

Primary Jejunal Adenocarcinoma

Farhat Bano

ABSTRACT

Primary adenocarcinoma of small bowel is an infrequent neoplasm that presents with nonspecific symptoms. We report a case of 47-year old man with adenocarcinoma of jejunum presenting with proximal small bowel obstruction, weight loss and abdominal mass. Abdominal ultrasound and computed tomography showed a mass involving the proximal jejunum causing partial obstruction. On exploration a mass arising from jejunum was found one foot distal to ligament of Treitz which was resected en-block. Histopathological examination revealed poorly differentiated adenocarcinoma of jejunum pT₃ N₀ M_x. 5-fluorouracil was administered as adjuvant chemotherapy.

Key words Small bowel cancers, Jejunal adenocarcinoma, GI malignancy.

INTRODUCTION:

Primary malignant tumors of the small bowel account for less than 2 % of all gastrointestinal (GI) tumors and 1 % of GI tumor –related deaths.¹ The lower incidence of small bowel cancers is due to several protective mechanisms.² Because of rarity of small bowel cancers, very little is known about its risk factors.³ Clinical presentation of small bowel cancers is vague and nonspecific. They are usually diagnosed late and often needs surgical intervention for it. Herein one such rare case is reported.

CASE REPORT:

A 47-year old man presented with 6-month history of recurrent vomiting, central abdominal pain and abdominal mass. Other complaints included generalized weakness and weight loss of 5 kg over 6 months. His diet, medication, and past medical history were unremarkable. There was no significant family history of any disease. Patient was of lean built and had pale look. On abdominal examination a 12 cm x 8 cm firm, non tender mass was palpable at right paraumbilical region.

Laboratory findings revealed a white cell count of 8,300/mm³, hemoglobin of 9.3 gm/dl and ESR of 60. Findings of routine blood chemistry, liver function tests and coagulation profiles were within normal limits. Abdominal ultrasound scan showed a 13.2 cm x 8.6 cm irregular heterogeneous mass with internal vascularity suggesting a neoplastic lesion

originating from bowel. Abdominal computed tomography revealed a large bulky soft tissue density mass involving the proximal jejunum causing partial obstruction with no evidence of abdominal or pelvic lymphadenopathy. Findings of upper gastrointestinal endoscopy were normal.

During exploratory laparotomy a jejunal mass was found adherent to mesentery about one foot distal to ligament of Treitz. Whole mass was completely resected en block and single layered extramucosal end to end anastomosis performed. The surgical specimen consisted of a segment of jejunum 26 cm long with a large nodular mass at its centre on the serosal aspect. Histological examination revealed a poorly differentiated adenocarcinoma infiltrating the full thickness of muscle wall pT₃ N₀ M_x. Both surgical resection margins were tumor free. All 15 recovered lymph nodes were tumor free. Patient recovered well and discharged on 7th post operative day. He was referred to oncologist for adjuvant chemotherapy and was treated with 5-fluorouracil.

DISCUSSION:

Primary adenocarcinoma of the small intestine is 40- 60 times less frequent than that of the colon. Primary adenocarcinoma of jejunum is extremely rare. Only 20 cases of primary jejunal adenocarcinoma were found in adults from 2000-2009 in English language Pubmed Database search.⁴ These tumors frequently develop in patients aged 50 -70 year with slight male predominance. Jejunal cancers develop in the region 50 to 60 cm distal to ligament of Treitz in more than 80% cases as in our patient.⁵

Jejunal adenocarcinomas present with vague and nonspecific symptoms. The mean interval from the

Correspondence:

Dr. Farhat Bano
Department of Surgery
Al-Tibri Medical College Karachi
E-mail: banofarhat97@yahoo.com

initial onset of symptoms until diagnosis is 5 months. In our case it was 6 months. For diagnosis abdominal ultrasound, CT scan, contrast enhanced radiography of small bowel and small bowel endoscopies are employed. CT scan provides useful information about tumor extension but its role is limited regarding local assessment of tumor. It is relatively rare to make a definitive diagnosis before surgery as jejunum is not amenable to upper GI endoscopic examination suggesting difficulty in diagnosis. Approximately 50% of cases are diagnosed by exploratory laparotomy as in our case. However, recent advances in endoscopic technologies, such as double balloon enteroscopy have been shown to diagnose these tumors preoperatively. Capsule endoscopy has its limitation like delayed passage, retention and no allowance of biopsy.⁶ To date, there are no clear associations between tumor markers and small bowel adenocarcinomas.

Surgical treatment depends on location and extension of the tumor. The literature recommends en block resection and lymph node dissection when possible, but in unresectable tumors, by-passes surgery is recommended.⁷ In our patient en-block resection was done. Recurrence rate after curative resection is 40-70% with most recurrences at distant sites.⁸

Because of tumor's rarity, the role of adjuvant or palliative chemotherapy is not well defined. The most frequently used agents are 5-fluorouracil, leucovorin, irinotecan and gemcitabine.⁹ Prognosis of primary adenocarcinoma of small bowel is poor, with a general survival rate of 5 years of 20-30%. Curative resection is currently the only factor that can prolong the patients survival. Consequently, early and accurate diagnosis is crucial to improve outcomes.

REFERENCES:

1. Hatzaras I, Palesty JA, Abir F, Sullivan P, Kozol RA, Dudrick SJ, et al. Small bowel tumors: epidemiologic and clinical characteristics of 1260 cases from the Connecticut tumor registry. *Arch Surg.* 2007;142:229-35.
2. Schottenfeld D, Beebe-Dimer JL, Vigneau FD. The epidemiology and pathogenesis of neoplasia in the small intestine. *Ann Epidemiol.* 2009;19:58-69.
3. Pan SY, Morrison H. epidemiology of the cancer of small intestine. *World J Gastrointest Oncol.* 2011;3:33-42.

4. Lee HJ, Cha JM, Lee JI, Joo KR, Jung SW, Shin HP. A case of jejunal adenocarcinoma diagnosed by double balloon enteroscopy. *Gut Liver.* 2009;3:311-4.
5. Patrascu T, Doran H, Strambu V, Vilcu M. [Small bowel tumors. Clinical course and therapeutic aspects] *Chirurgia (Bucur).* 2006;101:477-81.
6. Schwartz GD, Barkin JS. Small bowel tumors detected by wireless capsule endoscopy. *Dig Dis Sci.* 2007;52:1026-30.
7. Han SL, Cheng J, Zhou HZ, Jia ZR, Wang PF. Surgically treated primary malignant tumor of small bowel: A clinical analysis. *World J Gastroenterol.* 2010; 16:1527-32.
8. Agarwal S, McCarron EC, Gibbs JF, Nava HR, Wilding GE, Rajput A. Surgical management and outcome in primary adenocarcinoma of the small bowel. *Ann Surg Oncol.* 2007;14: 2263-9.
9. Bruckner HW, Hrehorovich VR, Sawhney HS, Meesus SI, Coopman AM. Chemotherapeutic management of small bowel adenocarcinoma associated with Crohn's disease. *J Chemother.* 2006;18:545-8.