Case Report

Single Balloon Enteroscopy in the diagnosis of Jejunal Diverticulosis

P. Murali Krishna[1], Varun Karri[2], Ravindra Kavuru[3], Srinivas Reddy[4], Girinadh LRS[5]

Abstract : Diverticuli of jejunum is a rare disease.It may masquerade as intestinal obstruction, perforation, malabsorption, diverticulitis, blind loop syndrome, volvulus, and intussusceptions.We report a rare case of multiple jejunal diverticuli presenting as intussusceptionand obstruction.We emphasize the importance of single balloon enteroscopy which led us to diagnosis of multiple jejunal diverticuli.

Key words : Jejunal diverticuli, Intussusception, Single balloon enteroscopy

Introduction

Jejunal diverticuli are rare with an incidence of less than 0.5%[1]. The prevalence increases with age, peaking at the sixth and seventh decades[2]. It is often asymptomatic with complications occurring in 10-30% of patients which include perforation, hemorrhage and intestinal obstruction [3,4]. We report a rare case of intussusception leading to upper intestinal obstruction diagnosed on CT. Single balloon enteroscopy confirmed the cause of intussusception being multiple jejunal diverticuli.

Case Report

A 55 year old man reported to the department of gastroenterology complaining of short duration of intense abdominal pain and vomiting. The patient had a drug-free medical history and was not receiving any drugs during presentation. He mentioned a three month-lasting remittent abdominal pain, fullness and often abdominal distension. Physical examination revealed a distended abdomen with increased bowelmovements. Rectal examination was normal. Vital parameters were within normal limits. Abnormal laboratory findings included leukocytosis (12300/mm^3) and hypokalemia (3.2mmol/l). A plain abdominal X-ray showed multiple air-fluid levels and dilated intestinal loops suggesting intestinal obstruction but no signs of hollow viscous perforation. Abdominal ultrasonography revealed dilated and hyperactive intestinal loops. Contrast enhanced computed tomography (CT) scan demonstrated multiple distended small bowel loops with jejunal intussusception (fig1). Patient was started on supportive therapy with nil per oral, Ryle's tube aspiration and intravenous fluid replacement.Gastroduodenoscopy was normal with fluid residue in stomach.Single Balloon Enteroscopy (Olympus, SIF Q 180) through oral route was done after 8 hours fasting to look for cause of intussusception. Jejunum was reached in 5 minutes which showed diverticulum at proximal jejunum and retrograde intussusceptions(Fig 2). On inflation of balloon of the outer tube, intussuscepted bowel showed reverse peristalsis and diverticuli were fixed. Scope was passed through the intussuscepted bowel and on further advancement, multiple diverticuli were found in mid jejunum. Shortening of loops was not tried and procedure was abandoned and patient referred for surgery. Review of CECT during procedure did not show any diverticuli. Surgical resection was done which showed multiple jejunal diverticuli with a band between proximal and distal diverticuli. (Fig 3)

[1]Professor, [2]Final year DM Resident, [3]Research Assistant, [4]Senior Resident, [5]Associate Professor. Department of Gastroenterology, Andhra Medical College, Visakhapatnam-530 002, Andhra Pradesh; Phone- 9032032000
email: muralikrishna63@yahoo.com, drravin@hotmail.com

Discussion

Diverticulum of the small bowel is a rare disease with variable clinical presentations and often incidentally discovered during radiological investigations. Jejunal diverticuli are rare with an incidence of less than 0.5%[1]. Jejunal diverticuli are often asymptomatic with complications occurring in 10-30% of patients which include perforation, hemorrhage and intestinal obstruction. [3,4]

Intussusception is the telescoping of proximal portion of bowel into distal bowel. It is an infrequent cause of abdominal pain in adults. As opposed to that in children, most of the cases (about 90%) in adults have an identifiable cause while the rest are idiopathic. In a study of 58 cases of surgically proven adult intussusceptions, most patients were found to have presented with signs and symptoms suggestive of bowel obstruction.[5]

Diagnostic workup in a patient with pain abdomen with features of upper intestinal obstruction starts with X- ray abdomen which showed multiple air fluid levels.On further

evaluation into the etiology, CECT abdomen was done which showed jejunal intussusception with dilated proximal bowel loops.

In surgically proven cases of adult intussusceptions, malignant causes have been described in 48% of enteric lesions[5]. Single balloon enteroscopy was attempted for reduction of intussusception which showed proximal jejunal diverticuli with retrograde intussusception and on further advancement multiple mid jejunal diverticuli were seen. As the intussusception was fixed, reduction was not attempted and procedure was abandoned and patient was subjected to surgery.

The recommended treatment for jejunal diverticulosis is intestinal resection[6]. Hence in this case, surgery was performed. Intraoperative surgical pictures showed proximal and mid jejunal diverticuli connected by a band probably formed due to perforated diverticuli.The jejunal loop was resected and end to end anastamosis done. Post operatively, patient had no further complications.

We conclude that in a middle aged patient presenting with upper intestinal obstruction, balloon enteroscopy plays an important diagnostic role.

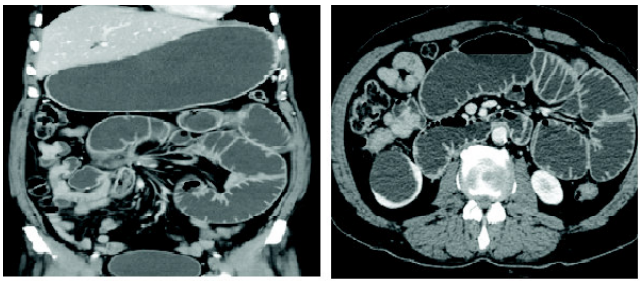

Fig 1: CECT abdomen showing jejunal intussusception with distended proximal bowel loops.

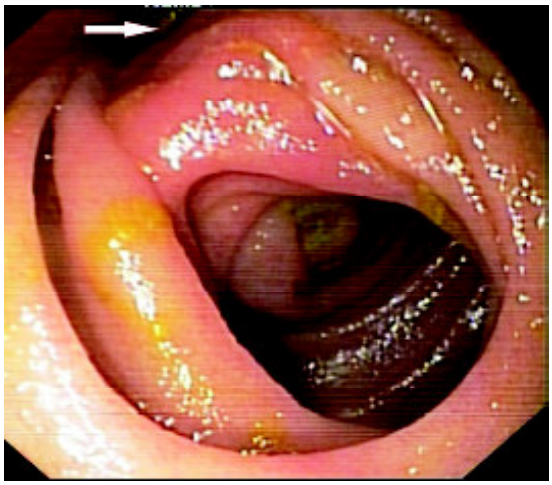

Fig 2: Single Balloon enteroscopy showing jejunal intussusceptions with diverticulum (arrow)

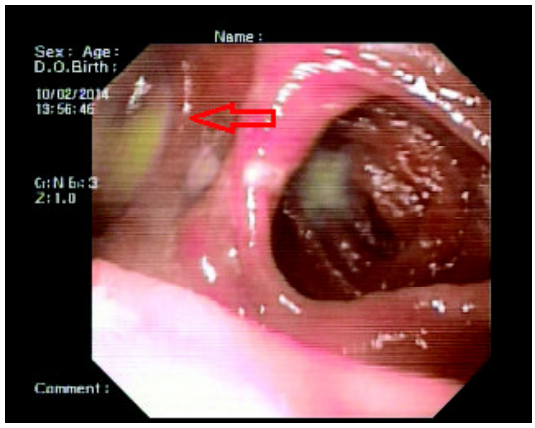

Fig 3: Single Balloon enteroscopy showing jejunal diverticulum (arrow)

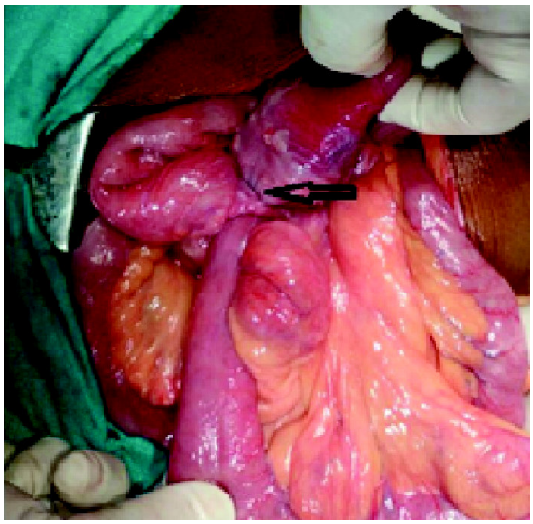

Fig 4: Holding proximal and distal jejunum in hands and arrow pointing band causing obstruction

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