

## Case Report

# Upper Digestive Hemorrhage Caused by Gastric Plasmacytoma: A Clinical Case

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## Introduction

Extramedullary Plasmacytomas (EMP) are tumors composed by a monoclonal population of plasma cells that arise in extraosseous tissues, comprising <5% of all plasma cell neoplasms [1]. Gastric Plasmacytoma (GP) is an infrequent form of presentation of monoclonal gammopathy (<5%). The presentation can be as an isolated lesion or representing a manifestation of multiple myeloma [2].

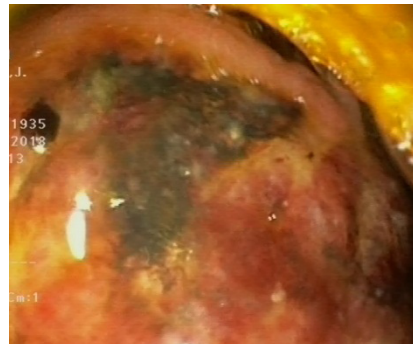
We present a case of a male patient who underwent investigations for upper gastrointestinal bleeding. The final diagnosis was gastric plasmacytoma associated with multiple myeloma. We report the clinicopathologic outcome of radiotherapy as a primary treatment modality.

## Clinical Case

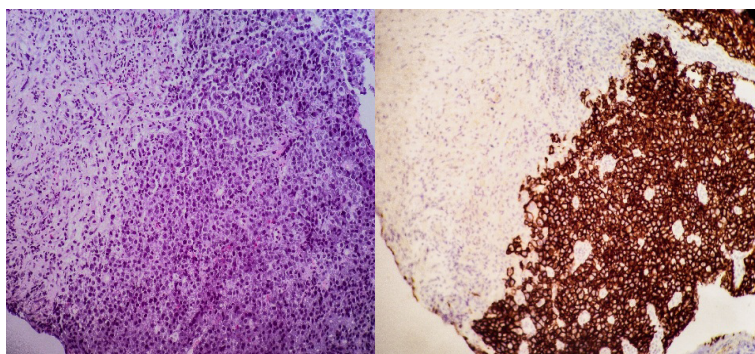
Male, 82 years old, with personal history of Hypertension, Dyslipidemia and Aortic valvuloplasty. He was admitted in our hospital for several presyncopal episodes. In the anamnesis was

remarkable a several-months history of dyspepsia, weight loss of more than 10 kg and melenas.

In the following studies a normocytic, normochromic anemia was evidenced that needed blood transfusion. An upper endoscopy was obtained and showed in fundus a polypoid lesion of 90 x 60 mm with large areas of ulceration and necrosis (Figure 1), that was biopsied. Pathological examination of biopsy specimens showed a plasmatic cell neoplasm with plasmablastic features (Figure 2).



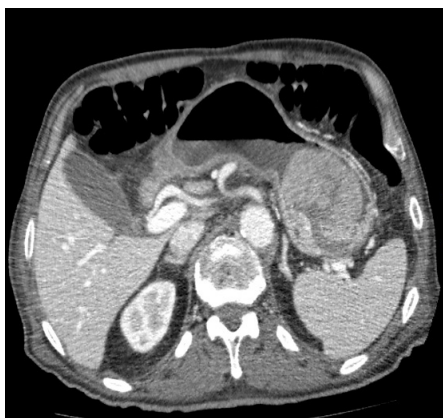
**Figure 1:** Gastric endoscopy showing a polypoid mass in the gastric antrum.



**Figure 2:** A) H&E stain shows a diffuse proliferation of atypical cells, with rounded and eccentric nuclei of plasmacytoid appearance (H&E, 40x). B)

Immunohistochemistry shows strong and diffuse membrane positivity for CD138 (40x).

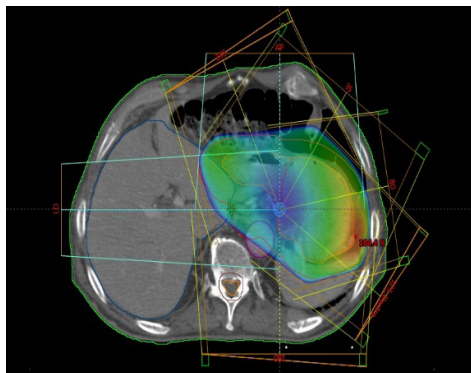
The thoracoabdominal CT-scan confirmed the 9.5 cm fundus-gastric mass and it did not showed neither local adenopathies nor other distant lesions (Figure 3). No lytic bone lesions were founded in bone X-ray series.



**Figure 3:** Abdominal CT scan. See description in the text.

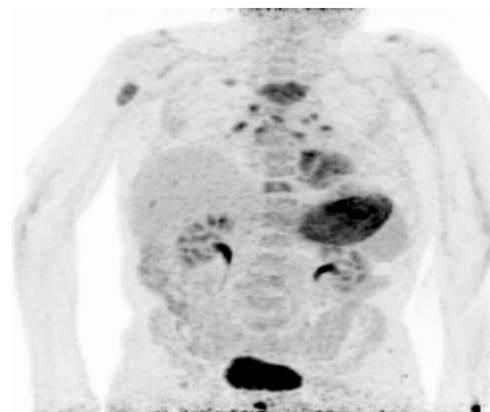
Hematology examinations showed negativity for monoclonal component in serum but with positivity in immunoelectrophoresis for Kappa-  $\gamma$ -Immunoglobulin amplification. Bone marrow aspiration showed less than 10% of plasmatic cells.

With the diagnosis of upper digestive hemorrhage due to gastric plasmacytoma, the patient was remitted to Radiation Oncology Department for radiation treatment. Initially, the proposed treatment consisted of 45 Gy/25 fractions, but after the PET results showing findings compatible with MM, a more hypofractionated radiation schedule was selected. Consequently, a schedule of 25 Gy/10 fractions was prescribed to the whole stomach and a margin of 1 cm. The lesion was delineated so it was ensured that de gross tumor volume received more than 95% of prescription dose (Figure 4).



**Figure 4:** Radiation plan. In color, the 95% isodose (95% of dose prescribed to the PTV- Primary Tumor Volume).

Effectively, a whole-body positron emission tomography evidenced increased Fluorodesoxyglucose (FDG) uptake in the gastric lesion (SUVmax=8,7) but also found focus of increased FDG accumulation in the sternum (SUVmax=5), in 10<sup>th</sup> thoracic vertebral body (SUVmax=3,9), posterior costal arch of 10<sup>th</sup> rib (SUVmax=4,1), 1<sup>st</sup> right rib (SUVmax=2,4) and endomedular lesion in right humeral diaphysis (SUVmax=3,9). (Figure 5).



**Figure 5:** PET scan showed Fluorodesoxyglucose (FDG) uptake in bones and gastric tumor.

Finally, the patient was diagnosed with an oligosecretor Immunoglobulin A Kappa MM with a gastric plasmacytoma.

The treatment was very well tolerated, showing no toxicity and dyspepsia improvement. He stopped bleeding after the fourth session of RT. After RT, the patient started systemic treatment with Lenalidomide and Dexamethasone. Three months after radiotherapy treatment, no other gastrointestinal bleeding was reported, and the patient is now undergoing systemic treatment.

## Discussion

Multiple myeloma (MM) is a plasmatic cell tumor of the bone marrow. Differential diagnosis should be performed with other monoclonal gammopathies, based on laboratory and histological criteria, as well as with other gastric tumors such as adenocarcinoma, gastrointestinal stromal tumors, neuroendocrine tumors and lymphomas [3].

Within the EMP, 5% are of exclusive gastric location. However, 15% of EMPs can evolve to a generalized form, such as MM [4]. Clinical manifestations are variable and unspecific and range from asymptomatic patients to abdominal pain, dyspepsia or upper gastrointestinal bleeding [5].

Endoscopically, the GP can occur as an isolated mass, an ulcerated tumor, or several mucosal ulcerations (the same morphologies that can appear in other types of gastric tumors). In the CT image, the plasmacytoma can also be similar to all of them,

since all are characterized by a homogeneous or non-homogeneous thickening of the gastric wall [6]. The major challenge in the diagnosis of GP is to distinguish it from a lymphoma. The 30% of lymphomas of the Mucosa-associated Lymphoid Tissue (MALT) have plasmocytic differentiation and are indistinguishable histologically from a plasmacytoma, particularly an infrequent type of MALT lymphoma, called immunoproliferative disease of the small intestine. The anatomopathological study and the immunohistochemical techniques will establish the differential diagnosis between both of them. Another entity that must be taken into account in the differential diagnosis are plasmoblastic lymphomas with plasmocellular differentiation. They are morphologically and immunohistochemically indistinguishable from EMP [7]. In practice, the distinction between the two of them is based on clinical correlation. The presence of a monoclonal band in serum and / or lytic bone lesions in imaging tests would support the diagnosis of MM. However, the presence of infection by the Epstein-Barr virus or the human immunodeficiency virus would support the diagnosis of plasmoblastic lymphoma [8].

There have been anecdotal reports of the role of radiotherapy in GP [9,10]. Our findings indicate that a modest dose of radiotherapy alone can achieve high rates of complete responses or, at least, a very good palliation in GP.

## Conflicts of Interest

None.

## References

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