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Acute Surgical Abdomens at the Koutiala Referral Health Center: Therapeutic Aspects

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Abstract **Original Research Article**

Aim: To describe the therapeutic aspects of surgical acute abdomens at the Koutiala referral health center. ***Patients and Methods:*** This was a prospective, descriptive study from August 1, 2017 to May 31, 2018, i.e. 10 months at the Koutiala referral health center. It included all patients operated on for abdominal pain syndrome in the general surgery department of the Koutiala referral health center. ***Results:*** We collated the records of 100 patients presenting with an acute surgical abdomen. They represented 70% of surgical emergencies. Mean age was 34.4±18.5 years. Men were in the majority, accounting for 70%. Acute appendicitis was the most frequent cause, accounting for 35% of cases (n=35), followed by acute peritonitis (31%, n=31). Therapeutically, appendectomy was the most common technique, 35% (n=35), followed by appendectomy + lavage, 10% (n=10). Average hospital stay was 4.7±3 days. Morbidity was 12% (n=12) and mortality 3% (n=3). ***Conclusion:*** Delayed consultation and low socio-economic status of patients explain the high complication rate in this study.

Keywords: Acute abdominal surgery, appendicitis, surgery, appendectomy.

INTRODUCTION

According to the WHO, this refers to abdominal pain that has been evolving for a few hours or days (less than three) and is related to a surgical pathology requiring emergency treatment [1]. Koutiala is a cercle in Mali, where the low rate of schooling, cultural beliefs and low socio-economic level explain the rate of complications in this study. The aim of this study was to describe the therapeutic aspects of acute abdominal surgery at the Koutiala referral health center. Methodology:

This was a prospective, descriptive study from August 1, 2017 to May 31, 2018, i.e. 10 months. It included all patients operated on for abdominal pain syndrome in the surgical department of the Koutiala referral health center. The cercle of Koutiala is a territorial collectivity of Mali in the Sikasso region and is located 390 km from Bamako and 140 km from Sikasso, it is part of the 6 cercles of Sikasso and has 35 communes including one urban. Parameters studied were age, sex, etiologies, treatment and outcomes.

RESULT

We collated the records of 100 patients presenting with acute surgical abdomen. They accounted for 8.4% of consultations, 27.7% of surgical procedures and 70% of surgical emergencies. The mean age was 34.4±18.5 years, with extremes of 1 and 80 years. The majority of patients were male (70%), with a sex ratio of 2.3 in favor of men. The mean duration of symptomatology was 4.8 days±5.4, with extremes of 1 and 30 days. The main etiologies were acute appendicitis 35% (n=35), ileal perforation peritonitis 15% (n=15),

appendicular peritonitis 10% (n=10), strangulated inguinal hernia 9% (n=9).

All patients underwent emergency surgery. The operative technique depended on the etiologies found. Appendectomy was performed in 35% of cases, appendectomy + lavage in 10% of cases, suture of ileal perforation in 9% of cases, and cure of inguinal hernia in 9% of cases (Table l).

Postoperative follow-up was straightforward in 85% of cases (n=85). We noted 7% (n=7) of parietal suppuration, 3% (n=3) of postoperative peritonitis, 1% (n=1) of evisceration and 1% (n=1) of external digestive fistula. Average hospital stay was 4.7 days±3 days, with extremes of 2 and 17 days. The mortality rate was 3% (n=3).

Table 1: Surgical techniques

Pathologies/Etiologies	**Techniques**	**Number of cases**	**%**
Appendicitis	Appendectomy	35	35
Acute peritonitis			
Ileal perforation	Suture	9	9
	Anastomosis resection	6	6
Appendicular	Appendicectomy + Lavage	10	10
Duodenal ulcer perforation	Suture	2	2
Caecal perforation	Suture	2	2
Perforation of gastric tumour	Gastrectomy of 4/5	1	1
Pyocholecystic rupture	Cholecystectomy	1	
Intestinal occlusion			
Small bowel volvulus	Anastomosis resection	4	4
Brides	Section	3	3
IIA	Resection anastomosis	1	1
	Disinvagination	2	2
Sigmoid colon volvulus	Hartmann procedure	1	1
	Resection anastomosis	1	1
Internal hernia	Resection anastomosis	2	2
Sigmoid stenosing tumor	Resection anastomosis	1	1
Strangulated parietal hernias			
Inguinal Hernia	Repair	9	9
	Resection anastomosis	2	2
Umbilical Simple hernia	Repair	1	1
Hemoperitoneum			
Splenic fracture	Hemostasis	2	2
	Splenectomy	1	1
Hepatic fracture	Hemostasis	2	2
Mesenteric artery injury	Suture	1	1
Section of ovarian artery	Ligature	1	1
Total		**100**	**100**

IIA: Acute intestinal invagination

DISCUSSION

Acute abdominal surgery accounted for 70% of surgical emergencies. This rate is close to that of Harouna in Niger, which was 62% [2]. Men were in the majority, with a sex ratio of 2.6, and the mean age was 34.4 years±18.5. In several African studies, acute appendicitis was the leading etiology of acute abdominal surgery [1, 3, 4]. These studies are similar to our own, which found 35% of cases of acute appendicitis.

On the other hand, Wade reported a high rate of intestinal obstruction in a Senegalese series, with 41% of cases [5]. The reason for this was that his study concerned only elderly subjects, with an average age of 73, who are at risk of colonic volvulus and colonic tumours. Acute peritonitis was the second most common etiology, accounting for 31% of cases. They were generally secondary to ileal perforation in an infectious context. As in the literature [2, 6], this can be explained by a delay in consultation due to cultural beliefs and lack of financial resources, on the one hand, and lack of proper management in our peripheral health centers, on the other. Surgical technique depended on the etiology. Appendectomy (45% (n=45)), with appendectomy and appendectomy + lavage combined, was the most frequently performed procedure. This high frequency of appendectomy was linked to the number of cases of peritonitis secondary to complications of appendicitis. However, it is lower than that of FONGORO [7] (59.7%) and higher than that of Sangaré S [8] (43.3%). This

difference is linked to the location of the study and the frequency of these pathologies (acute appendicitis, appendicular peritonitis).

The postoperative morbidity rate for acute abdominal surgery remains high, varying from 10 to 30% according to the authors [5, 6, 9]. Ours was 12%. Among these complications, parietal suppuration dominated with 7 cases. This can be explained by a delay in diagnosis and a lack of asepsis in intra- and postoperative management, with the disadvantage of increased hospital stays of up to 17 days. Several factors contribute to the increase in postoperative mortality in acute abdominal surgery, such as delayed consultation and management, insufficient correction of hypovolemia and inadequate antibiotic therapy. Mortality rates vary from 3% to 20% [3, 10-12]. Ours was 3% (n=3).

CONCLUSION

Surgical acute abdomens occupy an important place in surgical emergencies. The main etiology was acute appendicitis. The complication rate remains high due to delayed diagnosis.

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