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Surgical Research

Non-Traumatic Abdominal Surgical Emergencies in the Field of HIV: A Series of 22 Cases in the Visceral and Digestive Surgery Department of the Siguiri Prefectural Hospital

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ABSTRACT

Introduction: *This study aimed to describe the epidemiological-clinical and therapeutic aspects of abdominal surgical emergencies on the ground of HIV in the department of visceral and digestive surgery of the prefectural hospital of Siguiri.*

Method: *This was a descriptive prospective study which concerned patients operated on for abdominal surgical emergencies in the field of HIV, carried out in the visceral and digestive surgery department of the Siguiri prefectural hospital.*

Results: *Out of a total of 88 cases of abdominal surgical emergencies operated on during our study, we collected 22 cases on HIV ground, i.e. 25%. The female sex dominated, including 14 women against 8 men, i.e. a sex ratio of 0.6 with an average age of 35 years. Miners were the most affected socio-professional layer, i.e. 31.80%, followed by traders and housewives, i.e. 27.30% each. HIV type I affected 77.27% against 22.73%.*

There were 41% of our patients who knew their serological status among which 66.66% were on ARV treatment and 33.33% were not on ARV treatment. The symptomatology was dominated by abdominal pain in 100% followed by fever in 77.27%. Appendicitis accounted for 40.09% followed by generalized acute peritonitis in 31.82%. The management was medico-surgical with pre-operative, intra-operative and post-operative resuscitation. The average length of hospitalization was 7 days. The postoperative course was favorable in 45.45%, we recorded 36.36% parietal suppuration and the mortality rate was 13.64%.

Conclusion: *Abdominal surgical emergencies in the field of HIV remain a major health problem in terms of care. The clinical pictures are dominated by acute appendicitis and generalized acute peritonitis.*

Keywords
Surgical emergencies, HIV, Siguiri prefectural hospital.

Introduction
Human immunodeficiency virus infection presents a very specific aspect in surgery [1]. The systematic performance of the serological test for HIV screening before a surgical procedure is a subject of controversy [2]. HIV/AIDS infection, first revealed in the United States in 1981, is currently creating a pandemic despite national or international control programs and antiretroviral treatments. Sexual transmission is the most frequent, but contamination by blood and biological products is not negligible. In essence, bloody therapeutic surgery constitutes a risky situation in relation to viral infections, in particular HIV/AIDS, both for the nursing staff and for the patients [4].

Surgical abdominal emergencies (UAC) or acute abdomens are abdominal conditions, which, for the most part, in the absence of surgical intervention obtained within the normal timeframe, can make patients succumb in a few hours or a few days. Digestive surgical emergencies, daunting in their severity, occupy an important place in surgical pathology [5].

Due to the seriousness of the prognosis of this infection (risks incurred by professionals and sometimes dramatic postoperative complications for the patients), some practitioners have proposed to have HIV serology performed systematically in the preoperative assessment, whereas studies have shown the uselessness of such a practice [2].

The aim of this study was to describe the clinical and therapeutic aspects of non-traumatic abdominal surgical emergencies on the ground of HIV in the department of visceral and digestive surgery at the prefectural hospital of Siguiri**.**

Patients and Methods
This was a prospective, cross-sectional, and descriptive study carried out in the visceral and digestive surgery department at the Siguiri prefectural hospital for a period of 6 months from January 1 to June 30, 2022. We included in this study all patients admitted and operated on for non-traumatic abdominal surgical emergencies on the ground of human immunodeficiency virus (HIV) infection. Were not included in this study, all the patients operated with the results of the examinations whose retroviral serology is negative and traumatic abdominal surgical emergencies.

Our study variables were epidemiological, clinical, therapeutic, and prognostic. Our data was collected on a pre-established survey sheet, entered, and analyzed with Epi info in its version 7.2.1.0 then presented with the 2016 office pack.

Results
Out of a total of 88 patients operated on for non-traumatic surgical abdominal emergencies, we collected 22 cases of human immunodeficiency virus (HIV) infection, i.e. a frequency of 25%. Table 1 reports that the age groups from 20 to 45 years old were the most affected, i.e. 63.63%.

Table 1: Distribution of patients according to age groups.

Age (ans)	Effective	Proportion (%)
20 – 45	14	63,64
46 – 62	6	27,27
63 – 83	2	9,09
TOTAL	22	100

The female sex was dominant in our study with 14 cases or 63.64%, or a sex of 0.6.

Miners were the most affected socio-professional stratum with 7 cases or 31.80%, followed by traders and housewives or 27.30 each illustrated in Table 2.

Table 2: Distribution of patients according to profession.

Profession	Effective	Proportion (%)
Minors	7	31,80
Tradespeople	6	27
Cultivators	2	9,10
Student	1	4,50
Housewives	6	27,30
TOTAL	22	1OO

In this study, 9 of our patients knew their serological status, i.e. 41%, against 13 patients who did not know their serological status, i.e. 59%. Type I HIV affected 17 of our patients, i.e. 77.27%, and type II in 5 cases, i.e. 22.73%. Patients who did not know their status, counseling was done in order to put them on anti-retroviral treatment. Abdominal pain was the main symptom at the consultation observed in all our patients reported in Table 3.

Table 3: Distribution of patients according to reason for consultation.

Reasons for consultation	Effective	Proportion (%)
Abdominal pain	22	100
Fever	17	77,27
Vomiting	14	63,63
Abdominal distention	7	31,81
Stopping materials and gases	5	22,72

During the physical examination we noted the abdominal defense in 18 patients or 81.81, umbilical cry in 63.63%. A biological assessment was requested, namely the blood count (NFS), the retroviral serology (SRV), GS/FH, which had shown neutrophilic polynuclear leukocytosis in 86.36% and the result of the serology was positive in all patients. An abdominal ultrasound requested in 4 patients but which was not contributory. Abdominal X-ray without preparation was requested in 10 patients, i.e. 45.45%, which revealed an air fluid level in 3 patients, pneumoperitoneum in 3 cases, an inter hepato-diaphragmatic crescent in 2 cases and diffuse dullness in 2 case. Table 4 indicates that appendicitis was the dominant pathology with 12 cases or 54.55%.

Table 4: Distribution of patients according to operative diagnosis.

Abdominal pathology	Effective	Proportion (%)
Appendicitis	12	54,55
Peritonitis	7	31,82
Acute bowel obstruction	3	13,63

Preoperative conditioning was carried out in 10 patients, i.e. 45.45%, based on solutes, antibiotics (ceftriaxone) and analgesics (infusable paracetamol).

All our patients benefited from surgical management by the Marc Burney point approach in 54.55%, above and below the umbilical on horseback by the umbilical in 45.45%. The gesture made was; appendectomy in 54.55%, suture of perforation plus epiploplasty in 18.18%, adhesiolysis in 13.63% and suture of intestinal perforation in 13.63%. The cause of peritonitis was dominated by gastric perforation in 4 patients or 54.14% and typhus perforation in 3 patients or 42.86%.

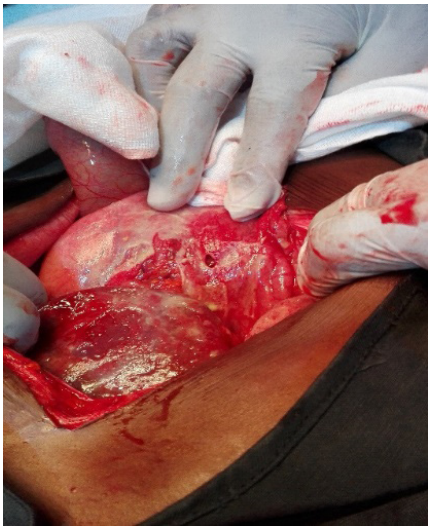

Figure 1: Gastric perforation in per operative.

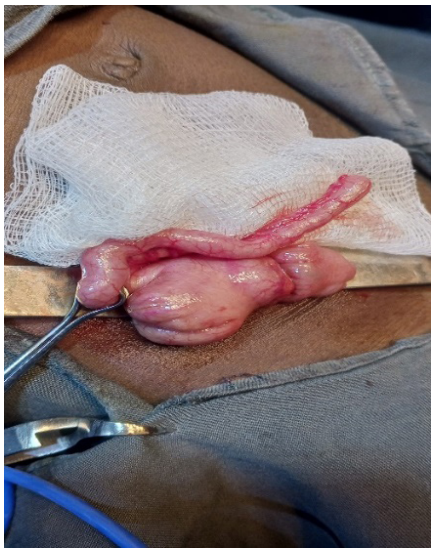

Figure 2: Catarrhal appendage in per operative.

The postoperative course was simple in 16 cases, i.e. 72.73%, and unfavorable early on, such as parietal suppuration in 5 cases, i.e. 22.73% and one case of death, i.e. 4.54%. The average hospitalization time was 5 days with extremes of 20 days.

Discussion

In our study, we collected 22 cases of abdominal surgical emergencies on HIV grounds out of a total of 88 cases of abdominal surgical emergencies, i.e. a hospital frequency of 25%. Our results were superimposable to those reported by F. BOUKINDA et al. [12] in Brazzaville and Antoine D.D et al. [2] who noted 20.9% and 23.6% respectively. However, they are superior to that of Dieng et al. in 2013 in Dakar who reported a frequency of 11.5% [9]. This high frequency in our study confirms data from the literature, which shows a high density of people living with HIV in border towns, artisanal mining towns and the main roads in the south and north-east.

In this study, the age groups of 20 – 45 years were the most affected, i.e. 63.64% with an average age of 32 years; a predominance of the female sex in 63.64%. A similarity was found in the study by Antoine D.D et al. [2] who noted an average age of 32 years with a predominance of female sex. However, in the study of [7-9] they are noted a male predominance. Our results could be explained by the fact that this age group is the most representative of the population of sub-Saharan Africa and in our context this could be explained by the life of debauchery in mining areas. The predominance of the female sex in our context confirms the data of the literature that the vaginal mucosa and the surface of the cervix increase the risks of contamination, the concentration of the virus is higher in the sperm than in the vaginal secretions.

In this series, miners were the most affected socio-professional stratum, followed by housewives and shopkeepers. These results can be superimposed on those reported by DIENG M. et al [9] who had recorded in their study that traders and housewives were the most affected. These results in our context could be explained by the fact that the study had been carried out in a mining area. Most of our patients were infected with type I HIV and those who knew their status were already on antiretroviral treatment. Our results confirm the literature data that the predominance of the type varies according to the geographical area, type I is much more widespread in sub-Saharan Africa.

During this study, abdominal pain was the main symptom followed by fever, vomiting and abdominal defense. A similarity had been recorded in other studies [1,10]. The main physical signs observed were abdominal defense and umbilical cry. These confirm the data in the literature.

The radiography of the abdomen without preparation had highlighted hydro aeric levels, pneumoperitoneum, diffuse grayness and inter hepatodiaphragmatic crossing. Our results confirm the data of the literature in relation to our etiological diagnoses. During our study, appendicitis was the dominant pathology. This result had been observed in other studies [5,2]. A 2007 US study demonstrated that acute appendicitis occurs at

higher incidence rates in HIV-infected patients compared to the general population. High viral load and lack of HAART were risk factors for appendicitis in HIV-infected patients, suggesting that uncontrolled HIV viral replication may contribute to the development of appendicitis [13].

During this series, the most common approach was the Marc de Burney point approach followed by midline laparotomy above and below the umbilical. Appendectomy was the most performed procedure followed by suturing of gastric and intestinal perforations. The same approach and procedure were performed in the study by Camara Mamoudou et al. [5]. However, in the study by Etienne BFK Odimba et al. [8] and I.A. Magagi et al. [1] who noted that peritonitis was the most diagnosed pathology in their contexts.

During our study period, the postoperative course was fraught with complications such as parietal suppuration and we recorded one case of death. In the study of [1,2,5], the same types of complications were observed. This frequency of suppuration in our context could be explained by the non-respect of certain rules of asepsis, antisepsis in our current practice and by certain factors specific to certain patients (poor hygiene body). The case of death notified was linked to the delay in consultation, which would be explained by the first recourse to the pharmacopoeia before consulting in a health structure.

The average hospital stay was 5 days. This delay was lower than that reported by Camara Mamoudou et al. [5] who noted an average hospitalization time of 7 days.

Conclusion

Abdominal surgical emergencies in HIV-infected patients occupy an important place in surgical pathology. Etiologies are multiple, remains dominated in our context by appendicitis. Diagnosis is clinical and confirmation by imaging and management requires multidisciplinary collaboration.

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