Case Report of an Advanced Gastric Cancer Associated with Diffused Protruded Lesions at the Angles of the Mouth, Oral Cavity and Esophagus

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Summary: This paper presents a case of a 73-year-old woman with a Borrhmann type 4 gastric cancer with diffuse protruded lesions at the angles of the mouth, oral cavity and esophageal mucosa, which was categorized as a malignant acanthosis nigricans.

Key words: gastric cancer—diffuse protruded lesions in the esophagus—malignant acanthosis nigricans—mucosal lesions in the mouth and oral cavity—Carcinoembryonic Antigen (CEA)

Introduction

Acanthosis nigricans is characterized by the triad of papillomatosis, keratin hyperplasia and pigmentation in the skin. It develops in the nape of the neck, axilla and external genitalia in many cases. It was reported, however, that papilloma and hyperplastic epithelial lesions were observed also in the lip, oral cavity, esophagus and anus in some cases (Ueno, 1962).

A patient with advanced gastric cancer associated with diffuse protruded lesions at the angles of the mouth, oral cavity and esophageal mucosa, which was categorized as malignant acanthosis nigricans without the typical skin pigmentation, is described below.

Case report

A 73 year-old woman had symptom of malaise in the oral cavity and a slight dysphagia which began one month before.

Family history: Unremarkable.

Past history: The patient had a resection of a right ovarian cystoma at the age of 33 and had acute glaucoma at the age of 72.

Findings on admission: The patient was of average build and fairly well-nourished. Anemia or jaundice was not observed in the visible mucosa. A slight pigmentation was noted at the margin of the lower lip, and a papillary proliferation was found in the angles of the mouth. A dense diffuse papillary proliferation was observed from the roots of the teeth to the palate, and the proliferation partially continued to the pharynx (Fig. 1). No abnormalities were found in the neck. The abdomen was flat, and no mass was palpable. The epigastric region was slightly tender on pressure. The superficial lymph nodes were not palpable. A wart was observed in the anus. Percussion and auscultation of the chest...
Laboratory findings on admission: There were no abnormal findings from the urinalysis, or the hepatic and renal function tests. The CEA in the peripheral blood (EIA) was elevated to 189 ng/ml.

Radiographic findings of the upper digestive tract: The esophageal wall extended favorably. Diffuse protruded lesions of various sizes were found throughout the esophagus (Fig. 2). Borrmann type 4 gastric cancer was observed.

Endoscopic findings: The mucosa of the esophagus had a slight redness. The surface of the protruded sites was irregular or like fine granules, and fur adhered to some portions. The protruded sites were not markedly stained black by spray of Lugol's solution. The number of protruded lesions were fewer in the lower region of the esophagus, and few lesions were observed in the esophago-gastric junction (Fig. 3). Cultures of the fur were negative for candida.

Ultrasonic findings: A hepatorenal cystoma and swelling of the periaortic and left supraclavicular lymph nodes were revealed.

Barium enema findings: No abnormalities were observed.

Histopathological findings by biopsy: The lesions in the angles of the mouth and oral cavity were squamous papillomas (Fig. 4), the lesion in the esophagus was squamous epithelial hyperplasia (Fig. 5), that in the stomach was poorly differentiated adenocarcinoma, and the wart in the anus was verrucae vulgaris.

Operative findings: Borrmann type 4 gastric cancer centering on the angulus was found. Radical resection was impossible, and a pyloric subtotal gastrectomy was performed (Fig. 6). Pathological examination of the specimen disclosed a stage IV (pT4, pN3) CEA producing gastric cancer (Fig. 7).

Postoperative course: The patient underwent chemotherapy consisting mainly
Fig. 3. Endoscopic picture of the esophagus

Fig. 4. Histology of the oral lesions (papilloma)

Fig. 5. Histology of the esophageal lesions (epithelial hyperplasia)

Fig. 6. The resected specimen of the stomach (Borrmann type 4 cancer)

Fig. 7. Histology of the resected stomach (por.)
of 5FU. The CEA concentration decreased to about 80 ng/ml, and the lesions in the oral cavity and esophagus temporarily improved. At the 6th postoperative month, however, the patient died of a recurrence of cancer in the residual stomach and peritoneum. An autopsy was not conducted.

Discussion

Diffuse protruded lesion in the esophagus as in the present case could be attributed to esophagitis or dermatopathy, but the incidences are low for both types. With esophagitis a small protruded type of reflux esophagitis (Endo, 1973), glycogenetic acanthosis (Rywlin, 1970), candidal esophagitis and infection with papilloma viruses have been described. The esophageal lesion in the present case was not considered to be one of these diseases from the findings described.

A dermatopathy, acanthosis nigricans and esophageal lesion in Cowden disease (Lloid, 1963) has been reported. Cowden disease was also rejected, clinically.

Papillomas in the lip, mucosa of the oral cavity and esophagus and hyperplastic changes of the epithelium of the mucosa are characteristic of acanthosis nigricans. These were observed and also a common wart was found in the anus; thus the present case was categorized as a malignant acanthosis nigricans. Also the dermal symptoms associated with gastric cancer, although typical pigmentation, were not observed. Lever (1954) described the pathologically essential symptoms of acanthosis nigricans as hyperplasia and papilloma with pigmentation only as an accompanying symptom.

Acanthosis nigricans is known to occur as an accessory symptom associated with a malignant tumor. Such cases are called malignant acanthosis nigricans, and the prognosis is after unfavorable. It has been reported, both in Japan and abroad, that intraperitoneal cancer was found in 90% or more of cases with malignant acanthosis nigricans, and that gastric cancer was also frequently found (Ide, 1983).

There have been 13 reports on cases of malignant acanthosis nigricans with

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esophageal lesions, including the present case, in Japan.

Lesions in the lip and mucosa of the oral cavity were observed in 10 of the 13 cases. The malignant cancer was gastric cancer in 11 of the 13 cases, and advanced cancer developed in all cases. Almost all patients died within one year (Table 1).

References