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Surgical Treatment in Inflammatory Colitis (Retrospective Study of 13 Cases)

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Abstract: Inflammatory colitis are inflammatory bowel disease. They are medico-surgical affections; their treatment is initially medical and become surgical in the event of complications or failure of medical treatment. This is retrospective study and conserne a series of 13 cases of inflammatory bowel disease including one case of ulcerative colitis (UC), all operated in the surgical department "A" of the children's hospital. The aim of the study is to explain the epidemiological, clinical, and paraclinical characteristics for inflammatory bowel disease and to specify the indications and the place of the surgical treatment in the assumption of responsibility of the inflammatory colites in the child. The average age of surgical patients was 14.4 years, with a sex ratio which was one. The most frequent location for Crohn's was ileocecal location, so it interested the entire colon including the rectum to the case of ulcerative colitis. The main indication for surgery was the enterocutaneous fistulae (25%). We can say that the place of surgical treatment remains high, surgery is dominated by the actions of excision according to the location of the infringement. In our series, resection was performed in 11 cases; the procedure most used is the ileocecal resection. In the only case of ulcerative colitis, total colectomy with ileoanal anastomosis was necessary. The postoperative continuations were marked by the appearance in two patients with a recurrence leading to an entero-cutaneous fistula at the right iliac fossa which had evolved under medical treatment, one patient had sepsis in the postoperative and died in intensive' care department.
Keywords: Crohn, ulcerative colitis, surgical treatment.

INTRODUCTION

Inflammatory bowel disease (IBD) refers to a group of disorders characterized by chronic inflammation of the intestine, including Crohn's disease, ulcerative colitis and undetermined colitis.

These inflammatory bowel diseases are not exclusive to adults since they begin in 10 to 15% of cases before the age of 15, and their incidences are increasing.

A clear association with a number of factors suggests that IBD is due to the combination of genetic predispositions, immunological factors, and environmental exposure to either enteric organisms or dietary factors.

These affections evolve through a series of variable severities, interspersed with the remission phase, and are often associated with systemic manifestations on the one hand, and on the other hand with extra-digestive manifestations.

The diagnostic behavior is variable according to the symptomatic richness and depends on the anamnestic, clinical, biological, morphological, and pathological data.

The diagnosis is based on a bundle of arguments, confirmed by the negativity of the etiological investigation and the subsequent evolution.

Pediatric IBDs have several peculiarities specific to this population, but the main features are their repercussions, especially Crohn's disease on growth and weight-loss and pubertal development, whose monitoring is essential to assess the activity of the disease and the disease. Treatment efficacy, the RCH is characterized in children by a rapid extension of the lesions from the diagnosis.

These particularities of IBD and their possible repercussions on socio-professional life justify appropriate management, which must control the disease without compromising growth.

IBDs are medico-surgical affections; their treatment is mainly medical and becomes surgical in case of complications or failure of medical treatment.

MATERIALS ET METHODS

Our work was carried out in the Surgery A department at Rabat children's hospital, this is a retrospective study of a series of 13 patients over a

period of 10 years, 12 cases of Crohn's and 1 case of RCH.

We included in the study the patients followed for IBD and operated for complications of their pathology, but also the patients whose operative act made discover the IBD.

The purpose of the work is:

- To highlight the different surgical aspects of the disease.
- To clarify the indications and the place of surgical treatment in the management of IBD.
- To recount the experience of the A surgery department of Rabat Children's Hospital in Morocco.

RESULTS

The average age of our patients is 14.4 years. The sex ratio M / F being 1 = 6/6. The only case of RCH having occurred in an 8 year old girl.

There was no family form in our study. The reasons for consultation were varied, abdominal pain was in the foreground in 34% of cases, skin fistulae in 33% of cases, an abdominal mass in 17% of cases, abdominal distension and a subocclusive syndrome came last with 8% cases each.

The reason for consultation in the case of RCH alone was rectorrhagia. With regard to the pathological antecedents; two of our patients, 16.6%, were operated for appendix plastron. Two had abscesses, a gluteal abscess in one case and a parietal abscess in another case. Three of our patients, 25%, were treated for intestinal tuberculosis before being diagnosed with Crohn's.

Regarding digestive symptoms; 10 of our patients had abdominal pain, 83.3% of cases. These pains were diffuse in 6 patients, located in the right iliac fossa in 3 patients, hypogastric and paraumbilical in 1 patient. For the case of RCH, the pains were peri-umbilical cramp type. In our series chronic diarrhea was found in 8 patients, 66.6% of cases. Diarrhea is bloody in 2 patients and liquid in 5 others.

Indication	Pourcentage		
Fistule	25%	Spontanée	8,3%
		Post-appendicectomie	16,6%
Sténose	16,6%	Dernière anse iléale	8,3%
		grelique	8,3%
Résistance au traitement médial	16,6%		
Abcès	8,3%		
Tumeur caecale (intervention pour exploration)	8,3%		

Fig-1: Table showing indications for surgical treatment

In 3 of the patients, transit disorders were alternating with diarrhea and constipation. One of our patients had a subocclusive syndrome.

Diarrhea was also present in the case of UC. It was bloody and purulent diarrhea, with 4 to 6 stools a day. An abdominal mass was found in 3 patients, in 3 cases the mass sat in the right iliac fossa. Enterocutaneous fistulas were found in 4 of our patients, ie 33.3% of cases.

- A post-appendectomy fistula in 2 patients at the level of the Mac-Burney scar.
- A spontaneous fistula in a patient at the level of the right iliac fossa and a fistula occurring at the level of the epigastrium, following a restoration of continuity.

In our series, 2 patients (16.6%) had presented ano-perineal manifestations, it was an anal fissure in both cases. In our series, 2 patients (16.6%) had minimal bleedings. Rectorrhagia has also been present in the case of UC. The fever was found in 7 patients or 63.6%. Weight loss was noted in 7 of our patients.

Puberty delay is evident in 8 of our patients with Crohn's disease, with one patient who has not yet arrived at this stage on admission and a notion of secondary amenorrhea in another patient.

Eleven of our patients (91.6%) were underweight, 10 of whom (83.3%) also had an associated stature deficit. Failure to thrive is also reported in the case of RCH listed with a weight at -3DS and a size at -2DS.

Other extra-gastrointestinal manifestations were observed mainly arthralgia-type joint damage, observed in 5 of the patients, only one patient had arthritis of the left knee. Ophthalmological examination was performed in 2 of the patients who reported visual fog, and the examination was not specific.

Hepatic assessment was done in 11 of the patients, and revealed hepatic cytolysis in 2 patients, this cytolysis was secondary to the treatment PENTAZA in one case and having decreased after stopping the medication, and in the other case, the Isolated cytolysis was unexplained and progressively worsened until death of the patient.

Only one patient developed during the course of the evolution a clinical nerve attack to type of peripheral neuropathy not explored paraclinically. All the patients benefited from a biological and radiological assessment, as well as endoscopies with biopsies to confirm the diagnosis.

Subsequently, based on opacification and endoscopy data, we can determine the location of Crohn's disease, knowing that the disease can spread from one location to another during the evolution. In the case of the RCH, the attack concerned the whole colonic framework, with also affecting the rectum. All patients benefited from medical and nutritional treatment.

The operative indications for this category were various as follows:

Fistulas

- Spontaneous: in the right iliac fossa occurred in 1 patient is 8.3%.
- Post-appendectomy: in 2 patients or 16.6% of cases, these fistulas initially benefited from medical treatment, but the failure of the latté recourse to surgery was required.

Stenosis

- of the last ileal loop: in 1 patient is 8.3% of cases.
- hail: in 8.3% of cases.
- Perforated caecal tumor (intervention for exploration) responsible for aseptic peritonitis, also for 1 patient.
- Resistance to medical treatment: in 2 cases with onset of relapses in a growing child.

Resistance to medical treatment was also an indication for surgical treatment in the case of UC.

Abscess of the right iliac fossa

The second category included patients operated on for another indication, and had per-operative findings and histopathological examination that corrected the diagnosis.

- Three appendicular syndromes.
- A restoration of continuity after suture release.

The types of intervention were varied; ileocaecal resection in 25% of cases, right ileocolectomy in 16.6% of cases, subtotal colectomy with ileo-rectal anastomosis in 16.6% of cases, segmental resection of small bowel in 8.33%, and surgical drainage in 8, 33%.

In the only RCH of the series, a coloproctectomy with ileoanal anastomosis was performed without making a reservoir. In our series, 2 patients presented recurrence in the form of an enterocutaneous fistula and both evolved well with closure of the fistulous orifice under Remicade. One patient developed post-operative sepsis and died in intensive care.

DISCUSSION

Very often, IBD is well controlled by medical and nutritional treatment [1]. Sometimes, however, it will be useful to have surgery [2,3]. Several circumstances may lead to consider intervention in a patient with IBD, especially when [4]:

- à complication occurs,
- drug treatment is ineffective, especially if it is a severe form of the disease,
- the treatment is insufficiently effective and does not prevent a significant repercussion of the disease on the general condition and quality of life,
- With large doses of medications needed to control the disease, they cause troublesome side effects.
- Since the purpose of the procedure is to remove the diseased part or to treat a possible complication, the type of intervention used depends on the location of the lesions and the nature of the complications.

The lesions of the RCH are limited to the colon and the rectum. The surgeon will therefore perform a complete resection (total coloproctectomy) or almost complete (colectomy with preservation of the rectum). The continuity of the digestive tract is then restored by connecting the terminal part of the small intestine:

- in the rectum by an ileo-rectal anastomosis;
- either directly to the anus by an ileoanal anastomosis with or without the creation of a reservoir, or after an ileo-rectal anastomosis; [5]
- directly to the skin (ileostomy).

Total coloproctectomy allows complete healing as the RCH only reaches the colon and rectum. The ileoanal anastomosis is the reference method because it allows to maintain the sphincter function and, by creating a reservoir instead of the rectum, to limit the number of stools. Its realization is however delicate, it requires several interventions [6].

Complications are possible: infection, inflammation of the reservoir ("pochite"). In the long term, this type of intervention will be a failure in about 5% of cases, it also increases in women the risk of infertility [7-10].

Crohn's disease, on the other hand, can reach more or less extensively all segments of the digestive tract. His surgical treatment is therefore more problematic [11,12]. The lesions are usually treated by an "economical" resection of the affected part in order to limit as much as possible the length of the intestinal segments removed. This is fundamental in the small intestine that is necessary for the proper assimilation of food. Both ends of the healthy gut are then connected. In the colon, resection may be more extensive, as in the case of UC, without major consequences [13].

Surgical intervention is primarily indicated in the following circumstances: [4]

- to treat certain ulcerated lesions: the ulcers expose indeed to various complications - perforations, intestinal obstructions, haemorrhages -, but these ulcers often yield easily to the medical treatment; so that the surgeon only intervenes in about 20% of cases,
- in case of severe haemorrhage or colectasia. Urgent surgery is essential then,
- treatment of most fistulas and especially abscesses.
- to intervene on the stenoses often present in Crohn's disease. The operative decision is made if abdominal pain or a potential risk of occlusion exists. Two surgical techniques are possible. The resection of the injured segment is proposed if the stenoses are not too extensive. Conversely, the conservative technique of leaving the diseased area in place is preferable when the narrowing is large and scattered. The surgeon then widens the diameter of the intestine, through incisions or by calibrating it by a mechanical process.
- In some cases, the narrowing can be achieved by an endoscope. Endoscopic dilatation will then be performed using an inflatable balloon without the need for surgery.

When the procedure has removed all or most of the diseased area, the patient generally found a good general condition and improved digestive function. However, the result obtained is less spectacular if a large part of the intestine had to be removed, because the digestive capacities are reduced accordingly.

In rectocolitis

The surgeon having removed the "target" organ, any risk of recurrence can be ruled out. But sometimes part of the rectum is left in place and the disease can continue to evolve at this level. The current trend is to completely remove the colon and rectum to avoid this situation knowing that this intervention may be at the origin, in women, a reduction in fertility.

In Crohn's disease

The surgeon never removes the entire digestive mucosa that may be affected. Also, after the intervention the improvement is most often spectacular, but does not protect from recurrences. Preventative medical treatment of relapses should be considered in certain situations, but a new push is possible. About 30% of patients relapse within 5 years; and 60% will have to be reoperated within 15 years of the first intervention.

When the extent of the lesions necessitates extensive resection of the small intestine, there is a risk of poor absorption of food. It is possible, however, to compensate for these phenomena most often by a suitable diet, certain nutrition techniques and medical treatment.

The risk of developing sexual disorders after removal of the rectum is extremely low (less than 0.2% of impotence is observed). The risk of à fall in fertility is high in case of total colectomy with ileoanal anastomosis (it would be multiplied by 3). It is therefore essential that before the operative decision the patient is fully informed of the possible risks.

Finally, it should be known that the surgical procedure improves most of the time very clearly the general state. In HCR, which is then theoretically cured, no medical treatment is needed. In Crohn's disease the relief of medical treatment is generally made possible, a preventive treatment of relapses is often started. Regular monitoring is of course essential [13].

Certain circumstances impose without discussion a type of surgical act; this is the case of the occurrence of a complication (an abscess for example) [4].

However, in other circumstances, several choices are possible and must be made taking into account the opinion of all the health professionals responsible for monitoring (attending physician, gastroenterologist and surgeon) and the patient, properly informed. Advantages and disadvantages of each solution. Some stenoses, if they are accessible during a colonoscopy (including post-operative stenoses) may sometimes be treated by endoscopic dilatation. This type of treatment sometimes requires several sessions. A recurrence is always possible, but if successful it avoids an intervention.

Some patients (often elderly) will prefer a large ablation ending in an artificial anus, while others will choose the conservative solution (anastomoses iléo-anal) with the disadvantage of having frequent evacuations but by the anus.

In all cases, the results of the surgery will be all the more beneficial to the patient and any sequelae will be better supported, the patient will have been properly informed before the intervention, and that clear and precise answers will have been brought to all of his questions.

Laparoscopic surgery is becoming increasingly important in digestive surgery. But if in the course of IBD, all interventions are feasible under laparoscopy, as of today this type of surgery can be conceived only if it is performed by a surgeon both expert in the field of IBD and in the case of laparoscopic surgery. A laparoscopic procedure that reduces postoperative pain, length of hospital stay, and has a certain aesthetic advantage can only be conceived by a team experienced in both laparoscopic surgery and IBD surgery. To prove delicate, if not impossible. Multiple, infected lesions and previous interventions are all limiting factors. The duration of intervention is often increased. However, in case of total coloproctectomy with ileoanal anastomosis, it is specified that this intervention is more and more feasible to avoid adhesions and can reoperate patients if necessary [14,15].

CONCLUSION

Inflammatory colitis, the peak frequency of which is estimated in adults aged 30-40, is not uncommon in children. In conditions as unpredictable and variable as these inflammatory colitis, sometimes interspersed with periods of remissions, but without real cure, and can become complicated quickly and seriously, and bring into play the vital prognosis, the place of surgery is no longer discuss.

The surgeon has several surgical options that are deferred by principle, however, for RCH, ileal-anal anastomosis with reservoir has become the first-line treatment in several centers. It presents what may be called the ideal treatment of the RCH, as it allows at the same time the eradication of all the mucous recto-colic patient and the conservation of a normal transit.

Initially burdened with a long morbidity and many functional failures, its results have now improved significantly thanks to the technical improvement.

The study of indications and complications of surgical treatment of colitis remains very intriguing. Thus, the earlier the indication is given and in times of quiescence, the lower the morbidity and the better results.

Our series is limited compared to large series of the literature, so in 10 years, only 13 patients were operated in the A surgery department, the results are considered satisfactory in 10 patients, with the occurrence of a death in the post -operative septicemia and 2 post-operative recurrences in the form of fistulas having evolved well under medical treatment.

CONFLICT OF INTEREST

All the authors declare that they do not have any conflict of interest.

AUTHOR'S CONTRIBUTION

All authors contributed to the writing of this manuscript. All have read and approved the final version of the latter.

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