

Hemorrhagic Primary Squamous Cell Carcinoma of the Stomach : A Case Report

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Abstract

Introduction: Primary squamous cell carcinoma of the stomach is an extremely rare malignancy. The pathogenesis of this tumor remains obscure, and the optimal treatment strategy is controversial.

Presentation of case: Here, we describe a case of gastric SCC complicated by multiple hemorrhagic episodes.

Discussion: The origin of primary squamous cell carcinoma of the stomach is unclear. there are several hypotheses; arising from the squamous metaplasia of the gastric mucosa; arising from multipotent stem cells; arising from the ectopic squamous epithelium; squamous differentiation from a pre-existing adenocarcinoma; and arising from the vascular endothelium of the stomach.

It is probably is related to HPV, EBV, and HP infections. Under chronic inflammatory exposure, tissue stem cell transformation causes epithelial metaplasia and dysplasia, then epithelial carcinoma occurs.

The treatment paradigm for this rare disease is the same as for other gastric malignancies.

Surgery followed by chemotherapy and/or radiotherapy remain the optimum pick for the management of the primary squamous cell carcinoma of the stomach, regardless of evolutivity of the primary tumor.

Conclusion: Primary squamous cell carcinoma of the stomach generally has a poor prognosis. Surgery remains the primary treatment, and adjuvant therapy is unclear. The clinical treatment is basically the same as that of adenocarcinoma.

Key Words: Primary gastric squamous cell carcinoma, gastric cancer

INTRODUCTION

Primary squamous cell carcinoma (SCC) of the stomach is an extremely rare malignancy, with a worldwide incidence of 0.04% to 0.07% of all gastric cancers (1). The pathogenesis of this tumor remains obscure, and the optimal treatment strategy is controversial. There must have evidence that primary gastric squamous cell carcinoma originates in the gastric mucosa, not the metastatic squamous cell carcinoma of other organs (2).

Here, we describe a case of gastric SCC complicated by multiple hemorrhagic episodes.

AIM OF THE ARTICLE:

The aim of this study is to describe our experience in the management of an hemorrhagic primary gastric squamous cell carcinoma.

PRESENTATION OF CASE

We present the case of a 53-year-old male patient, a chronic smoker and a former chronic alcoholic . He has been experiencing fixed epigastric pains accompanied by low-volume hematemesis for the past year, along with a weight loss of 20kg in 8 months.

On clinical examination, the patient is in good general condition, with a soft abdomen, no palpable mass, and a rectal examination showing no particularities.

In the paraclinical assessment, an endoscopy revealed a bulging tumor in the fundus, biopsied, and the histopathological and immunohistochemical examination showed a chronic inflammation after HP infection and a poorly differentiated and slightly ulcerated squamous cell carcinoma with positive

staining for p63 and cytokeratins 5 and 6 and negative staining for 7 and 20 (figure 1).

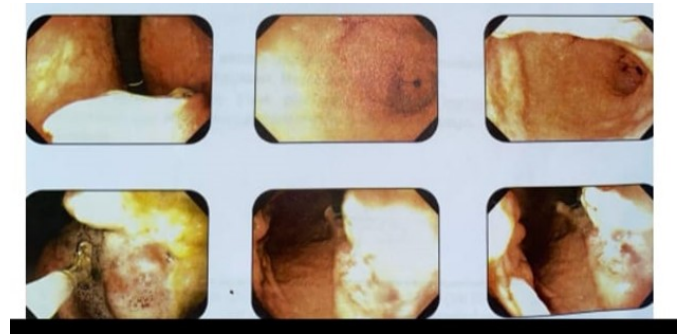


Figure 1: endoscopic pictures showing the bulging tumor of the fundus

In the extension assessment, including a thoraco-abdomino-pelvic CT scan, no metastatic lesions were found. Tumor markers were negative (figure 2).

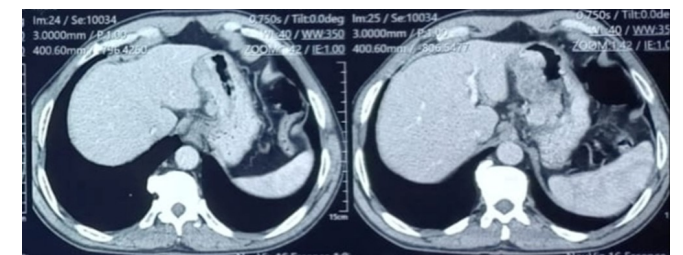


Figure 2: CT scan showing the lesser curvature tumor

The patient underwent exploratory laparoscopy, revealing a 10cm gastric tumor on the lesser curvature with a small amount of ascites and peritoneal carcinomatosis estimated at 5/39 according to the Sugarbaker index (figure 3).

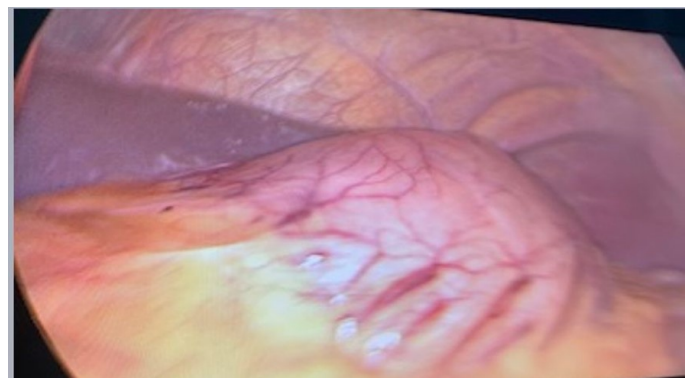


Figure 3: laparoscopic image showing the gastric tumor and peritoneal carcinosis micronodes

On postoperative day 3, the patient experienced profuse hematemesis with hemodynamic instability, requiring resuscitation measures, transfusion of 2 units of red blood cells, and emergency reoperation. The operative procedure was total gastrectomy with Roux-en-Y esophagojejunostomy.

Postoperative recovery was uneventful, and the patient was discharged on day 8 postoperatively.

The pathological examination of the specimen found a morphological appearance and immunohistochemical profile suggestive of a poorly differentiated and invasive gastric squamous carcinoma measuring 10 cm in its longest axis infiltrating the entire gastric wall and perforating the serosa with presence of vascular emboli and perineural sheathings. Resection margins sampled from the specimen: non tumoral.

Presence of 2 metastatic lymph nodes without capsular breach (2N+/18N).

The patient was started on chemotherapy and put under cisplatin based drug.

One year follow up was unremarked.

DISCUSSION:

The paucity of existing literature on primary squamous cell carcinoma of the stomach is a major impediment in the process of understanding this disease and hinders our ability to formulate effective evidence-guided treatment plans.

The origin of primary squamous cell carcinoma of the stomach is unclear, but there are several hypotheses; arising from the squamous metaplasia of the gastric mucosa; arising from multipotent stem cells; arising from the ectopic squamous epitheli-

um; squamous differentiation from a pre-existing adenocarcinoma; and arising from the vascular endothelium of the stomach(3).

According to 2022 D. Schizas et al study, primary squamous cell carcinoma of the stomach shows a greater preponderance for male patients, with an estimated 18:1 male: female ratio, and a mean patient age of 61.2 years. These findings suggest that primary squamous cell carcinoma of the stomach is a disease of the 7th decade of life that exhibits an incidence pattern resembling that of other squamous neoplasms of the aerodigestive tract (5).

These results are in concordance with our case report findings.

Whatever the case may be, it must be acknowledged that primary squamous cell carcinoma of the stomach grows indolently and presents with non-specific clinical symptoms, not unlike those associated with other gastric malignancies. This is in fact supported by the results of Akce and al.(6) and D. Schizas et al.(5) studies , which demonstrated that most PGSCCs are large, averaging 7.1 cm in size, and present at a locally advanced stage (T3-T4, node positive) in their vast majority. Endoscopy is unable to distinguish between PGSCC and gastric adenocarcinoma, because of the macroscopic resemblance between the 2 types of lesion; however, the histopathologic positive staining for p63 and cytokeratins 5, 6, 7 and 20 is unequivocally associated with PGSCC (7).

In addition, some scholars proposed that primary squamous cell carcinoma of the stomach is related to HPV, EBV, and HP infections. Under chronic inflammatory exposure, tissue stem cell transformation causes epithelial metaplasia and dysplasia,

then epithelial carcinoma occurs(4).

Our patient presented with both chronic inflammation after HP infection and primary squamous cell carcinoma of the stomach.

The treatment paradigm for this rare disease is the same as for other gastric malignancies. Nonetheless, it is uncertain whether oncologic outcomes in cases of localized disease are the same as in localized, resectable adenocarcinomas. KaplanMeier curve analysis demonstrated 3- and 5-year overall survival to be approximately 62.2% and 51.9%, respectively, with even lower 3-year disease-free survival at 38% following curative intent surgery with or without adjuvant therapy.

Akce et al (6), in their study, quote inferior 5-year overall survival rates of 14.7%, in a patient population that was largely managed non-operatively, mainly because of the presence of metastatic disease at presentation. These observations suggest that primary squamous cell carcinomas of the stomach amenable to surgical resection is likely to be associated with enhanced survival and metastatic disease is possibly an important factor influencing long-term oncologic outcomes.

Furthermore, T4 and node-positive stages were found to be significant negative predictors of survival in univariate but not in multivariate analysis. It is also possible that advanced T-stage correlates strongly with lymphatic spread and therefore cannot be assessed independently. Notwithstanding this limitation, survival following resection of non-metastatic PGSCC appears to be roughly equal to that following resection of gastric adenocarcinoma (11), and therefore surgery should be aggressively pursued whenever disease clearance is technically

feasible, irrespective of T and N stage, in the effort to optimize oncologic outcomes.

According to all these findings, it is clear that the overall reflection about the management of primary squamous cell carcinoma of the stomach is to emulate the management of gastric adenocarcinomas as well as their complications, since it is a lesion rarely described in the literature...

As far as adjuvant therapy is concerned, and given the lack of data, no standardized treatment regimens have been established as yet, with most authors reporting the use of 5-FU or cisplatin-based drug combinations (8,9,10) which was the case for our patient.

Taking into consideration the radiosensitivity of other squamous neoplasms of the digestive tract, we speculate that radiation therapy, in addition to chemotherapy, may be more effective in improving diseasefree and overall survivals.

CONCLUSION:

Compared with gastric adenocarcinoma, primary squamous cell carcinoma of the stomach generally has a poor prognosis because it is usually found at an advanced stage with lymph node, liver, and other organ metastasis and has poor sensitivity to radiotherapy and chemotherapy.

Surgery remains the primary treatment, and adjuvant therapy is unclear.

The clinical treatment is basically the same as that of adenocarcinoma.

PROVENANCE AND PEER REVIEW:

Not commissioned, externally peer reviewed.

CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

CONFLICTS INTERESTS

Authors have declared that no competing interests exist.

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None

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