Journal of Biosciences and Medicines, 2019, 7, 42-47
http://www.scirp.org/journal/jbm
ISSN Online: 2327-509X
ISSN Print: 2327-5081

Gastric Gist as Cause of High Digestive Hemorrhage

Vinícius Moreira Paladino[1], Thiago Sande Miguel[1], Vinicius Sande Miguel[2], Marcia Machado Galvão Pereira[1], Fernando Antonio Galvão Pereira[1], Carolina Galvão Teixeira[3], Caroline Guida Babinski[1], Nayrton Kalys Cruz dos Anjos[1], Caio Marcus de Andrade Lopes[1], Daniel Almeida da Costa[1*]

[1]The Medical School at the Center of Higher Education of Valença, Valença, Brazil
[2]Unigranrio Medical School, Rio de Janeiro, Brazil
[3]Faculty of Medical Sciences and Health of Juiz de Fora, Juiz de Fora, Brazil
Email: *professordanielfmv@gmail.com

How to cite this paper: Paladino, V.M., Miguel, T.S., Miguel, V.S., Pereira, M.M.G., Pereira, F.A.G., Teixeira, C.G., Babinski, C.G., dos Anjos, N.K.C., de A. Lopes, C.M. and da Costa, D.A. (2019) Gastric Gist as Cause of High Digestive Hemorrhage. *Journal of Biosciences and Medicines*, **7**, 42-47.
https://doi.org/10.4236/jbm.2019.71005

Received: October 27, 2018
Accepted: January 4, 2019
Published: January 7, 2019

Abstract

Introduction: Gastrointestinal stromal tumor (GIST) occurrence is uncommon and usually manifested by nonspecific signs and symptoms, which hinders its reasoning as a diagnostic hypothesis. The objective is to report a case of female GIST with curative treatment through video-laparoscopy with partial gastrectomy. **Case report:** A 61-year-old female patient attended the Luiz Gioseffi Jannuzzi School Hospital (HELGJ) emergency room, with a sudden onset of upper gastrointestinal bleeding with hemodynamic instability. After stabilization, she was admitted for diagnostic investigation, showing sub-epithelial lesion of antrum in upper digestive endoscopy (UDE) and solid-cystic mass in the gastric antrum to computed tomography (CT). The conduct was the video laparoscopy surgical approach with partial gastrectomy. The histopathological and immunohistochemical aspects of the surgical specimen showed a gastrointestinal stromal tumor (GIST) in a gastric antrum of low grade of malignancy, positive e-Kit and mycotic index (50 cga) < 5. **Discussion:** Compared to the scarce reports in literature, the case described presented typical epidemiology, but the clinical picture was not the most incident. **Conclusions:** Given the rarity of this pathology cases, it is essential to report these in order to elucidate the specificities and also to discuss diagnostic and therapeutic methods.

Keywords

Gastrointestinal Stromal Tumor, Gastrointestinal Hemorrhage, Immunohistochemistry

1. Introduction

Despite the existence of innumerable prognostic factors described in the literature (tumor rupture during surgery, anatomical location, presence of intratumoral necrosis, type of KIT gene mutation, cell proliferative markers, among others) the prediction of the biological behavior of GIST is uncertain. Consequently, the term "benign" has been avoided and GIST has been classified according to malignancy potential based on the two most relevant prognostic factors: mitotic index and tumor size [1] [2] [3]. The most common sites of metastasis are liver, lung, peritoneum and bone lesions [4].

The clinical picture also varies according to some factors mentioned above, such as biological behavior, size and location, but in the majority of cases the individuals are asymptomatic. However, there may be signs and symptoms such as abdominal discomfort, dysphagia, weight loss, gastrointestinal hemorrhage, altered eating habits, palpable mass in the abdomen and intestinal occlusion [4].

Imaging examinations, especially computed tomography (CT), allow us to define the tumor location, size and its relation with neighboring structures, although immunohistochemical evaluation is always necessary for the etiological diagnosis. Highlighted previously, the KIT protein is the main marker, positive in 90% to 95% of cases. As well as CD34, its positivity varies according to the location of GIST, representing 80% to 85% in the gastric, 50% in the small intestine and 90% to 100% in the esophageal and rectal regions [4] [5].

Complete surgical resection is the standard treatment for GIST, as it is the only modality capable of providing healing. Chemotherapy and radiotherapy are ineffective when the goal is healing and reserved for cases in which there are metastases [6]. Pharmacological treatment using Imatinib Mesylate, which is a tyrosine kinase inhibitor, has been advocated in advanced cases to decrease tumor size to perform resection [7].

The objective is to report a case of female GIST with curative treatment through video laparoscopy with partial gastrectomy, highlighting the characteristics of this unusual pathology, as well as the diagnostic and therapeutic procedures available.

2. Case Report

Patient C. R. G., 61 years old, female, from Valença, RJ, Brazil, presented with HELGJ ER presenting, as a history of the current disease, sudden onset of upper digestive hemorrhage, manifested by hematremia and melena. Associated, hemodynamically unstable, requiring blood transfusion. She had negative dyspeptic history, as well as use of NSAIDs.

After the clinical stabilization, the patient was admitted to the Medical Clinic for diagnostic clarification. It was then submitted to an upper digestive endoscopy (UDE) that showed a large sub-epithelial lesion in the middle antrum central portion, with ulceration area and visible vessel, conclusive as GIST (**Figure 1**). At CT of the abdomen, a solid-cystic mass was found in the gastric antrum,

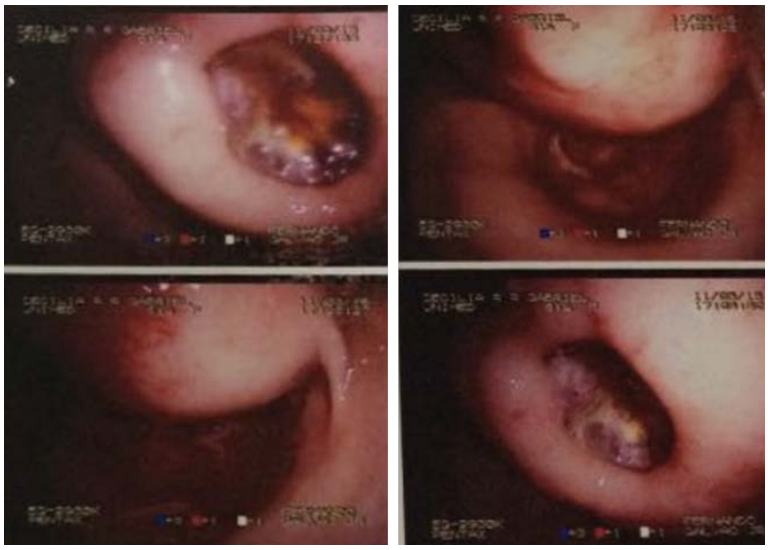

Figure 1. Upper digestive endoscopy.

with about 4 cm and density of soft parts with defined limits.

She presented a new episode of bulky bleeding and opted not to request echo endoscopy, which was unavailable in the service, and was then referred for video laparoscopy with partial gastrectomy. It evolved without intercurrences in the postoperative period.

The histopathological and immunohistochemically study of the surgical specimen showed a GIST in a gastric antrum of low grade of malignancy, positive e-Kit and mycotic index (50 cga) < 5. It was then decided not to perform chemotherapy. Patient is still in clinical follow-up and is asymptomatic.

The study was approved by the Ethics and Research Committee of the institution and the patient, after clarifying the purpose of the report, signed the informed consent form.

3. Discussion

The prevalence of GIST is generally higher in individuals in the sixth decade of life, with a slight preference for the male gender [8]. The patient described is female and is 61 years old, which coincides with those found in the literature. Despite this, this case is relevant in view of the restricted amount of reports described, given their rarity.

As for symptomatology, the majority of patients are asymptomatic. In this, signs and symptoms of upper gastrointestinal bleeding, evolving with hemodynamic instability have been reported, such as history of the current illness at the admission of the service, evolving with hemodynamic instability. Although this condition is described as one of the possible manifestations in this pathology, it also resembles other diseases and is therefore non-specific [9].

Currently CT with contrast is the complementary examination of surplus value, since it defines if there was tumor spread, as well as location and size [10]. As well as UDE and echo endoscopy are relevant imaging methods for the diagnosis

of GIST and differentiation of other submucosal neoplasms. In this case, UDE was used at the beginning since the clinical manifestation of upper digestive hemorrhage necessitated this type of intervention. After clinical stabilization, CT was performed considering the advantages mentioned above and the unavailability of echo endoscopy [11].

The diagnostic confirmation, however, is due to the histopathological and immunohistochemically tests, which was positive for the Kit protein [10] [12].

Therapeutic management with a surgical approach and complete resection of the lesion is the most indicated in cases of non-metastatic GIST, in which a high cure rate is obtained. However, there is a relevant possibility for the patient to develop some adverse effect, such as recurrence, metastasis or death [13]. Therefore, prolonged postoperative follow-up is recommended for at least 2 years, which is the mean period of recurrence. According to studies, a small percentage of patients were cured after 10 years [14] [15]. This procedure described was adopted in the case reported, where the patient, after discharge, is still under clinical monitoring and had no intercurrences.

Recent case studies indicate the advantages of using Imatinib Mesylate in situations in which the tumor is not susceptible or metastatic, since it acts by inhibiting the tyrosine kinase having a satisfactory therapeutic response15. The treatment time is between 6 to 12 months, but it varies according to the evolution of the pathology, being it progressive or regressive [7] [16].

4. Conclusions

After the literature review and the report, the reduced number of GISTs cases described in the literature was evidenced.

In short, the diagnosis is made due to nonspecific signs and symptoms that when investigated culminate in the tumor diagnosis. However, as the majority of the cases the patient presents asymptomatic, they can also be incidental findings during investigations of diverse pathologies that involve the gastrointestinal tract. Therapy through complete surgical resection of the lesion is the method with the highest cure rate, in the cases where it can be approached. When this is not possible, the use of Imatinib Mesylate becomes a viable therapy to halt the progression of the tumor.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Scapini, J.G., Guerrer, M.I., Dias, D. and Simões, J.C. (2013) Tumor estromal gastrointestinal metastático: Relato de caso e acompanhamento por 8 anos. *Revista do Médico Residente*, **15**, 211-219.

[2] Vieira, C.B., de Aragão Bezerra, D., da Silva Sena, M., Gonçalves, P.A.L.H., de Mais Júnior, W.E., de Sousa Andrade, C., *et al.* (2014) Tumor Estromal Gastrointestinal

do Estômago: Relato de Caso. B*lucher Medical Proceedings*, **1**, 44.

[3] DeMatteo, R.P., Gold, J.S., Saran, L., Gönen, M., Liau, K.H., Maki, R.G., *et al.* (2008) Tumor Mitotic Rate, Size, and Location Independently Predict Recurrence after Resection of Primary Gastrointestinal Stromal Tumor (GIST). *Cancer*, **112**, 608-615. https://doi.org/10.1002/cncr.23199

[4] Matsumoto, D.R., Pereira, C.L.M. and Adami, T.A.A. (2013) Tumor Estromal Gastrintestinal de Localização Esofágica: Relato de Caso/Gastrointestinal Stromal Tumor Location Esophageal: Case Report. *Revista Ciências em Saúde*, **3**, 69-77. https://doi.org/10.21876/rcsfmit.v3i2.246

[5] Lambertini, N.R., da Silva, P.A. and Adami, Â.F. (2016) Tumor Estromal Gastrointestinal na Transição Duodeno-Jejunal em Idoso-Relato de Caso/Gastrointestinal Stromal Tumor in Transition Duodenum-Jejunal in Elderly-Case Report. *Revista Ciências em Saúde*, **6**, 152-161. https://doi.org/10.21876/rcsfmit.v6i3.586

[6] Moreira, R.R., Pinto, J.E.D.S.D., Pereira, P.D.M.M., Silva, B.A.M.M., Rocha, R.F.D. and Regis, J.D.S. (2014) Tumor estromal gastrointestinal de intestino delgado: Relato de caso. *Revista Paraense de Medicina*, **28**, 79-82.

[7] Wang, D., Zhang, Q., Blanke, C.D., Demetri, G.D., Heinrich, M.C., Watson, J.C., *et al.* (2012) Phase II Trial of Neoadjuvant/Adjuvant Imatinib Mesylate for Advanced Primary and Metastatic/Recurrent Operable Gastrointestinal Stromal Tumors: Long-Term Follow-Up Results of Radiation Therapy Oncology Group 0132. *Annals of Surgical Oncology*, **19**, 1074-1080. https://doi.org/10.1245/s10434-011-2190-5

[8] Issa, M.F.A., Duarte, R.B.B., Alcântara, G.A.A.D. and Medeiros, D.L. (2009) Tumores estromais gastrointestinais. *Revista Médica de Minas Gerais*, **19**, 360-363.

[9] Mendívil, R., Cabanillas, J.L., Lozano, N., De la Cruz, M. and Mendívil, R. (2010) Tumor Estromal Gastrointestinal. *Anales de la Facultad de Medicina*, **71**, 127-131. https://doi.org/10.15381/anales.v71i2.84

[10] Blay, J.Y., Bonvalot, S., Casali, P., Choi, H., Debiec-Richter, M., Dei Tos, A.P., *et al.* (2005) Consensus Meeting for the Management of Gastrointestinal Stromal Tumors Report of the GIST Consensus Conference of 20-21 March 2004, under the Auspices of ESMO. *Annals of Oncology*, **16**, 566-578. https://doi.org/10.1093/annonc/mdi127

[11] de Almeida, É., Nigre, L.B. and Júnior, S.D.B. (2016) Tumores Estromais Gastrointestinais (GIST): Relato de Caso e Revisão da Literatura. *Revista de Saúde*, **1**, 19-30. https://doi.org/10.21727/rs.v1i2.125

[12] Oliveira, R.P.B.D., Pannain, V.L., Portari Filho, P.E., Salomão, A.R., Iglesias, A.C. and Oliveira, C.A.B.D. (2007) Tumor estromal gastrointestinal: Análise de fatores relacionados ao prognóstico. *Revista do Colégio Brasileiro de Cirurgiões*, **34**, 374-380. https://doi.org/10.1590/S0100-69912007000600004

[13] Silva, F.M.B.D., Moraes, M.G.N.D. and Lemos, J.S. (2001) Tumor estromal gastrointestinal de intestino delgado. *Revista do Colégio Brasileiro de Cirurgiões*, **28**, 65-67. https://doi.org/10.1590/S0100-69912001000100013

[14] DeMatteo, R.P., Lewis, J.J., Leung, D., Mudan, S.S., Woodruff, J.M. and Brennan, M.F. (2000) Two Hundred Gastrointestinal Stromal Tumors: Recurrence Patterns and Prognostic Factors for Survival. *Annals of Surgery*, **231**, 51. https://doi.org/10.1097/00000658-200001000-00008

[15] Valadão, M., Lourenço, L.G., Linhares, E., Romano, S., Kesley, R. and Siqueira, D. (2006) Fatores prognósticos clínicos e anatomopatológicos dos tumores estromais gastrointestinais (GIST) de origem gástrica. Revista do Colégio Brasileiro de Cirurgiões. *Revista do Colégio Brasileiro de Cirurgiões*, **33**, 298-304.

https://doi.org/10.1590/S0100-69912006000500008

[16] Nilsson, B., Bümming, P., Meis-Kindblom, J.M., Odén, A., Dortok, A., Gustavsson, B., *et al.* (2005) Gastrointestinal Stromal Tumors: The Incidence, Prevalence, Clinical Course, and Prognostication in the Preimatinib Mesylate Era. *Cancer*, **103**, 821-829. https://doi.org/10.1002/cncr.20862