PRIMARY SQUAMOUS CELL CARCINOMA OF THE STOMACH
A CASE REPORT

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Squamous cell carcinoma (SCC) originating from the stomach is a relatively rare entity. There are theories regarding the development of this rare tumor, but its exact pathogenesis remains obscure. Fewer than 100 cases of primary SCC of the stomach have been presented in the literature. Due to the advanced stage at the time of diagnosis in most of these cases, the prognosis is generally poor. Here we present a patient with primary SCC of the stomach extending to the transverse colon, gall bladder and omentum.

Key words: squamous cell carcinoma, stomach.

Introduction
Gastric carcinoma is a significant health problem in Turkey¹. Most of the gastric carcinomas are adenocarcinomas². Primary squamous cell carcinoma of the stomach is a rare occurrence, accounting for nearly 0.2% of all gastric carcinomas². Although there are theories about the development of SCC in the stomach, its pathogenesis remains obscure³,⁴. The aggressive behavior of this tumor was represented by locally advanced or metastatic disease in case reports, and a generally poor prognosis has been reported in the literature²,⁵,⁶. Here we present a patient with primary SCC of the stomach extending to the transverse colon, gall bladder and omentum.

Case report
A 62-year-old man was admitted to our emergency department with a 10-day history of constipation, vomiting and abdominal pain. The patient had had pain in the epigastric region for the previous three months. He had had no weight loss, hematochezia or melena. Physical examination on admission revealed a palpable mass in the epigastric region.

His history included a transurethral resection (TUR) one year earlier for transitional cell carcinoma in the urinary bladder. The grade 3 tumor had invaded the muscle layer of the bladder (T2bN0M0). External radiotherapy was applied after TUR. The patient was followed up with cystoscopic biopsy every three months after radiotherapy. No pathological recurrence was detected.

At the emergency department, the patient underwent an abdominal computed tomography (CT) scan that demonstrated thickening in the antral part of the stomach wall and a mass extending to the hepatic flexure of the large bowel. The size of the mass outside the stomach was 6 x 4 cm. The large bowel segments in that part were narrowed and the proximal segments were dilated. The gallbladder wall adjacent to the mass was thick. In parts of the anterior wall of the urinary bladder asymmetric thickness indicating TUR defects was observed. Endoscopic examination showed fecaloid content in the stomach. In the greater curvature an opening of a fistula tract to the transverse colon was detected. This opening was infiltrated by the tumor mass and extended to the transverse colon.

A subtotal gastrectomy, cholecystectomy, right hemicolectomy, and Billroth II gastrojejunostomy and ileo-transversostomy were performed. The resected specimen consisted of stomach and adjacent colon segments measuring 22 x 18 x 14 cm. In this specimen a solid, grayish, ulcerated exophytic tumor mass of 7 x 7 x 4 cm extending from stomach to colon was observed. It formed a fistula from the stomach to the adjacent colon segment. The tumor had also infiltrated the perigastric fat tissue. Another specimen consisting of a 50 cm segment of colon and terminal ileum was resected.

Macroscopic examination of the gallbladder revealed a 1.5 cm thickening in one part of its wall. Microscopic examination of the first specimen revealed SCC in the greater curvature of the stomach (Figure 1) and a fistula of the large bowel (Figure 2). In the lesser curvature of the stomach, free tumor mass was found. The gallbladder, abdominal wall and omentum were infiltrated with tumor (Figure 3). However, the second specimen containing part of the colon and terminal ileum was free of tumor. The carcinoma was poorly differentiated but
contained keratin pearls structures in some parts (Figure 4). Extensive desmoplastic reaction was observed in the tumor stroma. Sections of lymph nodes, ileum, and margins were free of tumor.

One month after the operation, combination chemotherapy consisting of cisplatin (20 mg/m²/day) and 5-flourouracil (5-FU) (1000 mg/m²/day) was given for five days every 21-days. The patient received six cycles of chemotherapy. Control abdominal CT scans and endoscopic examinations failed to show any recurrence during follow-up. The patient has been healthy and disease free for 36 months.

Discussion

Primary gastric SCC is an uncommon carcinoma of the stomach. The incidence of this tumor is 0.04-0.07%7. In Western countries, a male predominance has been observed7,8. The mean age of the patients is 61.9 years8. Parks and coworkers3 suggested three criteria for primary SCC of the stomach: absence of tumor in the cardia, no tumor extension to the esophagus and no evidence of SCC in any other part of the body. Besides these criteria, Boswell and Helwing established histological criteria for SCC of the stomach, stating that keratinizing cell masses with pearl formation are typical9. A mosaic pattern of cell arrangement with sharp borders, intercellular bridges and a high concentration of sulfhydryl or disulfide groups, indicating the presence of keratin, are characteristics of SCC of the stomach.

The pathogenesis of SCC of the stomach is unknown but several theories including the presence of totipotent cells, an area of ectopic squamous cell nests, squamous metaplasia of glandular epithelium, and squamous differentiation of preexisting adenocarcinoma have been put forward8. In our case the latter theory can be excluded because no evidence of adenocarcinoma or squamous metaplasia was found on pathological examination.

The prognosis of primary SCC of the stomach is not clearly defined. Only few cases have been presented in the literature. In most case reports the patients died after surgery and almost all patients had advanced disease at diagnosis8,6. Several patients have lived longer with extensive disease7,10. One patient received postoperative chemotherapy with adriamycin, 5-FU and mitomycin10, another was treated with postoperative radiotherapy and 5-FU, leucovorin, cisplatin and etoposide7. Our patient had an exophytic tumor extending to the transverse colon, gallbladder and omentum. After radical surgery, he was given cisplatin and 5-FU. The combination regimen of cisplatin and 5-FU appears to be effective in
these cases; however, a standard regimen for primary SCC of the stomach remains to be defined.

**Conclusion**

Primary SCC of the stomach is an uncommon tumor with an unclear pathogenesis. Most cases in the literature were at an advanced stage at the time of diagnosis and in these cases various chemotherapy regimens were unsuccessful. However, in the case presented here, in spite of extensive disease, complete remission was achieved with a combination of cisplatin and 5-FU. This combination can be effective in SCC of the stomach.

**References**