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An atypical presentation of small bowel adenocarcinoma; a case report

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Abstract

Small bowel malignancy (SBM) is a rare malignancy in the gastrointestinal tract. Duodenum is the most commonly involved segment and the most common histological subtype is adenocarcinoma (40%). Due to a lack of screening tools and vague symptoms, its clinical detection is very challenging.

A 27-year-old man presented at the surgical emergency of Lahore General Hospital in February 2019 with non-specific gastrointestinal symptoms (vomiting, abdominal pain), for which he had previously visited the hospital multiple times. Later, on further workup, he had been diagnosed as a case of intussusception on CT scan. On exploration, he had an impassable stricture in the jejunum. Resection anastomosis of the jejunum was done, but later, on histopathology it turned out to be adenocarcinoma.

Adenocarcinoma of the small bowel is a rare entity, and, particularly in Pakistan, the available literature is limited. SBM should be included in the differentials of patients with vague abdominal symptoms. Future studies for the evaluation of new investigations and treatment modalities should be encouraged to improve the overall outcome of the patients.

Keywords: Small bowel malignancy, Intussusceptions, Intestinal obstruction. Intestinal stricture.

Introduction

Small bowel malignancy (SBM) is a relatively rare type of cancer when compared to other gastrointestinal diseases, with glaring similarities to the said malignancies. Despite it being rare, primarily of GI origin is 3-6% with only 1-2% being malignant[1]. Mostly it is incidentally detected on histopathology. The most common histologic subtype is adenocarcinoma (40%), and duodenum is the most frequently involved segment, followed by jejunum and ileum[2]. Clinically, SBM presents with vague abdominal symptoms, which, due to inaccessibility by endoscope and lack of proper screening tools, ordinarily takes 6-10 months for diagnosis[3]. There is limited knowledge about the clinical aspects, remedies, or prophecy of patients with SBM, especially in Asians[4].

In this case report, is presented the history of a 27-year-old patient, who initially underwent surgery for a preliminary diagnosis of intussusception of the jejunum, which later turned out to be adenocarcinoma of the jejunum.

Case presentation

A 27-year-old man presented in the surgical emergency department of Lahore General Hospital, in February 2019, with a seven-month history of vomiting, loss of appetite, right lower abdominal pain and weight loss. These symptoms had worsened, and he had visited the hospital multiple times during the past three months. He was now admitted, with a preliminary diagnosis of intestinal obstruction. On examination, his vitals were within optimal range. He was pale, and his abdomen showed mild distention with sluggish bowel sounds. There was a visible sausage-shaped gut impression on the anterior abdominal wall in the right lower region. His laboratory investigations were well within the normal range. There were multiple air-fluid levels on abdominal X-ray.

Abdominal ultrasound showed dilated gut loops with increased peristaltic activity and free fluid in the abdominopelvic cavity. A preliminary diagnosis of intussusception was made based on CT scan findings. Thus, the patient underwent exploratory laparotomy after informed consent. Per-operatively, there was an unpassable stricture in the jejunum, one foot from DJ, with marked dilation of proximal jejunum and stomach. (Figure1). There were also enlarged mesenteric lymph nodes. Resection and primary anastomosis (figure 2) were done along with a mesenteric lymph node biopsy. His recovery was uneventful, and he was discharged on the sixth post-operative day.

The histopathology showed moderately differentiated adenocarcinoma of the jejunum involving the serosa and two nymph nodes (LNs) showed reactive lymphoid hyperplasia (Stage T3NxMx). His metastatic workup was negative, and his case was discussed in a multidisciplinary team (MDT). He was advised re-exploration for lymph node dissection followed by adjuvant chemotherapy. Unfortunately, the patient refused further treatment. But he agreed to have a regular follow up on OPD basis. The patient was advised to have clinical examination and CEA levels every three to six months for the first two years and then every six months for the next three years. CT scan of the chest, abdomen and pelvis six monthly for the first two years and then annually for the next three years were advised.

Discussion

Carcinoma of the small intestine is relatively rare as compared to other GI carcinomas. Although it is a significant portion of the GI tract, covering 75% of the length as well as 90% of the total mucosal surface, yet less than 2% of the total GI carcinomas occur in the small intestine[5]. The incidence has been recently increasing, with an annual frequency of 0.3–2.0 cases per 100,000 persons, with male predominance.[6] It is common in the fifth to sixth decades of

life and prevalence increases after the fourth decade. But in this case, it occurred in a 27-year-old young man.

Several risk factors predispose to small bowel cancer, including genetic, environmental, and medical conditions. Genetic risks include hereditary nonpolyposis colorectal cancer, familial adenomatous polyposis (FAP), and Peutz-Jeugher syndrome.[5] Whether environmental elements cause, small bowel cancer is unknown. There is an increased risk of SBA in alcoholics and smokers.[4] It is also common amongst the people who use sugar, carbohydrates, red meat and smoked food in large quantities. However, a reduced risk has been observed with higher intakes of coffee, fish, fruit, and vegetables. Diseases like Crohn's disease and Coeliac disease may represent a subset of a pre-existing condition for small bowel cancer. However, in our patient, no such risk factor was present.

The clinical features and diagnosis of SBM are usually late. The initial symptoms are typically vague and include abdominal pain and discomfort.[6] The common presentations include abdominal pain, abdominal distension, bleeding, and jaundice. Bowel obstruction is a common phenomenon in cases of the jejunal and ileal tumour but is less common in proximal duodenal tumours (47% vs 34%; $p = 0.06$). SBM has usually presented as emergencies such as occlusion (40%), bleeding (24%), perforation, and intussusception,[6] which was also the case in our patient, who had emergency surgery on the suspicion of intussusception.

Previously, vague clinical presentation, along with limited sensitivity of contrast studies and abdominal X-rays for small bowel neoplasms, had been the reason for delayed diagnosis. Different tools are widely available now for the diagnosis of SBM, which include Small bowel follow through (sensitivity is 50%), CT scan (accuracy of 47%), capsule endoscopy (sensitivity is between 88.9% and 95%) and CT Enterocolysis.[6] Studies have shown that CT Enterocolysis using

spiral and multi-detector CT with an oral contrast agent has matched the radiographic test of choice for SBM, with the sensitivity of 100%.[7]

According to the French guidelines, a CT scan of thoraco-abdominal and pelvic cavities to evaluate distant metastases, along with EGD and colonoscopy to exclude synchronous growths, are advised.[8] CEA and CA 19-9 assay have a prognostic value, especially in advanced disease. Testing for coeliac disease, Crohn's disease, and Lynch syndrome are also recommended in the presence of genetic predisposition.[7,8] In this case, the patient underwent CT scan of the abdomen preoperatively, which helped in the diagnosis of intussusception. Later, he had a CT scan of the chest to rule out metastasis, which was normal.

Sadly, there had been no significant enhancements in consequences and survival in SBM in the last two decades, and the treating modalities have mainly continued unchanged.[2] Although surgical resection is the treatment of choice for SBM, curative resection of the tumour is possible in only 40-65% of the cases as by the time it is diagnosed; it is too late for cure.[2] For localised SBM, complete en bloc removal of growth along with locoregional lymph node resection is associated with better outcomes. It is often required even in metastatic disease due to the high probability of obstruction or severe haemorrhage.[5,9] For unresectable SBM, by-pass surgery as the palliative procedure is a suitable option. Recurrence, even after surgery, is high (40-60%), and it is mainly systemic. Also, until now, no effective adjuvant or palliative regimen has been recommended for SBM.[9,10] Our patient had resection and anastomosis of the jejunum along with lymph node biopsy. His histopathology confirmed moderately differentiated adenocarcinoma with clear resection margins and reactive lymphoid hyperplasia without any signs of malignancy in the lymph node. Although our patient is doing fine at a six-month follow-up, the prognosis of SBM is poor and correlated to the tumour stage, with a five-year overall survival rate ranging from 14% - 33%.[10]

Conclusion

The global prevalence of small intestine adenocarcinoma is rare, and, particularly in Pakistan, the literature available is scarce. This report highlights the need for physicians to broaden their diagnostic vision for the suspicion index for these adenomas in patients with vague abdominal symptoms.

Informed Consent: Patient has agreed for publication of his case report.

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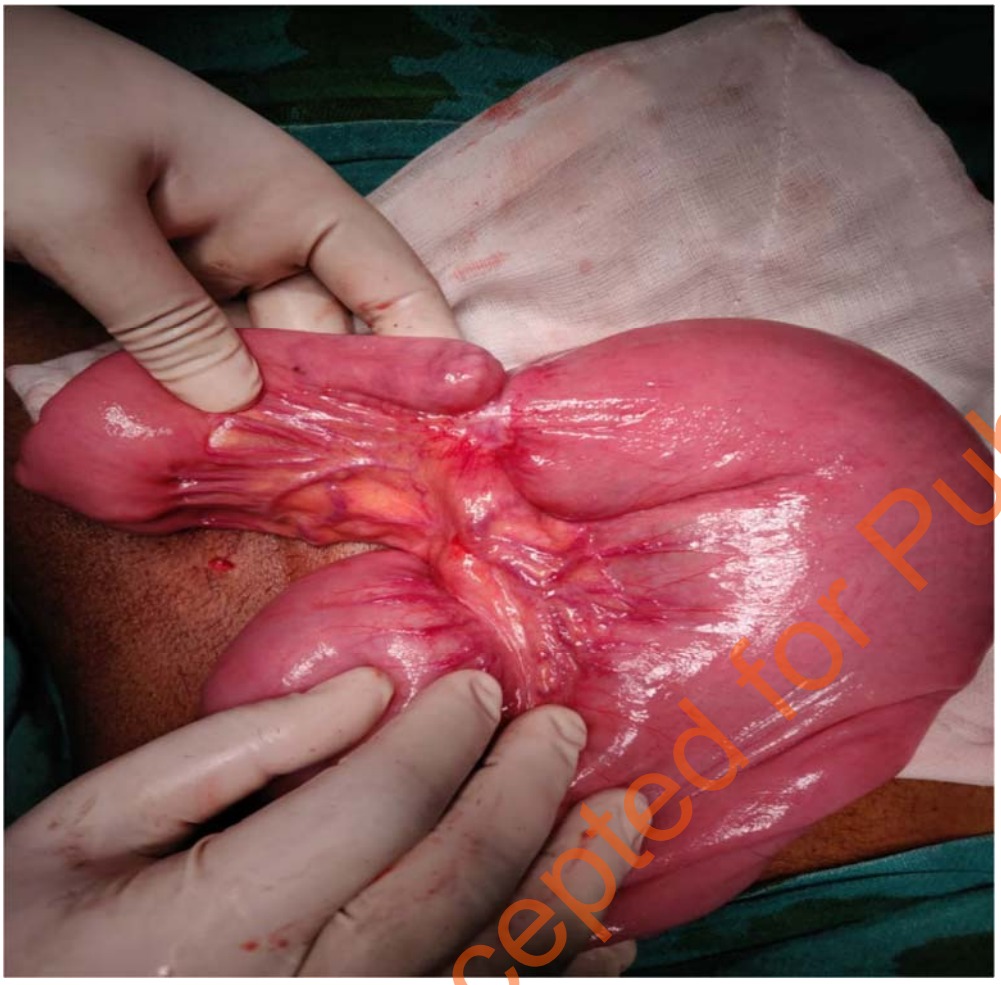

Fig 1: Stricture obstruction.

Fig 2: Jejuno-jejunal anastomosis.