A case of gastric carcinoma presenting with a metastatic cutaneous nodule in the face

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ABSTRACT

Skin is an uncommon site for distant metastasis and is reported to be involved in about 0.7–9% of all patients with cancer. Although metastasis to the skin usually appears in the advanced stage of the disease, they can also be the first sign of internal malignancy in a small group of patients. It is extremely rare for gastric cancer to present with a cutaneous metastatic nodule in the face. Herein, we report the case of a young patient who presented with a cutaneous nodule in his left cheek, which on evaluation was found to be a metastatic cutaneous nodule from carcinoma stomach. This case highlights its rarity and emphasizes the need for clinical vigilance in diagnosing this condition.

Key words: *Cutaneous metastasis, Gastric cancer, Metastatic nodule*

Internal malignancies can invade the skin through hematogenous, lymphatic spread, or through direct extension from a primary tumor [1]. Subcutaneous metastasis from gastric cancer is a rare manifestation, occurring in about 0.8%–1.0% and is usually seen late in the course of the disease [2]. Umbilical nodule known as Sister Mary Joseph nodule constitutes most of these metastatic nodules with the route of spread being the falciparum ligament. Other cutaneous manifestations are extremely rare with very few published case reports [2-4]. This case is reported for its rare presentation and also to emphasize the need for proper clinical evaluation in diagnosing the underlying condition.

CASE REPORT

A 27-year-old male patient presented with a 4-month history of a slowly progressive skin lesion in his left cheek. He also had recent-onset dysphagia and abdominal pain for 2 months. His vital signs were stable at presentation. Local examination revealed a mobile nodule measuring 1 cm × 1 cm in his left cheek with minimal serous discharge (Fig. 1). He had a hard, ill-defined epigastric palpable mass.

Gastroscopy revealed a large ulceroproliferative growth involving the entire body of stomach which was reported as poorly differentiated adenocarcinoma containing signet ring cells (Fig. 2).

Fine-needle aspiration cytology of the left cheek swelling showed malignant cells consistent with adenocarcinoma. Positron emission tomography (PET) scan showed a circumferential thickening of the body and antrum of the stomach with large subdiaphragmatic nodes, periportal nodes, and para-aortic nodes measuring up to 1.8 cm (Fig. 3a). There was also a focus of abnormally increased FDG uptake with standard uptake values of 9.04 noted in the left cheek (Fig. 3b). Computerized tomography scan showed thickening of the body and antrum of stomach (Fig. 4).

The HER-2 receptor status from the biopsy was negative. A diagnosis of cutaneous and nodal metastasis from signet ring cell adenocarcinoma of the stomach was made and the patient was advised palliative chemotherapy with capecitabine and oxaliplatin.

DISCUSSION

Histologically, gastric carcinoma is classified into tubular, papillary, mucinous and signet ring cell carcinoma, the frequency of signet ring carcinoma being 2 to 34%. However, 16–20% of skin metastases from stomach cancers are of signet ring carcinomas, suggesting that this histological type has a greater tendency toward cutaneous metastasis [5].

Very rarely, cutaneous metastasis may be the first sign of visceral malignancy. It may occur due to direct spread from underlying malignancy, lymphatic spread, or hematogenous spread from a distant primary tumor [6]. Cutaneous metastasis in gastric cancer presents as solitary or multiple non-specific nodules, located on the abdominal wall, including umbilicus (Sister Mary Joseph nodule), scars of previous surgery, or seed at the site of a percutaneous endoscopic gastrostomy [7]. The occurrence of

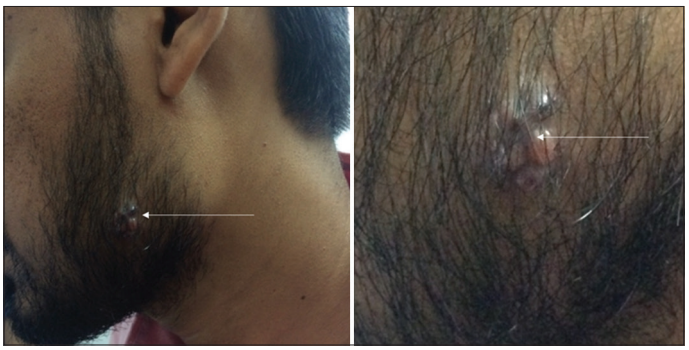

Figure 1: 1 cm × 1 cm nodule in the left side of cheek (white arrow depicting the nodule)

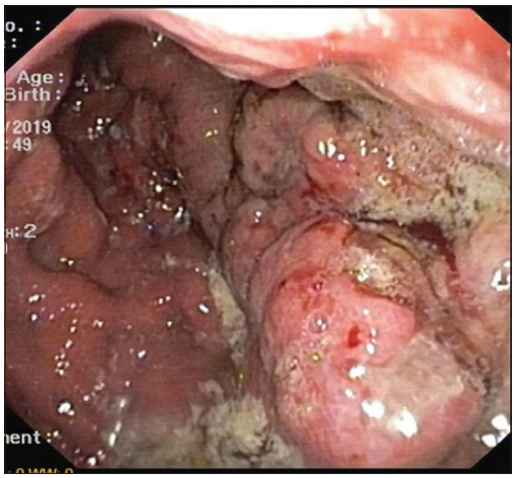

Figure 2: A large ulceroproliferative mass involving entire body of the stomach in gastroscopy

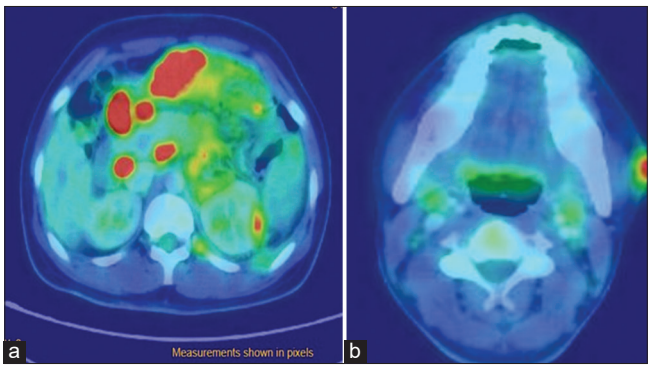

Figure 3: Positron emission tomography scan showing (a) a circumferential thickening of the body and antrum of stomach with large subdiaphragmatic nodes, periportal nodes, and para aortic nodes; (b) a focus of abnormally increased FDG uptake in the left cheek

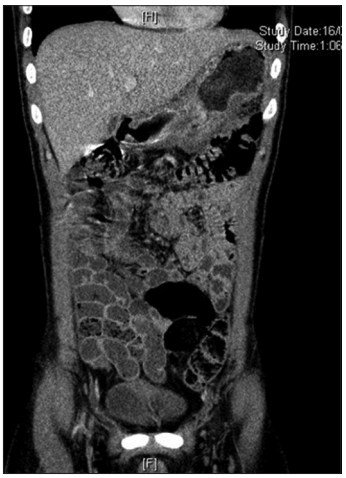

Figure 4: Computerized tomography scan showing thickening of the body and antrum of stomach

the same could be either synchronous or metachronous with the primary [6]. Cutaneous metastasis is generally a late clinical presentation indicating systemic dissemination with poor prognosis and also an inoperable state [8].

Stephen Paget described the "seed and soil theory," which explains the metastatic process to certain organs [8]. It stated that tumors (seed) preferentially metastasize to organs with an intrinsically favorable environment (soil). It is possible that the interaction between tumor cells and certain factors secreted from the dermis or epidermis plays a crucial role in the skin homing mechanism of metastatic cells [9]. It is believed that certain chemokine's and their receptors play a role in tumorigenesis in the skin [10].

Most cutaneous metastases appear as mobile, solitary or multiple, flesh-colored dermal, or subcutaneous nodules, varying in size and are usually painless [10]. However, it is often missed because it usually mimics common dermatological conditions and there is a lack of awareness of this clinical entity [6]. The differential diagnoses considered based on his clinical presentation were squamous cell carcinoma, basal cell carcinoma, primary cutaneous carcinoma of eccrine or apocrine origin, melanocytic tumors, liposarcomas, hidradenomas, cylindromas, lymphomas, and the atrophic variant of mycosis fungoides [11].

Histopathologically, four main morphologic patterns of cutaneous metastases involving the dermis, namely, nodular, infiltrative, diffuse, and intravascular are seen [7]. If the cutaneous metastasis is a part of disseminated lesions, resection of cutaneous metastasis is not recommended unless they are adversely affecting the patient's quality of life [8]. Namikawa *et al*. described a similar case of metastatic carcinoma of the stomach with chest wall metastasis, wherein a palliative distal gastrectomy was done as the patient was bleeding. However, the options of angioembolization and endoscopic stenting should be considered in cases of bleeding and obstruction as the mean survival time of these patients is only a few months [2]. Hence, the treatment for gastric cancer with cutaneous metastasis is only palliative and there is no role for surgery except in very rare circumstances, where the tumor bleeding is not controlled by other modalities.

CONCLUSION

Gastric cancer with cutaneous metastases heralds a poor prognosis. They are usually indicative of disseminated, progressive disease, or rarely recurrence of the primary tumor. Occasionally, they may be the only overt manifestation of the disease and hence should be actively pursued.

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