

## Particularities of Crohn's Disease Revealed by an Appendicular Syndrome - About 31 Cases

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**Received:** December 16, 2022; **Published:** January 21, 2023

### Abstract

**Introduction and Aim:** Crohn's disease (CD) is a chronic disease that can be revealed by an acute appendiceal syndrome. The aim of the work was to identify the particularities and analyze patients with Crohn's disease revealed by an appendicular syndrome.

**Materials and Methods:** This is a retrospective and descriptive study of patients with CD revealed by an appendicular syndrome over a period of 6 years in our unit.

**Results:** 31 patients were collected out of 163 patients with CD. The average age was 29 years, with a sex ratio F/M of 1,12. 19 patients presented with a non complicated appendicitis, 11 patients with appendiceal abscess and 1 patient with an appendicular peritonitis. 17 patients underwent ileocecal resection in emergency. 10 patients underwent emergency appendectomy, complicated in 2 patients by an enterocutaneous fistula, 1 patient with a deep abscess, 3 patients with a deep abscess fistulized at the abdominal wall, 2 patients with an ileal stenosis, 1 patient of an ileocecal mass and 1 patient of micro-abscess of the right iliac fossa. 4 patient was not operated in emergency, put under medical treatment with good evolution. Mean CDAI was 262, being higher in emergency operated patients. Rutgeerts in the operated patients were higher in those operated on urgently (i3 i4), i0 i1 in the rest of the patients.

**Conclusion:** In patients with CD revealed by an appendicular syndrome, the activity of this disease seems high especially in patients operated in emergency.

**Keywords:** Crohn's Disease (CD); Appendicular Syndrome

### Introduction

CD is a chronic inflammatory disease that can affect the entire digestive tract, from the mouth to the anus.

The diagnosis of CD is based on clinical, biological, endoscopic and histological arguments.

It can be revealed by an appendicular syndrome.

It is interesting to note that 50% of the classical attacks of ileocolic CD involve the appendix [1].

### Aim of the Study

The aim of our work is to note the particularities of the evolution and the prognosis of patients in whom CD was revealed by an appendicular syndrome and to highlight if there is a link between this mode of revelation and the activity of the disease.

### Patients and Methods

This is a retrospective, descriptive and analytical study conducted in the hepato- gastroenterology department of Medicine B of Ibn Sina Hospital in Rabat.

Were collected 31 patients in whom CD was revealed by an appendicular syndrome during the period from January 2015 to January 2022.

These patients underwent an interrogation, a complete clinical examination, a biological and radiological work-up and a digestive endoscopy.

Assessment of disease activity was performed by the CDAI and Rutgeerts scores in the operated patients.

### Results

Of 163 cases of CD hospitalized during the period from January 2015 to January 2022, 31 (19%) were revealed by appendicular syndrome.

The mean age of the patients was 29 years (with age extremes of 16 and 72 years), and the F/M sex ratio was 1.12.

### Clinically

19 patients (61.29%) presented with a simple acute appendicitis, 11 patients (35.4%) with an appendicular abscess and 1 patient (3.22%) with an appendicular peritonitis.

Extra-digestive manifestations, such as articular manifestations, were present in 6 patients (19.35%) and ano-perineal manifestations were found in 10 patients (32.2%).

The results were divided into 3 groups of patients:

1. Group 1 includes 10 patients (32.25%) who underwent emergency appendectomy.
2. Group 2 includes 17 patients (54.8%) who underwent emergency ileo-caecal resection.
3. Group 3 includes 4 patients (12.9%) who did not undergo emergency surgery and were initially put on medical treatment.

The evolution was marked, in group 1 patients, by the appearance in one patient (10%) of an abscess of the right iliac fossa, in 2 patients (20%) of an enterocutaneous fistula of the right iliac fossa, in 3 patients (30%) a combination of abscess and enterocutaneous fistula of the right iliac fossa, in 2 patients (20%) ileal stenosis, in 1 patient (10%) renal obstruction syndrome on an ileo-caecal digestive mass and in 1 patient (10%) micro-abscesses of the right iliac fossa. All these patients underwent ileo-caecal resection and the anatomicopathological examination of the surgical specimen confirmed active CD disease.

The mean CDAI of the patients in this group was 240 and the Rutgeerts was estimated i4 in 1 patient, between i0 and i2 in the other 9 patients.

	Less than 150	150-220	220-450	More than 450	
CDAI	2 patients (20%)	3 patients (30%)	5 patients (50%)	0 patients	
	I0	I1	I2	I3	I4
Rutgeerts	3 patients (30%)	4 patients (40%)	2 patients (20%)	0 patients	1 patient (10%)

**Table 1:** CDAI and Rutgeerts scores in group 1 appendectomized patients.

In group 2, appendicular peritonitis in 1 case (5.88%), appendicular abscess in 5 cases (29.41%), entero-enteric and entero-cutaneous fistulas in 7 cases (41.17%), and ileal stricture in 4 patients (23.52%).

All patients underwent ileo-caecal resection with peritoneal lavage in the patient with appendicular peritonitis, and the anatomopathological examination of the surgical specimen was in favor of active CD.

The mean CDAI of these patients was 360 and the estimated Rutgeerts was i4 in 5 patients, i3 in 10 patients, i2 in 2 patients, i1 and i0 in no patients.

In group 3, 1 patient (25%) with a right iliac fossa abscess was put on antibiotics and then operated without urgency, 2 patients (50%) were put on medical treatment and then operated on for ICD stenosis, and 1 patient (25%) was kept on medical treatment (corticosteroid therapy with associated degeneration to 5-ASA and introduction of immunosuppressants 4 months later) and did not undergo surgery.

Endoscopic, radiological and histological exploration revealed ileocolic CD.

The mean CDAI of this group of patients was 186 and the Rutgeerts of these 4 patients was i0 i0 i1 i1, respectively.

**Discussion**

CD may be revealed by an appendicular syndrome [2].

The symptomatology found is in 85% of the cases a pain of the right iliac fossa, in 27% of the cases a palpable mass and, for more than half of the cases, a duration of evolution of more than seven days, which must make one suspect this diagnosis [3].

There is a male predominance ranging from 1.3 to 2 males for every female, with a mean age of 24 years [3,4].

Several studies have examined the role of appendectomy on the course of CD. These studies are contradictory; some investigators have found a negative association, others have shown no association, and still others have found that it plays a deleterious role on the onset and clinical course of the disease [5].

It appears that an appendectomy performed before the diagnosis of CD decreases the risk of development of extra-digestive manifestations, particularly articular ones [6]. As there seems to be a relationship between appendectomy and a higher risk of stenosis and a lower risk of fistulas and ano-perineal manifestations [7].

Indeed, several studies have demonstrated the high aggressiveness of CD in patients with antecedent of appendectomy as shown by the results of our study (See table 1).

This increased risk was not only present in the first years after appendectomy but also remained unchanged if follow-up started 10 years after appendectomy [8].

There is currently no clear explanation for this association. The etiology and pathogenesis of appendicitis are not well understood [9]. Mechanical obstruction, the most favored theory, is found in only one third of cases [10]. A disruption of the mucosal barrier by direct invasion of a pathogen or by an inflammatory response is another possible mechanism.

### Conclusion

CD can be revealed by an acute symptomatology, among others the appendicular syndrome.

In our study, patients operated on in the emergency setting have relatively high disease activity.

Appendectomy represents a risk factor for high CD activity; hence the interest in evoking CD in the presence of acute appendicitis. This association is continuously present up to 20 years after appendectomy. This strongly suggests an underlying biological mechanism. Further studies on the etiology and pathogenesis of appendicitis are warranted, because this may be a fruitful way to expand our understanding also of the underlying cause of CD.

However, and in order to control disease activity in appendectomized patients, should combotherapy, combining immunosuppressive therapy and anti-TNF, be offered from the outset to avoid possible disease complications?

### Bibliography

1. Nugent FW. "Crohn's disease of the appendix". *The American Journal of Gastroenterology* 65 (1976): 83.
2. Gilaad G and Kaplan MD. "The Risk of Developing Crohn's Disease After an Appendectomy: A Meta-Analysis". *American Journal of Gastroenterology* (2008).
3. Richards ML, et al. "Granulomatous appendicitis: Crohn's disease, atypical Crohn and #39;s, or not Crohn's at all?" *Journal of the American College of Surgeons* 185 (1997): 13-17.
4. Ruiz V, et al. "Crohn's disease of the appendix". *Surgery* 1 (1990):07: 113-117.
5. Loureiro AC and Barbosa LE. "Appendectomy And Crohn's Disease". *Journal of Coloproctology* (2018).
6. Riegler G, et al. "Worse clinical course of disease in Crohn's patients with previous appendectomy". *European Journal of Gastroenterology and Amp; Hepatology* 17.6 (2005): 623-627.
7. Caserta L, et al. "Relationship between anamnestic evidence of appendectomy and onset and clinical course of Crohn's disease". *The American Journal of Gastroenterology* 97.1 (2002): 207.
8. Andersson RE, et al. "Appendectomy is followed by increased risk of Crohn's disease". *Gastroenterology* 124.1 (2003): 40-46.
9. Koepsell TD. "In search of the causes of appendicitis". *Epidemiology* 2 (1991): 319-321.
10. Arnbjornsson E and Bengmark S. "Role of obstruction in the pathogenesis of acute appendicitis". *The American Journal of Surgery* 147 (1984): 390-392.

**Volume 10 Issue 1 January 2023**

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