

# Surgical Treatment of Hemorrhoidal Disease at Brazzaville University Hospital Center

Murielle Etienne Julie Note Madzele<sup>1,2\*</sup>, Pierlesky Elion Ossibi<sup>1,2</sup>, Rody Stéphane Ngami<sup>2,3</sup>, Didace Massamba Miabaou<sup>1,2</sup>, Clausina Philestine Mikolele Ahoui Apendi<sup>2,3</sup>, Noé Henschel Motoula Latou<sup>1,2</sup>, Bhodeho Medy Monwongui<sup>1</sup>, Gresse Bienvenu Tsouassa Wa Ngono<sup>1</sup>, Prude Pertinie Avala<sup>1</sup>, Carmich Nzaka Moukala<sup>1</sup>, Cédrick Du Bonheur Alima Koya<sup>1</sup>, Blaise Irénée Atipo-Ibara<sup>2,3</sup>

<sup>1</sup>Digestive Surgery Department, Brazzaville University Hospital Center, Brazzaville, Congo

<sup>2</sup>Faculty of Health Sciences, Marien Ngouabi University, Brazzaville, Congo

<sup>3</sup>Gastroenterology and Internal Medicine Department, Brazzaville University Hospital Center, Brazzaville, Congo

Email: \*murielle.note@yahoo.fr

**How to cite this paper:** Note Madzele, M.E.J., Elion Ossibi, P., Ngami, R.S., Massamba Miabaou, D., Mikolele Ahoui Apendi, C.P., Motoula Latou, N.H., Bhodeho Medy Monwongui, Tsouassa Wa Ngono, G.B., Avala, P.P., Nzaka Moukala, C., Alima Koya, C.D.B. and Atipo-Ibara, B.I. (2024) Surgical Treatment of Hemorrhoidal Disease at Brazzaville University Hospital Center. *Surgical Science*, 15, 159-168.

<https://doi.org/10.4236/ss.2024.153016>

**Received:** February 8, 2024

**Accepted:** March 26, 2024

**Published:** March 29, 2024

Copyright © 2024 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

## Abstract

**Introduction:** Hemorrhoidal disease is a common pathology and its surgical treatment is based, among other things, on pedicular resection after failure of medical and instrumental treatment. The aim of this study is to analyze the epidemiological, clinical, therapeutic and evolving aspects of hemorrhoidal disease at the stage of surgical treatment at the University Hospital Center of Brazzaville. **Patients and Methods:** We conducted a retrospective and descriptive study carried out from January 2020 to December 2021, a 24 months period, in the Digestive surgery department of the University Hospital Center of Brazzaville. It concerned patients who underwent a surgical procedure for hemorrhoidal disease. **Results:** 21 cases were collected, representing a hospital frequency of 2.3%, with a sex ratio of 4.3 in favor of men. The average age of patients was  $42.2 \pm 11.9$  years. The symptoms were mainly proctalgia, mass sensation and rectal bleeding. We recorded five cases (19.1%) of hemorrhoidal thrombosis and 16 cases (80.9%) of hemorrhoidal prolapse including 12 cases requiring manual integration (Goligher grade III) and four irreducible permanent cases (Goligher grade IV). The Grade III prolapse was associated with a polyp in one patient and with posterior anal fissure in another patient. Out of the 21 patients, 14 underwent a tripedicular hemorrhoidectomy according to Milligan and Morgan. Two patients underwent mono- and bipedicular hemorrhoidectomy with resection of associated lesions and five patients underwent emergency thrombectomy. The outcome was favorable for all our patients. The average length of hospital stay was  $1.5 \pm 2.1$  days. **Conclusion:** In the event of failure of medical and instrumental treatment, the hemorrhoidal cure according to Milligan and Morgan is the surgical treat-

ment of reference for hemorrhoidal disease at the University Hospital Center of Brazzaville.

## Keywords

Hemorrhoidal Disease, Surgery, Milligan and Morgan

---

## 1. Introduction

Hemorrhoidal disease (HD) is a common disease. In the United States of America, it is estimated that 58% of people over the age of 40 suffer from this disease and almost a third of them are referred for surgical treatment [1]. In France, HD represents almost 20% of private consultations according to the White paper of the French National Society of Gastroenterology [2]. Approximately one in two French patients over the age of 50 have already had a hemorrhoidal crisis [3] and surgical treatment relates to roughly 10% of patients with hemorrhoidal pathology [4].

The surgical treatment of HD involves several procedures, some modern techniques known as minimally invasive, and the traditional hemorrhoidectomy [5]. The traditional haemorrhoidectomy is based on the resection of hemorrhoidal packages using the so-called pedicular resection method described at Saint Mark's Hospital in London in 1937 by Milligan and Morgan (MM) [6].

Surgical treatment should be considered when medical treatment and instrumental treatment have proven ineffective [5]. In Congo, a study carried out in 2007, over a period of 10 years, reported 56 cases of HD treated using the MM hemorrhoidectomy procedure with generally satisfactory results [7]. The present work aimed to study the current profile of HD at the stage of surgical treatment in its epidemiological, clinical, therapeutic and evolving aspects, at the Brazzaville University Hospital.

## 2. Patients and Methods

We performed a retrospective and descriptive study of patients who underwent a surgery for HD in the Digestive surgery department of Brazzaville University Hospital, during a 24 months period, from January 2020 to December 2021. It concerned all patients registered in the admission register of the service who have been operated on for HD in fixed or emergency surgery. Patients whose records were incomplete, which means, patients with missing medical observation, missing operative report, no result of a low endoscopy for patients operated on in controlled surgery or no information about the follow-up, were excluded. Records of patients released against medical advice and lost to sight were also excluded.

The variables studied were: age, sex, comorbidities, patients history, reasons for consultation, consultation period, diagnosis, surgical procedures performed and outcome. The diagnosis was based on clinical assessment, which made it

possible to grade HD according to the Goligher's classification (**Table 1**) [8].

Outside of emergency circumstances, a lower digestive endoscopic exploration made it possible not only to confirm the diagnosis, but also to search for possible associated organic lesions.

On the therapeutic level, the surgical procedure performed in controlled surgery was the MM technique. It was applied to patients under general or loco-regional anesthesia, in a dorsosacral position and who had received a colonic enema the day before and the morning of the procedure. After preparing the surgical site, we treated the hemorrhoids package by package. First, we proceeded to the exposure and gentle traction of each hemorrhoidal package using a set of three forceps arranged from outside to inside on the anocutaneous line, on the pectinate line and on the rectal mucosa. An incision on the anal margin and a submucosal dissection of each package was then carried out, in a triangular shape, up to the apex located in the rectal mucosa. During the dissection, the severed Parks ligament allowed us to release and keep the integrity of the internal sphincter. Using a resorbable Vicryl 2.0 suture, we then proceeded to the transfixing ligature and sectioning of each muco-arterial pedicle, leaving a long remaining of suture thread. The open pedicular resection was carried out while respecting the mucocutaneous bridges between the packages and finally between the wounds. Thus, particularly when the resection was tripedicular, the final operating wound was in the shape of a clover leaf. Next, we proceeded to the removal of residual hemorrhoids under the cutaneous-mucosal bridges, the control of hemostasis, the washing of the operating site and the installation of an intracanal dressing soaked in povidone iodine and a pressure dressing. During the procedure, an antibiotic prophylaxis was administered.

In the particular case of hemorrhoidal thrombosis, the procedure was performed under Local anesthesia. It consisted of the incision of the thrombosed hemorrhoidal package, laying it flat and allowing the hollowing out and removal of the clots. After washing the surgical site, a pressure dressing was placed over the wound.

After the procedure, all patients systematically received combined treatment of an analgesic, a laxative and an antibiotic (ALA). For all patients, a sitz bath with povidone-iodine, twice daily and after each bowel movement, was prescribed. Twice daily digital self rectal examinations were indicated and also carried out by the practitioner during the weekly clinical check-up. Local care and digital rectal examinations were prescribed until the wounds healed. The complete healing was achieved in the 6 weeks following the surgery.

**Table 1.** Goligher's classification.

Grade I	No prolapse of the hemmorhoidal plexuses out of the anal canal
Grade II	Prolapse during an effort of defecation returning spontaneously
Grade III	Prolapse requiring manual reinstatement
Grade IV	Permanent non-reducible prolapse

All patients had a monthly assessment for up to six months after healing of the wound. The follow-up was considered favorable when there were a complete resolution of initial signs; good anal continence and a complete healing of the wound. The outcome was unfavorable when one or more complications occurred such as hemorrhage, ischemia of the cutaneous-mucosal bridges, thrombosis of residual hemorrhoids underneath the cutaneous-mucosal bridges, delay or absence of wound healing, surgical site infection, anal stenosis or anal incontinence.

The data studied were collected from the registers of the Digestive surgery department and medical reports, then collected in a pre-established and case-by-case survey sheet. Data were compiled into the Excel version 2016 software and analyzed by the Epi info 7 software.

### 3. Results

We collected 21 cases of patients during the study period in the Digestive surgery department, which represented a frequency of 2.3%. There were 17 men (80.9%) and four women (19.1%), sex ratio 4.3. The average age of the patients was  $42.2 \pm 11.9$  years with extreme ages of 19 and 62 years. Age groups of 30 - 39 and 40 - 49 year-old were the most represented with 12 patients (**Figure 1**).

The symptoms found were proctalgia (10 patients), rectal bleeding (14 patients) and a sensation of mass for all patients.

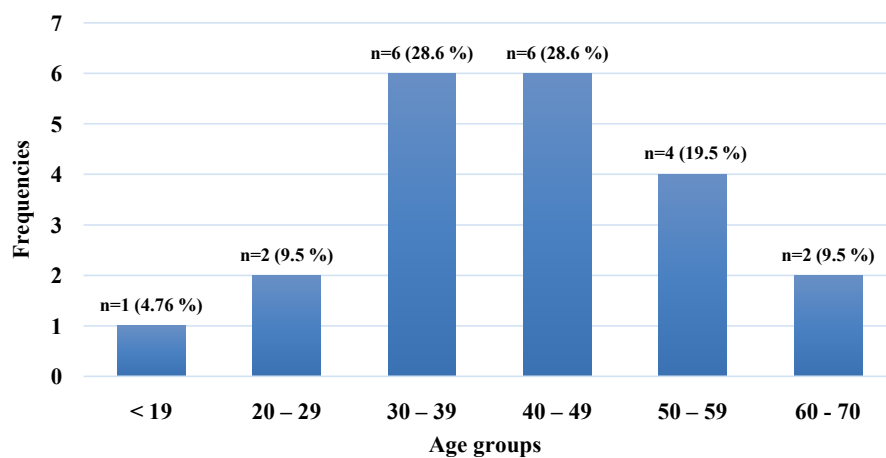
**Table 2** is a summary of the socio-demographic and clinical characteristics of patients.

The average delay of consultation was  $17.9 \pm 3.2$  days with extremes of 1 and 180 days.

The notion of sodomy was found for one patient; one patient was diabetic and constipation was present for all patients.

15 patients had a history of chronic alcohol consumption and 13 were active smokers.

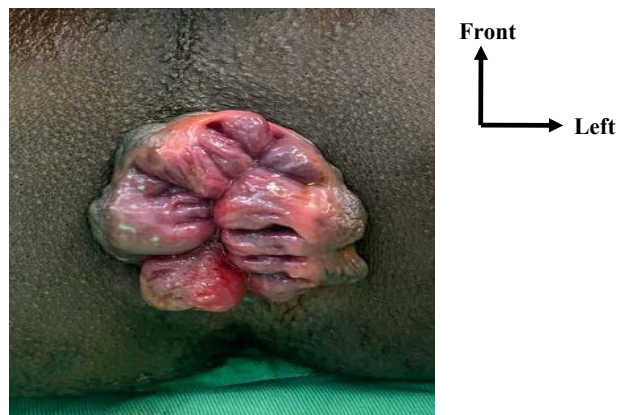
We recorded 16 cases (80.9%) of hemorrhoidal prolapse (**Figure 2**). 12 patients



**Figure 1.** Distribution of patients according to age groups.

**Table 2.** Summary of socio-demographic characteristics of the study population.

		Frequencies (N)	Percentages (%)
<b>Frequencies</b>		21	2.3
<b>Sex</b>	<b>Men</b>	17	80.9
	<b>Women</b>	4	19.1
<b>Age groups (years)</b>	<19	1	4.76
	[20 - 29]	2	9.5
	[30 - 39]	6	28.6
	[40 - 49]	6	28.6
	[50 - 59]	4	19.04
	[60 - 70]	2	9.5
<b>Clinical characteristics</b>			
<b>Proctalgia</b>		10	47.62
<b>Rectal bleeding</b>		14	66.66
<b>Sensation of mass</b>		21	100

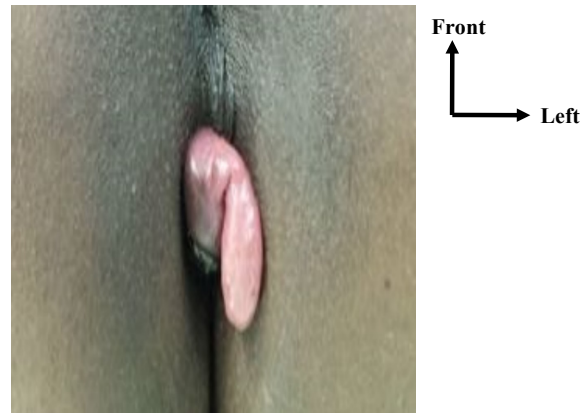
**Figure 2.** Image showing hemorrhoidal prolapse on a 45 year-old male patient. Source: Digestive surgery department. Brazzaville University Hospital.

had a manually reducible prolapse (Goligher grade III); and four patients had an irreducible prolapse (Goligher grade IV). They all underwent a lower digestive endoscopy which showed no colonic or rectal tumoral lesion.

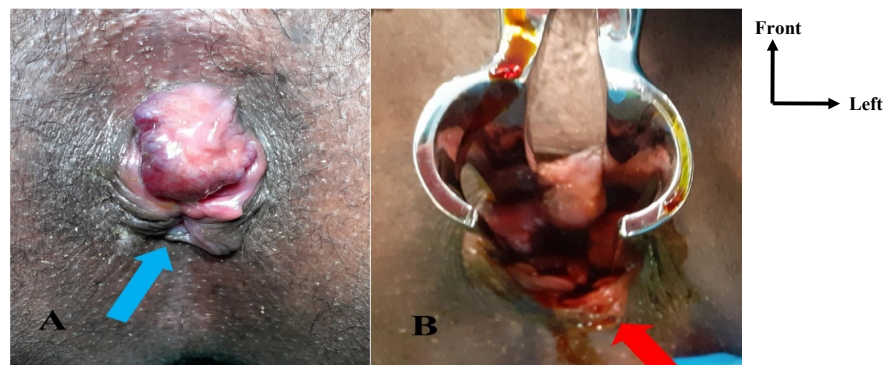
A Grade III hemorrhoidal prolapse was associated with a polyp on one female patient (**Figure 3**) and a posterior anal fissure on one male patient (**Figure 4**).

We also recorded five cases (19.1%) with hemorrhoidal thrombosis (**Figure 5**).

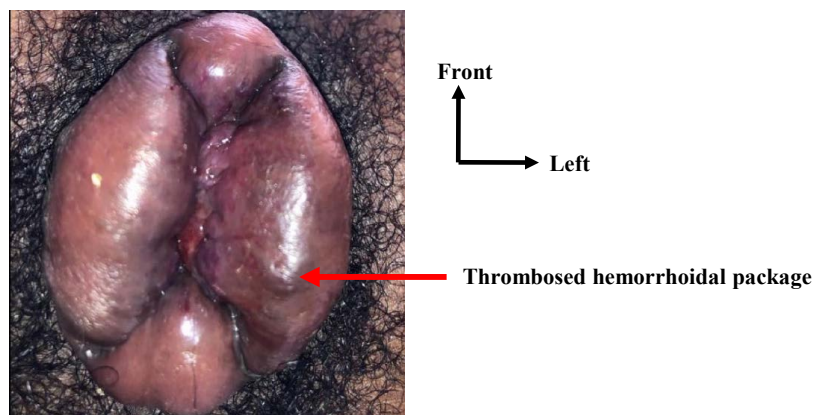
For the 16 patients with prolapse, the surgical procedure was scheduled. It consisted of a tripedicular hemorrhoidectomy according to MM for 14 patients (**Figure 6**), a monopedicular hemorrhoidectomy removing the polyp for one patient and a bipedicular hemorrhoidectomy removing the posterior anal fissure for another patient.



**Figure 3.** Image showing a hemorrhoidal package associated with a polyp on a 32 year old female patient. Source: Digestive surgery department. Brazzaville University Hospital.



**Figure 4.** Images showing two hemorrhoidal packages, one of which is associated with a posterior anal fissure before cleaning (A) and after cleaning (B), on a 50 year old male patient. Source: Digestive surgery department. Brazzaville University Hospital.



**Figure 5.** Image showing a circular hemorrhoidal prolapse with one thrombosed package, on a 34 year-old male patient. Source: Digestive surgery department. Brazzaville University Hospital.

An emergency thrombectomy was performed for five patients.

In the postoperative period, all patients received the treatment usually prescribed in the department (ALA) associated with local care.



**Figure 6.** Image showing a tripedicular resection. Source: Digestive surgery department, Brazzaville University Hospital Center.

The immediate postoperative outcome was marked by the occurrence of significant pain with edema at the surgical site for five patients to whom an anti-inflammatory drug was added for seven days. A bleeding on the surgical wound occurred for one patient and was controlled by mechanical maneuvers. One patient had a delayed healing of his wound, which was achieved after eight weeks instead of the average six week-period.

The average hospital stay was  $1.5 \pm 2.1$  days with extremes of 1 and 10 days. The outcome was favorable for all patients at six months post surgery.

#### 4. Discussion

The different prevalence rates of hemorrhoids are related to the method of recruitment of patients and to epidemiological factors [9]. In our study, a frequency of 2.3% was found, which is similar to those of other African authors who found a frequency ranging between 1.4% and 3.2% [10] [11] [12] [13]. On the other hand, in Western countries, the frequency seems higher. In a recent large-scale French survey, 39% of people questioned declared having suffered at least once of a hemorrhoidal problem [14]. This difference is explained by the size of the sample and also by the fact that in Africa, socio-cultural factors based on modesty, on the difficulty of access to health centers, and on the lack of information, prevent many patients from consulting a doctor. Furthermore, taking into account the location of patient recruitment, those registered at a surgical stage are logically fewer than those registered in medicine [13].

The higher male predominance (sex ratio: 4.3) in our series compared to others [7] [10] can be explained by the fact that men would be more willing to be treated than women [1], considering the modesty related to the fact that the ano-vulvar region is regarded as highly intimate for women. The male predominance in our study could also be explained by the fact that in Africa, the handy work required to carry heavy loads and the significant consumption of stimulants such as alcohol and/or tobacco is often a man's prerogative. These fac-

tors are recognized as contributing factors to HD [13].

The mean age was  $42.2 \pm 11.9$  years in our series. This is consistent with data from the literature [7] [9] [12] [13] [15] according to which HD appears around the third decade, increases with age, is maximal between 45 and 65 years, then decreases [16].

Similarly to several series [11] [13], the pain, the rectal bleeding and the sensation of an anal mass were the main functional signs for our patients.

The constipation, main risk factor found in our series, was also present in 58.3% and 72.5% of patients in the Diarra and Mbonicura series respectively [11] [13].

The average consultation period for our patients of  $17.9 \pm 3.2$  days appears to be long compared to other studies. This is certainly due to the fact that anorectal pathologies remain a taboo in our culture because of modesty. Most patients resorted first to either self-medication or traditional therapy and only came for consultation when symptoms became very bothersome.

Five patients (19.1%) presented with hemorrhoidal thrombosis which was excised in emergency. The hemorrhoidal thrombosis is considered by some authors to be a frequent complication [11].

The traditional surgical treatment is based on resection of hemorrhoidal packages using the classic procedure called pedicular resection described by MM [6]. It can be offered in the event of failure of medical and instrumental treatment or immediately in the event of hemorrhoidal disease of grade III circular and grade IV of the Goligher classification [8].

The pedicular hemorrhoidectomy according to MM which was our main operating technique, is considered to be the procedure which gives the best immediate results, except that it has the rightly earned reputation of being painful due to the large areas of dissection left bare in the highly innervated perianal region [17]. It was the most used procedure in the Madoff series [18] in America in 2004 and in the Konate series [19] in Senegal in 2015. It remains the gold standard technique in Africa and Europe, thus making it possible to treat associated lesions at the same time [12] [13] [20] [21]. This was illustrated for one of our female patients for whom a monopedicular resection with removal of a polyp was performed and for one of our male patients for whom a bipedicular resection with removal of a posterior anal fissure was performed.

The average hospitalization period of  $1.5 \pm 2.1$  days in our series is short compared to the hospitalization period of Mbonicura in Bujumbura and Madoff in America, who reported an average duration of hospitalization respectively of 4.2 days and five days [13] [18]. In France currently, the traditional hemorrhoidectomy according to MM is done on an outpatient basis [20] [22].

We carried out our study to investigate the current profile of HD during surgical treatment at our center, and to describe its epidemiological, clinical, therapeutic, and evolutionary aspects. However, this study was conducted over a short period (24 months) and involved a small sample (21 patients). These constitute limitations in the actual evaluation of the results of the performed surgical



procedure. To achieve a better evaluation, it is important to conduct more studies over a greater period and on a larger scale.

## 5. Conclusion

HD is a common pathology whose diagnosis is clinical and requires an endoscopy in order to rule out an organic pathology. The surgical treatment retains an important place in the therapeutic strategy. The MM procedure remains the gold standard surgical technique with a low risk of recurrence despite the initial postoperative discomfort. Our study, although of short duration and involving a small sample size, allowed us to confirm satisfactory and prolonged results of this surgical procedure with a six month period follow-up. However, additional long-term multicenter studies are needed to evaluate the results of this technique in Congo.

## Consent for Publication

All patients have consented to the use of their medical files for publication.

## Author Contribution

All authors contributed to this article and have read and approved the final version of this manuscript.

## Conflicts of Interest

The authors declare that they have no conflict of interest.

## References

- [1] Agbo, S.P. (2011) Surgical Management of Hemorrhoids. *Journal of Surgical Technique and Case Report*, **3**, 68-75. <https://doi.org/10.4103/2006-8808.92797>
- [2] Pigot, F. (2011) Pathologie hémorroïdaire: Traitement chirurgical. *La Presse Médicale*, **40**, 941-947. <https://doi.org/10.1016/j.lpm.2011.06.014>
- [3] Siproudhis, L., Pigot, F., Godeberge, P., Damon, H., Soudan, D. and Bigard, M.A. (2006) Defecation Disorders: A French Population Survey. *Diseases of Colon and Rectum*, **49**, 219-227. <https://doi.org/10.1007/s10350-005-0249-8>
- [4] Pillant-Le Moul, H., Auber, M. and De Parades, V. (2015) Traitement chirurgical classique des hémorroïdes. *Journal de Chirurgie Viscérale*, **152**, S3-S9. <https://doi.org/10.1016/j.jchirv.2014.09.003>
- [5] Higuero, T., Abramowitz, L., Castinel, A., *et al.* (2016) Guidelines for the Treatment of Hemorrhoids (Short Report). *Journal of Visceral Surgery*, **153**, 213-218. <https://doi.org/10.1016/j.jvisc Surg.2016.03.004>
- [6] Milligan, E.T.C., Naunton Morgan, C., *et al.* (1934) Surgical Anatomy of the Anal Canal and the Operative Treatment of Hæmorrhoids. *The Lancet*, **230**, 1119-1124. [https://doi.org/10.1016/S0140-6736\(00\)88465-2](https://doi.org/10.1016/S0140-6736(00)88465-2)
- [7] Ele, N., Okiémy, G., Chocolat, J.R., Ibamba Ikassi, A., Note Madzele, M. and Masengo, R. (2007) Résultats du traitement chirurgical de la maladie hémorroïdaire selon la technique de Milligan Morgan: A propos de 56 cas. *Le Mali Médical*, **22**, 58-60.

- [8] Watson, S.J. and Phillips, R.K.S. (1996) Hämorrhoidektomie: Gegenwärtiger Stand. *Chirurgie*, **67**, 213-221.
- [9] Ajayi, D.O., Banigoi, O.G. and Nnamdi, K. (1974) Anal Fissure, Fistule Abscessee and Haemorrhoids in a Tropical Population. *Diseases of Colon and Rectum*, **17**, 55-60. <https://doi.org/10.1007/BF02587537>
- [10] Diarra, M. and Konaté, A. (2015) La maladie hémorroïdaire interne au centre d'endoscopie digestive du chu Gabriel Toure de Bamako. *Le Mali Médical*, **30**, 38-41.
- [11] Diallo, G. and Sissoko, F. (2003) La maladie hémorroïdaire dans le service de Chirurgie B de l'hôpital du Point G. *Le Mali Médical*, **18**, 9-11.
- [12] Claude, M.J., Ngomirakiza, J.B., Kamatari, D., *et al.* (2019) Hemorrhoidectomy in Three Hospitals of Bujumbura, Burundi. *Journal of African Clinical Cases and Reviews*, **3**, 424-430.
- [13] Tournu, G., Abramowitz, L., Couffignal, C., *et al.* (2017) Prevalence of Anal Symptoms in General Practice: A Prospective Study. *BMC Family Practice*, **18**, Article No. 78. <https://doi.org/10.1186/s12875-017-0649-6>
- [14] Chew, S.S., Marshall, L., Tham, J., Grieve, D.A., Douglas, P.R. and Newstead, G.L. (2003) Short-Term and Long-Term Results of Combined Sclerotherapy and Rubber Bandligation of Haemorrhoids and Mucosal Prolapsed. *Diseases of Colon and Rectum*, **46**, 1232-1237. <https://doi.org/10.1007/s10350-004-6720-0>
- [15] Frexinos, J., Buscaïl, L. and Staumont, G. (2003) Hemorrhoides. In: Frexinos, J. and Buscaïl, L., Eds., *Hepato Gastro-Enterologie Proctologie*, 5th Édition, Masson, Paris, 395-401.
- [16] Goligher, J.C. (1984) Surgery of the Anus, Rectum and Colon. 5th Edition, Billiere Tindall, London, 101.
- [17] De Parades, V., Parisot, C. and Atienza, P. (2005) L'hémorroïdectomie selon la technique de Milligan et Morgan. *Journal de Chirurgie Viscérale*, **142**, 302-305.
- [18] Madoff, R.D. and Fleshman, J.W. (2004) American Gastroenterological Association Technical Review on the Diagnosis and Treatment of Hemorrhoids. *Gastroenterology*, **126**, 1463-1473. <https://doi.org/10.1053/j.gastro.2004.03.008>
- [19] Konate, A., Niass, M.I., *et al.* (2015) Le traitement chirurgical de la maladie hémorroïdaire selon la technique de Milligan et Morgan, à propos de 49 cas. *African Journal of Gastroenterology and Hepatology*, **9**, 138-140. <https://doi.org/10.1007/s12157-015-0603-y>
- [20] Dalibon, P. (2019) La maladie hémorroïdaire. *Actualités Pharmaceutiques*, **58**, 46-50. <https://doi.org/10.1016/j.actpha.2019.01.019>
- [21] Favreau-Weltzer, C. and Bouchard, D. (2020) L'hémorroïdectomie de Milligan et Morgan: Avantages et inconvénients. *Diseases of Colon and Rectum*, **14**, 24-28.
- [22] Vinson-Bonnet, B. and Juguët, F. (2015) Ambulatory Proctologic Surgery: Recommendations of the French National Coloproctology Society (SNFCP). *Journal of Visceral Surgery*, **152**, 369-372. <https://doi.org/10.1016/j.jvisc surg.2015.10.001>