

## Case Report

# Digestive Surgical Emergencies in Kara Teaching Hospital (Togo)

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## Abstract

**Introduction:** Digestive surgical emergencies are frequent and occupy an important part of digestive surgery activities.

**Objectives:** Analyze the management of surgical digestive emergencies in Kara teaching hospital (Togo) Patients and Methods: It is a retrospective study carried out in the general surgery department of Kara teaching hospital (Togo) over a period of three years (January 1, 2017 to December 31, 2019). The study consisted of studying all the files of patients operated for digestive surgical emergencies. The epidemiological, clinical, therapeutic and postoperative data caught our attention.

**Results :** During our study period, we treated 219 surgical emergencies out of the 1748 hospitalized patients, ie a frequency of 12.5%. There was a male predominance with 140 men and 79 women. The sex ratio was 1.7. The average age was 29 years with the extremes ranging from 2 years to 85 years. The consultation patterns were mainly abdominal pain (100%) followed by nausea and / or vomiting (84, 0%) and fever (59, 8%). The consultation time varies between one to 15 days with an average of 7 days. The etiologies were dominated by acute generalized peritonitis (37.4%) followed by appendicitis (20.1%) and strangulated hernias (18.7%). All patients underwent open surgery. The procedures performed varied depending on the etiology. The postoperative course was complicated in 48 cases (21.9%). Complications were dominated by parietal abscess (35.2%). Mortality was 5.0% due in all cases to septic shock and multiple organ failure due to delayed management.

**Conclusion:** Digestive surgical emergencies occupy an important part of the activities of our service. Their management in our context was confronted with problems of diagnostic delay and lack of adequate therapeutic means. They constitute a challenge for the surgeon and the resuscitator due to the high postoperative morbidity and mortality.

**Keywords :** digestive surgical emergency, consultation delay, peritonitis, splenic trauma, morbidity, mortality, Togo.

## Introduction

Surgical abdominal emergencies represent the afflictions which, for the most part, due to the lack of a surgical management

obtained without delay, cause patients to succumb in a few hours or a few days [1]. These emergencies are frequent and occupy a large part of surgical activities in digestive surgery [2,3]. In recent years, advances have been noted in terms of the rapidity of diagnosis and treatment of these emergencies with good results. However, in developing countries, there is the problem of limited

technical facilities and delayed consultation, making treatment difficult cause a high morbidity and mortality. Studies have been carried out around the world, in Togo and at the Kara teaching hospital, the last of which dates back more than 5 years [3-5]. We wanted to repeat this study in Kara teaching hospital with the aim of analyzing the new treatment and postoperative results.

## **Patients and Methods**

This was a retrospective and descriptive study which was carried out from January 1, 2017 to December 31, 2019, i.e. a period of 36 months in the general surgery department of Kara teaching hospital (Togo) which is a university hospital center located in the northern part of the country Togo. It is the center of reference for the northern part of the country. For about 5 years, qualified human resources have been strengthened with the assignment of several specialist physicians. Thus, for more than three years, the general surgery department has had three general surgeons, two general surgeons in training and a medical resuscitator for surgical resuscitation. All emergencies are taken care of by these surgeons and the medical resuscitator. This was not the case more than 5 years ago, when operating room nurses and nurse anesthetists sometimes took charge of patients when surgeons were unavailable.

This study covered all digestive surgical emergencies managed during the study period. All patients operated or not for digestive surgical emergencies were included in our study, regardless of age and sex. Patients not operated whose files were incomplete (files poorly completed, operative report unavailable, lost to follow-up) were excluded from our study. Patients were admitted urgently or through consultation. The diagnosis was

clinical in some cases and confirmed by further examinations in others. Paraclinical examinations were urgently represented by biological examinations (uremia, creatinine, glycemia, grouping-Rhesus and count) and morphological (x-ray of the abdomen without preparation and ultrasound). We do not have a scanner in our center. When the CT scan became necessary, patients were sent to Lomé or to Djougou hospital in Benin.

The patients had benefited from pre, intra and postoperative resuscitation depending on the pathology and the degree of urgency. It consisted of conditioning the patient, rehydration, correction of hydro-electrolyte disturbances, oxygenation, and probabilistic antibiotic therapy. All the patients operated had undergone open surgery because we do not have laparoscopic surgery equipment in our center. After discharge, patients were seen for control in one month, three months and every six months for up to a year. Epidemiological (age, sex, frequency), clinical (reason for consultation, time to admission, etiologies), therapeutic (first route, surgical procedures and postoperative procedures) and morbidity and mortality data have attracted our attention.

## **Results**

During our study period, we treated 219 surgical emergencies out of the 1748 hospitalized patients, ie a frequency of 12.5%. A male predominance was noted with 140 men and 79 women. The sex ratio was 1.7. The average age was 29 years with extremes ranging from 2 years to 85 years.

The consultation pattern were dominated by abdominal pain (100%) followed by nausea and / or vomiting (84.0%) and fever (59.8%) (Table I).

**Table 1:** Consultation pattern.

	<b>n</b>	<b>%</b>
<b>Abdominal pain</b>	<b>219</b>	<b>100</b>
<b>Nauseas and/or Vomiting</b>	<b>184</b>	<b>84,0%</b>
Fever	131	59,8
Transit stop	58	26,5

The consultation time ranged from one to 15 days with an average of 7 days. The etiologies of these emergencies were dominated by acute generalized peritonitis (40.4%) followed by appendicitis (21.7%) and strangulated hernias (20.2%) as described in Table II.

**Table 2:** Etiologies of emergencies.

	<b>n</b>	<b>%</b>
<b>Acute generalized peritonitis</b>	<b>82</b>	<b>37.4</b>
Perforated Gastric ulcer	35	16.0
Ileal perforation	21	9.6
Perforated Appendicitis	11	5.0
pelvic	10	4.6
Primitive	5	2.3
<b>Appendicitis</b>	<b>44</b>	<b>20.1</b>
Appendicular abscess	23	11.3
Phlegmonous	19	9.3
Gangrenous	2	1.0
<b>Strangulated hernia</b>	<b>41</b>	<b>18.7</b>
Inguino-scrotal	33	15.1
Umbilicale hernia	4	1.8
White line	2	1.0
Femoral hernia	1	0.9
<b>Abdominal trauma</b>	<b>28</b>	<b>8.2</b>
Splenic trauma	15	6.8
Traumatic evisceration	6	2.9
Abdominal contusion with bowel injuries	4	1.8
Liver injury	3	1.4
<b>Acute bowel obstruction</b>	<b>17</b>	<b>7.8</b>
Internal occlusion	6	2.3
Cicatricial Flanges	5	2.3
Volvulus côlon pelvien	5	2.3
Occlusion by tumor	1	0.5
<b>Liver abscess</b>	<b>3</b>	<b>1.4</b>
<b>Cholecystitis</b>	<b>2</b>	<b>0.9</b>
<b>Psoas abscess</b>	<b>2</b>	<b>0.9</b>
<b>Mesenteric ischemia</b>	<b>1</b>	<b>0.5</b>
<b>Total</b>	<b>219</b>	<b>100</b>

Therapeutically, all patients had undergone open surgery apart from 15 patients who have splenic trauma. Those patients were hemodynamically stable. The abdominal ultrasonography were performed showing splenic injury and hemoperitoneum. We had noticed a good outcome in 14 cases. In one case we had performed a splenectomy because the hemodynamic status has become instable. The surgical procedures performed by the rest of patients depending on the etiology (Table III).

**Table III:** Surgical procedures performed.

	<b>Geste (n)</b>
Acute generalized Peritonitis (82)	Lavage and drainage of peritoneal cavity (82), excision-suture of stomach (35), ileal excision-suture (19), appendectomy (10), ileal resection-anastomosis (2), colostomy (1)
Appendicetomie(44)	Appendicectomy with lavage and drainage of peritoneal cavity (23), Sample appendicectomy (21)
Strangulated hernia (41)	Hernia treatment according to Bassini (31), sample raffia treatment (6) small intestine resection-anastomosis (4), omentum resection (1), cure hernial according to Mac Vay (1)
Bowel obstruction (17)	Small bowel resection-anastomosis (7), section of flanges (5), Ideal colectomy (3), Hartmann intervention (2)
Abdominal Trauma (13)	Lavage-drainage (13), Resection-anastomosis of the small intestine (4); excision-suture (2), hepatic suture (2), round ligament cauterization (1)
Cholecystitis (2)	Cholecystectomy-Drainage (2)
Abcès hépatique (3)	Percutaneous drainage (3)
Liver abscess (1)	Lavage-Drainage(1)
Mesenteric ischemia (1)	Resection-anastomose of jejunum (1)
Splenic trauma (1)	Splenectomy (1)

The postoperative course was complicated in 48 cases (21.9%). Complications were dominated by parietal abscess (35.2%) (Table IV).

**Table IV:** Post-operative complications.

	<b>PAG</b>	<b>AP</b>	<b>IM</b>	<b>CA</b>	<b>%</b>
<b>Parietal abscess (77)</b>	<b>43</b>	<b>24</b>	<b>1</b>	<b>4</b>	<b>35.2</b>
Evisceration (4)	3			1	1.8
Digestive fistula (3)	2	1			1.4
Incisional hernia (2)	2			1	0.9

The patients who presented with parietal abscess had healed under local care. All cases of evisceration had undergone surgical revision followed by local treatment of the wall with favorable outcome. The digestive fistula

had complicated two cases of ileal perforation by probably typhoid origin and one case of appendicular abscess. The first two

cases required revision surgery with ileal resection followed by a complicated right ileocolic anastomosis in a case of death from septic shock. Conservative treatment had been adopted in the last case with favorable consequences. The two cases of incisional hernia observed had benefited from a repair with a prosthesis.

We recorded a total of 11 (5.9%) deaths complicating 9 cases

of peritonitis and 2 cases of acute intestinal obstruction, secondary to septic shock and multiple organ failure due to delayed treatment. The average the duration of hospitalization was 10 days with extremes ranging from 1 to 125 days.

## Discussion

This study is the second of its kind in the Kara region. It aimed to analyze the new management of digestive surgical emergencies after that carried out in 2014 [5]. In digestive surgery, emergencies occupy a large part of the activities, especially in Africa, because they often constitute the mode of admission [6,7]. However, the frequency of these emergencies is not high in our series for several reasons: we did not have exclusivity in the management of digestive surgical emergencies in the Kara region; patients often arrive with a significant delay at the stage of complications (septic or hemodynamic shock) sometimes not allowing a surgical management in our condition's work and finally other patients are not sometimes operated for lack of financial means (because social security does not cover the entire population). In the series of Kassegne et al. [5], the monthly frequency was 11 patients between 2002 and 2012, whereas it was 17 patients in our series. This would be due to the strengthening of human resources and the quality of the care offered. Male predominance was the rule in the African series except in that of Sanogo et al in Timbuktu [2,5,6]. The average age in our series was 29 years old as in all African series due to the youthfulness of the African population [2,6].

The consultation time in our study was on average 7 days. It was 4 days and more than 2 days respectively in the series by Sanogo et al and Adamou et al [6,8]. This confirms the long consultation time observed in the majority of hospitals in Africa. This is due to ignorance, cultural beliefs and socio-economic problems [6]. Abdominal pain was the most frequent the consultation pattern of the patients in our series, like several African series [2,6]. Acute generalized peritonitis was the most common etiology in our study. Peritonitis due to gastric ulcer perforation was dominant in contrast to the series by Kassegne et al where peritonitis by typhoid perforation predominated [5]. This would be due to the delay in consultation in our region where ignorance and attachment to traditional therapy are pronounced. In Lomé, Bobo-Dioulasso and Thiès, the most dominant etiologies were respectively appendicitis and peritonitis [4,9,10]. The management of digestive surgical emergencies is medico-surgical. The pre, per and postoperative resuscitation occupies a preponderant place in this treatment. All fluid and electrolyte disturbances must be corrected preoperatively before the surgery. Probabilistic antibiotic therapy will be instituted and then readjusted postoperatively [11,12].

The postopérative were complicated in 21.9% in our series dominated by parietal abscess. Kassegne et al had reported a complication rate of 30.7% with a predominance of parietal abscess

[5]. The same observation was made in several African studies [2,4,6-8]. This complications are due to infectious abdominal pathologies (peritonitis, appendicular abscesses, etc.). They are the result of insufficient asepsis, a lack of means to protect the edges of the abdominal wall during laparotomies and unsuitable probabilistic antibiotic therapy [4,6]. The use of a protective operative wound retractor (Alexis OR) reduces the incidence of parietal abscess [13]. The mortality was 5.0% in our series. It was higher in that of Kassegne et al (11.4%) and in several African studies [4,5,6,8]. It was due in the majority of cases to septic shock or to multiple organ failure complicating peritonitis and acute intestinal obstruction. The incriminated factors were generally the delay in surgical management, the pecuniary problem of the patients, the bad practice of vascular filling and the use of the inappropriate antibiotic [11]. Laparoscopy has revolutionized digestive surgery and is the first approach in most digestive surgical pathologies. It is widely practiced in developed countries while it is a luxury in developing countries. Studies have shown the superiority of the laparoscopic approach over laparotomy in terms of reduction of postoperative pain, the duration of hospitalization, rate of wall infections and mortality rate [14,15].

## Conclusion

Digestive surgical emergencies are frequent and represent an important part of the activities in our department. Their management in our context was confronted with problems of diagnostic delay and lack of adequate therapeutic means. Their management poses a challenge for the surgeon and the resuscitator due to the high postoperative morbidity and mortality. This morbidity and mortality can be prevented or reduced by an early and precise diagnosis, efficient resuscitation, adequate operating technique and good asepsis.

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