Somato Publications ISSN: 2688-1071

Archives of Clinical Case Reports

Case Report

Incidental Gastric Gastrointestinal Tumor in A Gunshot Wound Multitrauma Patient

Serhat Meric, Talar Vartanoglu Aktokmakyan*, Nihat Bugdayci, Nadir Adnan Hacim, Hasim Furkan Gullu, Merve Tokocin, Yuksel Altinel and Fatih Celebi

Department of General Surgery, Istanbul Bagcilar Training and Research Hospital, Istanbul, Bagcilar, Turkey

*Address for Correspondence: Talar Vartanoglu Aktokmakyan, Department of General Surgery, Istanbul Bagcilar Training and Research Hospital, Istanbul, Bagcilar, Turkey; E-mail: talarim@gmail.com

Received: 05 March 2021; Accepted: 20 April 2021; Published: 23 April 2021

Citation of this article: Meric, S., Aktokmakyan, TV., Bugdayci, N., Hacim, NA., Gullu, HF., Tokocin, M., et al. (2021)Incidental Gastric Gastrointestinal Tumor in A Gunshot Wound Multitrauma Patient . Arch Clin Case Rep, 4(1): 21-24.

Abstract

Gastrointestinal stromal tumors are rare malignancies. In this case report, we planned to discuss the resection of a GIST; which can be classified as an elective operation, during an emergency intervention based on health laws and malpractice. Encountering a gastrointestinal stromal tumor during a penetrating abdominal gunshot surgery is even rarer.

Keywords: Gastrointestinal Stromal Tumor, Gunshot, Malpractice

Introduction

Gastrointestinal tumors (GIST) are the most common mesenchymal tumors, primarily located in the gastrointestinal system and abdomen. The incidence of these tumors is 10-20/100000 [1]. Males are more affected than females and it is more seen in the ages between 55 and 65. GIST is the third most common tumor of the gastrointestinal system after adenocancer and lymphoma [2]. 50 to 70 percent of the GIST originate from the stomach and the systemic spread is usually seen as liver metastasis or as a peritoneal spread [3].

The location, the size, and the mitotic count are the main prognostic factors. Malignancy potential is seen with a frequency of 40% in intestinal GISTs and 20% in stomach-originated GISTs [4]. Tumor size greater than 5 cm and mitotic count more than 5 in 50 HPF are associated with a poor prognosis [5]. Preoperative fine-needle biopsy is not recommended for the diagnosis because there is a high risk of disintegration of the tumor capsule and seeding of tumor cells.

Liver metastasis peritoneal spread is the indicator of malignancy. Lymph node metastasis, lung metastasis, and extra-abdominal spread are very rare. Total resection of the tumor is the most

successful treatment method and ensuring negative margins after the resection is adequate for the treatment. Since GISTs rarely metastasize to lymph nodes, lymphadenectomy is generally not required. In this case report, we planned to discuss the resection of a GIST; which can be classified as an elective operation, during an emergency intervention based on health laws and malpractice.

Case Report

A 44-year-old male patient was brought to the emergency room due to a gun shout injury. The patient was hemodynamically stable. In the first evaluation, it was seen that there were two bullet holes, one on the epigastric area of the abdomen and the other one on the left thigh. The abdominal computerized tomography (CT) was quickly evaluated by the emergency medical specialists (Figure 1).

The orthopedic surgeons applied a splint to the left thigh. An operation decision was made for the patient who developed signs of peritonitis thirty minutes after arrival to the hospital.

No major vascular injury was detected at the exploration. Three full-thickness injuries were spotted on the area 20 cm proximal from the ileocecal valve. 20 cm of ileum which included these injured areas were resected and functional side to side anastomosis was performed with linear staplers. Another full-thickness injury was detected on the anterior side of the sigmoid colon. It was realized that the bullet has gone posteriorly through the mesocolon into the pelvic area and ended up on the posterior portion of the thigh. It was thought that making an anastomosis would not be appropriate due to the thermal injury along the course of the bullet at the posterior mesorectum. A segmenter colon resection was made and an end colostomy was created from the lower-left portion of the abdomen. At the exploration, a mass lesion of approximately 8 cm in diameter compatible with a GIST was detected on the lesser curvature of the stomach. The abdominal computerized tomography of the patient was then re-evaluated and no metastatic lesion was suspected in the liver (Figure 2).

The mass lesion was resected with a linear stapler with macroscopically negative margins. (Figure 3)

The patient was hemodynamically stable during the operation. Following the application of traction by the orthopedic team, the patient was taken into the intensive care unit. There was no problem in the follow-up period of the patient, who was taken from the intensive care unit to the service on the postoperative first day. Abdominal drains were removed and on the 6th day of the surgery, he was transferred to the orthopedic service to plan surgery for

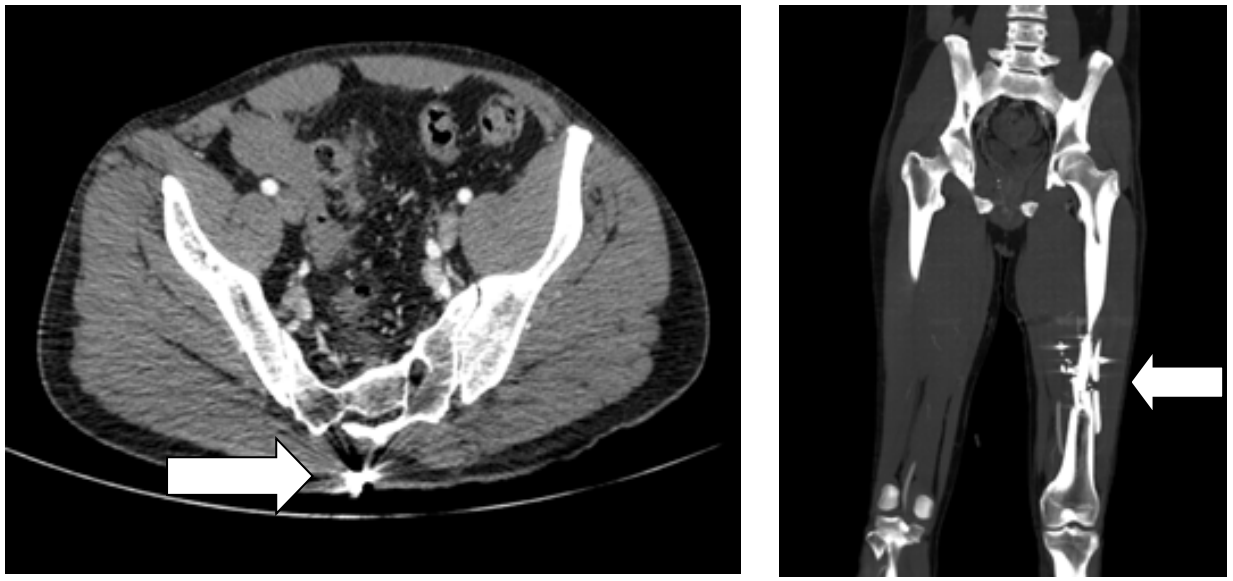

Figure 1: CT images of the patient with a gunshot injury (arrows)

the left femur shaft fracture.

In the pathology report, the mass has been verified as Gastroıntestinal Stromal Tumor (7 x 8 x 5.5 cm) with the Spindle cell type. The mitotic ratio was 1-2 (50HPF). Necrosis was not observed. No tumor was observed at the surgical margin. Histological grade was G1 with Low Grade (Mitotic ratio 1-2 50HPF). According to these properties, the tumor can be classified as in the low-risk group. Immunohistochemical study results are stated as follows, CD117 (+), CD34 (-), SMA (-), Desmin (-), S100 (-), GFAP (-), Panck (-), Ki67 proliferation index: 2-3%.

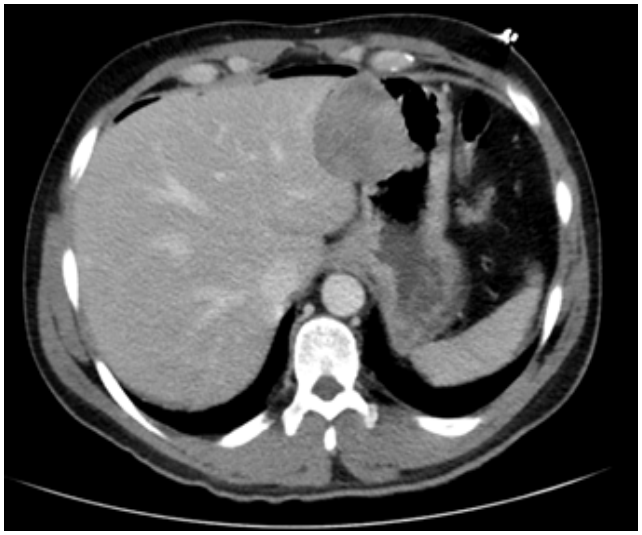

Figure 2: CT image of the detected gastrointestinal stromal tumor

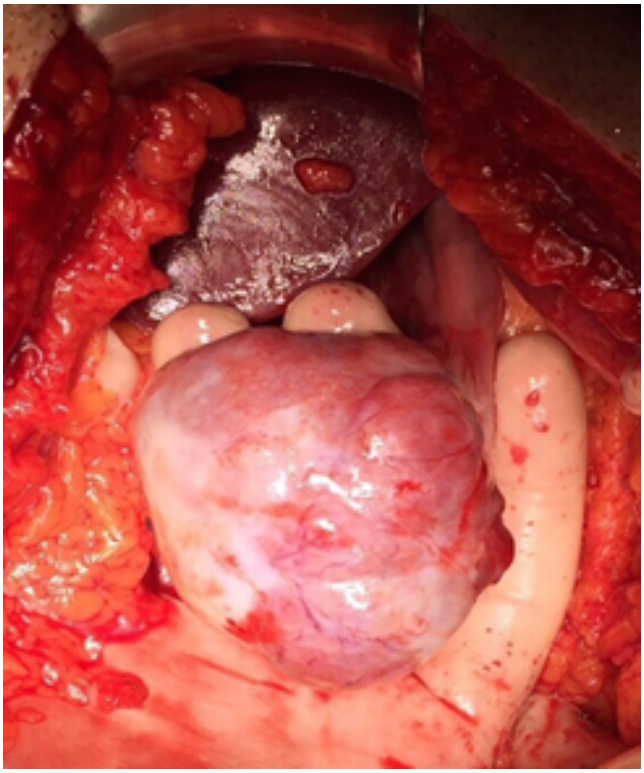

Figure 3: Photo of the resected gastrointestinal stromal tumor

Dıscussion

When patient safety incidents occur, managing them is an important issue. In particular, policies and interventions that are adopted to respond to patient safety incidents are intended to manage such incidents and minimize any additional harm [6] Emergency surgical interventions are procedures that should be completed in the shortest period and a target-oriented manner. The surgical method chosen in emergency surgical interventions should not cause an additional burden to the patient, in the current situation, it should not cause a loss of time and should be concluded quickly.

Today, laws related to health law and malpractice have been created within this framework. Malpractice reporting is an important measure in patient safety work. However, concepts such as increasing the operation time, bringing an additional burden to the patient, aggravating the current situation are concepts that should be evaluated on a patient basis. As we summarized in the case report, following the re-evaluations made by the surgeons; considering that the patient did not require additional staging after the emergency procedure, the surgery would be completed in a short time and with simple intervention with no additional burden and the fact that a planned re-exploration would be more difficult, resection of the incidentally detected mass was decided.

We began this research by reviewing the legal instruments and undertaking extensive literature reviews. Considering the legal difficulties that may arise after a complication and up-to-date medical information, it is recommended not to add an elective intervention in the emergency surgical intervention. In case of an incidental malignancy detected, concurrent resections should be avoided since staging cannot be performed completely. In the summarized case, tomography performed in the preoperative period provided an advantage in terms of staging, and the surgery was completed without any problems. In such rare cases, the bad

scenario and complication, as well as the good scenario, should be considered and the decision should be made carefully.

Conflict of Interest

The authors have declared that no conflict of interest exists.

Funding Statement

Authors declare that no funding received for this study

References

1. Agaimy, A., Wunsch, PH., Hofstaedter, F., Blaszyk, H., Rümmele, P., Gaumann, A., et al. (2007) Minute gastric sclerosing stromal tumors (GIST tumorlets) are common in adults and frequently show c-KIT mutations. Am J Surg Pathol, 31(1): 113-120.
2. Fletcher, CDM., Berman, JJ., Corless, C., Gorstein, F., Lasota, J., Longley, BJ., et al. (2002) Diagnosis of gastrointestinal stromal tumors: a consensus approach. Hum Pathol, 33(5): 459-465.
3. Miettinen, M., Lasota, J. (2001) Gastrointestinal stromal tumors-definition, clinical, histological, immunohistochemical, and molecular genetic features and differential diagnosis. Virchows Arch, 438(1): 1-12.
4. Duffaud, F., Blay, JY. (2003) Gastrointestinal stromal tumors: biology and treatment. Oncology, 65(3): 187-197.
5. Guzelcay, T. (2006) Gastrointestinal stromal tümörlerin klinik, histolojik, immunhistokimyasal özellikleri; Bu özelliklerin birbirleri ile ve prognoz kriterleri ile ilişkileri. Uzmanlık tezi, SB, İstanbul Eğitim ve Araştırma Hastanesi, Patoloji Kliniği.
6. Downie, J., Lahey, W., Ford, D., Gibson, E., Thomson, M., Ward, T., et al. (2006) Patient Safety Law: from silos to systems. Ottawa: Health Policy Research Program, Health Canada.