

Acute Appendicitis, Diagnostic and Therapeutic Aspects at the Ouelessebouyou Reference Health Center Mali

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DOI: <https://doi.org/10.36347/sasjs.2025.v11i03.010>

Received: 29.10.2024 | Accepted: 04.12.2024 | Published: 08.03.2025

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Abstract

Original Research Article

Object: To describe the diagnostic and therapeutic aspects of acute appendicitis at the Reference Health Center of Ouelessebouyou. **Methodology:** This was a retrospective and analytical study, carried out in the surgery department of the reference health center of Ouelessebouyou from January 01, 2019 to December 31, 2019. All patients operated on for acute appendicitis were included in this study. **Results:** Eighty-three (83) patients were listed, representing 18% of surgical procedures. These were 65 men (78.3%) and 18 women (21.7%), the sex ratio was 3.61. The mean age was 25.61 years with extremes of 3 years and 68 years, Standard Deviation =16.11. Most of the patients, 91.56%, were recruited in an emergency. Clinical signs were dominated by iliac fossa pain in 84.4% of cases, defense in the right iliac fossa in 94% of cases, and right pain in the cul de sac of Douglas in 86.8% of patients. The mean duration of the disease was 2.5 days with extremes of 1 to 7 days. Neutrophilic polynuclear leukocytosis was noted in 57.8% of cases. C-reactive protein was elevated in 62.7% of patients. Abdominal ultrasound performed in 78 patients (94%) revealed acute uncomplicated appendicitis in 70 patients (89.7%). Traditional medications were used in 21 patients (25.3%). Appendectomy with burial of the stump was performed in 82 patients (98.8%), and the appendix was laterocecal in 74 patients (89.2%). The postoperative follow-up was simple in 96.4% of cases. Morbidity was 3.6% (3 cases). The mean length of hospital stay was 5.36 days with extremes of 3 days and 8 days. The average cost of care was 62,500 CFA francs with extremes of 25,000 and 80,550 CFA francs. **Conclusion:** Appendicitis is a common surgical emergency in our department. Delay in consultation and traditional medication are the factors of severity.

Keywords: Appendicitis, Surgery, CSRéF Ouelessebouyou, Mali.

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INTRODUCTION

Acute appendicitis is an acute inflammation of the vermiform appendix [1]. This is the most common abdominal surgical emergency [1]. The essential prognostic factor is the time elapsed between the onset of clinical signs and management [2-6].

There is no anatomoclinical parallelism [7]. The incidence in Europe and the United States has been estimated at 100 cases per 100,000 inhabitants [1]. More than 60,000 adult and child patients were operated on for appendicitis in France in 2014, and this pathology remains one of the most frequent that any visceral and digestive surgeon will encounter during his or her

professional life [5]. In Central Africa, a 1991 study found that appendicitis accounted for 42.3% of abdominal emergencies [3]. In Mali in 2015, in Barthelemy Poudiougou's study, it accounted for 52.17% of surgical emergencies in the Reference Health Center of commune I [8]. The diagnosis is essentially clinical and paraclinical. The treatment is surgical and consists of an appendectomy. The prognosis depends on the precocity of treatment.

PATIENTS AND METHOD

This was a retrospective and analytical study, carried out in the surgery department of the reference health center of Ouelessebouyou from January 01, 2019

to December 31, 2019. All patients operated for acute appendicitis were included in this study, including local complications (abscess and cooled and operated plastron during the period of this study), with a usable medical record. The study parameters were: gender, age, reason for consultation, time elapsed between the beginning of the symptomatology and the consultation, clinical signs, paraclinical examinations performed (morphological and biological), surgical technique performed, evolution and short-term post-operative complications.

Data Entry and Analysis:

The data analysis was carried out on the EXCEL software as well as SPSS version 19.0. Comparison of proportions was made using the Chi2 test with a significance level for $P < 0.05\%$.

RESULTS

Socio-Demographic Aspects:

Eighty-three (83) patients were listed, representing 18% of surgical procedures. These were 65 men (78.3%) and 18 women (21.7%), the sex ratio was 3.61. The mean age was 25.61 years with extremes of 3 years and 68 years, Standard Deviation=16.11. Most of the patients, 91.56%, were recruited in an emergency. The mean duration of the disease was 2.5 days with extremes of 1 to 7 days.

Paraclinical Clinical Aspects:

The WHO performance index was rated at 1 in 88% of cases and 2 in 12% of cases. Clinical signs were marked by pain in the iliac fossa in 84.4% of cases, accompanied by fever in 83.1% of cases. Defense in the right iliac fossa was the predominant physical sign, with in 94% of cases a painful mass in 6% of cases.

At the rectal level, the pain was localized to the right in the cul de sac of Douglas fir in 86.8% of patients. The complete blood count showed neutrophil polynuclear hyperleukocytosis in 57.8% of cases. C-reactive protein was elevated in 62.7% of patients. Abdominal ultrasound performed in 78 patients (94%) led to the conclusion of acute uncomplicated appendicitis in 70 patients (89.7%), appendicular abscess (6.4%) and appendicular plastron (3.9 %) of patients. Acute appendicitis was the preoperative diagnosis in 94% of cases, followed by 2 cases of appendicular abscess (2.4%), 2 cases of plastron (2.4%) and 1 case of abscessed plastron (1.2%).

Therapeutic Aspects:

Traditional medication was the first line of treatment for 21 patients (25.3%). Spinal anaesthesia was performed in 52 patients (62.7%). Antibiotic prophylaxis with ceftriaxone was performed in 78 patients, i.e. 94% of cases. Intraoperative diagnosis was uncomplicated appendicitis in 94 % of cases. Macroscopic aspects of the appendix were phlegmonous in 8-4.3% of cases. In the majority of cases, 89.2%, the appendix was in the laterocecal position. Appendectomy with burial of the stump was the most commonly performed technique in 98.8% of cases. The postoperative effects were simple in 96.4% of cases. Morbidity was 3.6% (3 cases) marked by 2 cases (2.4%) of parietal suppuration and 1 case (1.2%) of hemorrhage. *Escherichia coli* and *Klebsiella Pneumoniae* were each isolated in 5-0% of suppuration cases. The mean length of hospital stay was 5.36 days with extremes of 3 days and 8 days. Histological examination was performed on 49 specimens (59%) and the appendix was phlegmonous in 63.3% of cases. The average cost of care was 62,500 CFA francs with extremes of 25,000 and 80,550 CFA francs.



Image 1: appendicitis with a gangrenous appearance (intraoperative)



Image 2: Appendectomy piece



Image 3: Phlegmonous appendicitis patch



Image 4: phlegmonous appendicitis (intraoperative)

DISCUSSION

We found a hospital frequency of 18% which does not differ statistically from that of studies carried out in Mali by Brahim Diallo and Mory Diawara [8-10], ($p > 0.05$). The average age (25.6 years) in this study does not differ from that found in other Malian series [9], ($p > 0.05$). Age is therefore a factor in the occurrence of appendicitis. A male predominance was noted in our study as in most African series [10-13], on the other hand European studies [10, 11], recorded more women. This difference could be explained by a recruitment bias. In our context several factors can explain the delay in consultation such as: unfavorable socio-economic factors, traditional treatment. The mean time to progression was 2.5 days in this study, with no difference from that of other studies conducted in Africa [10,16], but differs from that found in the literature [17, 18]. The pain was mainly located in the right iliac fossa (84.4%), with no difference from that of the literature [9-13]. The appendix was in the internal latero-cecal position in 98.2% of our patients peroperatively. This position was mainly found in the European and Nigerian series [12, 13], with no significant difference. The appendix had a phlegmonous appearance in 84.3% of patients in this study. On the other hand, the catarrhal appearance predominated in the European and American series [10-15], ($p < 0.05$). This difference could be explained by the attempts at traditional therapy and self-medication carried out by patients, leading to a delay in treatment in a specialized environment. The appendectomy technique with stump burial was the most practiced, i.e. 98.8%. This result is consistent with that of Brahim D, Mali [8], i.e. 97.0% and Maiga B, Mali [6], i.e. 94.3% without significant difference. Most patients had a simple postoperative course, i.e. 96.4%. Parietal suppuration was found in 2 patients, 2.4% as in the Hartwing study [11], and the Mexican series [9], with a non-significant p . The average length of hospitalization of 5.36 days in our study is slightly higher than that of the Asian, American and Israeli series [16-18]. This difference is explained by the delay in care and the fact that most patients live in rural areas unfavorable to quality care. Unlike in Europe where care is provided by social security, the average cost of care was 62,500 FCFA in our study, which is higher than the Malian minimum wage which is currently 28,460 FCFA.

CONCLUSION

Acute appendicitis is a common surgical emergency in our department. Delays in care can be avoided on the basis of good clinical knowledge in order to minimize complications. Appendectomy with stump burial gives good results if performed early.

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