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Research Article

Management of Abdominal Surgical Emergencies at the Coyah District Hospital (Guinea)

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Abstract

Background: abdominal surgical emergencies remain a frequent mode of admission in African public hospitals, cause of a high morbidity and mortality. This study aimed to assess the management of these diseases in a resources limited hospital. *Patients and methods:* this was a descriptive cross-sectional study for a period of 2 years from January 2018 to December 2021. *Results:* 637 patients were selected including 321 males 316 females. The age of the patients ranged from 5 to 79 years old. Abdominal pain was the main reason for consultation (90.11%), with appendicitis the dominant pathology (47.4%). All cases were managed surgically. Postoperative course was simple in 65.8% of cases, with an overall mortality of 13.3%. The average hospital stay was 9.96 ±6.77 days, with extremes of 3 and 54 days. *Conclusion:* abdominal surgical emergencies are very common in our practice with appendicitis being the dominant pathology. The mortality still remains considerable in resources limited setting.

Keywords

Abdominal Surgical Emergencies, Management, Guinea

1. Introduction

Abdominal surgical emergencies are pathological situations in which abdominal pain has been evolving for a few hours or days (less than three days) and is related to a surgical pathology, which must be diagnosed and treated very rapidly [1-3]. In African public hospitals, emergencies remain a frequent mode of admission, and the management of these diseases poses real public health problems in developing countries [4, 5]. According to Mondor, surgical emergencies are digestive affections, which for the most part, in the absence of surgical intervention obtained without delay, cause patients to succumb within a few hours or a few days [6-8]. This study aimed to assess the management of abdominal surgical emergencies in a resources limited settings.

2. Patients and Methods

This is a retrospective descriptive cross-sectional study covering a period of three years (from January 2018 to December 2021). It concerned all complete records of patients admitted for acute abdomen to the emergency department of Coyah district hospital during the study period. The parameters studied were sociodemographic, clinical, therapeutic and the morbimortality.

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3. Results

During the period of three years, a total of 1025 patients were admitted in the hospital; among them, we recorded 637 cases of abdominal surgical emergencies, representing 62.1%. The mean age of the patients was 27±14 years old with extremes of 5 and 79 years. The age group of 10 to 20 years old was the most affected (36%). Males predominated, with a sex ratio of 1.02. More than half of the patients were students and housewives from rural and peri-urban areas (69%). The mean time to consultation was 71.4 hours (extremes: 3 and 109 hours). The table 1 showed the frequency of reasons of consultation.

Table 1. *Frequency of reasons for consultation.*

Reasons or symptoms	Number (N=637)	Percentage
Abdominal pain	621	97.5
Nausea/vomiting	509	78.9
Abdominal distension	217	34.1
Fever	205	32.2
Constipation	196	30.8
Pelvic pain	112	17.6
Inguinal swelling	78	12.2
Anorexia	61	9.6
Asthenia	61	9.6
Headache	54	8.5
Vaginal bleeding	19	2.9
Dyspnea	17	2.7
Weight loss	11	1.7
Hematemesis	9	1.4

Blood examination showed hepatitis B antigen positive (26.5%), HIV positive (6.9%) and diabetes (6.1%). Simple abdominal plain X-ray and abdominal ultrasonography were contributive to the diagnosis in respectively 78.9% and 17.6% of cases. The table 2 indicated the distribution of patients by pathology.

Table 2. *Distribution of patients by pathology.*

Pathology	Number	Percentage
Appendicitis	302	47,4
Peritonitis	80	12,6
Strangulated hernia	78	12,2
Acute bowel obstruction	71	11,1
Abdominal trauma	63	9,9
Ectopic pregnancy	30	4,7
Gastro-duodenal ulcer hemorrhage	9	1,4
Cholecystitis	4	0,6
Total	637	100

Among the 637 patients, 614 (96.4%) underwent surgery and 23 cases had non operative treatment. The immediate postoperative course was simple in 65.8% of cases. The table 3 showed the results of the treatment.

Table 3. *Distribution of the patients according to the morbidity and mortality.*

Morbidity and mortality	Number	Percentage
Simple	419	65.8
Wall infection	93	14.6
Enterocutaneous fistula	24	3.8
Wall infection + evisceration	16	2.5
Death	85	13.3
Total	637	100

The average hospital stay was 9.96±6.77 days, with extremes of 3 and 54 days.

4. Discussion

During the course of this study, abdominal surgical emergencies accounted for more than half of all surgical and gynaecological activities. Out of 1025 patients treated, 637 (62.15%) were surgical emergencies. Our result is close to that of Camara M et al. in 2021 [9] who found 69.56% of abdominal surgical emergencies compared with other procedures, and higher than that reported in African series [10, 11]. This high frequency can be explained by the fact that the hospital is the referral center for local health structures. The average age of the patients was 27 years, which is lower than that of Kambire JL et al in Burkina-Faso in 2020 [8] who found 37 years, which could be explained by the fact that the Guinean population is predominantly young. It was noted a male predominance with a ratio of 1.02. This result is comparable to those of Camara M et al in Guinea in 2021 [9] and Dossouvi T et al in Togo in 2021 [12], who reported a sex ratio of 1.83 and 1.6 respectively. This male predominance could

be explained by the more frequent presence of hernia in men due to hyperactivity. Women are the most affected socio-professional stratum, with 48.3%. This result is contrary to that found by Camara M et al in Guinea in 2021 [9], who reported that farmers were the most represented. These results have no scientific value, as abdominal surgical emergencies are not linked to a particular profession.

Abdominal pain was the main reason for consultation in 90.1% of our patients, followed by fever and nausea/vomiting in 88.5% and 55% respectively. Our results corroborate those of Gaye I et al in Senegal in 2016, [13] who observed abdominal pain in 88.2% and vomiting in 67.7% respectively. These results corroborate with the literature which states that the first reason for consultation in surgical emergencies would be abdominal pain. In our series, the mechanism of hemoperitoneum due to rupture of the spleen was not described.

On physical examination, pain provoked by deep palpation of the right iliac fossa was the physical sign most frequently found, at 41.6% which is superior to that of Camara M et al in Guinea in 2021 [9], who found 54.7% of pain in the right iliac fossa. This high rate in our context would be explained by the multiplicity of digestive and gynaecological infections, and would also explain the very high frequency of febrile states in our series. The average consultation time was 41.04 hours. Our results are contrary to those of Tamou S B et al in Benin in 2020 [14] and Kondano SY et al in Guinea in 2021 [10], who found an average consultation time of 5 days and 5.53 days respectively. This early diagnosis could be explained by urbanization, which makes areas far from Coyah hospital geographically accessible, but also by the early referral of patients to Coyah hospital. Acute appendicitis was the leading cause of abdominal surgical emergencies, with 462 cases (72.5%). These results concur with those of Camara M et al [9], who reported 54.7% acute appendicitis. This high frequency of acute appendicitis may be explained, on the one hand, by the fact that the diagnosis of appendicitis is essentially clinical, and does not have to wait for ultrasound, On the other hand, the overdiagnosis of appendicitis and the difficulties associated with its differential diagnosis, such as mesenteric adenitis, urinary tract infections (pyelonephritis), Meckel's diverticulum, viral hepatitis, right urethral calculus, right-sided salpingitis, acute cholecystitis and acute pancreatitis. Haemoglobin levels, coagulation times and blood glucose levels were performed on only a few patients. This can be explained by the fact that these tests are not systematically prescribed for patients admitted in emergency. The management of these abdominal emergencies was surgical, and the technique used depended on the pathology in question. The Mac Burney approach was the most common (72.53%, followed by the sub-umbilical incision (12.03%) and the inguinal incision (7.79%).

The postoperative course was favorable in 65.8% of our patients. We recorded 20.9% of complications, mainly postoperative peritonitis followed by enterocutaneous fistula. The high rate of postoperative site infection and deaths in our series could be associated with the lack sufficient experience of young surgeon as well as the non-respect of control and prevention of infection guidelines in most of our surgical settings.

The average length of hospital stay was 9.96 days. Our results are close to those of Magagi IA and Harouna Y in Niger [15, 16], who found an average length of hospital stay of 8.71 and 10.3 days respectively. This can be explained by the abundance of appendicitis cases, which have a relatively short hospital stay.

5. Conclusion

Abdominal surgical emergencies are very common in our practice with appendicitis being the dominant pathology. The limitation of health facilities and financial resources lead to very late diagnosis often at a stage of complications. Surgery in emergency without a sufficient resuscitation tools is responsible for a high mortality in resources limited setting.

Abbreviations

HIV Human Immunodeficiency Virus

Conflicts of Interest

The authors declare no conflicts of interest.

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