

CASE REPORT

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Multiple subcutaneous metastasis from gastric cancer: A rare clinical presentation

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ABSTRACT

Introduction: The aim of this report is to describe a rare clinical situation in oncology, a gastric tumor with metastatic implants in subcutaneous tissue. This case demonstrates a rare scenario of gastric adenocarcinoma, with very few cases described in the literature, which evolved with subcutaneous metastases and whereby the role of systemic and even surgical treatment remains unclear.

Case Report: The case reported refers to a patient with an advanced gastric adenocarcinoma that evolved with multiple metastases implanted in the subcutaneous tissue, in addition to peritoneal, non-regional lymph nodes, and bone involvement, requiring first-line chemotherapy treatment.

Conclusion: This case manifests a rare presentation of advanced gastric neoplasm. The subcutaneous metastasis of internal malignancies is unusual, corresponding to less than 10% of neoplasms. The occurrence of skin or subcutaneous metastasis is still less usual in solid neoplasms, including gastric cancer, with a few cases reported in the literature. In this context, the role of diagnostic medicine is fundamental.

Keywords: Gastric adenocarcinoma, Hemorrhagic lesion, Subcutaneous metastasis

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INTRODUCTION

Gastric cancer is one of the most common cancers, worldwide, contributing to more than 1 million cases per year. Prognosis is poor, the most cases are metastatic when diagnosed. High-risk regions include East Asia, Eastern Europe, and Central and South America [1]. Gastric cancer can have multiple sites of metastasis, however, and the most common metastatic sites are lymph nodes, liver, and peritoneum. Subcutaneous metastasis from gastric cancer is a very rare manifestation, with incidence of 0.8–1.0% [2–4].

Here we report a rare clinical scenario of a patient with an advanced gastric adenocarcinoma that evolved with multiple metastasis implanted in the subcutaneous tissue, in addition to peritoneal, non-regional lymph nodes and bone involvement, which generates an important discussion regarding treatment planning, due to the rarity of the case and uncertainties of therapeutic response.

CASE REPORT

A 58-year-old patient was referred to our service in October 2020 due to severe epigastric pain. She had undergone an upper digestive endoscopy at another

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service, in September 2020, where the presence of an ulcerated lesion in the large gastric curvature was identified, which in the anatomic-pathological analysis was defined as a gastric adenocarcinoma in signet ring cells, histological grade 3. In October 2020, the patient underwent chest and upper abdomen computed tomography (CT) scans, where a concentric parietal mucosal thickening of the antro-gastric was identified, measuring 60 mm in length, with locoregional gastrocolic lymphadenopathy on the right and at the root of the ileal mesentery, the largest measuring 8 mm.

The patient started programming for cancer treatment, which was delayed due to poor nutritional status and general condition, in addition to an ECOG PS 2 (Eastern Cancer Oncology Group - Performance Status) in the initial evaluation. In December 2020, she needed a surgery with partial gastrectomy and retroperitoneal lymphadenectomy, in palliative nature due to a hemorrhagic lesion. Intraoperatively, an antro-gastric tumor was observed with retraction of the omentum and part of the transverse colon mesentery, in addition to ascites and peritoneal carcinomatosis in the lower abdomen. In the first postoperative days, the patient evolved with worsening renal function due to transient intravascular depletion and increased nitrogen supply in the gastrointestinal tract due to tumor bleeding. The renal condition was recovered and the patient was referred for evaluation regarding systemic therapy.

Within this context, in the anatomopathological analysis of the result of the surgery, a histological grade 3 adenocarcinoma was observed again, in signet ring cells, Lauren's diffuse subtype, invading to the gastric serosa, with lymphovascular and perineural invasion present, with a pathological staging pT4apN3b (AJCC/UICC TNM, 8th ed, 2017).

One month after surgery, the patient remained on ECOG PS 2, when physical examination revealed multiple subcutaneous implants in the neck, abdomen, upper limbs, dorsal and back of the neck, with a clinical appearance of secondary implants (Figure 1A–D). In a histopathological analysis with immunohistochemistry of these nodules, it was confirmed that they were adenocarcinoma metastases of the gastric tract infiltrating subcutaneous tissue (Cytokeratin 7 positive clone OV-TL 12/30 and positive DAK-CDX2) (Figures 2 and 3). In new CT scans from February 2021, secondary and diffuse osteoblastic lesions were also identified in chest bones and thoracic to lumbosacral spine, in addition to ascites.

In this new scenario, it was decided to start palliative 1st line chemotherapy with oxaliplatin plus capecitabine at reduced doses due to the patient's borderline performance status (maintained ECOG 2). The patient managed to undergo six chemotherapy cycles within this context, until June 2021, when she evolved with loss of performance status to ECOG PS 4, and died one month later in July 2021, before the possibility of reassessing the response to systemic treatment. Survival time after diagnosis was 10 months.



Figure 1: Subcutaneous metastatic implants of gastric adenocarcinoma, (A) cervical region, (B) abdominal region, (C) right upper limb, and (D) neck and back.

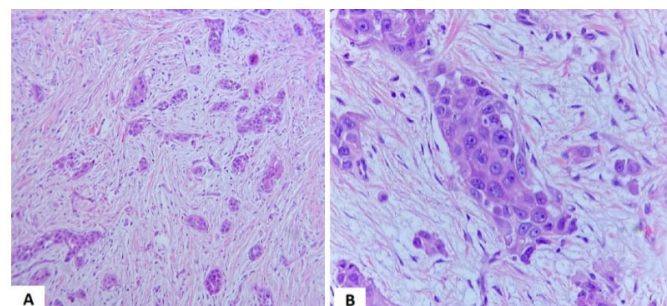


Figure 2: (A and B) Moderately differentiated adenocarcinoma infiltrating the skin into the reticular dermis, without ulceration.

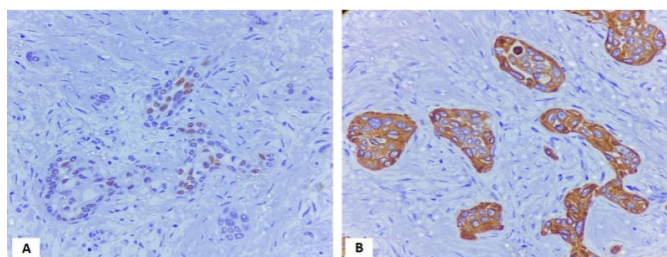


Figure 3: The focal nuclear expression of CDX2 (A) associated with the strong membrane and cytoplasmic expression of cytokeratin 7 (CK7) (B) favors, in this clinical context, metastatic carcinoma of the upper gastrointestinal tract.

DISCUSSION

In an oncology disease, metastasis is mostly driven by the acquisition of genetic and/or epigenetic alterations within tumor cells and the formation of tumor microenvironment [5]. Metastasis can appear in the cutaneous tissues by lymphatic and hematogenous dissemination, however, in relation to solid tumors, this happens very rarely. The event of cutaneous metastasis appears in less than 1% of solid tumors [6].

In the case of gastric cancer, the appearance of cutaneous/subcutaneous metastasis is an even rarer scenario, with very few cases described in the literature. Oncological involvement can be confused with other causes of skin injury, such as infections, especially in cases of patients who have not been diagnosed with cancer yet [7]. It is usually present as papules or skin-colored, violaceous or erythematous nodules [8].

Gastric cancer has a poor prognosis. A pertinent and current question is whether the location of metastasis sites impacts the survival of these patients. In a study published in 2018, the group with only peritoneal metastasis had the longest overall median survival of 8.9 months compared to the peritoneal and distant metastasis, and only distant metastasis groups with 7.4 and 5.5 months, respectively ($p < 0.001$) [9]. However, there is currently no evidence that cutaneous/subcutaneous metastasis demonstrates a worse prognosis alone.

The case reported in this article presents an advanced gastric cancer with indication of palliative chemotherapy in an attempt to improve the quality of life. Despite the proposed treatment, the patient rapidly progressed with loss of performance status, disease progression, and death. This clinical case also represents the importance of comprehensive patient care, because skin metastasis can be the initial manifestation of a serious systemic disease.

This case demonstrates a rare scenario of gastric adenocarcinoma, with very few cases described in the literature, which evolved with subcutaneous metastasis and whereby the role of systemic and even surgical treatment remains unclear. In one case reported in another study, similarly with our case, the patient also underwent distal gastrectomy to control bleeding due to the gastric cancer lesion. After that, the patient received chemotherapy with oxaliplatin and oral fluoropyrimidine (S1), but the liver metastasis and peritoneal carcinomatosis progressed, and the patient died six months after the diagnosis [2]. In another case reported, one patient evolved rapidly with a metastatic mass in the left armpit subcutaneous region, even after eight cycles of oral chemotherapy after surgery for the primary gastric tumor [10]. These cases demonstrate the refractoriness of this involvement to standard chemotherapies. Further biomolecular studies are needed in this context to improve early diagnosis and direct therapies.

CONCLUSION

In conclusion, our case presents a very rare subcutaneous manifestation of gastric cancer. This manifests the importance of diagnosis, with biopsy and immunohistochemistry in the management, especially in cases with rare and atypical presentations. The role of surgical and chemotherapy treatment in this scenario is still uncertain.

REFERENCES

1. Wong MCS, Huang J, Chan PSF, et al. Global incidence and mortality of gastric cancer, 1980–2018. *JAMA Netw Open* 2021;4(7):e2118457.
2. Namikawa T, Munekage E, Munekage M, et al. Subcutaneous metastasis arising from gastric cancer: A case report. *Mol Clin Oncol* 2017;6(4):515–6.
3. Kawai S, Nishida T, Hayashi Y, et al. Choroidal and cutaneous metastasis from gastric adenocarcinoma. *World J Gastroenterol* 2013;19(9):1485–8.
4. Kairouani M, Perrin J, Dietemann-Barabinot A, Diab R, Ruck S. Cutaneous metastasis revealing a relapse of gastric linitis: Another case. *Int J Surg Case Rep* 2013;4(2):185–7.
5. Valastyan S, Weinberg RA. Tumor metastasis: Molecular insights and evolving paradigms. *Cell* 2011;147(2):275–92.
6. Triantafyllou S, Georgia D, Gavriella-Zoi V, et al. Cutaneous metastases from esophageal adenocarcinoma. *Int Surg* 2015;100(3):558–61.
7. Alcaraz I, Cerroni L, Rütten A, Kutzner H, Requena L. Cutaneous metastases from internal malignancies: A clinicopathologic and immunohistochemical review. *Am J Dermatopathol* 2012;34(4):347–93.
8. Schadt CR. The cutaneous manifestations of gastrointestinal malignancy. *Semin Oncol* 2016;43(3):341–6.
9. Tan HL, Chia CS, Tan GHC, et al. Metastatic gastric cancer: Does the site of metastasis make a difference? *Asia Pac J Clin Oncol* 2019;15(1):10–7.
10. He FJ, Zhang P, Wang MJ, Chen Y, Zhuang W. Left armpit subcutaneous metastasis of gastric cancer: A case report. *World J Clin Cases* 2019;7(23):4137–43.

Author Contributions

Alan Felcar Soares – Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Rivadávio Antunes Menacho de Oliveira – Conception of the work, Design of the work, Analysis of data,

Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Mariana Suemy Kiara – Analysis of data, Interpretation of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Eni Martins Medeiros – Design of the work, Interpretation of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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