

Emergency Abdominal Digestive Surgery in Elderly: Indications and Results in the General Surgery Department of the Ignace Deen National Hospital of Conakry, Guinea

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Abstract: *Introduction:* In an emergency, the physician has little time to explore the patient, which suggests that the diagnostic and therapeutic management is approximate, with the result that there is a certain reluctance to operate on the elderly. The purpose of this study was to determine the indications and results of abdominal digestive surgery in persons aged 60 years and older. *Patients and methods:* This was a 24-month prospective study (January 2020 to December 2021) of patients aged 60 years and over admitted and operated in emergency for abdominal digestive disease in the general surgery department of the Ignace Deen National Hospital of Conakry, Guinea. *Results:* we collected data from 80 patients aged 60 years and over who had surgery in emergency for digestive abdominal disease, representing 4.02% of the interventions. The patients were 47 men and 33 women. The age group 60 to 74 years was the most represented (78.75%). Acute bowel obstruction (27.5%), peptic ulcer perforation (22.5%), appendicular peritonitis (13.75%) and typhoid ileal perforation (11.25%) were the most noted surgical indications. The overall mortality rate was 13.75%. *Conclusion:* The presence of various comorbidities increases the risk of death for elderly undergoing any abdominal digestive surgery in emergency particularly in resources limited settings.

Keywords: Abdominal Digestive Surgery, Emergency, Elderly, Guinea

1. Introduction

The growth of the general population is accompanied by an increase in the number of elderly people, who pose specific health problems that are well managed in regulated surgery [1, 2].

In an emergency, the physician has little time to explore the patient, which suggests that the diagnostic and therapeutic management is approximate, with the result that there is a certain reluctance to operate on the elderly.

In Western countries, with the progress of resuscitation, surgical methods and the possibility of perioperative explorations, old age is no longer a contraindication for emergency surgery [2, 3].

Consequently, the increase in life expectancy and the justified confidence in the progress of intensive care anesthesia and surgery are leading more and more elderly patients to be managed in emergency. However, the perioperative morbidity and mortality is far from negligible, given the insufficient capacity of these subjects to cope with perioperative stress due to the alteration of their reserves and the pre-existence of other associated defects [2-4].

In Guinea, the absence of geriatric institutions, the difficulties of exploration of the patients put at risk postoperative elderly operated both in emergency surgery and in planned.

The purpose of this study was to determine the indications and results of abdominal digestive surgery in

persons aged 60 years and older in the general surgery department of the Ignace Deen National Hospital in Conakry, Guinea.

2. Patients and Methods

This was a 24-month prospective study (January 2020 to December 2021) of consecutive patients aged 60 years and over admitted and operated in emergency for abdominal digestive disease in the general surgery department of the Ignace Deen National Hospital in Conakry. At admission, comorbidities were assessed according to the American Society of Anaesthesiologists Physical Status classification (ASA Score). All our patients had a chest X-ray, an electrocardiogram and a routine blood tests including complete blood count, glycemia and an urinalysis. The parameters studied concerned epidemiological aspects, indications, surgical procedures and patients' outcomes. The Postoperative complications and mortality were assessed until 30 days after discharge. Informed consent of the patients, anonymity and confidentiality in data collection were respected. Qualitative data were presented in terms of frequency or percentage and quantitative data were evaluated as an average.

3. Results

Table 1. ASA Score.*

Score	Number of cases	Percentage
ASA 1	40	50.0
ASA 2	18	22.50
ASA 3	15	18.75
ASA 4	7	8.75
Total	80	100

* ASA Score: American Society of Anaesthesiologists Physical Status classification.

Table 2. Surgical indications.

Pathologies	Number of cases	Percentage
Acute bowel obstruction	22	27.5
Peptic ulcer perforation	18	22.5
Appendicular peritonitis	11	13.75
Typhoid ileal perforation	9	11.25
Strangulated hernias	7	8.75
Acute appendicitis	5	6.25
Colonic tumor in occlusion	5	6.25
Acute cholecystitis	3	3.75
TOTAL	80	100

Table 3. Frequency of surgical procedures.

Surgical procedures	Number (n=80)	Percentage
Peritoneal lavage + drainage	38	47.5
Intestinal resection + anastomosis	23	28.75
Suture of gastroduodenal perforation	18	22.5
Appendectomy	16	20.0
Suture of ileal perforation	9	11.25
Herniorraphy	7	8.75
Stoma	5	6.25
Cholecystectomy	3	3.75

During the two years, we found 80 patients aged 60 years and over who had surgery in emergency for digestive abdominal disease, representing 4.02% of the interventions. The patients were 47 men and 33 women. The age group 60 to 74 years was the most represented (78.75%). The extreme ages were 60 and 97 years. The average time to consultation was 4.4 days with extremes of 1 and 21 days. Tables 1 and 2 show the ASA Score and the surgical indications, respectively. The associated pathologies were cardiovascular (n=20), neurological (n=6), bronchopulmonary (n=4), diabetes (n=4), HIV infection (n=2). The table 3 indicated the different surgical procedures.

The mean time to care was 19.3 hours. All patients were operated under general anesthesia with orotracheal intubation. Table 3 shows the surgical procedures performed.

The postoperative course 30 days after discharge was simple in 58.75% of cases (n=47). Surgical complications were dominated by surgical site infections (n=16), evisceration (n=7), digestive fistula (n=4) and postoperative peritonitis (n=4). Reintervention was performed in 11 patients to treat evisceration and peritonitis. The overall mortality was 13.75% (n=11), the majority of whom had associated pathologies (7/11 cases). The average length of hospital stay was 14.95 days with extremes of 2 to 58 days.

4. Discussion

Over a period of two years, 80 patients aged 60 years and over were operated on in our department for abdominal digestive disorders, representing 4.02% of all urgent operations performed.

Western series report higher figures over short or long periods [5-7], which shows that surgery on elderly subjects is less common in our department. In the series by Lebeau R et al [5], they found a male predominance of 91 men for 46 women, with a mean age of 68.3 years (extremes: 60 and 93 years). In the Turkish study by Günay Gürleyik et al [5], 61% of patients were male, with a mean age of 70.3 years (range 60-95 years). The Guinean population is relatively young, and the lack of anesthesia and resuscitation facilities in our hospitals does not reassure the elderly and their families, nor the surgeons.

The surgical indications were dominated by infectious pathologies and intestinal occlusions. Peritonitis, whether due to perforation of a peptic ulcer or of appendicular origin or by typhoid ileal perforation, reflects the poor medical follow-up of the elderly. The inaccessibility of imaging examinations such as fibroscopy and ultrasound in our hospitals makes it difficult to diagnose certain digestive diseases in elderly subjects who already have many defects or diseases. Günay Gürleyik et al [5] found in their study that the causes of surgical emergencies in patients aged 60 years and older were: acute cholecystitis (31.5%), strangulated hernia (18.2%), perforation of gastrointestinal tract (17.1%), intestinal obstruction (10.5%), acute mesenteric ischemia (9.4%), acute appendicitis (8.3%), and upper gastrointestinal hemorrhage (5%). The result of our study indeed reflects the

panorama of abdominal surgical emergency in the general population of our country. The rarity of strangulated hernias in this series could be explained by the fact that these cases are often managed in lower level hospitals.

Associated pathologies were present in 34 patients (42.5%) with a predominance of cardiovascular and neurological pathologies. The presence of comorbidities in the elderly has already been reported in proportions of 48 to 60% [7, 9, 10]. The authors agree that this is one of the main causes of postoperative morbidity and mortality [11]. As in the series by Lebeau R et al [8], medical defects were found in 50.3% of patients, with a predominance of cardiovascular pathologies (34 cases). Launay-Savary E et al [4] also reported 87% cardiovascular defects and 29.6% neuropsychiatric defects.

Delayed consultation was almost constant in our medical environment. It reflects the therapeutic itinerary of our patients and their financial difficulties. Indeed, patients first use self-medication, then transit to traditional medicine or health centers before being directed to university hospitals when there is no improvement in their health.

The occurrence of postoperative complications such as peritonitis and evisceration has led to early re-interventions. Lebeau R et al [5], also reported a re-intervention of 5.1% in their series.

The overall mortality of 13.75% noted in this study is within the range of those reported in the literature [8, 5, 7, 12-17]. In Australia, Abbas S et al [17], in their study of major abdominal surgery in people aged 80 years and over, reported a mortality of 29% in emergency surgery and 7.5% in scheduled surgery with an overall morbidity of 33.3%. Of the patients who died in our series, 5 patients were aged ≥ 75 years, 6 patients were admitted for peritonitis, 8 patients had an ASA score \geq to III, 5 patients had undergone intestinal resection-anastomosis. The middle and long-term outcome of patients in this cohort was not assessed. Actually, the postoperative mortality in elderly possibly will continue to rise after discharge. Rangel EL et al in a cohort of 390 patients with a mean age of 79 years who had emergency abdominal surgery found that postoperative mortality was 16.2% at 30 days and 32.5% at 1 year, reflecting a doubling of mortality over 11 months [18].

The causes of death reflect the difficulties in resuscitating these elderly patients in emergency, the negative influence of comorbidities on the postoperative evolution. The existence of a medical defect led to a higher risk of death.

It has been shown that the incidence of comorbidities increases progressively with age and that only 5% of patients over 80 years of age do not have any [19]. These comorbidities make the elderly patients at high risk for surgery [15, 20]. Indeed, the assessment of operative risk in geriatric patients undergoing emergency surgery is challenging [21, 22].

5. Conclusion

The recent increase in the number of elderly people in low

income countries became a real challenge for health care services particularly when these aged persons need surgery in emergency. Our findings show clearly that the presence of various comorbidities increases the risk of postoperative complications and death in elderly. The prolongation of the hospital stay increases considerably the financial burden of the family but also increases the risk of occurrence of nosocomial infections. To improve the outcome of elderly undergoing surgery, there is a need to establish well-equipped geriatric institutions and train medical staff in resources limited countries like ours.

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