



(RESEARCH ARTICLE)



Acute generalized peritonitis of appendicular origin: Epidemiological, clinical and therapeutic aspects at the Sino-Guinean Friendship Hospital

Soriba Naby Camara ^{1,*}, Monece Haba ², Oumar Taibata Balde ², Mama Aïssata Camara ¹, Mohamed Camara ¹, Mamady Sidibe ¹, Ousmane Soriba Sylla ¹ and Biro Diallo ²

¹ Department of visceral surgery, Sino-Guinean Friendship Hospital, Faculty of Health Sciences and Technology, Gamal Abdel Nasser University of Conakry, Conakry, Guinea.

² Department of visceral surgery, Donka National Hospital Faculty of Health Sciences and Technology, Gamal Abdel Nasser University of Conakry, Conakry, Guinea.

GSC Advanced Research and Reviews, 2021, 07(02), 087–092

Publication history: Received on 12 April 2021; revised on 18 May 2021; accepted on 21 May 2021

Article DOI: <https://doi.org/10.30574/gscarr.2021.7.2.0109>

Abstract

Introduction: The aim of this study is to investigate, the etiologies, the results of management of acute generalized peritonitis of appendicular origin. Acute generalized peritonitis of appendicular origin is defined as acute inflammation of the peritoneum resulting from either perforation of the appendix or spread of a peri-appendicular abscess.

Methodology: The visceral surgery department of the Sino-Guinean Friendship Hospital served as the framework for this work. All patients admitted and operated on for acute generalized peritonitis of appendicular origin whose records were complete were included in this study.

Results: During our study we recorded 23 cases of appendicular peritonitis, the sex ratio of nearly 3.6 reflected a clear male predominance of the condition. We noted 15 cases of appendicular perforation, 8 cases of appendicular gangrene, 2 cases of surgical site infection, 2 cases of evisceration and 2 cases of death.

Conclusion: Appendicular peritonitis is a frequent disease, the management is medico-surgical

Keywords: Peritonitis; Appendicular; Sino-Guinean hospital

1. Introduction

Acute generalized peritonitis of appendicular origin is defined as acute inflammation of the peritoneum resulting from either perforation of the appendix or spread of a peri-appendicular abscess. They are one of the most common abdominal emergencies in surgical practice. [1] Numerous studies carried out on peritonitis by digestive perforations have shown the predominance of appendicular perforations. [2] In the USA Flun D.R [3] in 2001 found in his study on digestive perforations 25.85% of appendicular perforations. In Europe Kraemer. M [4] in 2002 noted in their study on acute abdomens that 17.7% were appendicular perforations. In France, Becmeur F [5] in 2000 reported a frequency of 16% of acute generalized peritonitis of appendicular origin in their series of peritonitis. Chavda SK [6] in Kenya in 2005 found 29.7% appendicular perforations. In their series of peritonitis at Kenyatta National Hospital in Nairobi. In Niger Harouna YD [7] in 2005 found a frequency of 33.5% of appendicular perforations. In their series of peritonitis about 70 cases at the Niamey National Hospital. Coulibaly OS [8] in 2006 reported in his series on gastrointestinal perforations

* Corresponding author: Soriba Naby Camara

Department of visceral surgery, Sino-Guinean Friendship Hospital, Faculty of Health Sciences and Technology, Gamal Abdel Nasser University of Conakry, Conakry, Guinea.

in hospital B-G-spot surgery 24.16% of appendicular perforations. About 120 cases with 6.8% mortality. Konaté H [9] in 2001 in his study on acute abdomens found 50% of appendicular perforation including 0.03% of deaths. In Guinea Camara MB [11] in 2004 found a 33.41% frequency of appendicular perforation n at the regional hospital of Labé The high morbidity and mortality and frequency of acute generalized appendicular peritonitis, treatment difficulties, are among other reasons for choosing this article.

2. Material and methods

The visceral surgery department of the Sino-Guinean Friendship Hospital served as the setting for our study. Our study focused on the charts of patients admitted to the department and operated on for acute generalized peritonitis of appendicular origin during the study period. The operating report registers, the duty report registers, the hospitalization registers, the patient files. This was a 5-year descriptive retrospective study from January 1, 2013 to December 31, 2018.

Target population: all records of patients admitted and operated on for acute generalized appendicular peritonitis during the study period.

2.1. C-Selection criteria

Included in this study were the records of patients admitted to and operated on in the department for acute generalized peritonitis of appendicular origin during the study period.

The records of patients admitted to and operated on in the department for PAG of appendicular origin with an incomplete record (general, clinical, Para clinical information) were not included in the study.

Our variables were epidemiological clinics; para-clinical; therapeutic and prognostic

3. Results

Table 1 Distribution of patients according to the categories of emergencies encountered

Abdominal surgical emergencies	Number of case	Percentage %
Acute appendicitis	202	48.70
Strangulated hernias	106	25.54
Peritonitis of others etiologies	38	9.20
Acute generalized peritonitis of appendicular origin	23	5.50
Acute bowel obstruction	46	11.10
Total	413	100

Average age = 28.5 years, extremes = 11 years and 70 years, the age group most affected is 31 to 40 years with 6 cases,

Table 2 Distribution of patients according to clinical signs

Physical signs	Number of case	%
Abdominal meteorism	14	60.86
Contracture	18	78.26
Painful and bulging Douglas	23	100
Dullness of the sides	13	56.52
Silence sepulcral	12	52.17

Table 3 Distribution of patients according to the lesions encountered

Lesions encountered	Number of case	%
Appendicular Perforation	15	65.20
Appendicular Gangrene	8	34.80
Total	23	100

Table 4 Distribution of patients according to the postoperative period

Operative suites	Number of case	%
Simples	12	52.17
Suppurations	7	30.43
eviscerations	2	8.70
Deaths	2	8.70
Total	23	100

4. Discussion

During the study period in the digestive surgery department of the Sino-Guinean hospital in Kipé (RATOMA), we identified in five (5) years from January 1, 2013 to December 31, 2018: 675 cases of surgical pathologies operated on and 413 cases of abdominal surgical emergencies operated on, which allowed us to obtain the frequencies of 3.41% of cases compared to surgical pathologies operated on and 5.5% of cases compared to abdominal surgical emergencies operated. This result is comparable to that of BARRY TM [29] which found in a series of 40 cases 2.79% of cases and lower than that of Zougoutamou G [30] which reported in a series of 33 cases 10.54% cases compared to abdominal emergencies operated on at the regional hospital of N'Nzérékoré these high frequencies could be explained by the delay in the diagnosis of acute appendicitis acute generalized peritonitis of appendicular origin occupied the first place of the causes of acute generalized peritonitis with a frequency of 25.54%

According to literature data, acute generalized peritonitis of appendicular origin ranks first among the causes of secondary peritonitis with 38.82% and 51.30% respectively [30, 31].

- Frequently encountered functional signs were pain 100% of cases, vomiting 82.60% and stopping of materials and gauze 78.26%
- Konomou K. [33] on the contrary in a study on acute generalized peritonitis found that abdominal pain, vomiting and stopping of materials and gas were the most frequent functional signs with respectively 100%, 63,46 % and 82.69% our findings agree with those of the various authors. [31,] who noted that the predominant functional signs of acute generalized peritonitis were abdominal pain, vomiting, and cessation of materials and gas.

In the digestive surgery department of the Sino-Guinean hospital during the study period 39.13% of patients consulted between the sixth and tenth days and 21.73% of patients between the first and fifth days, on the contrary to the regional hospital of N'zérékoré Zougoutamou. [30] noted that 55.55% of patients consulted late between the twelfth and fifteenth days, which proves that our patients consulted very early compared to those in the general surgery department of the regional hospital of N'zérékoré. In contrast to Kindia Konomou K. [33] found that patients came for consultation very early compared to our two studies with 48% of patients consulted between the fifth and sixth days and 36.5% between the third and fourth day almost. 84.5% of his patients consulted between the third and sixth day. We recorded an average delay of 7.87 days with extremes of two (02) and 22 days against an average delay from konomou K. [33] to Kindia of 5 days and extremes of 2 and 8 days.

The clinical signs were dominated by hyperthermia greater than 38 ° 5, 82% of cases with poor general condition (thinning, paleness of the conjunctiva) anorexia with contracture, meteorism, dullness of the flanks and Douglas-fir painful on rectal examination, abdominal silence was observed in 52.17% of cases.

These clinical signs have been observed by various thesis work at the University of Conakry. [33,]The main lesions encountered were appendicular perforations 65.20% and appendicular gangrene 34.80% of cases. We have not encountered any cases of peritonitis without perforation.

The postoperative hemodynamic rebalancing continued with solutes, micro and macromolecular and blood transfusions in 6 patients (26.08%) in the six patients, the two patients were Rh and O plus each took two 2 blood bags, all our postoperative patients were subjected to the infusible flagyl for 5 days and to cephalosporins (ceftriaxone 1g) for a week.

The operative consequences were simple in 52.17% of cases and complicated by suppuration in 30.43% of cases, we recorded 2 cases of death, 8.69% of cases, our study being retrospective did not allow us to 'elucidate the cause of death.

Zogoutamou G. [30], in the postoperative period observed a simple result in 60% of cases, a complicated result of parietal suppuration in 27.27% of cases and recorded 12.12% of deaths.

Konomou K. K [33] observed simple consequences in 48% of cases and a mortality of 34.6% at the regional hospital of Kindia, the difference in mortality rates was due to the fact that his study focused on Typhoid peritonitis.

In all cases, the death rates in acute generalized peritonitis remain very high due to the very long admission time and poor resuscitation means.

Most patients had a hospital stay of between 6 and 15 days 56.52% of cases, the maximum number of patients had a hospital stay of between 6 and 10 days 30.34% of cases, 17, 40% of patients had a hospital stay longer than 20 days, our average hospital stay was 11.17 days with extremes of 1 to 35 days

5. Conclusion

Peritonitis by appendicular perforation has a very high frequency at the Sino-Guinean hospital in Kipé; they occupied the first place among secondary peritonitis, they constitute a public health problem. The long admission times mean that mortality and morbidity remain considerable, thus worsening the vital prognosis, the clinic, the x-ray of the abdomen without preparation and ultrasound are the diagnostic means used for the management of peritonitis by perforation. Appendicular in the service. This difficult treatment underlines the importance of preventing complications through campaigns to raise public awareness of the seriousness of appendicular surgical conditions and their complications.

Compliance with ethical standards

Acknowledgments

Through this article, we would like to thank our dear teacher, Professor Biro Diallo, for his effort to improve the scientific quality of this work.

Disclosure of conflict of interest

The authors declare that there were no conflicts of interest in the scientific writing of this work.

Statement of informed consent

All of the authors who appear in this article have an equal share of and agree to the publication of this article in your journal.

References

- [1] Moniel J. Regensberg. Conférence de sémiologie chirurgicale. Appareil digestif. J. B. Baillière et fils-Paris. 2004; 2: 92-96.
- [2] Massa-Misse P. Morbidité et mortalité de l'appendicite en milieu tropical à propos de 120 cas de péritonites appendiculaires (Cameroun). 2000; 54(3): 280.

- [3] Flun DR. Has is diagnosis of appendicitis decreased over time ? A population – based analysis JMA. 2001; 286: 742.
- [4] Kraemer M, Leppert R. Perforating appendicitis is it a separate disease, acute abdominal pain study group Jour. Surg. 2010; 543: 321-322.
- [5] Becmeur F et Coll. Modalités de prise en charge chirurgicale des péritonites communautaires chez l'enfant Masson-Paris. 2000; 137: 349-357.
- [6] Chada SK, Hassa S. péritonitis kenyata National, Hospital Nairobi East. Afr. Med J. chir. October 2005; 82(10): 526-530.
- [7] Harouna Y, Maazou I, Almoustapha I, Sani R. Les Péritonites appendiculaires généralisées à propos de 70 cas à l'hôpital national de Niamey – communication scientifique ACAF Bamako. 9 Déc 2005.
- [8] Koulibaly S. Les Perforations digestives en chirurgie B de l'hôpital du point G à propos de 1320 cas. Thèse de Médecine – Bamako. 2006; 188: 99.
- [9] Konaté H. Abdomen aigües chirurgicaux dans les services de chirurgies générale et pédiatrique de l'hôpital Gabriel TOURE thèse de Médecine Bamako. 2001; 67: 53.
- [10] Camara MB. Aspect clinique, évolutif et thérapeutique des appendicites aiguës à l'hôpital régional de Labé. Thèse de Doctorat en Médecine Université Gamal Abdel Nasser de Conakry. 2005; 9-12.
- [11] Barbier J, Carrétier M. Péritonites aiguës Encyclo Méd. Chir. Estomac-intestin-paris. 2001; 5: 1-16.
- [12] Bonillot JL, Bresler L. Abdomen aiguë prise en charge diagnostique. Rapport présenté au 106^{ème} congrès Français de chirurgie du 7 au 9 octobre Paris 2004.
- [13] Affont A. Péritonites aiguës. Encyclo. Méd. Chir. Les Techniques chirurgicales Paris. 2000; 1(4): 246-248.
- [14] Bacanovo J, Amato A, Varaldo E, Mattiali FP. Définitions et classifications des Péritonites. Médecine, Mal. Inf. 2008; 25(2): 7-12.
- [15] Kahle W, Leonhard TH, Platzer W. anatomie viscères: plammarion Med. Sciences Paris: 2001; 2: 222-223.
- [16] Kanima P. Dictionnaire atlas d'anatomie Maloine SA Editeur 27, rue de l'école de Médecine 75.000 Paris. 2001; 1296-1298.
- [17] Gosling JA. Anatomie humaine Paris. 2009; 2: 416-421.
- [18] Rouvière H. anatomie descriptive topographique et fonctionnelle le tronc. Edition Masson. 2008; 2: 656.
- [19] Arnaud JP. Physiologie du péritonite-drainage Encycl. Méd.chir. Paris. 2000; 1(4): 246-248.
- [20] Mutter D, Marescaux J. Les péritonites aiguës généralisées physiologie, clinique et traitement Faculté de Médecine de Strasbourg. 2002; 1-4.
- [21] Ohmann C. Neues Zur épidémiologie der akuten appendicitis chrug. 2002; 769-776.
- [22] Evard S, Marescaux J. péritonites aiguës diffuses physiopathologie, Etiologie, diagnostic, évolution et traitement Revue du Praticien-Paris. 2010; 1791-1792.
- [23] Fagniez PLE, Koffi Y. Les péritonites appendiculaires diagnostic et traitement. Revue du praticien Paris. 2007; 245: 42-46.
- [24] Yana Parc, Pascal F. péritonites aiguës diffuses; physiopathologie, étiologie, diagnostic, évolution, traitement: la revue du praticien Paris. 2003; 87-89.
- [25] Avisse C. Les péritonites aiguës diffuses, impact, internat Paris Mars. 2004; 287-294.
- [26] Fagniez PL, Serpeaud S, Thomsen C, Trinet C. les péritonites aiguës Encycl. Med. Chir. Paris Estomac intestine. 9043-6.
- [27] Mouiel. Conférence de Sémiologie chirurgicale. Appareil digestif J.B. Baillière et Fils Paris. 2004; 2: 92-96.
- [28] Maritano JY, caillot JL. Péritonites aiguës complications, formes cliniques et traitement revue du praticien. 2001; 51: 38-39.
- [29] Barry TM. Péritonites aiguës généralisées d'origine appendiculaire : Aspects épidémiologiques, cliniques et thérapeutiques à l'hôpital National Donka : Thèse de Doctorat en médecine, Université Gamal Abdel Nasser de Conakry. 2004; 2.

- [30] Zougoutamou G. les péritonites aiguës généralisées d'origine appendiculaire : Fréquence et traitement à l'hôpital Régional de N'Zérékoré : Thèse de Doctorat en médecine, Université Gamal Abdel Nasser de Conakry. 2005; 29-34.
- [31] Harouna YD, Abdou I, Saïdou B, Bazira L. Les Péritonites en milieu tropical, particularités étiologiques et pronostics actuels. A propos de 160 cas Med. D'Afrique noire. 2001; 48(3): 103-106.
- [32] Becmeur R, Bientz J. Modalités de prise en charge chirurgicale des péritonites communautaires chez l'enfant. Masson (Paris). 2000; 137: 349-354.
- [33] Konomou K. Les péritonites par perforation typhique : Fréquence, aspects clinique et thérapeutique à l'hôpital Régional de Kindia thèse de Doctorat en médecine Université Gamal Abdel Nasser de Conakry- Guinée. 2007.