of the gastric epithelium with squamous cell carcinoma infiltrating the lamina propria (arrows) (H&E x40).

2. Anagnostopoulos GK, Aithal GP, Ragnath K, Kaye P, Rowlands BJ. Squamous cell carcinoma of the pancreas: report of a case and review of the literature. JOP. J Pancreas (Online) 2006; 7:47-50. [PMID 16407618]
  3. Ishikawa O, Matsui Y, Aoki I, Iwanaga T, Terasawa T, Wada A. Adenosquamous carcinoma of the pancreas: a clinicopathologic study and report of three cases. Cancer 1980; 46:1192-6. [PMID 7214302]
  4. Nakashima H, Hayakawa T, Hoshino M, Kamiya Y, Ohara H, Yamada T, et al. Squamous cell carcinoma of the pancreas with massive invasion of the retroperitoneum. Intern Med 1995; 34:61-4. [PMID 7718985]
  5. Minami T, Fukui K, Morita Y, Kondo S, Ohmori Y, Kanayama S, et al. A case of squamous cell carcinoma of the pancreas with an initial symptom of tarry stool. J Gastroenterol Hepatol 2001; 16:1007-9. [PMID 11595080]
  6. Itani KM, Karni A, Green L. Squamous cell carcinoma of the pancreas. J Gastrointest Surg 1999; 3:512-5. [PMID 10482708]
  7. Fajardo LL, Yoshino MT, Chernin MM. Computed tomography findings in squamous cell carcinoma of the pancreas. J Comput Tomogr 1988; 12:138-9. [PMID 3168524]
  8. Sprayregen S, Schoenbaum SW, Messinger NH. Angiographic features of squamous cell carcinoma of the pancreas. J Can Assoc Radiol 1975; 26:122-24. [PMID 1158957]
  9. Brown HA, Dotto J, Robert M, Salem RR. Squamous cell carcinoma of the pancreas. J Clin Gastroenterol 2005; 39:915-9. [PMID 16208119]
  10. Bideau K, Metges JP, Bayle S, André M, Robaszkiewicz M, Lagarde N, Labat JP. Treatment of squamous cell carcinoma of the pancreas with gemcitabine. Gastroenterol Clin Biol 2006 ;30:1217-20. [PMID 17075482]
-