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Total Small Bowel Volvulus on an Incomplete Common Mesentery: Case Report

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Abstract **Case Report**

The common mesentery results from an abnormality of rotation of the digestive tract. It is characterized by the persistence of an embryonic anatomical arrangement secondary to an abnormality of rotation of the primary umbilical loop, thus constituting a meso common to the entire intestinal loop and an extremely short root of the mesentery. This lack of rotation is most often associated with a shoulder defect. These abnormalities in bowel rotation can lead to dreadful and sometimes fatal complications, which usually occur during the neonatal or pediatric age. It is estimated that the prevalence of these congenital malformations in adulthood is of the order of 0.2% to 0.5% age at which they very often remain asymptomatic and therefore undiagnosed. The diagnosis of total small bowel volvulus can be made in a wide variety of circumstances: in emergency before an acute bowel obstruction panel, or even a state of shock that could lead to death, before a table of repeated abdominal pain more or less associated with transit disorders. We report the observation of a 55-year-old patient admitted with total small bowel volvulus on an incomplete common mesentery who underwent emergency surgery with favorable postoperative outcome.

Keywords: Small bowel volvulus, common mesentery, abnormal rotation.

INTRODUCTION

Common mesentery due to tube rotation anomaly digestive. It is characterized by the persistence of a embryonic anatomy secondary to a rotation anomaly of the primitive umbilical handle, thus constituting a meso common to all the intestinal loop and a root of the mesentery extremely short [1]. This lack of rotation is most often associated with a berthing defect. These can lead to dreadful complications sometimes deadly, which usually occur during the period neonatal or pediatric age. The fact that this pathology is exceptional in adulthood and that its symptomatology is quite causes many errors and delays in diagnosis and therapeutic to the point that the majority of cases are diagnosed in post-mortem. The causes of his late revelation are still unknown. The most formidable complication is the total small bowel volvulus, it occurs when the type of rotation anomaly is the incomplete common mesentery at 180°[2].

PATIENT AND OBSERVATIO

We report the observation of a 55-year-old patient without known pathological history admitted to the emergency department in a occlusive syndrome, the symptomatology has evolved since more than 24 hours before admission and was made to stop matter and gases associated with diffuse abdominal pain plus vomiting in an apyrexia context. The examination at his admission found a patient who was hemodynamic and respiratory stable. In addition, the abdominal examination found a distended, tympanic abdomen with diffuse sensitivity and an empty rectal bulb on the rectal touch. The Biological Balance Sheet found aPNN predominant 21,000-element/mm3 hyperleucocytosis with correct renal function, the CRP was 85 mg/l. The Abdominal radiography without preparation found grelic and colic hydro-aeric levels (Figure 1). Abdominal CT C- /C+ found the artery superior mesenteric vein to the right of the superior mesenteric vein, small bowel in the right false iliac with absence of caecum at this level and the distension of small intestine and colon upstream of an organo-axial whirlpool image of the small bowel (Figure 2). An incomplete diagnosis of occlusion on the common wall was made and the patient was admitted to the operating room as an emergency. the gesture consisted of a manual devolution with the discovery of a suffering but viable area of striction located about 60 cm from the ileocecal valve. Ladd flange section; release of second duodenum and change of intestine to full common mesentery

position. The per-operative result was satisfactory after the assessment of intestinal viability. The post-operative follow-up was simple; patient released 4 days after surgery with favorable evolution.

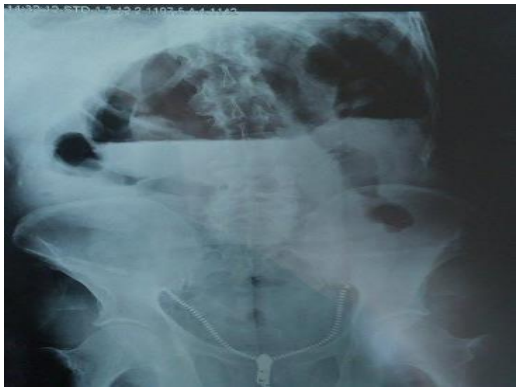

Fig-1: Abdominal radiography without preparation showing grelic and colic hydro-aeric levels

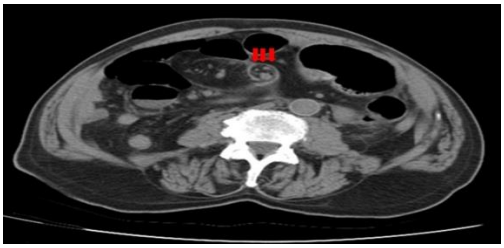

Fig-2: CT showing "whirlpool" image

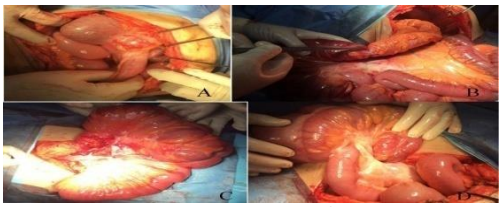

Fig-3: Per-operative image of our patient

DISCUSSION

The prevalence of these birth defects is estimated to be adult age is in the range of 0.2% to 0.5% [3.4], the age at which they very often remain asymptomatic and therefore not diagnosed. In these asymptomatic patients, the diagnosis may be revealed during ectopic appendicitis attacks [5] or incidentally during a radiological examination. The complications of bowel rotation abnormalities may be acute or chronic in adults, progressive complications acute include flanged duodenal occlusions as well as total small bowel volvulus, which remains exceptional in adults and of which the prognosis is fearsome. Chronic complications result from incomplete duodenal stenosis or chronic volvulus stenosis of the mesenteric arterial insufficiency. The diagnosis of total small bowel volvulus can be done under very.

Various: emergency in front of an acute bowel obstruction panel, or a state of shock [6] that could lead to death, in front of a table of repeated abdominal pain more or less associated with transit disorders; more rarely, following surgery laparoscopic, as described after cholecystectomy [7-11], appendicectomy [12,13] or obesity surgery.

Abdominal radiography without preparation can be extremely variable and shows no specific signs; however it is rarely normal and generally interpreted as "unusual" or discordant. Doppler ultrasound is often hampered by gases and is not always contributing to the diagnosis; however its sensitivity would be 86.5%, its specificity 74.7%, its value of 42.1% and its negative predictive value of 96.3% [14]. Finally, according to some authors [15], ultrasound is thought to be reference exam to eliminate an EN, when it shows the presence of the third duodenum behind the artery superior mesenteric. The reference exam for diagnosis of the total volvulus of the small bowel on abnormality of intestinal rotation in adult is abdominal-pelvic CT with injection contrast agent [16-19], described by Fischer [20] in 1981 under the name of whirl-like pattern, the "swirl" sign appears be pathogenic for the majority of authors. It corresponds to the tendril of the mesentery visible in the middle position, ahead of aorta and upper mesenteric artery, around which "curl" the superior mesenteric vein and proximal jejunum. Treatment of small bowel volvulus on intestinal malrotation is a surgical emergency. The procedure of Ladd remains the reference [2], both in adults and in the child. It consists of a median laparotomy followed by a Volvulus reduction by detorsion (in a more anti clockwise direction often), a section of the flanges responsible for the shortening of the mesenteric root by complete common mesentery intestine to prevent recurrence and finally an appendectomy of principle. The evolution is then generally favourable, provided that diagnosis and therapeutic load was carried out quickly.

CONCLUSION

A formidable and exceptional complication in adulthood. The heavy mortality due to diagnostic delay requires knowledge of these rotational abnormalities and the complications they may to each practitioner. Clinical symptomatology being non-specific, the X-ray examination must not be no delay. The prognosis of the total small bowel volvulus is that of the occlusive syndrome, of the microbial pullulation it causes and strongly depends on the pick-up time and the terrain.

Conflict of Interest

The authors do not declare any conflict of interest.

Contributions of authors

All authors have read and approved the final version of this manuscript

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