

Terminal Ileal Intubation: Interest and Results, through 5224 Ileo-Colonoscopies

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Abstract

Introduction: Ileo-colonoscopy is considered the method of choice for exploring the terminal ileum. However, the diagnostic value of terminal ileal intubation (IBD) during colonoscopy remains controversial. The objective is to evaluate the frequency, the interest and the results of systematic catheterization of the IBD with biopsies during a total colonoscopy. **Patients and Methods:** Were included all patients referred to the service for a colonoscopy whatever the indication from July 2006 to July 2022; in whom IBD catheterization was performed whenever possible regardless of the indication for colonoscopy. All colonoscopies were performed under Propofol sedation and all patients were prepared with Polyethylene Glycol (PEG). **Results:** Out of a total of 5224 colonoscopies, the IBD was catheterized in 2371 patients, i.e. a frequency of 45%. 62% were men and 37% women. The average age was 46 years old. The most common indications were diarrhea in 35% patients and rectal bleeding in 30% patients. IBD was abnormal in 249 patients (11%): congestive ileitis in 88 patients (3.7%), nodular ileitis in 75 patients (3.1%), ulcerated ileitis in 72 patients (3%), stenosis in 10 patients (0.5%), an ulcero-budding tumor in 2 patients (0.1%) and angiodysplasia in 2 patients (0.1%). The histological study of ileal biopsies was pathological in 116 patients (47%): Crohn's disease in 110 patients (94.8%), tuberculosis in 4 patients (3.4%), radiation ileitis in 1 patient (0.8%) and neuroendocrine carcinoma in 1 patient (0.8%). **Conclusion:** The diagnostic yield of catheterization of the last ileal loop varies according to the indications for colonoscopy. It should be done as often as possible during each colonoscopy to objectify terminal ileitis most often referred to Crohn's disease and therefore requiring adequate medical care.

Keywords: Ileo-colonoscopy, terminal ileum intubation, Crohn's disease, Polyethylene Glycol (PEG).

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INTRODUCTION

For gastrointestinal endoscopists, the ileocecum is the finishing line during colonoscopy and it is identified by three endoscopic landmarks: terminal ileum, ileocecal valve, and the appendiceal orifice. Although ileal intubation is recommended during routine screening colonoscopy, it is not required in most cases of screening colonoscopy [1]. Ileal intubation is indicated in certain circumstances such as suspected inflammatory bowel disease and GI bleeding. There is much pathology that can be observed within the ileocecum. Careful and systematic examination should be stressed during GI endoscopic training and practice [2, 3]. The objective is to evaluate the frequency, the interest and the results of systematic catheterization of the IBD with biopsies during a colonoscopy.

MATERIALS AND METHODS

Were included all patients referred to the Unit for a colonoscopy whatever the indication from July 2006 to July 2022; in whom IBD catheterization was performed whenever possible regardless of the indication for colonoscopy. All colonoscopies were performed under Propofol sedation and all patients were prepared with Polyethylene Glycol (PEG).

RESULTS

Out of a total of 5224 colonoscopies, the IBD was catheterized in 2371 patients (frequency of 45%). 62% were men and 37% women. The average age was 46 years old. Diagnostic yield of IBD catheterization: 11%.

| | |
|--------------------------------------|-------------|
| Total number of colonoscopies | 5224 |
| Number of IBD catheterizations | 2371 |
| Catheterized IBD frequency | 45% |
| Average age | 46 ans |
| Sex ratio M/F: | 1,6 |
| Men | 1470 (62%) |
| Women | 901 (38%) |

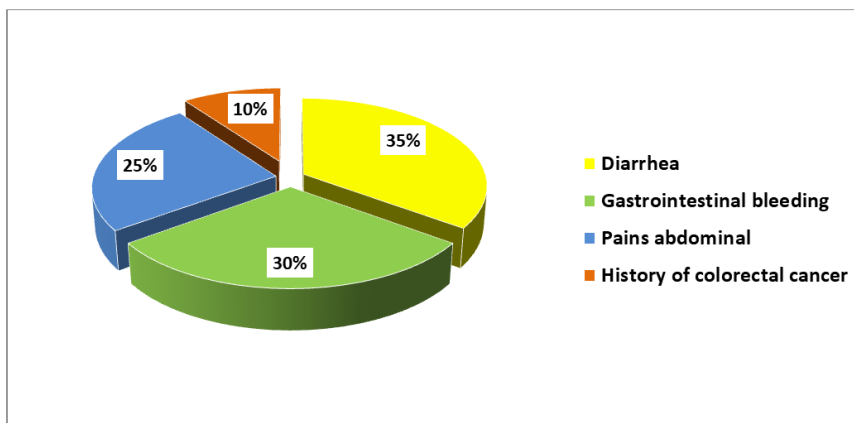


Fig. 1: indications for colonoscopy

Chronic diarrhea is the most common indication, found in 35% of patients, rectal bleeding second in 30% of patients, abdominal pain with

warning signs in 25% of cases and a history of CRC in 10% of cases.

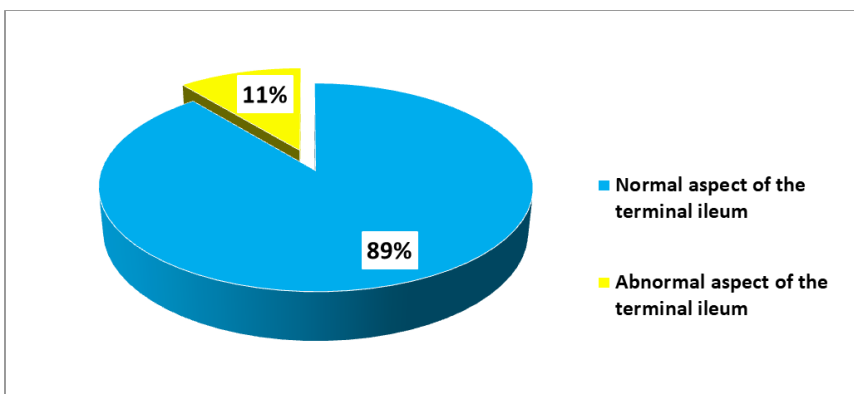


Fig. 2: Endoscopic aspects of the terminal ileum

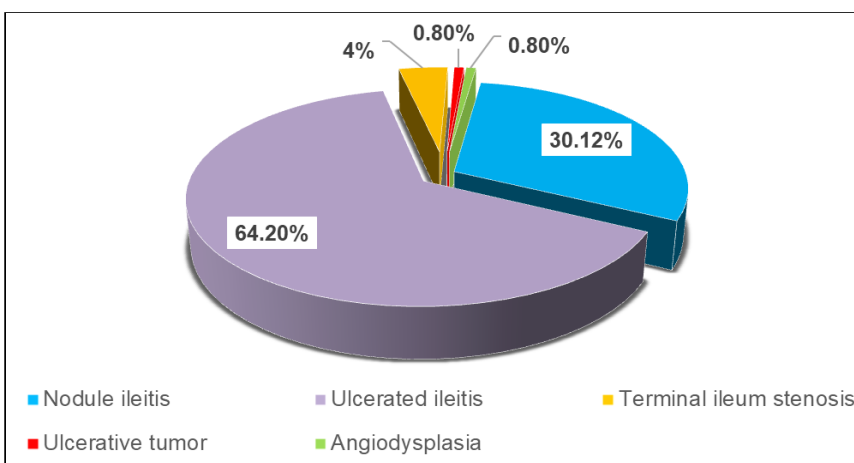


Fig. 3: Pathological aspects of the terminal ileum

IAD was abnormal in 249 patients (11%): ulcerated ileitis in 64.2%, nodular ileitis in 30.1%,

stenosis in 4%, ulcero-budding tumor in 0, 8% and angiodysplasia in 0.8%.

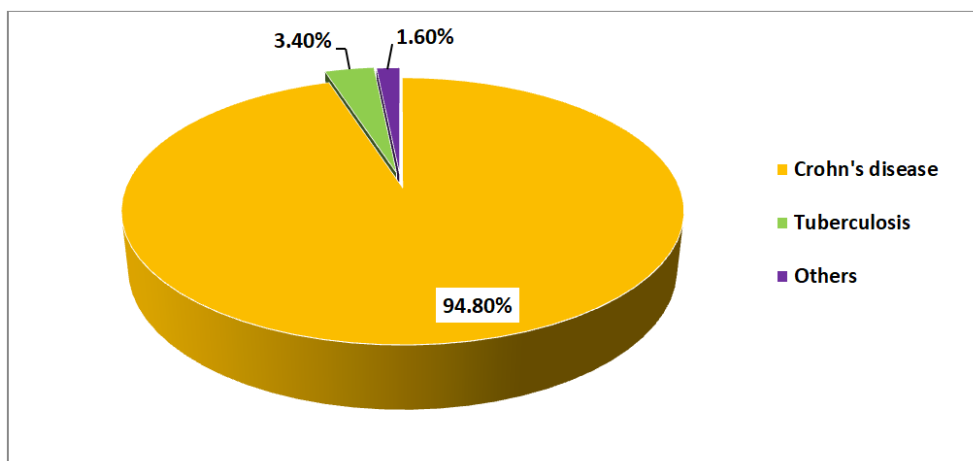


Fig. 4: histological results of ileal biopsies

The histological study of ileal biopsies was pathological in 116 patients (46.6%): Crohn's disease in 110 patients (94.8%), tuberculosis in 4 patients (3.4%), radiation ileitis in 1 patient (0.8%) and neuroendocrine carcinoma in 1 patient (0.8%).

DISCUSION

In the present study, the most common indication for ileal intubation was diarrhea (35%) followed by gastrointestinal bleeding (30%), pains abdominal (25%), and history of colorectal cancer(10%). There were 45% successful ileal intubations.

| Authors | Indications | | | | | Catheterized IBD frequency |
|--------------------------------|-----------------|---------------------------|-------------|------------|----------|----------------------------|
| | Pains abdominal | Gastrointestinal bleeding | Contipation | Diarrhea | bloating | |
| Akere <i>et al.</i> , [4] | 26,2% | 25% | 14,2% | 14,2% | - | 30,9% |
| Velidedeoğ <i>et al.</i> , [5] | 26% | 28% | 5% | 39% | 8% | 35% |
| Wijewantha <i>et al.</i> , [6] | 15,83% | - | - | 29,31% | 10,6% | 75,9% |
| Our case | 25% | 30% | - | 35% | - | 45% |

This is a comparative table comparing the indications of our study with the studies described in the literature:

The catheterization rate of the IAD in our study was 45%, which agrees with the results of Aker [4] and Velidedeoğ [5] where the catheterization rate was 30.9% and 35% respectively, unlike the work of wijewanta [6] where the catheterization rate was 75.9% higher than that of our study.

Regarding the indications, In our study the main indication was diarrhea followed by rectorrhagia, abd pain, which agrees with Velidedeoğlu [5] and Wijewantha [6], on the other hand in Akere's study [4] the main indication was abdominal pain followed by rectorrhagia.

| Authors | % pathological DAI | Endoscopic lesions | | | % positive biopsies | histopathological results | | | |
|----------------------------------|--------------------|--------------------|-----------------|--------------------|---------------------|---------------------------|--------------|--------------------|-------------|
| | | Ulcerated ileitis | nodular ileitis | Congestive ileitis | | Crohn's disease | Tuberculosis | Infectious ileitis | Others |
| N. Alkhalidi <i>et al.</i> , [7] | 20,9% | 20,4% | 49,7% | 38,9% | 7,4% | 100% | 0% | 0% | 0% |
| Wijewantha <i>et al.</i> , [6] | 72,3% | 38,3% | - | 61,7% | 58% | 59,5% | 12,7% | 17% | 10,6% |
| Our case | 11% | 64,2% | 30,12% | - | 47% | 94,8% | 3,4% | | 1,6% |

Regarding the endoscopic aspect, it was 72.3% at Wijewantha higher than that of our study and the study of Alkhalidi [7] which is 11% and 20.9% respectively, this can be explained by the sampling of patients included in their studies who predominantly had diarrhea and significantly higher abnormalities were reported in these patients.

Regarding endoscopic lesions, the dominant endoscopic aspect is nodular ileitis in Akhalidi [7], congestive ileitis in wjewantha [6] and ulcerative ileitis in our study.

For the anatomopathological results, it was 58% in the Wijewantha series [6], which agrees with our results, which were 47%. Crohn's disease was the main etiology according to the studies followed by tuberculosis, which is consistent with our studies.

CONCLUSION

The diagnostic yield of terminal ileal intubation varies according to the indications for colonoscopy. Catheterization of the last ileal loop should be done as often as possible during each colonoscopy to objectify terminal ileitis most often referred to Crohn's disease and therefore requiring adequate medical care.

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