

*Medical Education Article*

# Deflection of the sigmoid volvulus by Faucher's probe: indications; Technical and interest

**K. Rabbani, A. Maroua ; O. Jaddi ; A. Louzi ; B. Finech**

Department of General Surgery, Caddi Ayyad University, Marrakech, Morocco.

Corresponding Author's E-mail: rabbanik2003@yahoo.fr.

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The volvulus of the sigmoid is responsible for a mechanical occlusion which classifies it in emergency medical-surgical. If his diagnosis is more or less easy; Its therapeutic strategy differs from school to school. The resection with ostomy is probably done in case of necrosis or peritonitis; The other therapeutic options are ideal colectomy or two-stage co-lectomy after surgical twisting. As far as we are concerned ; We always attempt a detention by a Faucher probe followed by a cold colectomy in the same hospitalization. We will describe the conditions under which we implement this strategy; Our technique of detangling by the Faucher probe and the interest we have in relation to other therapeutic methods. We performed a retrospective series of 53 cases of volvulus of the sigmoid treated in the department of visceral surgery at the Marrakech University Hospital spread over a period of 5 years. Twelve patients underwent emergency surgery in front of a table of peritonitis or sign of necrosis. While 41 patients had a detanglement by the Faucher probe. The male predominance is at 88.6%. The most affected age group is between 60 and 80 years and involved 24 patients, ie 45.28%. The success rate of detangling by mowing probe reached 80 percent. Only 4 patients were operated in emergency after failure of the detorsion. Mortality is 1 percent in total. The morbidity is minimal in the group of probe twisting.

**Keywords:** volvulus; Sigmoid; Occlusion; Untwisting; Colonic resection.

## INTRODUCTION

Sigmoid volvulus is a medical-surgical emergency that represents a common cause of colonic occlusion. Pathology rare in the West, it is the leading cause of colonic occlusion in developing countries where it affects a younger population. Clinical examination and abdominal shots without preparation are usually sufficient for diagnosis. However, the doubt persists in 30% of the cases, the abdominal tomodensitometry is then of a great contribution. Sometimes the diagnosis is made only on the operating table. In the absence of treatment, the spontaneous evolution, independently of the mechanism, takes place towards ischemia and then necrosis of the volvulate digestive segment. In the absence of intestinal necrosis, endoscopic detangling followed by sigmoidectomy on prepared colon is the most widely used technique. In our developing countries this procedure is hardly feasible because of the lack of equipment and the interventional endoscopy in the emergencies. We perform the

technique of detanglement by Faucher's probe in urgency. Given the scarcity of work on the non-surgical detanglement of sigmoid volvulus in our developing country context; we decided to carry out this work with the following objectives:

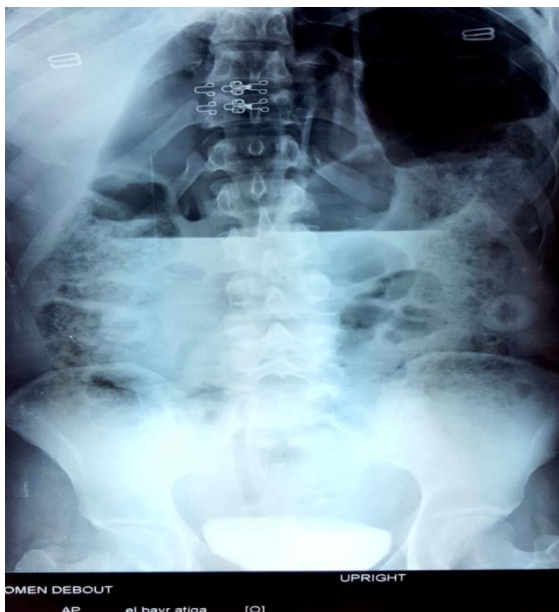
- Determine the indications of the detorsion by the Faucher probe
- describe our own Faucher probe twisting technique
- show the interest and the advantages of realizing this technique in first intention

## MATERIAL AND METHODS

We carried out a retrospective study which covered 5 years from January 2011 to December 2015. it was carried out in the department of General and Digestive surgery of the Mohamed VI CHU of Marrakech- Morocco.

Have been included; All patients admitted for volvulus of the sigmoid without necrosis or perforation. During the study period a total of 53 patients were admitted including 12 patients were operated in emergency for volvulus with necrosis.

At admission; All patients underwent a complete clinical examination with complementary examinations including an ASP first looking for a double leg or dual cannon appearance figure 1. Abdominal CT was performed in 12 patients in front of the history of rectal bleeding Or clinical and radiological evidence is inconclusive. FIG. 2. A resuscitation was started for a duration of 4 to 6 hours including a venous route; Filling; Hydroelectrolytic re-equilibrium and placement of a naso-gastric tube under suction.



**Figure1 :** ASP with double leg appearance

les patients ont été acheminé au bloc opératoire pour tentative de d'une détorsion par la sonde de Faucher sinon une détorsion chirurgicale

**RESULTS**

We recorded a total of 41 cases of sigmoid volvulus without necrosis. The age of our patients varies between 24 and 80 years with an average of 56 years. The male predominance is very clear, accounting for 88.6% of cases and 6 women, or 11.4% of cases. With sex ratio of 7.80 / 1. The consultation period, in our series, varies from 01 to 07 days, an average of 3.5 days. Of the 41 patients, the change in general condition was noted in 07, ie 13.20% of cases; Fever in 05, or 9.43% of cases; Dehydration in 4 patients, 7.54% of cases; None of them showed up in shock. Abdominal pain was present in all patients (100%), vomiting was observed in 40 patients

(89.4%), fecaloid in 2 cases (3.7%), bilious in 8 cases (15%) and In all patients (100%), occlusive syndrome was complete in 73% of the patients. Two patients had associated rectal bleeding. The ASP; An unavoidable examination, was carried out in all the patients of our series, in standing position. He objectified: images in arch with double jamb (appearance in coffee bean) in 35 ASP. The CT scan was performed in 12 patients, ie 30%, from 4 patients (in front of a previous history of rectal bleeding, 8 patients with clinical signs and non-conclusive ASP) (5 patients with mixed double-legged NHA and 7 patients With NHA colic.) This scan revealed a twisting aspect of the sigmoid loop in the 12 patients, and all patients had an attempt to detangle the moving probe with a success rate of 82 percent. Detorsion was noted only in 4 patients for whom surgical detorsion was



performed.

**Figure 2:** Aspect of the double leg at CT

**DISCUSSION**

Sigmoid volvulus is a relatively common surgical emergency in Asia and Africa. We have treated 53 cases of sigmoid volvulus, 41 of which have no necrosis in 5 years. It is the equivalent of 10 patients per year. Naseer, Pakistan, (2010) reports 15 cases per year. Connolly, Ireland (2002) reports 2 cases per year. Salas, USA, 2000 1cas per year. Nuhu, (2010), Nigeria 9.6 cases / year. Sigmoid volvulus is rare in Western Europe and North America. On the other hand, it is particularly common in Central and Eastern Europe, Latin America, Africa and the Middle East where the frequency of dolichocolon and congenital megacolon are predisposing factors. Table 1

Age is an important prognostic factor in emergency surgery of the sigmoid Volvulus. Our patients are relatively young, as are those of other African and Asian authors who reported an average age between 40 and 47 years.

In our series the average age was 54 years. Radiography of the abdomen without preparation is an essential examination to confirm the diagnosis of volvulus of the sigmoid by showing a typical image in the form of a arch with double jamb. We were able to confirm the diagnosis of sigmoid volvulus by ASP in 70% of cases.

Endoscopic detanglement is probably the most logical method to be used in first-line treatment; Confirmed by several studies; Which makes it possible to achieve elective colectomy under good conditions on a well-prepared colon. According to Renzulli (2002); Endoscopic detorsion should be proposed in all cases of sigmoid volvulus in the absence of clinical, biological, or radiological (scanner) signs of intestinal necrosis. The limits of this technique are the success rate of 77 percent; The risk of perforation of 2 per cent and recognition of a necrotic colon. Given the lack of interventional endoscopy units available in emergency rooms; We practice the detorsion by probe Faucher always in first intention. The patient being on an operating table; Gynecological position; We introduce in a gentle manner the Faucher's probe soaked with foamy Betadine, without anesthesia since it is a non-painful gesture. The progression in the rectum to the sigmoid colon is done gently by simultaneously making a rotation of the probe in the direction of the clockwise. Any resistance to the progression of the probe must stop the maneuver, as it may cause perforation of the rectum or colon. On the other hand, resistance to rotation is a good sign and means that the probe is at the level of the twist It is necessary to insist on the rotation of the probe to beat it. The success of the maneuver results in a break-up of gas and liquid stools through the probe; Which is plugged with a collector bag to retrieve the stool. A control ASP is done systematically which will show a regression of the hydro-aerial levels or even their disappearance; But also to verify the absence of pneumoperitone which means in case of presence a rectal or sigmoidal perforation. Faucher's probe is kept in intra-rectal for 1 day. The colectomy is done in 7 to 10 days after the detanglement in the same hospitalization. This maneuver is obviously exposed to the risk of perforation but we have never had cases of perforation. The informed consent of the patient is compulsory after explaining the risks and the advantages of this technique. These advantages are the possibility of its realization to the block before the anesthesia; easy ; fast ; No morbidity or mortality to date for this technique; Its low cost; The duration of hospitalization is reduced and above all it allows a better preparation of the colon for a resection under the best conditions. Faucher probe twisting is always proposed as a first option in all patients admitted for volvulus of the sigmoid without signs of necrosis.

## STRONG POINTS

The volvulus of the sigmoid is a frequent surgical emergency.

- Stopping of materials and gases; Abdominal distension and vomiting are stable signs
- ASP allows to make the diagnosis in more than half of the cases with evocative aspect in double jambage
- The first endoscopic detension followed by cold surgery is the strategy practiced by most schools.
- The detorsion by the Faucher probe can be an alternative in structures where there is no endoscopy unit.

## CONCLUSION

The volvulus of the sigmoid is a surgical emergency which; In the case of late care; Can cause the death of the patient due to the various complications of intestinal occlusion. The standard of management in the case of sigmoid volvulus is endoscopic detanglement followed by cold colic resection. In our context of developing countries; The detanglement by the Faucher probe is a solution that allowed us to gain in interval of management; To reduce the surgical morbidity of a surgical procedure; To make the cold colectomy under the right conditions and above all to reduce the total cost and the duration of hospitalization despite the risk of complications especially the perforation which is minimal but present.

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