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Case Report

# Small Bowel Adenocarcinoma of The Jejunum a Case Report

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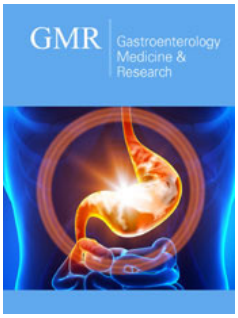


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## Abstract

Small Bowel Adenocarcinomas (SBA) have a low prevalence, of less than 5%, compared to other malignancies of the gastrointestinal tract. Little is still known about their specific mechanisms, treatments, and etiology because of their rarity and insufficient research about the condition. This scenario imposes a substantial challenge in the clinical practice to diagnose and properly treat patients with this disease. In this case report we document a rare case of intestinal obstruction caused by SBA of the ileum, a rare location for this type of clinical presentation. We report a case of a 64-year-old woman with small bowel adenocarcinoma of the ileum, who presented a story of 2 months of gastrointestinal and consumptive with symptoms of intestinal obstruction, she also had a personal history of cervical cancer 3 years before and had radiotherapy previously. She underwent an enterectomy as treatment and seven lymph nodes were removed with no signs of metastatic disease.

**Keywords:** Adenocarcinoma; Small bowel; Gastrointestinal malignancies; SBA; Ileum adenocarcinoma

**Abbreviations:** SBA: Small Bowel Adenocarcinoma; LBA: Large Bowel Adenocarcinomal; CT: Computed Tomography; OS: Overall Survival; FAP: Familial Adenomatous Polyposis

## Introduction

Small Bowel Adenocarcinomas (SBA) have a low prevalence, of less than 5%, [1] compared to other malignancies of the gastrointestinal tract. The estimated incidence of SBA is 5,7 cases per million persons [2], and studies have shown that males had higher rates of SBA compared to females, as well as the black population had a higher prevalence compared to white people [1]. The incidence has been increasing in the last years [3], and the prognosis appears to be closely related to the stage of disease at the diagnosis [4] and the presence of node-positive disease [5,6], which makes even clearer the need for further research about the disease and other methods for early diagnosis. Little is still known about their specific mechanisms, treatments, and etiology because of their rarity and insufficient research about the condition. The clinical findings can vary and involve unspecific symptoms such as abdominal pain, weight loss, bleeding in the gastrointestinal tract, intestinal obstruction, nausea, and vomiting [7]. This scenario contributes to delayed diagnosis which can lead to a poorer prognosis for patients despite the advances in the latest years in imaging and endoscopic evaluations. The median age for diagnosis of SBA is around the sixth decade of life [8] which is precisely the case of the patient we're reporting ahead. The duodenum is the most involved segment of the small intestine with 55–82% of cases, followed by the jejunum (11–25%) and ileum (7–17%) [9]. The 5-year Overall Survival (OS) rate range from 14-33% [2,9,10], which reinforces the poor prognosis compared to other gastrointestinal malignancies. The case we are reporting is about an SBA of the ileum, that typically is the less affected portion of the small bowel, and less commonly is diagnosed in an intestinal obstruction scenario.

## Case Presentation

A 64-year-old female patient that was an active smoker and had a history of cervical cancer 3 years ago that needed radiotherapy, and no history of previous surgical procedure, arrived at the emergency room complaining about intense epigastric pain for 2 months. The pain was associated with a change in bowel habits such as diarrhea, one episode of hematochezia, progressively lower caliber stool, and a loss of 18 kg in the same period. She reported having performed an upper digestive endoscopy examination about two months before with no clinical findings. She presented at the emergency setting undernourished, pale, with moderate and diffuse abdominal pain at palpation, with no findings in the rectal exam. The biological assessment showed she was anemic (Hemoglobin of 8,5g/dL, Hematocrit of 26%) had a leucocytosis of 15450uL and elevated C-reactive protein of 60,68mg/L. An abdominal Computed Tomography (CT) scan was also performed, which revealed parietal thickening and moderate liquid distension of the small bowel loops, especially in the hypogastric region, with the formation of air-fluid levels and an apparent transition of caliber in the flank/iliac fossa to the right, associated with densification in adjacent planes of adipose tissue, with a minimal amount of free fluid in the pelvic cavity, and no inflammatory sings in the appendix. Colonoscopy imaging showed a sub stenotic mucosa at the rectosigmoid transition with an actinic aspect with no active bleeding, and no suggestive image in the terminal ileum. Considering the symptoms of abdominal obstruction, associated with the imaging findings, the patient underwent a diagnostic laparotomy that showed a hard mass that was blocking the ileum. The surgical team then proceeded with an oncologic resection of 30cm of the terminal ileum, with a 50 cm distance of the ileocecal valve, with primary anastomosis considering the wellbeing benefit for the patient in the future. Samples were also taken for anatomopathological examination that later revealed an R0 resection, moderately differentiated adenocarcinoma with no signs of metastasis in the 7 resected lymph nodes and were achieved with T3N0MO.

In postoperative follow-up, the patient evolved with progressive abdominal pain 7 days after the surgical procedure. A new Computed Tomography (CT) scan showed that the colic frame was filled with liquid, and noted ascites with a little amount of liquid, associated with mild peritonitis. She then underwent a new surgical intervention that found she had anastomotic dehiscence with a peri-anastomotic collection, the medical team opted for terminal ileostomy due to the hostile abdominal environment and the patient was clinically stable after the procedure. Later the patient was referred to a specialized oncology service and was just waiting to continue her follow-up there with chemotherapy.

## Discussion

Small bowel adenocarcinoma is a rare type of cancer, the low prevalence and the unspecific symptoms of this type of malignancy can delay the diagnosis and tend to make the prognosis of these patients even worse than other malignancies found in the gastrointestinal tract. about 60% of patients are symptomatic at presentation, and the most common symptom is related to stenosis. Symptomatic presentation was more common for jejuno-ileal primaries (84%) as compared to duodenum (54%). For duodenal primaries, patients present with complaints suggestive of both stenosis or bleeding. Currently, the treatment is based on resection of the primary tumor with loco-regional lymph node resection. The use of chemotherapy as adjuvant treatment has been increasing [9] although the research around its use is still ongoing and not fully established due to the lack of randomized trials. The use of palliative chemotherapy in cases of advanced-stage unresectable SBA is the preferred standard treatment [11] and various retrospective studies have suggested prolonged overall survival (OS) rates with its use [4], although only a few protocols have been studied in literature and those regimens are based on protocols used for colon cancer. The FOLFOX regimen, using oxaliplatin-based chemotherapy seems to be the best choice, and its recommended by the French guidelines as 1st line therapy nowadays [12]. There aren't specific studies around targeted modalities of treatment for this type of malignancy, which is still a barrier as the optimal treatment for SBA is still unknown.

Its pathogenesis and etiology are not fully understood yet, but some risk factors have been related to SBA, such as alcohol consumption [13], smoking, and high sugar intake [14]. Other predisposing conditions have been correlated with SBA as well, like Crohn's disease [3,15] coeliac disease [16], Familial Adenomatous Polyposis (FAP), and Lynch syndrome [17]. Furthermore, some genes have been linked with a higher incidence of SBA and Large Bowel Adenocarcinomas (LBA), which suggests some kind of intersection in carcinogenic pathways between the two types of adenocarcinomas. Many of the hypothesis on the pathogenesis of SBA are based in either colorectal cancer or pancreatic-biliary cancers. The adenoma to carcinoma sequence seems to apply also for the SBA [18-20]. Most of the current protocols and treatments for SBA have been based on treatments used primarily for LBA, therefore, there is still a need for further studies on a larger scale about SBA since the prevalence and risk factors associated with it differ profoundly from the ones related to LBA. The case we are reporting is definitely an uncommon one, because the patient had no other risk factor than smoking and came to us with very unspecific gastrointestinal symptoms and a clinical presentation of intestinal obstruction, that only proved to be an adenocarcinoma in the ileum after diagnostic laparotomy. There was the hypothesis of gastrointestinal tuberculosis, since Brazil as a developing nation with huge dimensions, still has tuberculosis as a quite common disease [18]. The main symptoms of intestinal tuberculosis are abdominal pain, weight loss, nausea or vomiting, change in bowel habit, night sweat and fever. The symptoms of the patient presented. The patient also was importantly undernourished, which contributed to the gastrointestinal tuberculosis possibility and also put the patient at a higher risk for postoperative complications. SBA is still an unusual diagnosis in the day-to-day physician's practice, and even worldwide guidelines don't have a consensus yet about neoadjuvant treatments as well as the necessary number of

resected lymph nodes for an adequate staging of the malignancy, with multiple studies suggested as a very important factor to the patient's prognosis [5,6]. These obstacles make it even harder for doctors to establish a reliable method to manage and treat these cases, since there is no consensus about these clinical practices.

## Conclusion

SBA is a condition that has a wide range of clinical presentations and should be further studied to clarify its characteristics and bring awareness of SBA as a possible diagnosis for abdominal and gastrointestinal symptoms to physicians in clinical practice. Additional studies about the developing mechanisms, risk factors, and therapies for SBA can increase the knowledge about the condition and improve the prognosis and well-being of these patients with advances in early diagnosis, more specific treatments, and neoadjuvant options. These findings could definitely change the limited prognosis that this population currently has because of the restricted medical knowledge about the topic available.

## Acknowledgment

None.

## Conflict of Interest

We have no conflicts of interest to disclose.

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