



# Caecal Perforations: Anatomoclinical Aspects and Management in the General Surgery Department at the CHU Donka

Keita Doubany Mariame<sup>1</sup>, Guirassy Mariama II<sup>1</sup>, Condé Ansoumane<sup>1</sup>, Traoré Lansana<sup>2</sup>, Mohamed Albert Diawara<sup>3</sup>, Naby Fofana<sup>1</sup>, Foafana Houssein<sup>1</sup>, Toure Aboubacar<sup>1</sup>

<sup>1</sup>General Surgery Department CHU Ignace Deen, Faculty of Health Sciences and Techniques, Gamal Abdel Nasser University of Conakry, Guinea.

<sup>2</sup>Visceral and Digestive Surgery Department, Donka National Hospital, Faculty of Health Sciences and Techniques, Gamal Abdel Nasser University of Conakry, Guinea.

<sup>3</sup>Surgery Department, Ratoma Communal Medical Center, Conakry, Guinea.

## Correspondence

Keita Doubany Mariame

Surgery Department, Ratoma Municipal Medical Center, Conakry Guinea  
Tel: 622612920

E-mail : doubanymk2016@gmail.com

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## Abstract

**Introduction:** the aim of this study was to analyze the management of 45 cases of caecal perforations in the general surgery department at CHU Donka Conakry.

**Methodology:** This was a descriptive retrospective study lasting 10 years, from January 1, 2013 to December 31, 2022 performed in the general surgery department at CHU Donka, Conakry.

**Results:** We have recorded in 10 years, 45 cases of caecal perforations or 9.45% compared to other cecal pathologies. The age groups from 50 to 64 years accounted for 35.5% or 16 cases. The average age was 53.2 years and the extremes were from 6 years to 86 years. The male sex represented 27 patients or 60% with a sex ratio of 1.5. Abdominal pain and fever were the reasons for consultation in all our patients and the clinical diagnosis of appendicitis was made in 20 patients or 44%. Luberkunian adenocarcinoma was histologically evoked in 15 cases, i.e. 33.33%, and benign behavior was visualized in 25 patients, i.e. 56%.

**Conclusion:** The anatomopathological examination constitutes a means of evaluation of the lesion assessment but also of the etiological diagnosis.

## Introduction

Hollow visceral perforations are fairly common surgical emergencies in our practice, of which colonic perforations are rare, the cecum being rarer. Many causes have been implicated in cecal perforation, of which distal colonic obstruction, trauma, and foreign body ingestion are common [1].

They represent ubiquitous lesions, the frequency of which is linked to their risk factor, of which cancer and inflammatory pathologies occupy a prominent part [2].

The age-dependent etiology of this surgical emergency may arise either from a mechanical pause in the flow of intestinal contents or from colonic dilatation in the absence of an anatomical pseudo-obstruction/lesion. Tumors, diverticulitis severe inflammatory processes, fecal impactions and volvulus can be the causes. An omental appendix band is an uncommon cause of significant closed-loop colonic obstruction, leading to cecal perforation [3].

The diagnosis is confirmed intraoperatively. The anatomopathological examination will serve as a time for lesion assessment on the

one hand and for etiological research on the other hand [4].

The treatment is emergency surgery and the prognosis, often poor, depends on the terrain and the speed of treatment [6].

The aim of this study was to analyze the management of 45 cases of caecal perforation in the general surgery department at CHU Donka.

## Patients and methods

This was a retrospective, descriptive study, collecting the files of patients operated on for cecal perforations over 10 years, from January 1, 2013 to December 31, 2022, carried out in the general surgery department at Donka University Hospital. Patients operated on for other abdominal-digestive pathologies unrelated to cecal perforation were excluded. Medical imaging is of major importance for the diagnosis, but the diagnosis is confirmed intraoperatively.

Anatomopathological examination in search of etiology. The treatment is surgical by performing a laparotomy, the type of which will depend on the choice of surgeons. Our study variables were epidemiological, clinical,

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therapeutic and pathological. Data were collected from patient records and noted on a survey sheet. The input and analysis was done with Word, Excel, Power Point from Office Pack 2013 and Windows.

**Results**

We collected 45 cases of cecal perforations out of a total of 476 cases, representing a frequency of 9.45% compared to other cecal pathologies.

The age groups from 50 to 64 years accounted for 35.5% or 16 cases (Table 1). The average age was 53.2 years and the extremes were from 6 years to 86 years. Males represented 27 patients or 60% with a sex ratio of 1.5.

**Table 1.** Distribution of patients according to age groups

Age group (in years)	Numbers	Proportion (%)
5 - 19	3	7
20 – 34	6	13
35 – 49	9	20
50 - 64	16	35,5
65 - 79	7	15,5
80 - 94	4	9
Total	45	100

The clinical picture was dominated by abdominal pain and fever were noted in all our patients followed by weight loss in 29 cases or 64.44%; physical asthenia 29 cases or 64.44%; vomiting 46.67% or 21 cases and cessation of materials and gas in 18 cases or 40%.

The presumptive diagnosis was dominated by appendicitis in 20 cases or 44% followed by cecal tumor in 33% or 15 cases; ileocecal intussusception in 7 cases or 16% and generalized acute peritonitis in 3 cases or 7%.

The surgical gesture and the most performed gesture was right colectomy in 73% or 33 cases, followed by ileo-caecal resection in 8 cases or 18% and cecal lumpectomy in 9% or 4 cases.

The site of the perforation was at the cecal base in 27 cases, i.e. 60%, ileo-caecal junction in 10 cases, i.e. 22%, anterior surface in 9%, i.e. 4 cases and located on the posterior surface in 9%, i.e. 4 cases.

Macroscopic lesions were dominated by budding ulcerative lesions in 24 cases, i.e. 53%, illustrated in Table 2.

**Table 2.** Distribution of perforations according to macroscopic lesions.

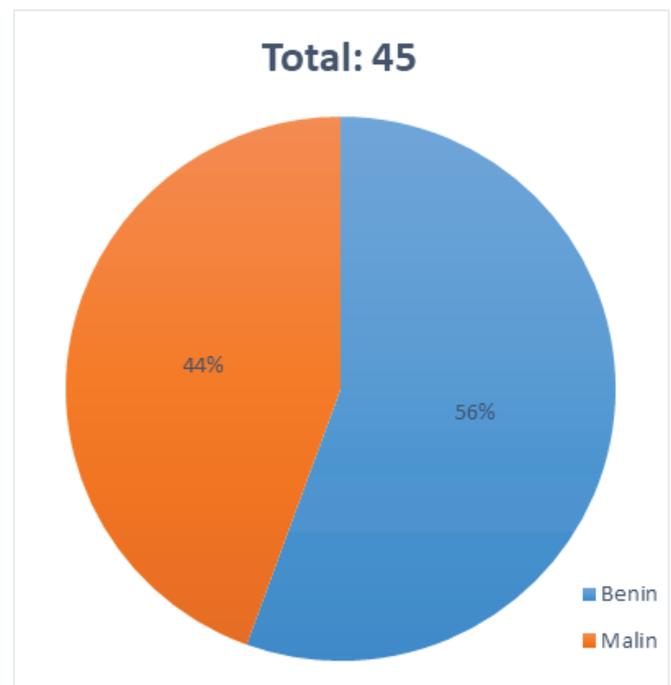
Macroscopic aspects	Numbers	Proportion (%)
Ulcerobudding	24	53
Budding	07	16
Infiltrating	07	16
Infarcted	05	11
Sphacele	02	4
Total	45	100

All the documents were sent to the pathology department and Luberkuhnien adenocarcinoma was the most noted histological lesion in 17 cases or 38% (Table 3).

**Table 3.** Distribution of perforations according to histological lesions.

Histological lesions	Numbers	Proportion (%)
Luberkuhnien adenocarcinoma	17	38
Cecal infarction	09	20
Infarction on fibro-inflammatory polyp	05	11
Cecal base necrosis	04	9
Neuroendocrine carcinoma	03	7
Tuberculous granuloma	03	7
Bilharzial granuloma	02	4
Ileocecal lymphoma	02	4
Total	45	100

The histological lesions were benign in 56% or 25 cases and malignant in 44% or 20 cases.



**Figure 1.** Histological classification of lesions.

**Discussion**

During our study, we recorded 45 cases of cecal perforation over 10 years, or 9.45% compared to other cecal pathologies.

Our results are superior to that found by Avinooh.E. et al. [6], but lower than that found by Roger. H [7] who recorded 5.8% and 12.3% respectively.

The age groups of 50 to 64 years represented 35.5% or 16 cases. The average age was 53.2 years and the extremes were from 6 years to 86 years. Our results are above those of Taylor .M. et al.[8] who reported in their series an average age of 49.2 years and extremes of 16 and 77 years. On the other hand, they

are lower than those of Schwenter F et al.[9] who found an average age of 67.9 years with extremes of 49 and 91 years.

In our series, abdominal pain and fever were the reasons for consultation found in all our patients. Our results are similar to those of Rac K FJ [10] who mentioned in his series that abdominal pain and fever were the most frequent reasons for consultation in 91% and 31% respectively. On the other hand, they are different from those of Low G.C et al. [11] who noted in their series that abdominal bloating was the most common reason 81.2%, followed by vomiting in 78.3%.

### Conclusion

Caecal perforations are a rare and serious condition. Surgical management is the definitive option and the prognosis for cecal perforation is generally poor and depends on the degree of peritoneal contamination, duration of onset and timeliness of surgical intervention. The anatomopathological examination constitutes a means of evaluation of the lesion assessment but also of the etiological diagnosis.

### Conflict of interests

The authors report no conflicts of interest.

### Author contributions

All authors contributed to the conduct of this work. They also declare that they have read and approved the final version of the manuscript.

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