

Case Report

Ileocolic Intussusception as a form of Presentation of Cecal Carcinoma: Report of a Case and Review of Literature

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Abstract

Intussusception in adults accounts for less than 5% of all intussusceptions. It occurs when a segment of intestine invaginates into itself. We report a case of ileocolic intussusception secondary to a cecal adenocarcinoma in a 89 year old female, diagnosed on a contrast enhanced CT scan. The etiology, clinical presentation and management of this condition are different in adults when it is compared to children. Symptoms such as nausea, abdominal pain or vomiting are non specific which makes more difficult the pre-operative diagnosis. In adults, etiology most common when colon is affected is malignant neoplasm whereas it is idiopathic in children. Surgery is the treatment of choice in adults resecting the part of the bowel implicated. However there are many controversies such as de-intussusception of the part of bowel or the laparoscopic access.

ABBREVIATIONS

CT: Computerized Axial Tomography Scan

INTRODUCTION

The first description of intussusception was performed by Barbet in 1674. The first successful surgical treatment was performed in 1831 by Wilson in an adult, and in 1871 by Jonathan Hutchinson in a child [1]. Intussusception in adults is rare, accounting for less than 5% of all cases of intussusception and 1-3% of bowel obstruction [2]. We report a case of cecal adenocarcinoma which caused ileocolic intussusception and required urgent surgery. It is defined as a segment prolapsed of gastrointestinal tract into the lumen of an adjacent segment [3]. Etiology most common are tumors in adults. When a neoplasm is involved, intussusception occurs when the mass in the bowel is pulled forward by normal peristalsis, resulting in an invagination of the involved wall.

CASE PRESENTATION

A 89 year old female was admitted to the emergency department of our hospital with 24 hours long history of pain right lower quadrant of the abdomen, altered bowel habits and vomiting. Her medical history consisted on hypertension

arterial and Alzheimer's dementia. The patient was afebrile and hemodynamically stable. A tender mass was palpable in the right side of the abdomen. Laboratory tests showed leukocytosis with neutrophilia and anemia. Inflammatory markers like procalcitonin and CRP were elevated. A contrast multidetector computerized axial tomography scan (CT) was performed. The CT suggested an ileocolic intussusception which interested to cecal pole and terminal ileum. CT showed the characteristic image with three ring form ("target-like") that includes intestinal wall, its mesentery and wrapping small bowel (Figure 1). An open right hemicolectomy was performed. An ileo-transverse colic anastomosis was carried out. The diagnosis of ileocolic intussusception secondary to a solid mass at the cecum as the lead point of the intussusception was confirmed (Figure 2). The postoperative period was uneventful being discharged on the fifth day of admission. Histopathological examination of the resected specimen revealed an adenocarcinoma of the cecum without lymphovascular invasion and margins free of disease. Staging was T3N0M0 well differentiated adenocarcinoma of colon.

DISCUSSION

The ileocecal intussusception is rare in adults [4]. Intussusception occurs as a result of unequal motility between adjacent segments of the intestine. The proximal segment

is referred to as the intussusceptum, and the distal segment is referred to as the intussusciptens [1]. When this happens edema increased in the intestinal wall which can compromise the intestinal vasculature and result in necrosis of the intestinal affection section [3]. It accounts for 1-3% of all patients undergoing surgery for intestinal obstruction. It is more common in women, the average age of presentation is between 50 and 70 years. In children 90% of the invaginations are idiopathic [1]. Regarding the location of the “head” of intussusception they are classified as enteric (the intussusception is limited to the small intestine), ileocolic (the ileum passes the ileocolic segment, but the appendix does not invaginate), ileocecal (the ileocecal portion invaginates into the ascending colon) and colocolonic (including colorectal) in which the intussusception is limited to the colon and rectum with no anal protrusion [1]. The etiology of the intussusception depends on the segment of the bowel affected. More than half of the colon intussusceptions in adults are malignant tumors. Invagination bowel usually are benign lesions (adhesions, lipomas, polyps or even a Meckel’s diverticulum [5] whereas when colon or rectus are usually tumors or metastatic disease from tumors as lung or melanoma [6]. The signs and symptoms in these patients are nonspecific and may be abdominal pain (70%), nausea or vomiting (68%) or abdominal distension (45%). Symptoms such as fever, hematochezia or melena are rare [1]. Intussusception usually is

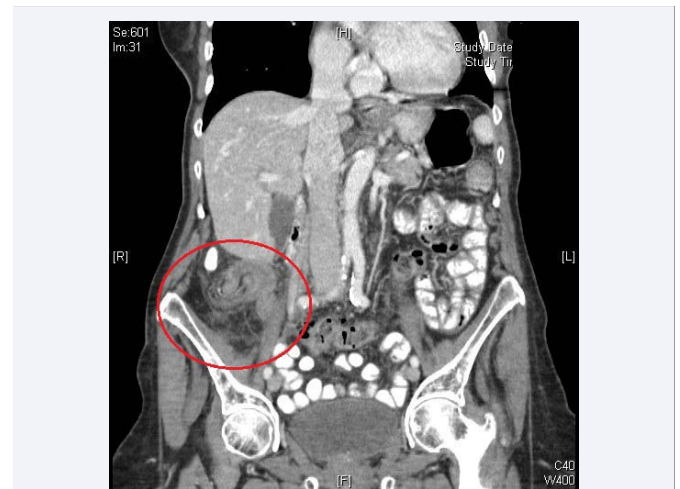


Figure 3 Coronal computed tomography picture shows the typical image (“target” or “bull’s-eye”) consists on a hyper dense ring with three layers including the intestinal wall, the mesentery and intestine wound. (Red circle).

presented as abdominal pain, mass effect, accompanied in most cases of leukocytosis and elevation of acute phase reactants such as C-reactive protein. The abdominal X-ray shows dilated bowel loops and CT or ultrasound confirmed the diagnosis [5]. In the CT we can see a feature image not pathognomonic (“target-like”) consists on a hyper dense ring with three layers including the intestinal wall, the mesentery and intestine wound (Figure 3). In addition, CT provides information about the presence of metastasis, free fluid or lymphovascular involvement [2]. Abdominal ultrasound also has a high sensitivity, identifying the cross-section, multiple thin layers parallel hypochoic. Treatment of choice is surgical resection of the invaginated bowel segment. Disinvagination has been discussed by some authors because could produce dissemination or seeding in the case of tumors with the manipulation of the intestine [7]. Furthermore, the disinvagination can reduce the extent of resection allowing retain more loop of intestine. When the colon is the affected part treatment may be based on enemas or colonoscopy to try and avoid the surgery. The laparoscopic approach is not contraindicated in these cases [7,8]. In conclusion, intestinal intussusception represents 1% of the total of intestinal obstruction in adults. When invagination affects small bowel usually are benign lesions whereas when colon or rectus are usually tumors or metastases. The CT with oral and intravenous contrast is the gold standard for preoperative diagnosis in these patients. Treatment consists on surgical resection being controverted the de-intussusception of the piece and the laparoscopic access.

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Figure 1 Axial computed tomography image shows an ileocolic intussusception. (Red circle).



Figure 2 Intraoperative image shows ileocolic intussusception.

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