Case study

Sigmoidorectal intussusception associated with duodenal GIST: ~~about a case~~

ABSTRACT: Sigmoido-rectal intussusception is rare and the lead point can be in most of the time amalignant lesions like adenocarcinoma.An86-year-old patient wasadmitted to the emergency room for rectal bleeding associated with mucous diarrhea. Computed tomography revealed sigmoid-rectal invagination associated with a jejunal stromal tumor. The patient underwent a colon-rectal resection carrying a colon-rectal invagination and a colostomy was performed. Biopsies were taken of a mass in the 4th duodenum, an epiploic nodule, a mesenteric nodule, and a liver nodule.

KEYWORDS: Sigmoido-rectalintussusception, colorectal cancer, sigmoid adenocarcinoma, duodenal GIST.

INTRODUCTION:

Intestinal intussusception is rare in adults, accounting for approximately 1% of all intestinal obstructions1. Symptoms in adults are most often chronic or non-specific such as nausea, vomiting, digestive hemorrhage, transit disorders, and abdominal distension. However, computed tomography is the most sensitive diagnostic modality 2. This article presents a case of a patient with sigmoido-rectal intussusception associated with adenocarcinoma and a duodenal GIST.

CASE PRESENTATION:

An 86-year-old patient, who had undergone a prostatectomy for prostate cancerand having as a comorbidity, diabetes. well controlled on insulin, wasadmitted to the emergency room for rectal bleeding associated with mucous diarrhea. These symptoms had been present for 20 days in a context of a deteriorating general condition.

On admission, the patient was conscious, hemodynamically and respiratory stable, with discolored conjunctivae. Abdominal examination revealed a midline laparotomy scar below the umbilicus, with a distended, tympanic, painful abdomen and the presence of a palpable mass on the left flank, measuring 7 cm on the long axis, fixed to the deep plane. On digital rectal examinationdid not reveal a palpable mass.The thoraco-abdomino-pelvic scanner revealedan irregular rounded tissue mass taking contrast in the periphery with central necrosis measuring 8 cm in diameter. Jejunum stromal tumor inFigure 1,Sigmoido-rectal invagination in Figure 2.

The patient underwent a colo-rectal resection carrying a colo-rectal invagination with colostomy in double gun barrel.Biopsies were taken from a mass in the 4th duodenum, an epiploic, a mesenteric and a liver nodule. During exploration: presence of a medium-abundance serous effusion (sampled), presence of sigmoidorectal intussusception with colonic distension at 7 cm with no sign of pain "Figure 3", presence of a mass of 12 cm of long axis at the anti-mesenteric edge of the 4th duodenumsuggesting a GIST (biopsy done) and presence of nodule of carcinomatosis at the entire peritoneal cavity (biopsy of a nodule done) "Figure 4" with the liver being filled with metastases(biopsy also performed).

On pathological examination:

- Biopsies of the mesenteric,omental nodule, and liver deposits showed morphological and immunohistochemical aspects consistent with a secondarylocalization of a gastrointestinal stromal tumor (GIST) at high risk of recurrence.
- Biopsy of the duodenojejunal junction mass: Morphological and immunohistochemical aspect of a gastrointestinal stromal tumor (GIST).
- Colorectal intussusception resection: Moderately differentiated and invasive NOS type adenocarcinoma on top of a tubule-villous adenoma

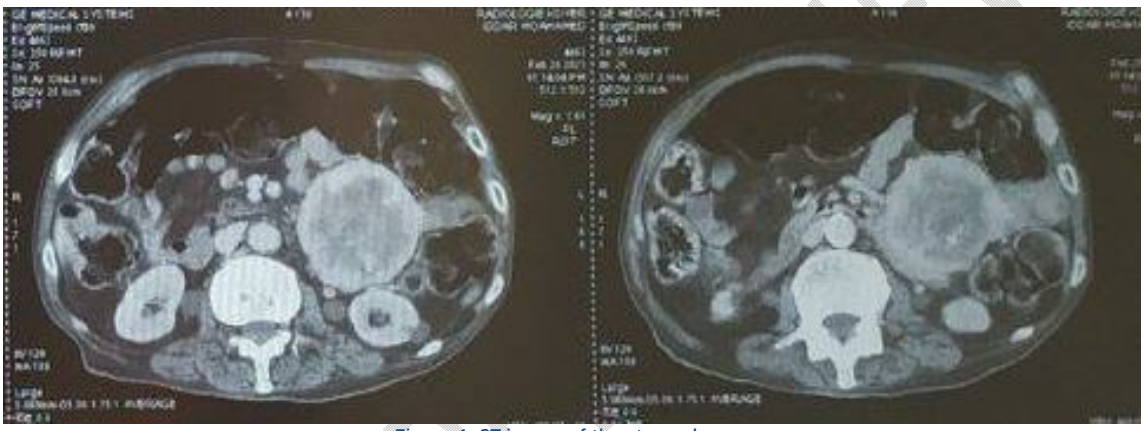

Figure 1 :CT image of the stromal mass

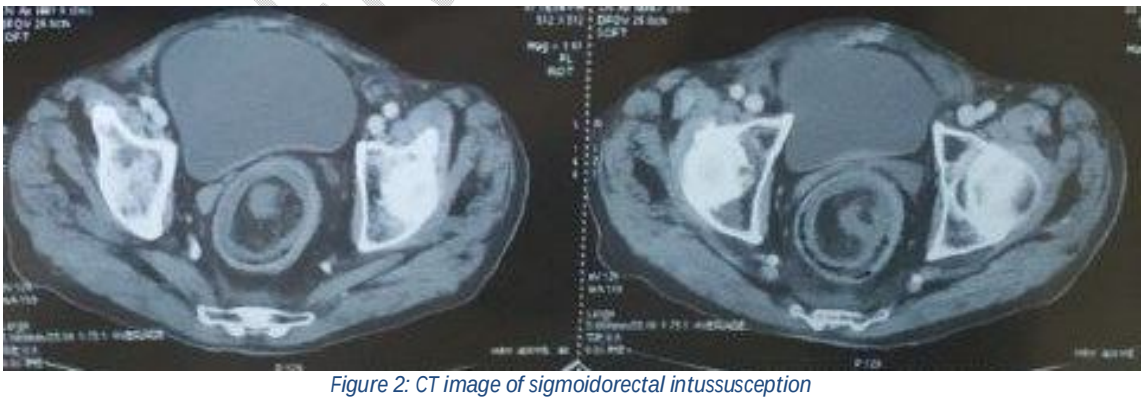

Figure 2: CT image of sigmoidorectal intussusception

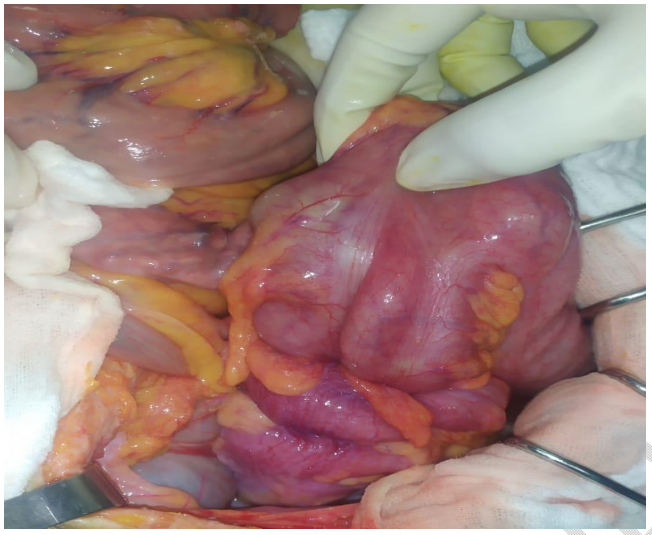

Figure 3: *per-oper*ative image of sigmoidorectal intussusce

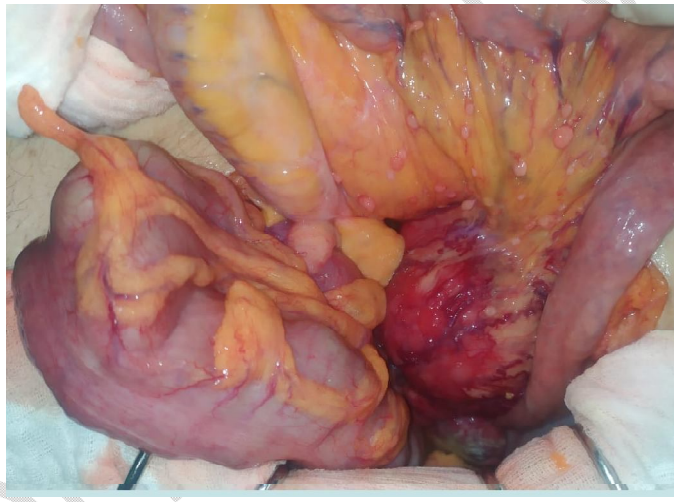

Figure 4: per-operative image of duodenal mass and carcinomatosis nodules

II. DISCUSSION

Adult intussusception is rare, less than 5% of all cases of intussusception and 1–3% of intestinal obstruction 3.

Malignant lesions like adenocarcinoma, lymphoma and metastasis,is in more than half of them the cause 4.

Intussusception consist on the invagination of a proximal segment of bowel intoan adjacent distal segment. Thelead point can be a lesion in the bowelwall or an irritant in its lumen

thatmay change the normal peristalticpattern and initiatethe invagination leading tointussusception. In other case, it can be primary oridiopathicintussusceptionwhen there is no lead point and is interest thesmall intestines3,5.

The non- specific clinicalpresentation lead to a diagnostic dilemma. The paraclinical examinations are represented by, plain abdominal X-rays, demonstrating signs of intestinal obstructionand the probable site of obstruction6.

CTas a useful imaging modality for diagnosingintussusception, show the so-called bowel-within-bowel configuration, in which the layers of the bowel are duplicated forming concentric rings, when imaged at right angles to the lumen, and a soft tissue sausage when imaged longitudinally. The mesentery (fat andvessels) will form a crescent of tissue around the compressed innermost lumen, surroundedby the two layers of the outerenveloping bowel7,8.

Adult intussusception istreated almost always surgically. The reduction should be avoided and a resectionwithout reduction (en bloc resection) should be done to preventdisseminating malignant cells when anunderlying malignancy is suspected, knowing that almost 50% of bothcolonic and enteric intussusceptions are associated with malignancy. In other wise, the advantageof reduction, especiallyin the small bowel, is preservation ofconsiderable lengths of the bowel development of shortbowel syndrome5,9,10, 11.

Gastrointestinal stromal tumors (GISTs) are the most common mesenchymal tumors of thegastrointestinal tract 12.

Defined as KIT (CD117) positive and derived from the interstitial cells of Cajal or theirprecursors, the tumor can be located anywhere in the gastrointestinal tract. The duodenum is a rare siteaccounting in 4%–5%, contrary to the stomach that constitute the most common site,followed by the jejunum and ileum13.

The GIST can be associated with another malignant tumor in 4.5% to 35% of cases. The most founded tumorassociated with the GIST are gastrointestinal adenocarcinoma,prostatic adenocarcinoma, lymphoma, leukemia and breastcancer and their discovery in few cases in on the CT used as part of the extension study of the adenocarcinoma 14, 15.

The localization of the two tumors can be on the same, or different parts of thegastrointestinal tract. Like our case and frequently, the association is of a colic adenocarcinoma and asmall bowel GIST16.

Hypothesis such as thesamecarcinogen that induce simultaneous proliferation of different cell lines can explain this associationbut a further investigationis needed17, 18, 19, 20, 21.

In conclusion, adult intussusception is rare cause of intestinal obstruction, most often cause by malignant lesions. The non- specific clinicalpresentation explain that the diagnosis is is evoked onimaging modality “the CT”. The association between the gastrointestinal adenocarcinoma and the GIST suggest the existence of a relation between the carcinogenesis pathwaysoh the two lesions.

IV. REFERENCES

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