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Surgical Research

Epidemiology and Management of Post-opérative Complications of Colic Surgery at the Donka National Hospital, CHU of Conakry

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ABSTRACT

Introduction: *Postoperative complications of colonic surgery are frequent and serious pathologies, often linked to delayed consultation and comorbidities. The aim of this study was to improve the quality of management of postoperative complications of colonic surgery in the department.*

Methodology: *This was a 5-year retrospective, descriptive study from January 1, 2017 to December 31, 2021in the visceral surgery department of the Donka National Hospital, CHU of Conakry.*

Results: *We collected 37 CPOCC cases (17.12%) out of a total of 216 cases. The mean age of patients was 39.4 years and the sex ratio was 1.3. Merchants and housewives were the most affected, with 21.6% each, and 64.81% of patients came from the city of Conakry. The comorbidities recorded were diabetes (33.33%) and arterial hypertension (33.33%). Seven patients had vices, and the majority (32.43%) underwent surgery for pelvic colon volvulus. The mean time to complications was 85.18 hours and the mean time to management was 19.64 hours. The clinical picture was dominated by fever (59.45%), and the majority of complications were infectious. All patients were resuscitated, and the procedures performed were dominated by peritoneal cleansing + colostomy and resection of the necrotic part + colostomy in equal proportions (36.36%). Post-operative follow-up was favourable in 78% of cases, during which we recorded 22% deaths.*

Conclusion: *Post-operative complications in colonic surgery are frequent and serious, often linked to delayed consultation and comorbidities, and can rapidly jeopardize patients' vital prognosis.*

Keywords

Postoperative complications, Colonic surgery, Epidemiology, Management.

Introduction

Postoperative complications of colonic surgery (POCCs) are pathological conditions that arise after surgery for colonic pathology, worsening the prognosis [1]. They are one of the leading causes of morbidity and mortality in clean abdominal surgery, even in emergencies [2]. The most common and serious postoperative complications of colonic surgery are anastomotic fistulas, postoperative peritonitis, evisceration, stomal necrosis and surgical site infections [3]. Most of these complications are life-threatening, requiring rapid surgical management with intensive and adequate resuscitation measures [4]. The aim of our study was to investigate the management of postoperative complications

of colonic surgery in the department while comparing our results with data in the literature.

Methodology

This was a retrospective, descriptive study of five (5) years, from January 1, 2017 to December 31, 2021, covering the records of patients admitted and operated on in the department for colonic pathology and who developed post operative complications during the study period. The study was conducted in the visceral surgery department of the Hôpital National Donka, CHU de Conakry. All patient records meeting our study variables were included in the study, and incomplete record were excluded. These variables were epidemiological, clinical, therapeutic, prognostic and evolutionary.

Result

Out of 216 patients admitted and operated on for colonic pathologies in the department during the study period, we recorded 37 cases of CPOCC, representing a frequency of 17.12% (n=37). Males predominated, with a frequency of 56.7 (n=21) vs. 43.3% (n=16) for females, with a M/F sex ratio of 1.3. The mean age of our patients was 39.4 years, with extremes of 16 and 86 years. We observed a predominance of the 21-30 age group with a frequency of 27% (n=10). Merchants and housewives were the socio-professional strata most affected, with 21.6% (n=8) each. The majority of our patients came from the city of Conakry with 64.81% (n=24). Clinical signs were dominated by fever 59.45% (n=22), purulent discharge 48.64% (n=18), abdominal pain 37.83%(n=14), cold extremities 13.51%(n=5), fecal discharge 8.10%(n=3). Comorbidities included diabetes (33.33%), arterial hypertension (33.33%), obesity (22.22%) and epilepsy (11.11%). Seven patients were vices: 5 smokers, one alcoholic and one alcoholic-tobacco addict.

Table 1: Breakdown of cases by indication for primary intervention.

Indication of primary intervention	Number of cases	%
Pelvic colon volvulus	**12**	**32,43**
Colon tumor	**7**	**18,92**
Colic wounds	**6**	**16,21**
Restoring colonic continuity	4	10,81
Tumor of the cecum	3	8,11
Dolichocolon	3	8,11
Volvulus of the cecum	2	5,41
Total	37	100

According to ASA score: 29 cases (78.38%) had ASA1; 2 cases (5.41%) had ASA2 and 6 cases (16.22%) had ASA3. According to colonic preparation, only 27% (n=10) had received colonic preparation the day before surgery, and 70% (n=27) had not. The mean time to complications was 85.18 hours, with extremes of 10 minutes and 12 days. The mean time to care was 19.64 hours, with extremes of 10 minutes and 5 days. 73% (n=27) of patients underwent emergency surgery, versus 27% (n=10) who underwent planned surgery. According to the type of complication, we noted 91.9% (n=34) cases of early complications and 8.1% (n=3) cases of late complications.

Table 2: Frequency of infectious complications.

Infectious complications	Number of cases (N=24)	%
Surgical site infections	**18**	**75**
Digestive fistulas	3	12,50
Postoperative peritonitis	2	8,33
Respiratory infection	2	8,33

Table 3: Frequency of non-infectious complications.

non-infectious complications	Number of cases (N=13)	%
Deaths	**6**	**46,15**
Necrosis of the stomal mouth	2	15,38
Eschar	2	15,38
Stomal mouth hemorrhage	1	7,69
Stomal stenosis	1	7,69
Colostomy fall	1	7,69

Late complications included two deaths and one case of anastomotic stenosis.

All patients benefited from resuscitation based mainly on antibiotics, analgesics and local anesthesia in 80% of cases.

Table 4: Frequency of procedures performed.

Actions taken	Number of cases (N=11)	%
Peritoneal cleansing + Colostomy	**4**	**36,36**
Resection of necrotic area + colostomy	**4**	**36,36**
Anastomosis resection	2	18,18
Hemostatic sutures	1	9
Fixing the stomatal mouth	1	9

In terms of therapeutic follow-up, 78% (n=29) of cases were favorable and 22% (n=8) were fatal. In terms of causes of death, we recorded 62.5% (n=5) cases of septic shock and 37.5% (n=3) cases of hemorrhagic shock. Average length of hospital stay was 15.24 days, with extremes of 6 hours and 29 days.

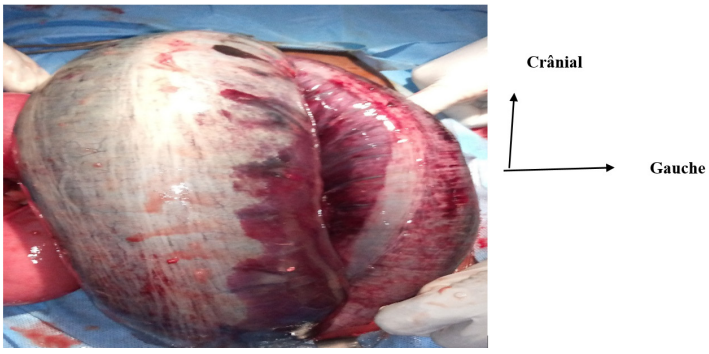

Figure 1: Intraoperative view of a necrotic sigmoid colon volvulus. (Photo library Visceral Surgery CHU Conakry).

Discussion

The rate of postoperative complications of colonic surgery found in our series is lower than that of Kambire et al. [5] in 2020 in Burkina Faso, who reported 32.3% of CPO at the Regional

Hospital of Ouahigouya, and of Baldé [6] in 2015 in Guinea, who reported 24% of CPOCC in the visceral surgery department of the National Hospital Donka. But it is higher than that of Choua O et al. [3] in 2014 in Chad, who reported 13.6% of CPO after a study on pelvic colon volvulus. If in Europe colonic pathologies are diseases of the elderly, in Africa they are the domain of young adult males. Adakal et al. [7] in 2021 in Burkina Faso found an average age of 11 years with extremes of 1 year and 87 years. Didier et al. [8] in 2021 in Niger reported a male predominance with a sex ratio of 5.9. The comorbidity rate encountered in our series is higher than that of Baldé [6] in 2015 in Guinea, which reported 6.3% of diabetics and 4.5% of HIV-immunosuppressed individuals. Comorbidities expose patients to complications due to the fragility of their condition. The median consultation delay in the tropics is usually long, which influences prognosis. Didier et Coll [8] in 2021 in Niger reported an average admission delay of 4.8 days ± 1.3, with extremes of 1 day and 30 days, comparable to that found in our series.

The majority of our patients were admitted as emergencies, comparable to the series by Adakal and Coll [7] in 2021 in Burkina Faso, which reported that 97% of patients were operated on as emergencies and 3% for elective surgery. The primary indication in the tropics is dominated by pelvic colon volvulus, as reported in our series. Kambire and Coll [5] in 2020 in Burkina Faso reported 35.3% colonic volvulus and 32.4% colonic tumors. Tanis et al. [10] in 2015 in the Netherlands found that ASA score ≥ 3 in patients over 70 years of age, respiratory and neurological comorbidities were factors with a worse prognosis than in our study. Nearly half the complications occurred in less than 72 hours, and the median time to management was nearly 20 hours. In the series by Balique [9] in France, 25% of patients were managed before 48 hours, 12.5% between the 3rd and 7th days and 62.5% after the 7th day. As in the series by Baldé [8] in Guinea in 2015, these complications included fever, discharge of purulent fluid and abdominal pain. All patients benefited from resuscitation with antibiotics, analgesics and imidazoles. Peritoneal cleansing and colostomy were performed in almost 40% of cases, followed by anastomotic resection. Postoperative follow-up in our series is comparable to that of Balique [9] in France, who reported a 33.3% favorable outcome and 66.6% complications. The median length of hospital stay in our series is comparable to that of Yénon et Coll [11] in 2008 in Côte D'Ivoire, who reported a mean length of hospital stay of 19.4 days. The length of stay depended on the patient's age, associated defects, surgical procedures and type of complication.

Conclusion

Postoperative complications of colonic surgery are most often related to delayed consultation and comorbidities, and can be life-threatening. Careful preparation of the colon, emergency colostomy and improved technical facilities could improve the prognosis of these patients.

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