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Colorectal Surgical Pathologies : Frequency and Management in the Visceral Surgery Department of the National Hospital Donka CHU in Conakry

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Abstract :-

Introduction : Colorectal surgical pathologies include all colonic and rectal pathologies whose treatment requires surgical intervention. They represent an important part of the activities of the visceral surgeon. The aim of this study was to determine their frequency and to assess their management.

Methodology : This was a retrospective cross-sectional and descriptive study of 5 years from 1/01/2009 to 31/12/2013. It focused on the records of patients hospitalized and operated on for colorectal surgical pathologies. Epidemiological, clinical, therapeutic and prognostic variables were studied.

Results : This study involved 136 cases. These pathologies represented 3.46% of the surgical procedures performed in the department. The average age was 48 years with extremes of 16 and 82 years. We noted a male predominance with a sex ratio of 3.10. The 52.9% of patients were seen as emergencies and 47.1% as scheduled surgery. The average duration of evolution was 21.4 days. Functional symptoms were dominated by abdominal pain. Pelvic colonic volvulus was the most commonly operated on, 61.7%. Colostomy was performed in 47.8%. The mortality rate was 19.9%. The average length of hospital stay was 17.8 days.

Conclusion : This study enabled us to review the problems of their diagnostic and therapeutic management. The clinic, sometimes assisted by the ASP, was the main recourse. Perioperative resuscitation based on the results of biological examinations, CT scan and colonoscopy could help in a better management of these pathologies.

Keywords:- *colorectal surgery, frequency, management.*

I. INTRODUCTION

Colorectal surgical pathologies include all colonic and rectal pathologies whose treatment requires surgical intervention. They represent an important part of the activities of the visceral surgeon.

These pathologies, which are uncomplicated, are most often asymptomatic; when complicated, they have multiple and varied clinical expressions. Their diagnosis is clinical, confirmed by morphological, endoscopic and anatomo-pathological examinations.

They have been the subject of several rich and varied studies throughout the world.

HN Natta N'tcha et al reported in their study 427 patients who underwent colorectal surgery during the period from 1 January 2011 to 31 December 2015 [1].

In sub-Saharan Africa, they are dominated by pelvic colonic volvulus, the frequency of which varies from 20% to 50% compared to other causes of obstruction [2,3]. In the rest of the world, colorectal cancers are the most frequent operative indication for laparoscopic colorectal surgery with rates varying between 34 and 95% [1, 4, 5].

Data concerning colorectal surgical pathologies as a gnoseological entity do not exist in the literature.

The aim of this study was to determine their frequency and to assess their management in the visceral surgery department of the Donka Hospital in Conakry.

II. MATERIAL AND METHODS

This was a retrospective cross-sectional and descriptive study of 5 years from 1 January 2009 to 31 December 2013. It focused on the records of patients hospitalised and operated on for colorectal surgical pathologies in the visceral surgery department of the Donka National Hospital, CHU of Conakry during the study period. It concerned 136 cases out of the 207 cases of patients operated on for colorectal surgical pathologies. This situation is explained by the absence of data relating to our study variables in the excluded files. Epidemiological, clinical, therapeutic and prognostic variables were studied.

III. RESULTS

This study involved 136 of the 207 cases of patients operated on for colorectal surgical pathologies. These pathologies represented 3.46% (136 cases / 3923) of all surgical procedures performed in the department, i.e. 7th place in a list dominated by appendicular pathologies 865 cases (22.05%), abdominal parietal surgical pathologies 706 cases (18.00%), and surgical pathologies of the stomach 400 cases (10.20%). The average age of our patients was 48 years

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with extremes of 16 and 82 years. We noted a male predominance with a sex ratio of 3.10. The 52.9% of the patients were treated as emergencies and 47.1% as scheduled surgery. The mean duration of evolution was 21.4 days with extremes of 1 day and 730 days.

N = 136

functional signs	%
Abdominal pain	100 (n=136)
Gas and stoppage	83,1 (n= 113)
Nausea and/or vomiting	74,3 (n=101)
Abdominal distension	55,1 (n= 75)
Constipation	10,3 (n= 14)
Diarrhoea	9,6 (n= 13)
Rectorrhagia	5,9 (n= 8)
Melena	1,5 (n= 2)

Table 1: Frequency of functional signs

N =136

physical signs	%
Pain on palpation	82,4 (n = 112)
Distended abdomen	77,9 (n = 106)
Tympany	77,2(n = 105)
Abdominal tightness	57,4(n = 78)
Inaudible peristalsis	29,4(n = 4O)
Palpable mass	14,0(n = 19)
Peristaltic ripple	13,2(n = 18)
Decreased flank mass	12,5 (n = 17)
Abdominal defensiveness	8,1(n = 11)
Painful and bulging Douglas	8,1(n = 11)
Inguinal adenopathy	0,96(n = 13)

Table 2: Frequency of physical signs

Diagnosis	%
Pelvic colon volvulus without necrosis	40,4 (n = 55)
Pelvic colon volvulus + necrosis	21,3 (n = 29)
Non-occlusive colorectal tumours	14,0 (n = 19)
Occlusive colorectal tumours	9,6 (n = 13)
Colonic perforations	7,4 (n = 10)
Colonic wounds	3,7 (n = 5)
Colonic occlusions on flanges	2,2 (n = 3)
Necrotizing colitis	1,4 (n = 2)
Total	100 (n=136)

Table 3: Distribution of colonic surgical pathologies by diagnosis

X-ray of the unprepared abdomen, performed in 96 patients (70.6%) revealed hydro-aeric levels in 88 patients (91.7%) and pneumoperitoneum in 8 patients (7.3%). Rectosigmoidoscopy performed in 8 patients (5.9%) evoked a sigmoid tumour in 4 patients and a recto-sigmoid tumour in the other 4; abdominal ultrasound performed in 7 patients (5.1%) was not contributory to the diagnosis; barium enema performed in 2 patients (1.5%) showed irregular sigmoid stricture.

Intravenous rehydration and analgesic treatment were given in 100% of cases; 98.5% received broad-spectrum probabilistic antibiotic therapy; and 58.1% received a colonic enema. The approach was median above and below the umbilical for all cases.

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N = 136

Surgical procedures	%
Endoscopic detorsion + Secondary colectomy	18,4(n = 25)
Colostomy (Hartmann) + Secondary colectomy	18,4(n =25)
Left Hemicolectomy	16,2(n =22)
Volkmann Colostomy + Secondary Colectomy	15,4(n =21)
No procedure	08,8(n =12)
Simple surgical detorsion	08,8(n =12)
Externalization + secondary suture of the breach	07,4(n =10)
Ideal colectomy	04,4(n =06)
Suture of wound (2 after exteriorisation)	03,7(n =05)
Final colostomy	03,4(n =04)
Section of flanges	02,2(n =03)
Colostomy on rod	01,5(n =02)

Table IV : Frequency of surgical procedures

The postoperative course was complicated by parietal suppuration in 20.6% of cases and postoperative peritonitis in 4.4% of cases. Death was noted in 19.9% (n=27) of cases.

The average length of hospital stay was 17.8 days.

IV. DISCUSSION

This study is a first in the department. During this period, colorectal surgical pathologies occupied the 7th place among the groups of pathologies operated on in our department. The high frequency in adults found in our study is reported in the literature [1,6,7,8]. We noted a male predominance with a sex ratio of 3.10. This male predominance is found in the literature [6, 7, 8] and could be explained by the frequency of colonic surgery in men. On the other hand, a female predominance has been reported by some authors [9, 10].

The analysis of the cases according to the mode of admission revealed that the majority of cases were admitted in emergency and this could be explained by the asymptomatic evolution of most uncomplicated colonic surgical pathologies. On the other hand, in the study by HN Natta N'tcha et al [1] 98.75% were operated on in a controlled setting.

The functional symptoms were dominated by abdominal pain, which was found in all cases (Table I). The physical examination essentially noted abdominal pain, abdominal distension (Iconography1A) and tympany (Table II). This clinical situation indicates the urgent nature of the majority of cases

Pelvic colonic volvulus was the main colonic pathology operated during this period, followed by colorectal tumours (Table III). Volvulus is the main complication of the pelvic dolicho-colon. This malformation is reportedly frequently encountered in sub-Saharan countries [7, 11]. Its diagnosis is based on clinical and imaging findings. In our study, PSA was the main imaging test performed in 70.6% (n=96) of cases. Hydroaerosic levels were noted in 88 cases. The ASP and the water-soluble enema, which are easy to perform, do not however allow us to predict the vitality of the loop [11].

Abdominal and pelvic CT is currently the reference examination for the diagnosis of colonic surgical pathologies. It allows both accurate diagnosis and indication of severity. [11].

In our study, all the cases benefited from preoperative resuscitation, which aimed above all to put the patient in the right conditions for surgery and to prevent possible intra- and postoperative complications. It was decisive for the continuation or not of the treatment.

This resuscitation was very limited in our hospital environment due to the fact that certain para-clinical examinations (blood ionogram) were not available. In the absence of data on the results of these different examinations, even the antibiotic therapy, which is always probabilistic, does not follow scientific recommendations.

The absence of an operating kit at the national hospital made the management of these pathologies very difficult, either because of the delay or the lack of availability of consumables, which were charged to the patients or their parents.

Colostomy (Iconography1C) was the most common surgical procedure performed in our series.

Definitive colostomy was performed in cases of tumour pathologies diagnosed at an advanced stage where no resection allowing the restoration of digestive continuity was possible.

The Hartmann colostomy was used in cases of extensive necrosis (volvulus of the pelvic colon) and tumour occlusion.

The Bouilly Volkmann colostomy was mainly used in pelvic colon volvulus with limited necrosis.

In pelvic colon volvulus (Iconography1B), the strangulation mechanism rapidly exposes the risk of irreversible ischaemia evolving towards necrosis and intestinal perforation with stercorrhagic peritonitis. This is why, if the patient presents serious clinical or radiological signs, he/she must be operated on urgently. In the absence of these signs, several therapeutic attitudes are possible and depend on the technical platform.

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The colonic enema with water-soluble solutions is effective in only 5% of cases [6]. Some have proposed detorsion by rectal intubation with a Faucher tube in the radiology room if the patient is seen early [11]. This blind technique without prior endoscopy should be abandoned as it does not ensure the absence of necrosis of the volvulus colon and exposes the risk of digestive perforation.

Endoscopic detorsion was used in our study in 18.4% of cases (Table IV). It allowed a deferred sigmoidectomy, after good preparation of the patient. However, in the absence of an endoscopic tray, surgical treatment remained the only therapeutic possibility in our study. Several surgical techniques can be proposed:

- Simple detorsion of the volvulus colon. This may or may not be associated with a sigmoidopexy. In our study it was used in 8.8% of cases (Table IV). It has the advantage of removing the obstacle but does not protect the patient from a recurrence. This technique is said to be obsolete and should be abandoned [12, 13].
- Surgical resection is accepted as the treatment of choice. It consists of segmental colectomy or sigmoidectomy followed or not by restoration of digestive continuity. One-stage sigmoidectomy is described as ideal and is followed by immediate recovery [3,7]. It was used in 4.4% of cases in our study (Table IV). Two-stage colectomy requires a colostomy while awaiting recovery, which is delayed by several months [3,10,11].

For non-occlusive colorectal tumours, in 10 patients no surgery was possible because of the extensive invasion of the tumour which made surgery impossible. Intervention on these patients could have been avoided if there had been precise information on the extension of the tumour thanks to the results of the CT scan. The other 09 non-occlusive tumours benefited from a left hemicolectomy with lymph node dissection after a good colonic preparation.

For occlusive colorectal tumours, the treatment remains controversial today between 2 or 3 stage procedures and the so-called ideal one stage procedures [14,15,16]. In our study, 2-stage procedures were used. However, in 04 cases the colostomy was definitive because there was no possibility of restoring digestive continuity (Table IV). The other 09 cases benefited from a left hemicolectomy at a distance from a colostomy (02 on rod and 05 according to Hartmann) (Table IV).

¬ The principles of management of colonic wounds were codified from the middle of the Second World War, emphasising systematic laparotomy, wide drainage and bypass colostomy [17]. In our study 2 cases of colonic wounds were externalized to the skin and closed secondarily, these were colonic wounds received after 6 hours of evolution; the others received in less than 6 hours were closed during the first intervention.

The diverticular colonic perforations were all externalized to the skin before being closed secondarily.

The postoperative course was good in the majority of cases. They were enamelled with complications, the main one being parietal suppuration. This could be explained by the urgent and septic nature of most cases.

We recorded 19.9% overall mortality. All these deaths concerned patients admitted in emergency with poly visceral failure aggravated by a resuscitation deficit.

The average length of hospital stay was long in our study. This could be explained on the one hand by the double hospitalisation of colostomy cases and on the other hand by the management of complications occurring in the postoperative period.

Iconographie 1

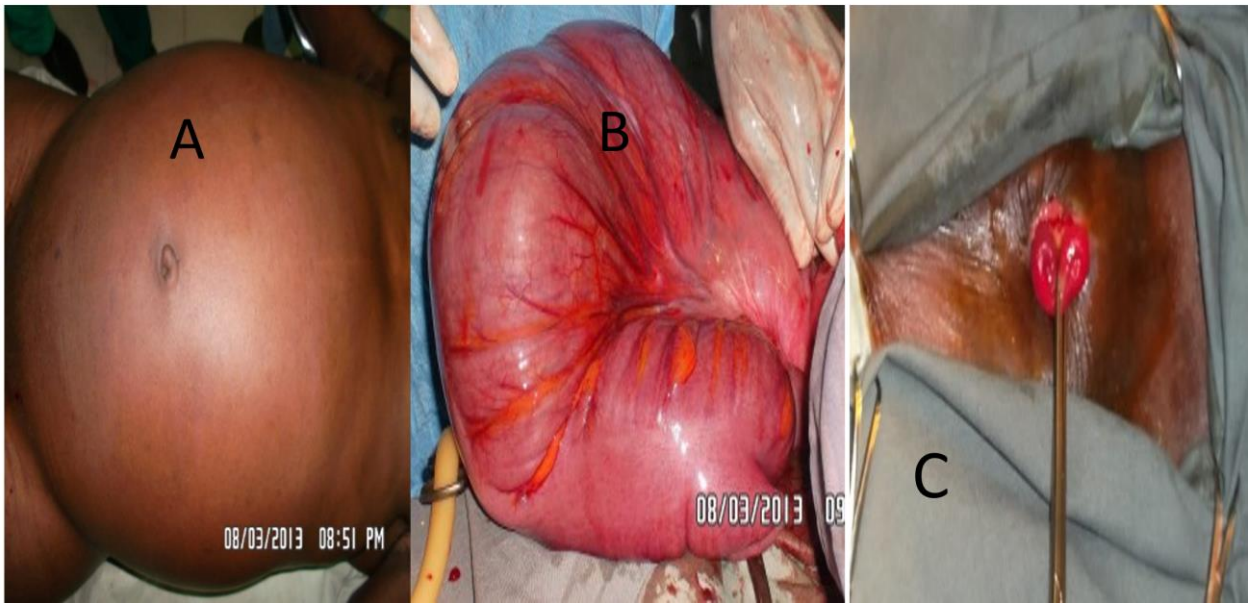

Image 1 :Iconographie

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V. CONCLUSION

Colorectal surgical pathologies have occupied a significant part of the department's activities. This study allowed us to review the problems of their diagnostic and therapeutic management. They are most often encountered in fasting male adults. For diagnosis, the clinic, sometimes assisted by the ASP, was the main recourse. Emergency admissions accounted for more than half of the cases. Perioperative resuscitation based on the results of biological examinations, CT scan and colonoscopy could help to improve the management of these pathologies.

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