

Duodenal adenoma presenting as duodenojejunal intussusception

Probal Neogi¹, Alok Misra², Ritesh Agrawal³

¹ Assistant Professor in Surgery, MLN Medical College, Allahabad, India; ² Consultant Gastroenterology, Allahabad, India;

³ Resident in Surgery, MLN Medical College, Allahabad, India

Abstract. Enteroenteric intussusceptions are rarely observed in adults. Most of these are associated with tumors. We operated a 25-year old female with suspected stricture in the third part of the duodenum. However during laparotomy, duodenojejunal intussusception was found along with an adenoma in the third part of the duodenum associated with a lax ligament of Treitz. The intussusception was reduced and the parts of the duodenum containing the adenoma were resected, followed by an end-to-end duodenojejunal anastomosis. To the best of our knowledge, this is the first reported case of tubulovillous adenoma in the third part of the duodenum presenting as intussusception in an adult. (www.actabiomedica.it)

Key words: Duodenal, adenoma, duodenojejunal, intussusception

Introduction

Duodenojejunal intussusception is usually observed in the pediatric age (1). It is a rare entity due to somewhat fixed position of the duodenum within the retroperitoneum (2). It is usually secondary to tumors, hamartomatous polyps or adenomas, which act as the original site (3). An adenoma in the third part of the duodenum presenting as duodenojejunal intussusception in an adult female has not been previously reported. The patient was successfully treated by reducing the intussusception and resection of the segment containing the adenoma with an end-to-end duodenojejunal anastomosis.

Case report

A 25-year old female presented with an 8-month history of vomiting and weight loss. Vomiting occurred within two-hours of food intake; she was reluctant to eat, even when hungry, due to fear of vomiting. Abdominal pain was absent. During the previous

week, she was unable to assume solid foods since it was vomited within one-hour of food intake. Nasogastric tube insertion yielded bilious content. Barium study revealed distension of the stomach and of the first and second parts of the duodenum associated with a delayed emptying of the stomach. An abrupt smooth narrowing in the third part of duodenum was observed (Fig. 1). Duodenojejunal junction was not opacified, hence it could not be differentiated. Gastro-duodenoscopy revealed a smooth stricture with a pin-hole opening in the third part of the duodenum with normal mucosa. Postero-anterior view of the chest x-ray was normal. Routine hematological tests, liver function tests, renal function tests, and blood sugar levels were normal. The patient was HIV negative. A preoperative diagnosis of duodenal stricture was made. However, during laparotomy, a duodenojejunal intussusception (Fig. 2) was found in which the distal duodenum was acting as the intussusceptum and the jejunum as the intussusceptiens. The ligament of Treitz was pulled down and lax. Therefore duodenojejunal flexure was not in a normal position and the distal part of the duodenum was mobile. The third and



Figure 1. Barium study showing distension of the stomach and of the first and second part of the duodenum. An abrupt smooth narrowing at the third part of duodenum with thin passage of barium through the narrowed segment is observed

fourth parts of the duodenum and the proximal jejunum were considerably dilated and hypertrophied. This was evident after successful reduction of the intussusception. A mass was found inside the third part of the duodenum (Fig. 3) that was resected and an end-to-end duodenojejunal anastomosis was performed anterior to the superior mesenteric vessels through a window in the transverse mesocolon. The growth was sessile, 4 cm in diameter and fragile. Histology confirmed the growth to be a tubulovillous adenoma without dysplastic aspects. Postoperative course was uneventful and a gastrograffin follow through was performed on the 5th postoperative day prior to beginning of enteral feeding, revealing no abnormality. She was discharged on the 7th postoperative day. Colonoscopy was negative for any growth or adenomas in the large bowel. At the 6-month follow-up, she was doing well; a second colonoscopy at this time was negative for adenomas.



Figure 2. Duodenojejunal intussusception showing the duodenum as the intussusceptum and the jejunum as the intussusciens



Figure 3. Mass inside the third part of the duodenum

Discussion

Duodenojejunal intussusception is usually observed in children. Tumors act as original sites. These are usually hamartomatous polyps or adenomas and are located in the second part of the duodenum (1).

Uggowitz et al found a case of duodenojejunal intussusception in an adult subject that manifested as biliary obstruction and pancreatic atrophy secondary to a hamartomatous polyp (3). In our case, tubulovillous adenoma in the third part acted as the original site. The laxity of the ligament of Treitz also acted as a predisposing factor.

Adenomas in the distal duodenum are rare. Galandiuk et al found only 2 adenomas in the third part among the 34 adenomas of the duodenum demonstrating the rarity of adenomas in the third part. Most of them (88%) were located in the second part (4). Our patient had an adenoma in the third part.

In familial polyposis coli, adenomas are often found in the upper gastrointestinal tract. Duodenal adenomas have been reported in 24-93% of patients with familial polyposis coli, usually in the final stages of the disease. Most of these lesions have a predilection for clustering around the papilla of Vater (5).

Brereton et al determined the position of duodenojejunal flexure in 37 infants presenting with intussusception (6). They found it abnormal in 15 pts. and in midline in 3 pts. In the other ones it appeared in the normal position. In our case we also observed an abnormality of the duodenojejunal flexure. The ligament of Treitz was pulled down and lax. Therefore the duodenojejunal flexure was not in its normal position and the distal part of the duodenum was mobile. However, the major difference lies in the patient's age. Our patient was a mature 25 year-old woman, while their study was conducted exclusively on infants.

Fujiwara et al described a double-tract anastomosis to a retrocolic Roux-en-Y loop for the reconstruction of a large duodenal defect that followed the resection of a duodenal tubulovillous adenoma (7). We performed an end-to-end duodenojejunal anastomosis

after resection of the duodenal segment containing the tumor.

Moreover, our patient showed a new presentation with features of duodenal adenoma with laxity of the ligament of Treitz that lead to duodenojejunal intussusception. Our case was also unique in having a solitary duodenal adenoma without other adenomas in the gut.

In a duodenal pathology, the ill part can be successfully removed with duodenoenteric anastomosis. Clinicians should be suspicious of such condition when they encounter a duodenal stricture.

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Accepted: 19th June 2008

Correspondence: Ritesh Agrawal, MD

324/6 Katari Tola

Chowk, Lucknow-226003 (UP)

India

E-mail: drriteshagrwal@rediffmail.com; www.actabiomedica.it