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Cases Report

Acute Intestinal Invagination in Adults Revealing GIST: Case Report

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Abstract: Acute intussusception is a pathology of infants and young children. Its occurrence in adults is rare. It is of various etiology. In the vast majority of cases, it is secondary to a tumor which can be benign or malignant. We report the case of a 77-year-old patient, admitted to the emergency department of our structure for an acute intestinal obstruction, an abdominal CT scan showed acute small intestine intussusception on a small intestine tumor complicated by perforation. Treatment was open surgical resection. The anatomopathological and immunohistochemical study of the surgical specimen concluded to a small intestine GIST. From this new case and after analysis of the literature, we discuss the clinical and diagnostic characteristics and the therapeutic possibilities of this rare pathology.

Keywords: Intussusception, Occlusion, tumor, Surgery.

INTRODUCTION

Acute intestinal intussusception (AII) in adults, unlike in children, is a rare manifestation most often occurring during a bowel tumor of malignant origin.

It represents 1 to 5% of the etiologies of intestinal obstruction in adults [1]. His fashion progressive is usually chronic or subacute [2, 3]. It is rarely discovered in an acute picture of intestinal obstruction or peritonitis [4]. In adults an organic cause is found in 70 to 90% of cases, whereas in children intussusception is most often idiopathic [2, 5].

Consequently, in adults, the treatment is surgical based on intestinal resection with, however, an open debate concerning the necessity or not of prior reduction of the intussusception tube [1, 5]. We report a rare case of acute intussusception revealing a small bowel GIST in a 77-year-old woman admitted to the emergency room with an occlusion picture.

PATIENT AND OBSERVATIONS

A 77-year-old patient, with no particular history, admitted to the emergency room for diffuse abdominal pain with the notion of cessation of matter and gas and bilious vomiting. The onset of his clinical symptoms dates back to one month with the onset of diffuse paroxysmal abdominal pain in the form of cramps with vomiting.

This abdominal syndrome was self-limiting then interspersed with paroxysmal painful episodes until the day of his hospitalization motivated by the accentuation of the pains and the stopping of materials and gases.

On admission, the clinical examination revealed a distended abdomen with percussion tympanism, slightly sensitive, without palpable mass, the hernial orifices were free. The digital rectal examination was normal. The patient was afebrile. The rest of the clinical examination was normal, but there was a recent deterioration in general condition. The usual biological examinations were unremarkable. The plain abdominal X-ray showed hail fluid levels (Figure 1). The abdominopelvic CT scan showed an occlusive syndrome upstream of an acute small intestine intussusception on a digestive parietal thickening of the incarcerated loop (Figure 2). The surgical indication was formal. The surgical intervention, carried out by a midline laparotomy straddling the umbilicus, confirmed that the IIA is related to a perforated tumor, located approximately 2m from the angle of Treitz and 1m 80 from the ileo valve. -coecale (Figure 3), this intussusception was responsible for significant upstream hail distension.

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The procedure consisted of small bowel resection removing the tumor with creation of a double BW stoma.

The anatomopathological and immunohistochemical study of the surgical specimen probably concluded to an ileal GIST.

The postoperative follow-up was simple, the stoma was viable and functional from D32 postoperatively. The patient left the department on D5 and was seen in consultation on D15 with good progress.

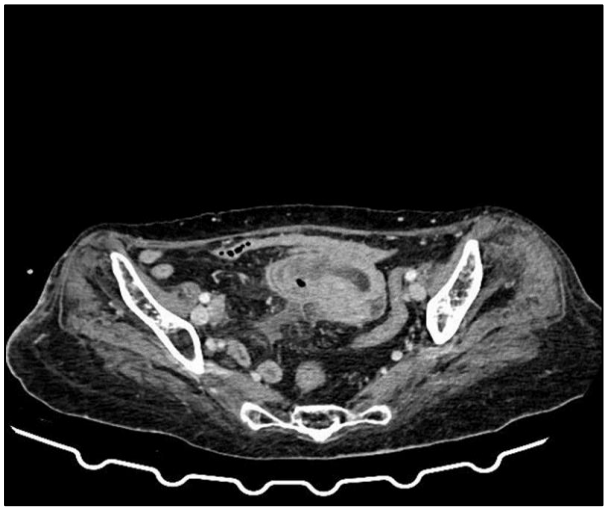

Figure 1: CT scan image in axial section showing an occlusive syndrome upstream of an acute small intestine intussusception on a digestive parietal thickening of the incarcerated loop

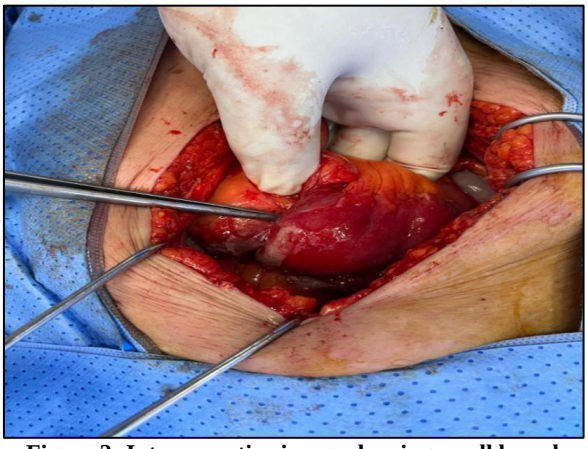

Figure 2: Intraoperative image showing small bowel intussusception

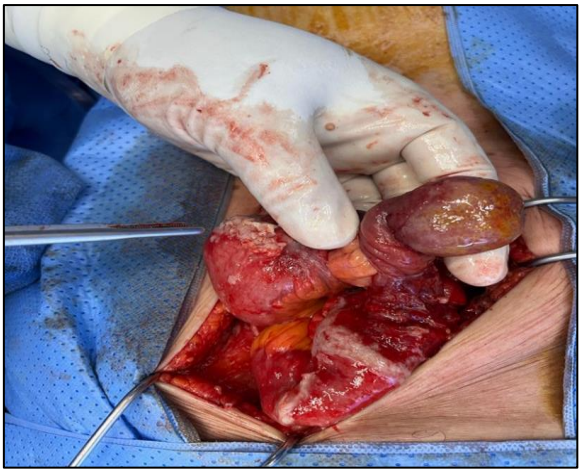

Figure 3: Image of ileal GIST responsible for intussusception

DISCUSSION

Intussusception represents 1 to 5% of the etiologies of intestinal obstruction in adults, and 0.003 to 0.02% of hospitalizations where an organic cause is found in 70 to 90% of cases and idiopathic in 8 to 20% then that in children intussusception is primitive in 90% of cases [6, 7]. The first intussusception was described by Barbette of Amsterdam in 1674 [8] and Sir Jonathan Hutchinson who performed the first intussusception surgery in 1871.

If this condition is observed only very rarely in developed countries, it is on the contrary relatively frequent in Africa and in particular in intertropical zones. The reasons for these geographical differences are unknown and some factors such as diet and parasites are discussed [9]. It is difficult to find a predominance linked to sex or an age group, even if the average age of the various series published is between 40 and 50 years with extremes ranging from 15 years to 81 years [1, 10, 11].

The clinical symptomatology is polymorphic and most often misleading: occlusive picture acute, sub-occlusive picture of progressive onset extending from a few days to a few weeks, non-specific abdominal syndromes (modification of transit, diffuse abdominal pain, digestive bleeding), sometimes evolving over several months, with or without deterioration in general condition [12, 13]. The finding on physical examination of the patient of an abdominal mass is a sign of great value in particular, if it appears of different seat and consistency during repeated examinations, It will be carefully sought in right and left lateral decubitus, in the supine position and in the Trendelenburg position [14, 15].

Anatomically, the ileum is considered to be a zone of preferential attack, colo-colic intussusceptions only present in 27% of cases. Rarer are colorectal, colo-anal or jejuno-gastric invaginations [16].

Contrary to the primitive forms of the infant. An organic lesion is found at the weak point of the intussusception in 80% of cases in adults. Malignant tumors represent the first etiology of intussusception in adults, especially in the colon, whereas they are secondary to a benign lesion 10% idiopathic [17]. These organic lesions are represented by stromal tumors, lipomas, polyps, adenopathies, digestive thickenings, especially ileocaecal. Melanoma, adenocarcinoma and metastases are found in about 15% intussusceptions [18].

Acute intussusception in small bowel GIST is rare, as in this patient. Classically in adults, the evolution of intussusception is chronic with intermittent abdominal pain associated with sub-occlusive attacks. The acute form is mainly the prerogative of ileo-ileal forms. For Mondor, the acute form would be the final stage chronic intussusception for which an early diagnosis would not have been made [3]. This is the case of our patient who had paroxysmal pain for a month preceding a sub occlusive syndrome.

Whatever the initial clinical presentation, the diagnosis is mainly made by imaging (ultrasound, scanner), more rarely by exploratory surgery. Radiologically, plain abdominal x-rays can help establish the diagnosis of small bowel obstruction. Direct visualization of the pudding head as an air-molded water tone mass of the downstream intestinal segment is very rare [1]; but in most cases this examination provides little information. Our patient had hail-like water and fluid levels. Abdominal ultrasound is a reliable examination and seems promising for the diagnosis of intussusception [4, 5], it typically gives a target image in longitudinal section with two peripheral hypoechoic rings and a central echogenic ring, and in cross section [4, 5] a “sandwich” image with three superimposed cylinders, which corresponds to the sausage of invagination. Abdominal ultrasound associated with color Doppler can in some cases highlight the disappearance of venous and arterial hyperemia of the invagination tube suggestive of ischemic necrosis [19, 20].

Despite the importance of the data provided by ultrasound, it is often hampered by the presence of air in the event of occlusion. Our patient did not benefit from an abdominal ultrasound. The scanner abdominal examination with injection of contrast product, performed in an emergency, increases the sensitivity of the diagnosis which can reach 90% with a specificity of 100% in adults [21].

Treatment is always surgical in adults and leaves no room for reduction by hyperpressure under radiological control. A more or less extensive resection can be necessary [22].

Recourse to simple desinvagination is licit in idiopathic forms. Intestinal excision while respecting oncological requirements is essential when a clearly malignant tumor is discovered. Our patient underwent oncologic small bowel resection removing the tumor with a double stoma on BW. The anatomopathological study is necessary for diagnostic confirmation and must be supplemented in certain cases by an immunohistochemical study.

The prognosis is linked to the duration of evolution, the extent of the lesions and the nature of the cause [23].

CONCLUSION

Intestinal intussusception in adults is often secondary to an organic lesion: tumoral or inflammatory. It is characterized by its clinical polymorphism. It is essentially about repetitive sub-occlusive phenomena. Ultrasound and especially CT have an essential place in the diagnosis of intussusception and its cause. Regarding the treatment of adult intussusception, resection of the invaginated segment is always necessary.

Ethical Aspects

The patient's consent was obtained for the use of his data for possible publication. We strictly respect anonymity and no image allows the identification of the patient.

Contribution of the Authors

All authors have contributed to the development of the work. All authors also declare that they have read and approved the document.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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