

INTESTINAL OCCLUSION DUE TO INTUSSUSCEPTION IN THE ASCENDING COLON

CIPRIAN TĂNĂSESCU¹, MIHAI FAUR², DENISA BOARIU³

^{1,3}“Lucian Blaga” University of Sibiu, Emergency Clinical County Hospital, Sibiu

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Abstract: *Intussusception is a particular form of intestinal occlusion characterized by the telescoping of a proximal intestinal segment into the distal one. Intussusception involves the existence of an extremely mobile intestinal segment due to a long mesentery or a mobile endoluminal tumour that tracts the intestinal wall. The pathology is quite common in infants - up to 2/1000, while in adults it is extremely rare, with a non-specific symptomatology. (1) We present the case of a 42-year-old patient, known for lipomatosis, presenting in the Emergency Room with clinical symptomatology of intestinal occlusion. Following clinical and paraclinical investigations, surgical intervention for colic intussusception was performed. A tumour was found at the level of the intussuscepted caecum up to the transversal colon, which at the histopathological examination turned out to be a colic parietal lipoma, which had numerous polyps with different degrees of dysplasia on the adjacent mucosa. Right hemicolectomy was performed with favourable postoperative evolution and discharge at 6 days postoperatively.*

INTRODUCTION

Digestive lipomas are conjunctival tumours, whose incidence varies between 0.1 and 5% of all benign digestive pathologies according to the literature.(2,3)

The first case of intestinal intussusception was reported by Barbette in Amsterdam in 1674.(4) The first description of a colic lipoma belongs to Bauer in 1757. The description of the disease was to be made by John Hunter in 1789.(2)

Intussusception is a particular form of intestinal occlusion characterized by the telescoping of a proximal intestinal segment into the distal one.

Any disease that exaggerates intestinal peristalsis can cause intestinal intussusception under certain conditions. Some local causes are added to this, such as the presence of an incompletely fixed and mobile caecum, a Meckel's diverticulum, mesenteric adenopathies and, more rarely, intestinal tumours or polyps.

Intussusception involves the existence of an extremely mobile intestinal segment due to a long mesentery or a mobile endoluminal tumour that tracts the intestinal wall.

The pathology is quite common in infants - up to 2/1000, while in adults it is extremely rare, with a non-specific symptomatology. Some authors agree that adult colic intussusception is so rare that a surgeon encounters this pathology, maximum once - twice in a lifetime.(1)

Most often, this pathology is an intraoperative surprise, being difficult to choose the type of surgical intervention that should take into account both the possibility of an associated malignant lesion and the extent of intestinal mass sacrifice.(4)

CASE REPORT

We will present case of a 42-year-old male patient, M.I., coming from rural environment, presenting in the Emergency Room with the following complaints: extremely

diffuse abdominal pain, more pronounced in the upper abdominal floor, respectively in the epigastrium with irradiation in the right hypocondrium, nausea and vomiting, meteorism, stopping transit for faeces for about 48 hours, weakness and fatigue.

From the pathological personal history, we noted that the patient suffered from lipomatosis without any significant illness.

From the history of the disease, we found that the patient was having abdominal painful episodes for about 7 months, accompanied by abdominal distension and stopping intestinal transit for faecal matter and gas. The current episode began about 48 hours before presentation in the Emergency Room, when it suddenly appeared in apparent health with immediate postprandial nausea and vomiting with dietary content, associated with diffuse abdominal pain of high intensity, abdominal meteorism, stopping transit for faeces and gas.

The general clinical examination revealed a patient with altered general status, conscious, afebrile.

Pale teguments and mucous membranes, normal exoskeletons, normal adipose tissue – body mass index (BMI) 28.5, non-palpable superficial ganglion-lymph system, integral and mobile osteo-articular system, normotonic, normokinetic muscular system.

Respiratory system: free upper respiratory tract, mild tachypnoea, respiratory rate = 19-20 breaths/min, normal conformation of the chest, ample, symmetrical, synergistic respiratory movements, lung sound on percussion, active physiological pulmonary motion, bilateral physiologic murmur, physiologic tubal murmur without over-added rales.

Cardiovascular apparatus: palpable apex beat in the left 5th intercostal space at the midclavicular line, normal area of cardiac dullness, rhythmic heart rate, well beaten, without rales, BP 140/70 mmHg.

Uro-genital system: free renal lodges, spontaneous,

¹Corresponding author: Ciprian Tănăsescu, Str. Triajului, Nr. 59, Şelimbăr, România, E-mail: tanasescuciprian@yahoo.fr, Phone: +40722 490048
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CLINICAL ASPECTS

painless, physiological micturition, bilateral Giordano negative, normal urine.

Osteo-tendinous reflexes present bilaterally within normal limits, tactile sensitivity within normal limits, oriented to time and space, no signs of meningeal irritation.

The local examination revealed a palpable soft mobile abdomen with breathing movements, painful spontaneously and on palpation in the upper abdominal floor, of colic nature for about 48 hours, exacerbating within the last 6 hours, without muscular defense, with absent intestinal transit of about 48 hours, post appendectomy scar, normally inserted umbilical scar.

On palpation, a pseudo-tumour formation could be felt that extended from the right hypocondrium through the right flank up to the right iliac fossa, extremely sensitive to palpation.

Because of the clinical suspicion of an acute pancreatitis, an emergency native abdominal and pelvic CT examination was performed, showing: basal pulmonary segments without suspected CT images, liver, spleen, kidney with no pathological changes detectable on CT, pancreas with preserved acinus, no CT signs of pancreatitis, immediately beneath the transversal colon, there could be seen a traction of the ascending colon, the caecum and of the ileo-cecal junction, with multi-layered aspect of the colonic loops at the mezo / inframezocolic level, with CT aspect suggestive for intussusception at this level, without excluding a volvulation mechanism due to the summation at this level, small sigmoid diverticula without retroperitoneal pathological adenopathies, no ascites, without hydroaeric levels (figures no. 1,2).

Figure no. 1. Ileocolic intussusception process

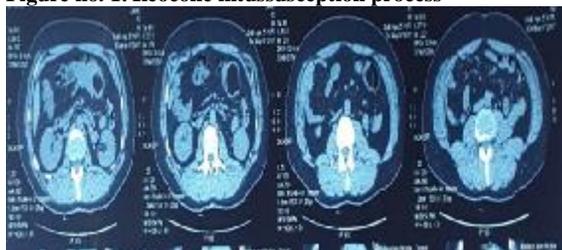
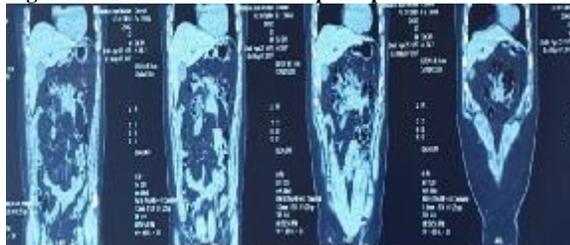


Figure no. 2. Ileocolic intussusception process



Following abdominal and pelvic CT, the diagnosis of intestinal intussusception was established, a rare disease in adults and commonly found in children. Considering the clinical picture and the hemodynamic instability, the patient was admitted to the I Surgery ward.

In evolution, patient's symptoms suddenly disappeared completely, the patient becoming hemodynamically stable and respiratory balanced, with mobile, supple, abdomen painless on palpation, present hydroaeric sounds, resumed transit for faecal matter and gas, good digestive tolerance, good general condition, afebrile, reason for which it was decided to complete the paraclinical investigations by conducting a colonoscopy. This highlighted a progression with the colonoscope up to the ascending colon where a giant polypoid

formation with a large implantation base and an irregular surface with increased mobility on insufflation with valve effect was highlighted. The formation was overcome and the caecum could be seen without mucosal lesions (figure no. 3).

Figure no. 3. Colonoscopic image of the tumour



The next day, surgery was performed under general anesthesia after adequate preoperative preparation, accomplishing xifo-subumbilical exploratory laparotomy, dissection of subcutaneous tissue and opening of the peritoneal cavity.

Intraoperatively, there were noticed mild omental-parietal adhesions at the level of the right iliac fossa post-appendectomy, for which viscerolysis was performed. Also, there was highlighted a caecum, a very mobile ascending colon by the absence of the Toldt's fascia and, at the level of the ascending colon, a sliding elastic formation was revealed (figure no. 4), therefore right hemicolectomy was decided and practiced with latero-lateral ileotransverse anastomosis, haemostasis control, lavage, drainage.

Figure no. 4. Sliding tumour formation in the ascending colon



Upon dissection of the resection piece, there was revealed a lipoma with the implantation base in the colon mucosa, with multiple polyps developed on the surface of the lipoma (figure no. 5).

The postoperative evolution of the patient was slowly favourable, with his return in the patients' room on the 2nd postoperative day, urinary catheter removal on the second day after the surgery, gradual resumption of food, resumption of intestinal gas transit on the third postoperative day and for faeces on day 6 postoperatively, with wound control and daily local dressing (using antiseptic solutions), monitoring the drainage tubes and extracting them on the sixth postoperative

day.

Figure no. 5. Lipoma inside the colon with multiple polyps developed on its surface



Afebrile patient, stable, hemodynamically, respiratory balanced, with soft, mobile abdomen when breathing, painless spontaneously and on palpation wound healing with no reaction was discharged on the sixth day after surgery, with the following recommendations: sterile dressings every 2 days, to return for check-up for fibres suppression according to appointment and 21 days later for the histopathological results, to avoid intense physical effort, nutritional-hygienic regime, surgical re-evaluation when needed.

The histopathological result confirmed the clinical suspicion of cecal wall lipoma, with multiple polyps of varying degrees of dysplasia, two of which being in situ carcinoma.

DISCUSSIONS

Intestinal intussusception is quite common in infants - up to 2/1000, while in adults, it is extremely rare with non-specific symptoms.(1)

In our case, the sudden onset of symptomatology, in apparent full health, after a plentiful lunch splashed with alcohol, in a patient who has also experienced similar frequent episodes in the past 7 months but which have remitted by themselves, have posed the problem of an acute pancreatic disease, most likely of bile etiology.

The sudden disappearance of the symptoms after the surgical consultation in the Emergency Room, as well as the CT image with multi-layered appearance of colonic loops in the right hypochondrium, determined us to consider an intestinal occlusion by colic intussusception.

The fact that the symptomatology suddenly remitted due to desintussusception mechanism allowed us to perform a colonoscopy that highlighted the tumour formation. The presence of multiple polyps of different sizes on the mucosal surface that wallpapered the tumour formation has led to the suspicion of malignancy.

In colonic intussusceptions, the unanimously accepted tactic is to resect the involved segment without reducing the intussusception and taking into account the oncological safety limits, most of the times the cause being a neoplasm.

In our case, both the colonoscopic and intraoperative appearance forced us to carry out a radical oncological intervention, even if CT examination did not reveal intraperitoneal adenopathy.

Intussusception consists in penetrating an intestinal segment into an adjacent one. The penetrating loop by telescoping advances into the adjacent segment. The intussusception tumour that is being formed consists of three cylinders. The internal cylinder consists of the intestine that is being intussuscepted. It should have a long and lax mesentery,

most commonly being represented by a terminal ileum. The external segment belongs to the receiving intestine. It should be fixed in order to accept the mobile intestine. The middle cylinder is formed according to the mechanism of intussusception.(5) It may be due to the receiving intestine (intussusception by overturning), or it may be due to the penetrating loop (intussusception by prolapse).

The particularity of our case is the intussusception of the ascending colon in the ascending colon, which anatomically is a fixed segment of the colon due to the Toldt's fascia. Intussusception was also possible due to an anatomical variant present through the mobile mesentery in the ascending colon.

In the case of colic lipomas, the treatment is less aggressive, most often colostomy being practised with lipoma resection or segmental colectomy. In our case, the colonoscopic appearance of the tumour formation required an oncological intervention due to the existence of the neoplastic risk. Due to the appearance of the intussusception and the existence of multiple polyps with varying degrees of dysplasia in the colic mucosa that wallpapered the lipoma, the patient had the chance to be diagnosed and operated at an in situ stage of colic neoplasm.

Gardner syndrome was discussed and excluded that supposed the involvement of the combination of multiple intestinal polyposis and tumours with different localizations.

In our case, we are dealing with a generalized lipomatosis, the patient presenting multiple subcutaneous lipomas, but also a colic lipoma which, on the surface of the mucosa, contains multiple polyps with different degrees of dysplasia.

CONCLUSIONS

Colic lipomas are rare, but their existence should not be ignored. When complicated by intussusception, they become surgical emergencies. Diagnosis is difficult preoperatively, especially in emergency, and is based on colonoscopy, irrigography and tomodensitometry.

The ideal treatment is tumour resection through colotomy. In cases with suspicion of a neoplastic process, surgical oncological sanction should be applied.

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