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PRIMARY ADENOCARCINOMA OF JEJUNUM WITH METASTASIS TO RIGHT OVARY AND PRESENTING AS ACUTE INTESTINAL OBSTRUCTION: A RARE ENTITY

Oncology

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ABSTRACT

Rare disease is rarely diagnosed. Same is the case for small intestine malignancy. When we think of gastrointestinal tract cancer first thought comes to mind is gastric carcinoma followed by colonic carcinoma. No one even think of small intestine carcinoma except for periampullary carcinoma. Jejunal carcinoma is rare and its metastasis to ovary has very low incidence. In literature only ten cases has been reported in the world so far. The age incidence for primary adenocarcinoma of jejunum is sixth decade. We report a case of acute intestinal obstruction in a young female of 32 years age operated in the emergency, which post operatively diagnosed as a case of primary adenocarcinoma of jejunum metastasized to the right ovary. The basis of the diagnosis was histopathology of the resected specimen.

KEYWORDS

Adenocarcinoma. Small Intestine. Jejunum. Ovary. Metastasis.

INTRODUCTION:

Although the small intestine length is about three fourth of the total length of gastro intestinal tract, with 90% of its mucosal surface area, the incidence of small intestine malignancy is very rare. This represents approximately 2% of all gastrointestinal cancer. The incidence of cancers arising in the small intestine is many folds less than that of colon and gastric tumors. There are four major histologic subtypes of cancer of the small intestine i.e.adenocarcinoma, malignant carcinoid, lymphoma, and leiomyosarcoma. Adenocarcinoma arising in the small intestine most commonly occurs in the duodenum (50%), followed by the jejunum (17% to 23%), and the ileum (13% to 15%) (1).

Case Report:

32 years old female presented to the emergency with chief complain of pain abdomen on and off for 2months aggravated since four days, abdominal distension for three days, and bilious vomiting for two days. She had no history of weight loss, tuberculosis, any abdominal surgery and none of her first degree relatives had suffered from any malignancy. She was dehydrated and hypotensive at the time of admission. Clinically her abdomen was distended and all quadrants were tender. On auscultation the bowel sound was sluggish. On digital rectal examination there were no any mass or growth and the rectum was empty. Her total count was 14000/cumm; haemoglobin was 11.5gm% with deranged electrolytes. Her X-ray abdomen and lower chest p.a view in erect posture showed dilated small bowel loops with multiple air and fluid levels (Figure-1). Ultrasonography of abdomen showed a thickened segment of jejunum with proximally dilated small bowel loops with to and fro peristalsis and minimal interbowel fluid collection with right ovarian cyst of size 76mm x 58mm with internal septa. She was resuscitated and her electrolytes were corrected. She was on intravenous fluid and antibiotics with Ryle's tube aspiration for first 12 hours. Her condition did not improve so she was posted for exploratory laprotomy in the emergency hence her computerized tomography scan of abdomen could not be done. Abdomen opened through mid line incision. A well defined concentric stricture of 2.5 cm length seen about 42 cm distal to the ligament of Treitz (figure-2A). This mass was hard in consistency, causing near complete obstruction of the lumen. The intestine proximal to the growth was dilated (Fig-2B). There were no any mesenteric nodes or asitis. The liver, spleen, uterus and rest of the small and large intestine were grossly normal. There was a right ovarian cyst of size around 8cm x 6cm, which was twisted on its axis. Since the growth was looking like a malignant growth, we resected the growth with 10 cm proximal and distal margin with sectoral resection of mesentery and performed end to end anastomosis. The resected part was sent for histopathological examination. The ovarian cyst was also excised. Abdomen was closed in two layers with two intra peritoneal tube drain. Patient was on Ryle's tube aspiration for 4 days and then she was allowed orally. The post-operative period was uneventful. Patient discharged with advice after eight days of hospital stay. On histopathological examination the intestinal tumor was grossly-annular, light pinkish white in colour, 2.5 cm in length and cut surface was smooth grey in colour. Microscopically the cell from growth shown features of well differentiated adenocarcinoma, almost reaching up to the serosal layer of intestine. However both margins and mesentry were free from tumour. Histo pathology of right ovary grossly shown glistening outer surface with cut section having solid cystic component with multiloculated cyst of varying size filled with mucous. Microscopically it shows well differentiated adenocarcinoma similar to that of intestine. Both the specimens were nonreactive to CA-125 and CK-7 while being uniformly reactive for CK-20 and CEA. This confirms the diagnosis as primary adenocarcinoma of jejunum with metastasis to right ovary . As soon as we got the histopathological report we called the patient and counseled her about the disease and further management. On her request she was referred to higher centre for further management.

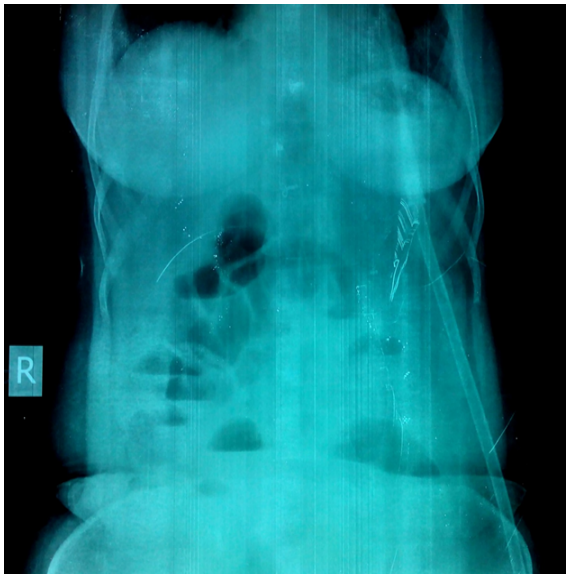

Figure-1

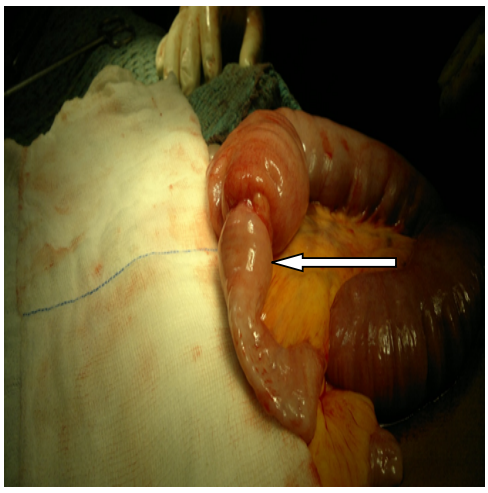

Figure-2A

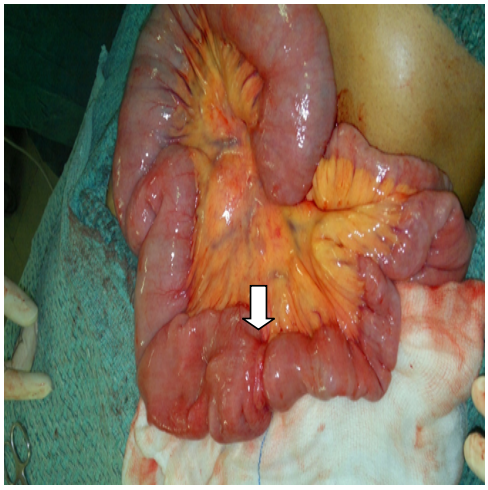

Figure- 2B

DISCUSSION:

Adenocarcinoma of the jejunum and ileum usually occurs in the 6th decade of life. It is more common in Western industrialized countries than in other regions of the world (2, 3). Population-based data from the Surveillance, Epidemiology and End-Results Program (SEER) of the U.S. National Cancer Institute for 1973–1982, which represents approximately 10% of the US population, indicate that 48.4% of adenocarcinoma of the small bowel is located in the duodenum, with 32.5% in the jejunum and 19.2% in the ileum (4). Adenocarcinoma of small intestine predominantly found in males as compared to female, with a male to female ratio of approximately 1.4 (4, 5). Some studies indicate a higher incidence of adenocarcinoma in blacks than in whites (5). There is no specific sign and symptoms of small intestine malignancy. The typical presentation for these cancers is often vague and nonfocal. They usually present with features of acute or subacute intestinal obstruction such as pain abdomen, nausea, and vomiting. Weight loss and gastro intestinal bleeding occasionally found. Approximately half of all small bowel tumors present as an acute event; 77% of the time this is either an obstruction or a perforation. Crohn's disease is one of the strongest known risk factor for small bowel adenocarcinoma, initially reported by *Ginsburg* et al., in 1956 (6). Continuous exposure to bile is also a risk factor for development of adenocarcinoma. (7, 8) since prior cholecystectomy may be related to the incidence of adenocarcinoma (9). The higher incidence of adenocarcinoma in duodenum and jejunum as compare to ileum is not well understood however Lowenfels and others (7,8), have ascribed this difference in incidence to the higher concentration of bile and its metabolites in the duodenum, secondary to the presence of the ampulla of Vater. Cigarette smoking, alcohol consumption, prior peptic ulcer disease, familial adenomatous polyposis, prior colon cancer, celiac sprue, and cystic fibrosis are others attributable factors for development of adenocarcinoma of intestine. The least incidence of small intestine cancer as compared to colon may be attributed to the extremely rapid turnover of small intestinal mucosal cells (10), which would tend to eliminate partially transformed intestinal cells prior to their reaching full metaplastic development. In its early stages, adenocarcinoma of the jejunum and ileum is usually asymptomatic. Unlike gastric and colonic cancer, which is amenable to endoscopic biopsy, small intestinal cancer distal to the duodenum is relatively inaccessible. This difficulty in assessment has led to definitive preoperative diagnoses in only 35–72% of reported series (11). In addition, patients with other malignancies including ovary, appendix, colon, lung and kidney may present with intraperitoneal or hematogenous metastatic disease to the small intestine (12). The incidence of ovarian metastases from gastro intestinal cancer is estimated to be 3–14 %.(13, 14) Ovarian metastasis from small bowel cancer is much more rare. (15) Review of the literature reveals less than 10 cases of ovarian metastasis from Jejunal primary. (16–18) There are three routes of metastasis to the ovary from the gastro intestinal tract. First, retrograde lymphatic spread and second, dissemination via peritoneal fluid and lastly, haematogeneous spread. The lymphatic drainage system of the ovary and the GI tract meets at the para-aortic pathway. (19, 20) The mechanisms of metastasis to the ovary from a jejunum primary remains unclear, historically was thought to be via a trans serosal route. Surgical resection with 10 centimeter margin from both ends with sectoral resection of mesentry or wide local lymphadenectomy is the only hope of cure for patient. Adenocarcinoma of small bowel is generally considered as radio resistant. However it may prolongs life for few months to year. Our case is unique as the patient is a young female with no classical symptoms of malignancy and diagnosed incidentally post operatively. So while operating cases of obstruction in any gender of any age, a high index of suspicion can lead to an early and definitive diagnosis and may have an impact on further management.

Legend:

Figure 1: Showing pre-operative X-ray of abdomen in erect posture showing multiple air-fluid level in central area.

Figure 2A: Showing per operative image of the concentric growth (white arrow).

Figure 2B: Showing per operative image of dilated small intestine proximal to the growth (white Arrow)

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