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# Management of recurrent ileocolic intussusception in adults caused by a high-grade dysplastic polyp

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**ABSTRACT:** Intussusception is the penetration of a segment of bowel into a more distal segment. It is frequent in children and considered an unusual condition in adults. We report a case of a 65-year old woman with acute intussusception secondary to ileal polyp diagnosed by abdominal CT scan and confirmed by surgery. The patient underwent a bloc ileocecal resection with respecting the oncological rules.

**KEYWORDS:** Intussusception, high grade dysplasia, polyp, CT scan, surgery, histological analysis.

## 1 INTRODUCTION

Intestinal intussusception is an uncommon entity in adults, accounting to 1% of bowel obstruction cases and 5% of whole intussusceptions [1]. It is defined as telescoping of one segment of bowel into another, which can cause loop obstruction or strangulation. Most cases are idiopathic in children, while it is approximately 90% due to organic lesions in adults [2]. We report a case of a woman with acute ileocolic intussusception caused by a high-grade dysplastic polyp.

## 2 CASE REPORT

Mrs. R.N, 65 years old, with a medical history of intermittent and diffuse abdominal pain, was admitted at the emergency department for the management of violent and spasmodic colic in the right iliac fossa, which has been evolving for about 3 hours. Physical examination was in favor right iliac fossa tenderness with a normal digital rectal examination.

Routine laboratory tests were without anomalies. A CT scan of abdomen and pelvis with IV contrast was done showing an ileocolic intussusception containing an oval formation, well limited, measuring 18x12 mm, no bowel suffering and normal other visceral organs (figure 1).

Urgent exploratory laparotomy was done and an ileocolic intussusception was encountered (figure 2). The patient underwent an ileocecal resection with a safety margin and end-to-side ileocolic anastomosis (figure3).

The post-operative outcomes were favorable. The histological analysis found a 4 cm adenomatous ileal polyp with multifocal high grade dysplasia on the terminal ileum.

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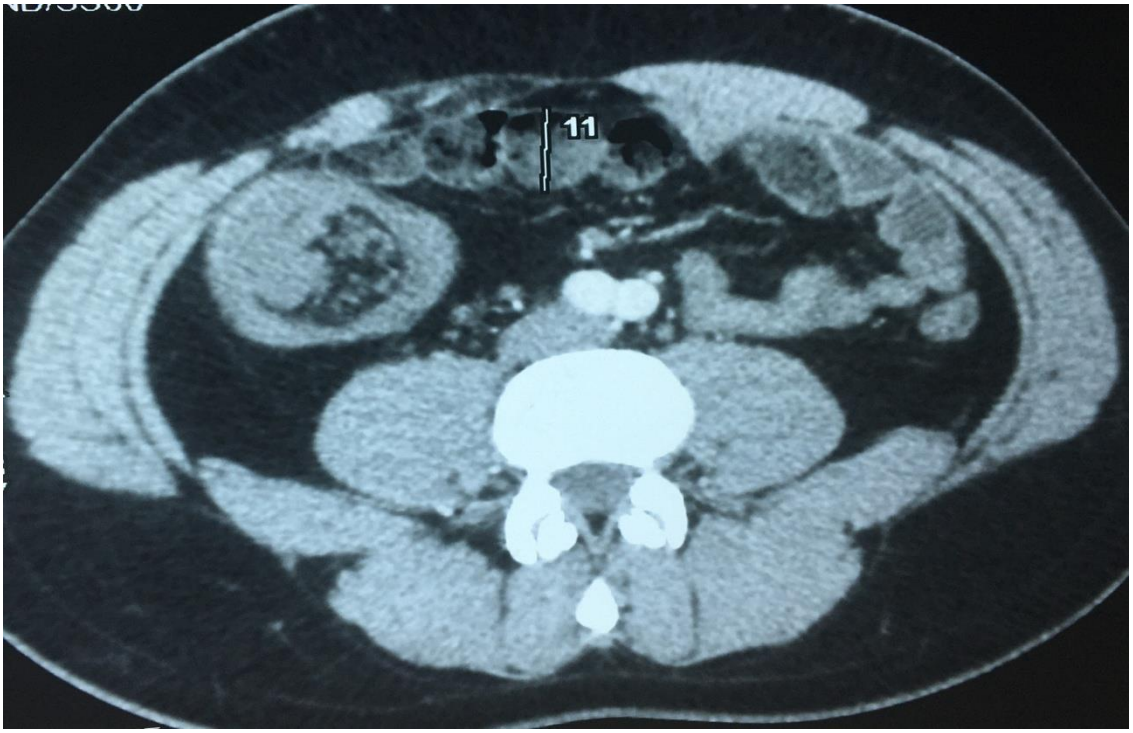


*Fig. 1. Ileocecal intussusception seen on transverse cut of abdominal CT scan with IV contrast (cockade aspect)*

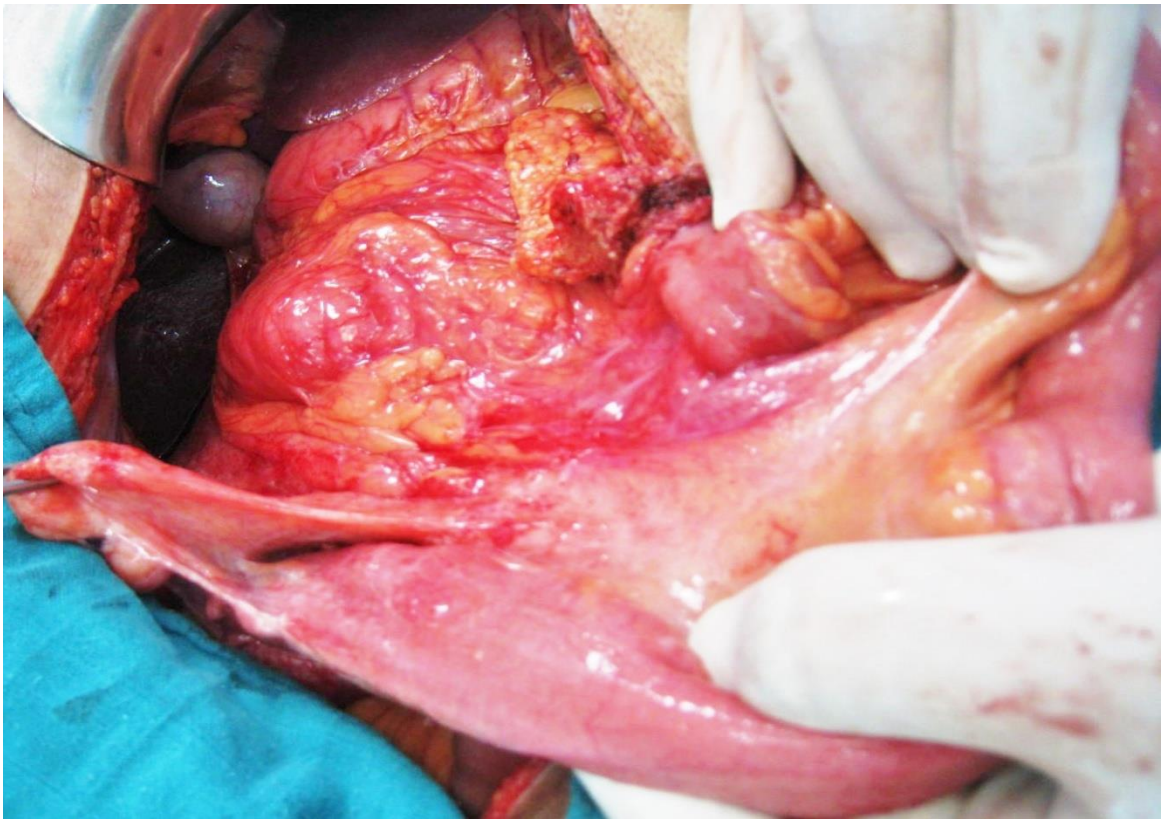

*Fig. 2. Ileo-cecal intussusception seen during surgical exploration*

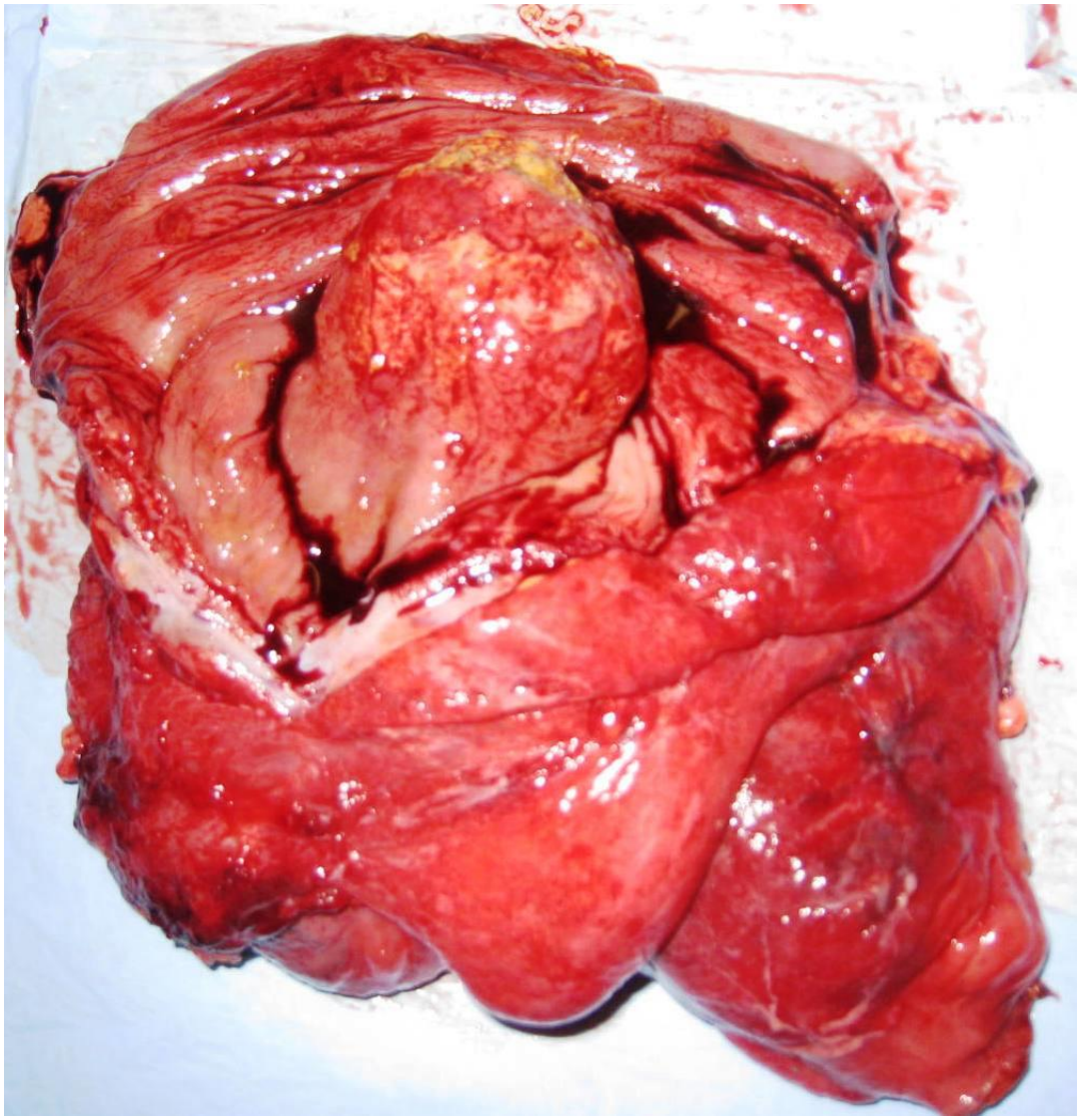

***Fig. 3.*** ***Surgical specimen showing the ileal polyp measuring 4 cm***

## 3 DISCUSSION

Intussusception was first described by Paul Barbette in Amsterdam in 1674, and first treated with manual reduction by Sir Jonathan Hutchinson in 1871 [1]. Intestinal intussusception is defined as the telescoping of a proximal segment of bowel with its mesentery into the lumen of a distal segment [2]. It is often the result of organic lesions and it occurs only in 5% of all bowel obstructions and it is often the result of organic lesions. Ileo-cecal intussusception was seen secondary to benign lesions such as appendix, Meckel's diverticulum, inflammatory lesions, polyps, lipomas, previous anastomosis site, endometriosis, worms and foreign bodies. Malignant lesions are ileal or cecal carcinoma, carcinoid tumors and lymphomas. In our case, the intussusception was caused by a 4 cm ileal polyp [3].

The clinical presentation is mostly chronic and polymorphic: acute bowel obstruction, progressive and onset subocclusion, nonspecific digestive signs (disorder of transit, vomiting, diffuse abdominal pain, digestive bleeding…) [4]. In our case the symptomatology was a violent spasmodic colic in the right iliac fossa. The length of the invagination determines the perception of the sausage on the digital rectal examination which is the more often normal. Presence of blood or mucus is an excellent sign of digestive suffering [4-5].

Abdominal ultrasound shows a "sandwich" image with three cylinder layers, corresponding to the sausage-shaped [5-6]. The abdominal CT is the most sensitive radiologic method to confirm the diagnosis of intussusception. It usually reveals the classic 'target mass' picture which is pathognomonic of intussusceptions. It

consists in a central dense area and a halo of low attenuation being respectively the intussusceptum and the edematous intussuscepiens. In a sagittal view, it shows the classical « sausage sign ». Moreover, CT scan may identify the underlying lesion of the intussusception with or without signs of intestinal obstruction [6]. MRI is not applied routinely in diagnosis of intussusception. However, it can contribute to the radiological diagnosis of intussusception by demonstrating the "bowel-within-bowel" or "coiled-spring" aspect [7].

Surgical oncologic resection is the treatment of choice, considering likelihood of underlying malignant lesions, necrosis and perforation of the invaginated segment [5-7]. The most commonly used surgical approach in the emergency is the midline laparotomy. It offers the advantage of good exposure, especially in case of intestinal distension [7]. Laparoscopic ileo-cecal oncologic resection with ileo-colic anastomosis but this hinders vision and intestinal mobilization, hence the need for an experienced surgeon [2-7].

Although it is not always possible, as in our case, there are no arguments against high-pressure disinvagination under radiologic control because it facilitates exposure to resection by better appreciating its limits and reducing its extent, especially in the case of a benign tumor [1-8].

The histological analysis is essential for diagnostic confirmation and requires in some cases an immunohistochemical study, especially if lymphoma is suspected [8].

## 4 CONCLUSION

Intestinal intussusceptions in adult are an unsual entity. Given high risk of malignant lesions, surgical resection either via laparoscopy or laparotomy and detailed histological analysis are the best therapeutic attitude.

### AUTHORS CONTRIBUTIONS

All the authors have read and agreed to the final manuscript.

### GUARANTOR OF SUBMISSION

The corresponding author is the guarantor of submission.

### SOURCE OF SUPPORT

None.

### CONSENT STATEMENT

Written informed consent was obtained from the patient for publication of this article.

### COMPETING INTERESTS

The authors declare no competing interests.

### DATA AVAILABILITY

All relevant data are within the paper and its Supporting Information files.

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