Revista Española de Enfermedades Digestivas
The Spanish Journal of Gastroenterology

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DOI: 10.17235/reed.2022.9433/2022
Link: PubMed (Epub ahead of print)

Please cite this article as:
Dias Emanuel, Santos-Antunes João, Portugal Raquel, Pinheiro Jorge, Carneiro Fátima, Macedo Guilherme. Primary gastric choriocarcinoma: a rare and aggressive gastrointestinal malignancy. Rev Esp Enferm Dig 2022. doi: 10.17235/reed.2022.9433/2022.

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Primary gastric choriocarcinoma: a rare and aggressive gastrointestinal malignancy

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Conflict of interest: the authors declare no conflict of interest.

Keywords: Primary gastric choriocarcinoma. Beta-human chorionic gonadotropin. Gastric cancer.

Dear Editor,

A 40-year-old male with no previous medical history presented to the Emergency Department with a two-week history of progressive dyspnea and also described night sweats and weight loss of 15 kg during the last three months. Laboratory studies revealed leukocytosis and elevated C-reactive protein (99 mg/l). Chest radiography showed multiple nodules scattered through both lungs, suggestive of metastases. Thoraco-abdominal computed tomography (CT) confirmed multiple bilateral lung nodules (Fig. 1A) associated with supra-clavicular, hilar and peri-esophageal lymphadenopathies and gastric parietal thickening. These imaging features were suggestive of primary gastric cancer with lung and lymph node metastases. Therefore, he underwent upper digestive endoscopy that showed a large ulcerated protruding lesion at the greater curvature of the body, suggestive of malignancy (Fig. 1B). Gastric biopsies of the lesion confirmed a solid neoplasia constituted by solid nests and sheets of highly pleomorphic, bizarre cells with cytotrophoblastic and syncytiotrophoblastic

differentiation (Fig. 1C) that stained positive for beta-human chorionic gonadotropin (β-HCG) (Fig. 1D), SALL-4 (Fig. 1E) and glypican-3 on immunohistochemistry (Fig. 1F). CT-guided biopsy of lung nodules revealed malignant cells with similar histopathological and immunohistochemical features. Elevated serum alpha-fetoprotein (20.2 mg/dl) and β-HCG (36,486 mg/dl) were also detected. Clinical and ultrasound examination were negative for testicular masses. These findings were consistent with a primary gastric choriocarcinoma presenting with lung and lymph node metastases (stage IV). Although chemotherapy was started, the patient evolved unfavorably and died after nine months.

Discussion

Choriocarcinoma is a rare β-HCG producing malignancy of trophoblastic cells with a rapid growth rate and high metastatic potential that most commonly has a gestational origin. Primary gastric choriocarcinoma is extremely rare, corresponding to only 0.08 % of all gastric cancers (1). The most accepted theory is that it results from dedifferentiation of gastric adenocarcinoma cells, which explains why most primary gastric choriocarcinomas coexist with gastric adenocarcinoma and only a minority are pure choriocarcinoma (2). Clinical manifestations are similar to gastric adenocarcinoma, usually including abdominal pain, iron-deficiency anemia, weight loss, anorexia, nausea and vomiting. Gastrointestinal bleeding is more frequent and hormone effects can lead to gynecomastia (3). Trophoblastic cells staining positive for β-HCG on immunohistochemistry and elevated serum levels of β-HCG are enough for diagnosis (4). Prognosis is usually poor, with a mean survival of less than two months (5).

In conclusion, primary gastric choriocarcinoma is a rare and aggressive gastrointestinal malignancy. Our case demonstrates its rapid growth rate and high metastatic potential, which may lead to symptoms from secondary involvement of distant organs.

References

1. Hirotsu A, Hiramatsu Y, Kawata S, et al. Rapid recurrence of primary gastric choriocarcinoma after complete resection. Int J Surg Case Rep 2019;57:138-41. DOI:

10.1016/j.ijscr.2019.03.045

2. Lee JH, Lee JK, Kang DB. Primary gastric choriocarcinoma coexisting with adenocarcinoma. Korean J Gastroenterol 2019;73(6):350-4. DOI: 10.4166/kjg.2019.73.6.350

3. Liu Z, Mira JL, Cruz-Caudillo JC. Primary gastric choriocarcinoma: a case report and review of the literature. Arch Pathol Lab Med 2001;125(12):1601-4. DOI: 10.5858/2001-125-1601-PGC

4. Picazo Ferrera K, Herrera Servin M, Hernández Guerrero AI. Primary gastric choriocarcinoma. Rev Esp Enferm Dig 2020;112(3):241. DOI: 10.17235/reed.2020.6478/2019

5. Martins VF, Moreno F, Vizcaíno JR, et al. Primary gastric choriocarcinoma: a rare case. Int J Surg Case Rep 2015;14:44-7. DOI: 10.1016/j.ijscr.2015.07.009

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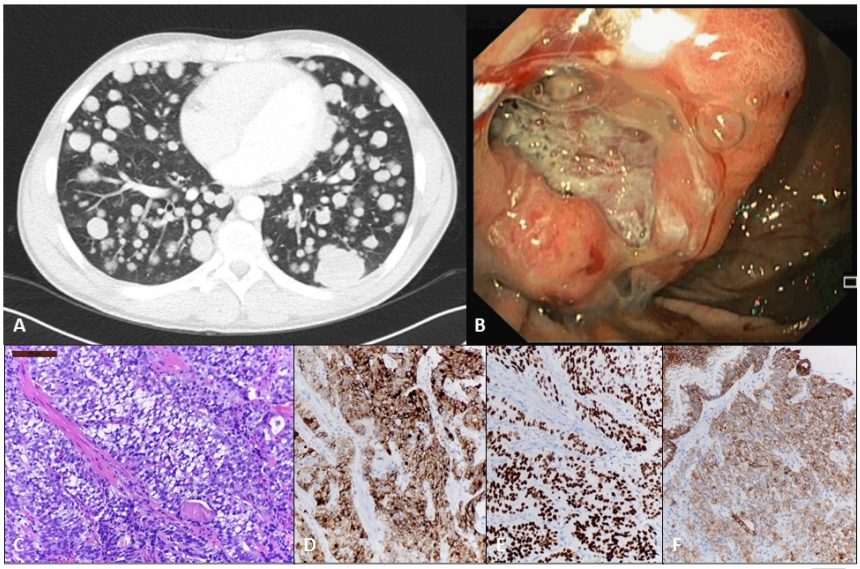

Fig. 1. A. Computed tomography scan revealed multiple round nodules scattered through both lungs of varying sizes in a pattern suggestive of lung metastasis. B. Upper digestive endoscopy revealed a large gastric neoplasia at the greater curvature of the body. C. Histopathological examination revealed solid neoplasia formed by solid nests and sheets of malignant cells with trophoblastic differentiation. The cells stained positive for β-HCG (D), SALL-4 (E) and glypican-3 on immunohistochemistry (F).