

INTUSSUSCEPTION AND VOLVULUS SECONDARY TO JEJUNAL ADENOCARCINOMA IN AN ADULT NIGERIAN MALE; A CASE REPORT

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ABSTRACT

A 31 year-old Nigerian man with jejuno-jejunal intussusception with the lead point being an adenocarcinoma complicated by small intestinal volvulus is presented.

The subtle clinical features of an underlying small bowel malignancy were masked by the overwhelming clinical and radiological features of intussusception.

This rare case is reported to remind clinicians to have an increased index of suspicion of malignancy in patients who present with the usual features of chronic anemia, weight loss and loss of appetite with an intra-abdominal mass. The presentation of acute intestinal obstruction, with mesenteric vein thrombosis probably due to intussusception or volvulus should not however lower the suspicion. Histological evaluation of surgical biopsies is of immense importance.

Key Words: Jejunal intussusception, Small bowel volvulus, Thrombosis, Adenocarcinoma.

INTRODUCTION

Intussusception is the invagination of a portion of the intestine into the lumen of an immediately adjoining and nearly always distal segment. Over 90% of cases are seen in children between the ages of 3 months and 2 years and it is the commonest cause of intestinal obstruction in that age group.¹

Intussusception is relatively rare in adults and its presence usually follows an intraluminal mass or tumor as the lead point. The causative factors include neoplasms like lipomas, leiomyomas, maltomas, benign polyps in the small and large intestines and, malignant tumors of the colon.^{1,2} The jejuno-jejunal variety of intussusception in adults is rare.^{3,4}

Intussusception following adenocarcinoma of the jejunum is uncommon due to the relative rarity of small bowel adenocarcinomas.^{5,6}

It is also very rare for intussusception and volvulus to co-exist in the same patient.⁷ We therefore report this case of intussusception of the jejunum secondary to jejunal adenocarcinoma and complicated by a volvulus of the small bowel in an adult Nigerian male.

CASE SUMMARY

31 year old male Nigerian factory worker presented at the Emergency Department of the Hospital with a three-day history of sudden onset of sharp, periumbilical pain. The pain was aggravated by lying flat and relieved whenever he stooped down. He noticed progressive epigastric swelling by the second day. There was associated anorexia and recurrent

projectile, bilious vomiting. There was no history of constipation, diarrhea or fever. However, he had passed very dark colored stool the previous day. He had a past history of peptic ulcer disease in the preceding two years and was on treatment with cimetidine and mist magnesium trisilicate. He had a background history of progressive weight loss in spite of normal appetite and adequate intake in the preceding one year.

On examination he was moderately pale, dehydrated, and malnourished. He had generalized abdominal tenderness with guarding and an ill-defined soft tender mass in the epigastrium. Bowel sounds were absent and rectal examination showed an empty normal rectum. Examination of the other systems was unremarkable.

A clinical diagnosis of generalized peritonitis secondary to perforated duodenal ulcer was made and he was placed on naso-gastric tube drainage and resuscitated with intravenous fluids. His packed cell volume was 27% and his chest X-ray showed no air under the diaphragm. Abdomino-pelvic ultrasound scan revealed a visible mass in the left hypochondrium which revealed a fluid filled bowel loop with another bowel loop seen within it. The diagnosis at ultrasound scan was intestinal obstruction secondary to intussusception.

He had an exploratory laparotomy. The operative findings were a volvulus of the small intestine across the area of the superior mesenteric vessels with thrombosis of the superior mesenteric vein. There was a jejuno-jejunal intussusception of the proximal jejunum and associated gangrene of the small intestines from 5 cm distal to the duodeno-jejunal junction to about 5 cm of the ileo-caecal junction. The resection of the gangrenous small intestine with

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jejunum-ileal anastomosis was performed.

The immediate postoperative period was marked with diarrhoea. The symptom resolved progressively with anti-diarrhoeals and appropriate parenteral fluids, electrolytes and amino acid infusion. He was discharged home on the 28th day post operation on nutritional rehabilitation. He was scheduled for review in the-clinic two weeks later but he was lost to follow-up.

The histological report of the patient's specimen was not available at the time of his discharge. The specimen was received at the pathology laboratory and it was grossly a long segment of gangrenous small intestine weighing 3.2kg and measuring 140cm in length, with about 70cm of the proximal segment telescoped into the distal segment. Cut sections revealed a mural tumor mass measuring 3x3cm as lead point of the intussusception. No mesenteric lymph nodes were identified. Microscopic sections of the jejunal tumor show proliferation of moderately pleomorphic glandular epithelial cells having large vesicular to hyperchromatic nuclei and moderate cytoplasm. The tumor cells have breached the muscularis mucosa through the submucosa but have not breached the muscularis propria and there is no involvement of regional lymphnodes. These features are consistent with a moderately differentiated adenocarcinoma of the jejunum.

Figure 1: The loop of jejunum showing cut section of the intussusciption held by forceps exposing the intussusceptum.



DISCUSSION

Jejunal adenocarcinoma in adults is rare and jejunum-jejunal intussusception is even much rarer.^{3,5,6} There is paucity of reports of intussusception with a jejunal adenocarcinoma as the lead point in the literature.^{5,8,9} It is also very rare for volvulus and intussusception to co-exist in the same patient. Abdominal ultrasoundscan was very precise in arriving at the diagnosis of intussusception in this case.

Ultrasonography is now regarded as the first and arguably the best modality of investigation of intussusception. It has a sensitivity of 98.5% and a specificity of 100%.^{10,11} The occurrence of a jejunal adenocarcinoma as the primary pathology should have altered the line of management from the conventional management of intussusception and volvulus. While surgical resection is the main treatment of choice,^{3,12,13} the postoperative management of this patient should have included adjuvant chemotherapy.¹⁴

The concern in this case however is the fact that the patient was lost to follow up. The histology report could have been available before he was discharged home 28 days after surgery. This would have enabled the clinician to plan adjuvant therapy for the patient who otherwise might have presented for follow up in view of the histopathology report. Retrospectively, the features suggestive of malignancy in this patient included a one-year history of progressive weight loss in spite of adequate intake as well as the presence of moderate anaemia. Moreover, there were no other findings that would have explained the anaemia adequately besides the gangrene (infarction) of the long segment of small intestine. The other symptoms i.e. colicky abdominal pain of short duration, vomiting, constipation and a periumbilical abdominal mass could have been explained by the intussusception alone and these features are common to both pathologies.^{14,15}

An operative finding that should have generated suspicion of malignancy is the finding of superior mesenteric vein thrombosis with extensive small bowel infarction. Mesenteric vein thrombosis is a common finding in gastrointestinal, pancreaticobiliary and hepatic carcinomas.^{16,17} However; it is not pathognomonic of small bowel malignancy and it could also have been a complication of the volvulus of the jejunum in this patient. There is also the need to appreciate the importance of timely release of surgico-pathologic reports and improve on the turn around time in the laboratories. The logistic problems that may contribute to delays in the processing of surgical specimens for histological diagnosis such as delays in the specimen reaching the laboratory and delays in the delivery of the histology report to the surgeon should be resolved. This will improve the quality of care patients get and the outcome of patient management. It is also important to pay greater attention to details and have a high level of suspicion for rare lesions during evaluation of patients even in the emergency setting like in this patient.

In conclusion, this rare presentation of jejunal tumor precipitating intussusception and volvulus in the same patient who also has subtle clinical features of malignancy should raise suspicion for the diagnosis of small bowel malignancy.

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