ORIGINAL RESEARCH PAPER

General Surgery

LINITIS PLASTICA PRESENTATION AS LARGE BOWEL OBSTRUCTION; A CASE REPORT

KEY WORDS: Adenocarcinoma stomach, Linitis plastica, Adenocarcinoma colon, Bowel obstruction

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ABSTRACT

Linitis plastica is a rare variety of gastric cancer and is usualLy asymptomatic in early stages. Often the presentation is late and is in the form of abdominal discomfort or gastrointestinal bleeding (with history of weight loss) or ascites. Here I report a case of linitis plastica where the patient presentation was that of intestinal obstruction.

A patient with abdominal pain, vomiting and constipation, underwent surgery for suspected bowel obstruction. A subtotal colectomy with end ileostomy + mucus fistula formation was performed. The bowel specimen removed at surgery when sent for biopsy surprisingly revealed an adenocarcinoma with signet ring cell morphology. An oesophagogastroduodenoscopy was performed and biopsies taken from the stomach revealed that there was a primary tumour in the stomach - histologically linitis plastica

INTRODUCTION

Gastric adenocarcinomas are subclassified according to their gross appearance as polypoid, fungating, ulcerated or infiltrative and according to their histologic features as intestinal or diffuse and according to their location within the stomach as involving cardia, corpus or antrum{1}. A rare subtype of gastric cancer is scirrhous carcinoma or linitus plastica [also called BRINTON'S DISEASE]. It is a poorly differentiated mixture of mucin-producing carcinoma cells that infiltrates the muscle wall and turns the stomach tissue rigid and leather-like, limiting its distensibility.The tumor cells are not easily detected in frozen sections of the surgical specimens. Negative findings at endoscopic biopsy or brushing cause a substantial delay in the diagnosis and treatment of these tumors. Usually the presentation can be abdominal discomfort or gastrointestinal bleeding with weight loss or ascites but it is often asymptomatic in early stages{2}.

Here I report a very rare case of linitis plastica in a 62 year old gentleman who presented with a 1 week history of intermittent dull ache in the abdomen that increased in severity progressively and became associated with vomiting and constipation when the patient was admitted under colorectal surgery team for investigating a suspected case of large bowel obstruction.

PATIENT CASE PRESENTATION

A 62 year old gentleman was admitted in surgical emergency with a one week history of worsening dull abdominal pain. He had 2 episodes of vomiting and was constipated for the last 2 days at the time of admission. He had been losing weight (8-10 kg as per patient history) over the past few months with occassional episodes of diarrhoea although there was no change in appetite. He never had any gastric or bowel trouble in the past. His father had carcinoma of large bowel that had been treated surgically.

He smoked 20 cigarettes a day and had been a heavy drinker{>20 units/wk}

On examination at the time of admission, he was tachycardic {pulse-103}, normotensive, apyrexic and the oxygen saturation of blood was 96% on air. Abdomen was mildly tender in right iliac fossa. Per rectal examination did not reveal any masses or mucus but there was fresh blood stain on the glove. Investigations showed raised white cell count [13.8], CRP[145] and BloodUrea [8.9] and ALP[177]. Rest of the haematology and biochemistry results including liver function tests & coagulation profile was normal.

Abdomen x ray revealed dilated small bowel loops and a CT scan of abdomen-pelvis was arranged which showed significant dilatation of small bowel loops and suspicious circumferential wall thickening at the level of sigmoid colon.

The patient was treated initially with intravenous fluids and intravenous antibiotics [tazocin 4.5 g three times a day]. However, he developed worsening abdominal pain, increasing abdominal distention of his abdomen and exploratory laparotomy became mandatory.

A midline laparotomy was performed and we could see massively dilated small bowel loops and large bowel dilatation upto the splenic flexure. A contained sealed perforation was observed during bowel mobilization with loops of bowel stuck in pelvis. The bowel loops were not healthy and a subtotal colectomy with end ileostomy + mucus fistula was performed. The specimen was sent for histopathological analysis. Post operatively intravenous antibiotics were continued along with total parenteral nutrition as the patient was nursed in the HDU.

A repeat CT scan post-operatively was unremarkable and the patient was shifted from the HDU to the surgical ward. He was tolerating oral fluids at this time. His blood reports [haematology + biochemistry] were normal eleven days postoperatively.

Histopathology report of the bowel segment removed during surgery came back 2 weeks post-operatively. It showed extensive infiltration of the colon, bowel mesentery and omentum by adenocarcinoma with signet ring cell morphology. Immunoprofile was most in keeping with the primary origin in upper gastro-intestinal tract (stomach) or pancreas and secondary changes of extensive deep ulceration and bowel perforation which seemed most likely ischaemic in origin. Therefore, Oesophago-gastro-dudenoscopy was requested with suspicion of Gastric carcinoma.

The endoscopy was done and it showed features consistent with Grade 3 oesophagitis plus a gastric Carcinima (? Linitis plastic).Tissue biopsy taken during endoscopy was sent for histopathology which confirmed a poorly differentiated adenocarcinoma of diffuse type with signet ring morphology.

DISCUSSION

The most common site of gastric linitis is the antral/pyloric region (with variable spread proximally towards the gastric body). Thus it usually presents with symptoms like heartburn, anorexia and sometomes dysphagia.The fundus is least often involved{3}. It is very rare to see linitis plastic presenting as intestinal obstruction as in our case. When Linitis plastica presents primarily with abdominal pain and change in bowel habits, other differential diagnoses like Crohn's disease (CD) may be considered at first. Therefore, intensive diagnostic work-up is important{4}.

In this case the patient presented with abdominal pain, constipation and vomiting which lead to an initial diagnosis

of intestinal obstruction. The abdominal x-ray followed by CT scan of the abdomen confirmed the obstruction and the patient underwent a subtotal colectomy with ileostomy and mucus fistula. Histopathology showed signet ring adenocarcinoma in the colon as a result of which an upper gi endoscopy was requested. The specimen was taken during endoscopy and sent for histopathological analysis. It revealed a diffuse poorly differentiated adenocarcinoma of stomach with signet ring pathology. The patient was reviewed by the oncology team and has been found unsuitable for chemotherapy. He will receive palliative care.

CONCLUSION

Metastatic gastric adenocarcinoma should be included in the differential diagnosis for patients presenting with intestinal obstruction.

Intestinal obstruction can be a late presentation of potentially uncurable gastric cancer in a middle aged man. Therefore, all cases of intestinal obstruction must be investigated thoroughly.

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