Primary squamous cell carcinoma of the stomach : a case report

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Abstract

Primary squamous cell carcinoma (SCC) of the stomach is a very rare tumour. We report a case of SCC of the stomach in a 56-year old woman who had metastases to the liver and abdominal lymph nodes. (Acta gastroenterol. belg., **2003**, 66, **189-190**).

Key words : squamous cell carcinoma, stomach.

Introduction

Primary squamous cell carcinoma (SCC) of the stomach is rare with a frequency between 0.04 and 0.009% (1,2). Up to now, 62 Western and 18 Japanese cases have been reported in the literature (2). Although there are various theories regarding the pathogenesis of this rare neoplasm, its origin is still unknown. In this report, we present a case with primary SCC of the stomach with metastasis.

Case Report

A 56 year-old Caucasian woman was admitted to the hospital with anorexia and epigastric pain for the past three months. In the previous four months, she had lost about 10 kg in weight. She had begun to vomit during the past two weeks. There was no history of corrosive acid swallow, head and neck surgery, gastric operation, chemotherapy, and radiotherapy. Her other personal history was completely unremarkable. There was no known history of cancer in her first degree relatives.

The patient was an anaemic and cachectic middle-aged woman. Physical examination revealed a firm epigastric mass unattached to the liver. The mass appeared to be fixed in deeper segments, however the part closer to the surface was mobile. There were no abnormal findings in other systems.

The laboratory studies showed hemoglobin 8.7 g/dL, mean corpuscular volume 70.8 fl, platelets 494000/mm^3, white blood cell count 11.400/mm^3, with a normal differantial. CEA 1.5 ng/ml (N : 0.9-5.4) and CA 19-9 65.6 U/ml (N : 0-37). Liver function tests were normal.

Gastroscopy showed a large, polypoid, friable and ulcerated lesion which involved the greater curvature of the stomach between the proximal corpus and antrum. Esophagus, cardia, fundus, antrum and duodenum were normal. Histologic examination of biopsies taken from this lesion showed sharply demarcated islands of moderately differentiated SCC. There was a moderate degree of variation in the size and shape of malignant cells with mitosis occasionaly present. There was individual cell keratinization. There was no squamous metaplasia at the margins of the tumor. The tumor was surrounded by normal glandular cells of stomach (Fig. 1a, 1b, 1c).

After diagnosis of squamous cell carcinoma, metastasis or extension to the stomach from another site such as lung and upper respiratory tract was explored. Thoracal computed tomography and ear, nose, and throat investigation were normal. Abdominal ultrasonography revealed multiple, hypoechoic nodules in the liver, juxtavascular lymphadenopathies (between aorta and superior mesenteric artery), and an irregular mass of 62 $\times$ 48 mm with necrosis in the epigastrium. Some adenopathies showed multilocular appearrance due to necrosis. Pelvic ultrasonography was normal.

The diagnosis was consistent with metastatic SCC of the stomach and she was given chemotherapy (5 Flourouracil, leucoverin, etoposid). The patient did not show any improvement and died before the second cycle of chemotherapy.

Discussion

The first case of primary squamous cell carcinoma of the stomach was reported by Rollenson and Trevor (3) in 1905. Up to date, there have been fewer than 100 cases of primary gastric SCC (4). Gastric SCC occurs at a somewhat younger age than adenocarcinoma and the male - female ratio is 5:1 (5). The youngest case, a 17 year old boy, was reported by Schwab *et al.* (6) . Our patient, a 56 year old female, was slightly younger than average cases reported.

The prognosis of patients with primary gastric SCC is reported to be worse on the average than that of patients with adenocarcinoma (3,7,8,9). Mori *et al.* (9,10) suggested that this poor prognosis was due to extensive tumor depth and higher frequencies of lymphatic and vascular invasion of the carcinoma cells in SCC. Metastases were frequent in gastric SCC . Boswell *et al.* (3) found metastasis in the 10 of 12 cases with gastric SCC at time of

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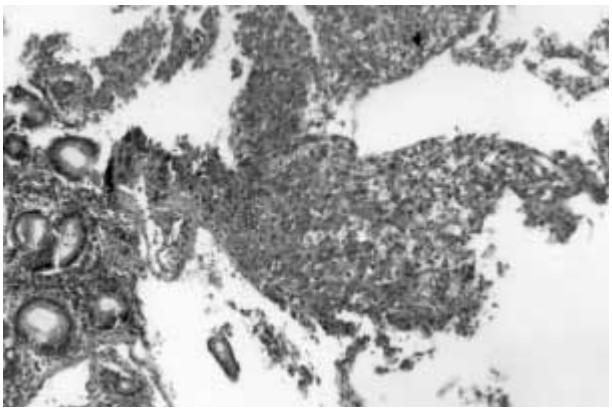

Fig. 1a. — Histology of transition between normal gastric mucosa (left), and squamouse cell carcinoma with keratin formation (right) (H&E × 115).

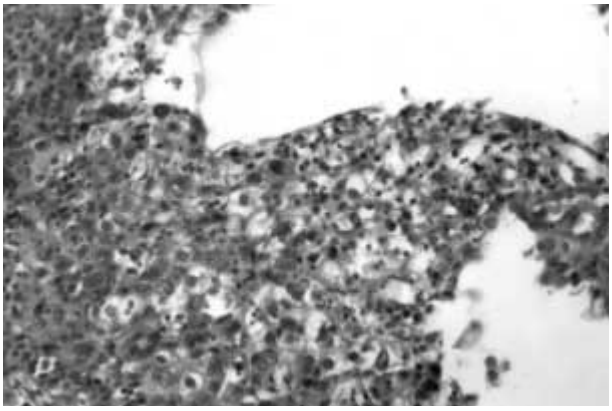

Fig. 1b. — Squamous cell carcinoma of the stomach (H&E × 230).

diagnosis. The sites and frequency of metastases were the liver 8, peritoneum and omentum 4, lymph nodes 5, and spleen and adrenal once each. Distant metastasis occured in only 2 cases, both in the lung. Our patient had metastasis in the liver and lymph nodes at the time of admission.

The criteria of primary gastric SCC have been described by Parks (11). These are : 1) the tumour must not be located in the cardia, 2) the tumour must not extend to the esophagus, and 3) there should not be any evidence of SCC in any other organs. Thoracal CT and pelvic ultrasonography did not indicate any sign of malignancy. Ear, nose and throat examination was normal. We suggest that the primary SCC was in the stomach in our case.

Several theories of the pathogenesis of the gastric SCC have been postulated (1,9,12,13). According to these theories the origin of gastric SCC could be 1) heterotropic squamous epithelium, 2) squamous metaplasia, 3) multipotential stem cells, 4) overgrowth of squamous components in a primary adenocarcinoma, and 5) local extension or metastasis from an esophageal SCC. In

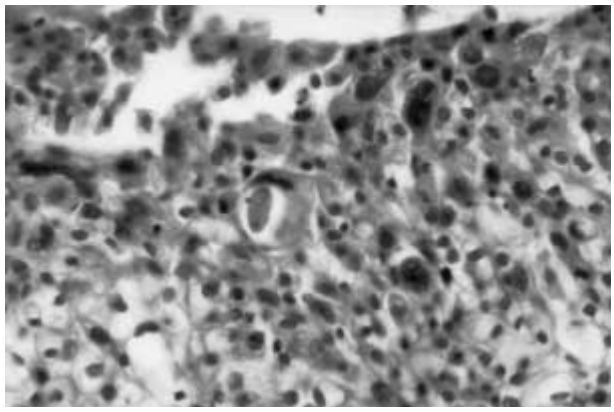

Fig. 1c. — Squamous cell carcinoma of the stomach with individual keratinization (H&E × 460).

spite of these hypotheses, the actual origin of primary SCC still remains unknown.

Our case was not operated because of definite evidences of metastasis. We had taken endoscopic biopsies from different parts of the mass. Pathological examination did not show any evidence of squamous metaplasia or adenocarcinoma. We assume that the tumour in our case probably developed from multipotential stem cells.

In summary, we presented a case of metastatic primary gastric SCC, in which the patient died with in a month. We discussed the specifics of the case to help further development of theories on the origin of this extremely rare tumour.

References

1. STRAUS R., HESCHEL S., FORTMANN D.J. Primary adenosquamous carcinoma of the stomach. *Cancer*, 1969 ; **24** : 985-995.
2. MUTO M., HASEBE T., MURO K. *et al*. Primary squamous cell carcinoma of the stomach : A case report with a review of Japanese and Western Literature. *Hepato-gastroenterology*, 1999, **46** : 3015-3018.
3. BOSWELL J.R., HELWIG E.B. Squamous cell carcinoma and adenoacanthoma of the stomach : a clinicopathologic study. *Cancer*, 1965, **18** : 181-192.
4. TARGARONA E.M., PROS I., BALAGUE C. *et al.* Upper digestive hemorrhage secondary to the rupture of the splenic artery as the first sign of a squamous gastric carcinoma. *J. Clin. Gastroenterol*., 1993, **17** (4) : 349-353.
5. WON O.H., FARMAN J., KRISNAN M.N. *et al.* Squamous cell carcinoma of the stomach. *Am. J. Gastroenterol.*, 1978, **69** : 594-598.
6. SCHWAB G., WETSCHER G., DIETZE O., SCHMID K., POINTNER R. Primary squamous cell carcinoma of the stomach in a seventeen-year-old boy. *Surg. Today*, 1992, **22** (6) : 561-564.
7. Japanese Research Society for Gastric Cancer. The general rules for gastric cancer study in surgery and pathology. *Jpn. J. surg.*, 1981, **11** : 127-139.
8. BONNHEIM D.C., SARAC O.K., FETT W. Primary squamous cell carcinoma of the stomach. *Am. J. Gastroenterol.*, 1985, **80** : 91-94.
9. MORY M., IWASHITA A., ENJOJI M. Squamous cell carcinoma of the stomach : Report of three cases. *Gastroenterology*, 1986, **81** : 339-342.
10. MORY M., IWASHITA A., ENJOJI M. Adenosquamous carcinoma of the stomach. A clinicopathologic analysis of 28 cases. *Cancer*, 1986, **57** : 333-339.
11. PARKS R.E. Squamous neoplasm of the stomach. *AJR*, 1967, **101** : 447-449.
12. CALLARY C.D., SANDERS M.M., PRATT S., TURNBULL A.D. Squamous cell carcinoma of the stomach : A study of four patients with comments on histogenesis. *J. Surg. Oncol.*, 1985, **29** : 166-172.
13. RIOUX A., MASSE S. Pure squamous cell carcinoma of the stomach. *Can. J. Surg.*, 1979, **22** : 238-23.