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Colorectal Polyps in The Digestive Endoscopy Unit of Aristide Le Dantec Hospital of Dakar: Prevalence, Endoscopic and Histological Aspects

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Abstract **Original Research Article**

Background*:** Adenomas are the early stage of colorectal cancer. It represents the 3rd cancer on a global scale. In sub-Saharan Africa, the prevalence of polyps and colorectal cancers is considered low. ***Objectives: To determine the prevalence of colorectal polyps in the digestive endoscopy center of Aristide Le Dantec Hospital in Dakar (Senegal) and describe their endoscopic and histological aspects. ***Material and methods:*** This was a retrospective descriptive study from January 2008 to December 2015. All patients with one or more polyps with low digestive endoscopy were included. The absence of histological report was a criterion of non-inclusion. ***Results:*** Polyps were detected in 177 patients (9.3%) of whom 60 were included (3.1%). There were 45 men and 15 women (sex ratio 3). The average age was 45.2 years [27 months-83 years]. The main indications for endoscopic examination were rectorrhagia in 25 cases (41.7%), intestinal transit disorders in 13 cases (21.7%) and polypectomy in 9 cases (15%). The average size of the polyps was 6.8 mm. The polyps were sessile in 74.5%, pedicled in 21.6% and planed in 3.9%. The localization was right colic in 35% of cases, left colic in 14% of cases, sigmoid in 28% of cases and rectal in 23% of cases. Histology concluded with an adenoma in 31 patients (51.7%). Adenomas were in high grade dysplasia in 6 cases (19.3%). In 2 cases it was carcinoma in situ. Fifteen patients (25%) had hyperplastic polyps. A sporadic juvenile polyp was present in 4 others (6.7%). Inflammatory polyps were found in 7 patients (11.7%). ***Conclusion:*** Colo-rectal polyps are relatively rare in African hospitals. The predominant histological type is represented by adenomas. The prevention of colorectal cancer is based on their detection and per-endoscopic excision.

Keywords: polyp, adenoma, rectal cancer, polypectomy, Senegal.

BACKGROUND

Adenomas are precancerous lesions. Colorectal cancer is the third cancer worldwide with significant mortality [1]. Their prevention is based on the detection and endoscopic excision of polyps. In sub-Saharan Africa, the prevalence of colorectal cancer is considered low [2,3]. Our study aims to determine the prevalence of colorectal polyps in the digestive endoscopy center of Aristide Le Dantec Hospital in Dakar and to describe their endoscopic and histological aspects.

PATIENTS AND METHOD

The study was conducted in the digestive endoscopy center of Aristide Le Dantec University Hospital in Dakar from January 2008 to December 2015. This was a retrospective descriptive study on the analysis of the reports of low digestive endoscopy. The study population consisted of all patients referred to the center for examination of the lower digestive tract, regardless of the indication. All patients whose reports of endoscopic examination revealed the presence of one or more polyps were included. The absence of histological report was a non-inclusion criterion. Information was collected from a survey card that collected age, sex, indications for the examination, endoscopic and histological data. The data was analyzed with the Excel software.

RESULTS

During the 8 years of the study, 980 colonoscopies and 930 rectosigmoidoscopies were performed. The examination found a polyp in 177 patients, a global prevalence in the macroscopic sense of the term of 9.3%. Histological confirmation was

available in 60 cases (3.1%) and the age of patients ranged from 27 months to 83 years with an average of 45.2 years. There were 45 men and 15 women (sex ratio 3). Colonoscopy was performed in 38 patients and rectosigmoidoscopy in the remaining 22 patients. Colonoscopy was incomplete in 7 cases because of poor tolerance or poor preparation. The indications for low digestive endoscopy were varied (table).

Table-1: Frequency of indications for low digestive endoscopy

Indications for low digestive endoscopy	Number	Percentages %
Rectorrhagia	25	41,7
Intestinal transit disorders	13	21,7
Polypectomy	9	15
Anemia	5	8,3
Abdominal pain	5	8,3
Hemorrhoids	5	8,3
Alteration of general state	3	5
Prolapsus ani	1	1,7
Abdominal mass	1	1,7
Colorectal cancer screening	1	1,7
History of colonic adenoma	1	1,7
Hepatic metastases	1	1,7
Control of solitary rectal ulcer	1	1,7
Dysentery	1	1,7

Several indications could be found in the same patient. The most frequent were rectorrhagia in 25 cases (41.7%) and intestinal transit disorders in 13 cases (21.7%). During endoscopic exploration, 115 polyps were found in 58 of our patients, an average of 1.98 polyps per patient [1-14]. The number of polyps was uncountable in the other 2. The average size of the polyps was 6.8mm [1-30mm]. The polyps were sessile in 74.5%, pedicled in 21.6% and planed in 3.9%. They were located in the right colon in 35% of cases, the left colon in 14%, the sigmoid in 28%, and the rectum in 23% of cases. During the endoscopic examination, a polypectomy was performed in the loop in 23 cases and in the cold forceps in 31 cases. In 6 patients with multiple polyps, both excision techniques were used simultaneously. No incident or accident was observed. Histologic examination included adenoma in 31 patients (51.7%), hyperplastic polyp in 15 patients (25%) and juvenile polyps in 4 others (6.7%). Adenomas showed dysplasia in 22 cases (71%) and carcinoma in situ in 2 cases. This dysplasia was high grade in 6 cases (27.3%) and low grade in 16 cases (72.7%). In 7 patients (11.7%) inflammatory polyps were present without endoscopic or histological evidence for chronic inflammatory bowel disease or parasitosis. Histological examination returned to normal in one patient. It could be normal colic mucous outgrowth giving mucosal polyps (Figure).

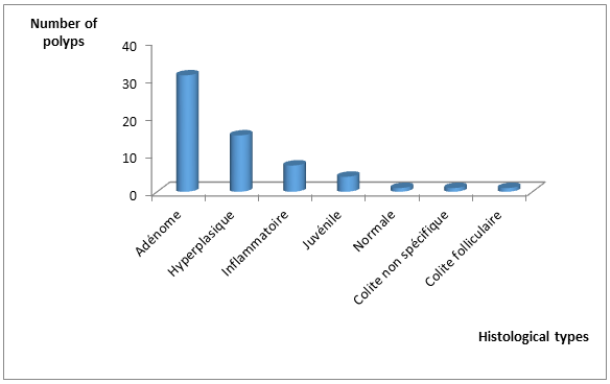

Fig-1: Distribution of polyps by histological type

Adenome = adenomas
Hyperplasique = Hyperplastic
Inflammatoire: inflammatory
Juvenile: juvenile
Normale: normal
Colite non spécifique: non-specific colitis
Colite folliculaire: follicular colitis

DISCUSSION

During the study period, the prevalence of colorectal polyps in the digestive endoscopy center of Aristide Le Dantec University Hospital in Dakar was 9.3%. Histologically confirmed polyps accounted for 3.1%. In Senegal, at the Principal Hospital in Dakar, the prevalence was 3.8% in 1987 and 18.5% in 2009 [2, 3]. In endoscopic series in Burkina Faso, Cameroon and Morocco, they were 1.6, 12.1 and 8.22% respectively [4, 5, 6]. In France, the prevalence of polyps was estimated at 28.5% [7]. The frequency variations observed could be linked to genetic, racial and environmental factors but also to dietary factors. Western diets appear to be richer in animal fats and low in fiber. Also, the anatomopathological examination of

the polyps after excision is often unavailable because of the absence or the scarcity of the laboratories of pathological anatomy in Africa. Sometimes the cost of these examinations is often prohibitive for patients without social coverage. The average age of our patients was 45.2 years with a peak frequency in the age range of 50 to 74 years. it was 54 years old in a pre-Dakar study; 34.37 years in Burkina Faso and 50 years in Morocco [3, 6, 8]. In France, according to the adenomatous or non-adenomatous nature of the polyp, the average age was 62 and 58 years respectively [9]. Although there are variations according to the studies, it is accepted that the frequency of polyps increases with age, especially at age 45 [10, 11, 12]. Colonoscopy was performed in the majority of patients (63.3%). Indeed, colonoscopy is the reference examination for the detection of polyps [13]. Of the colonoscopies, seven were incomplete. This is due in part to the conditions of realization of the examination which was done under simple sedation with sometimes a bad tolerance. Incomplete examination requires full colonoscopy for synchronous polyps or associated lesions in other colonic segments. The polyps were sessile in 74.5%. In Ibn Ghazala's study in Morocco, they were also sessile in 79% of cases [11]. On the other hand, for Bossali in Congo and Boukhtir in Tunisia, pedicle polyps were predominant [10, 14]. Thus, the appearance of polyps is variable according to the studies. However, in all studies flat polyps remain rare. This is partly due to the difficulty of their detection sometimes requiring the use of electronic chromo-endoscopy or indigo carmine [15]. Endoscopic polypectomy is the treatment of choice for colorectal polyps with low morbidity and near zero mortality [16]. Following polypectomy, surveillance regimens based on repeated colonoscopies are recommended with the aim of detecting lesions at risk of recurrence and reducing interval lesions [17]. Adenomatous polyps were present in 48.3% of patients with an average age of 46.8 years. The majority of studies tend to show the greater frequency of adenomas compared to other histological types [3, 6, 7, 12]. There is some difference between the countries of the North and those of the South regarding age at diagnosis. Thus, the average age was 56 years in Burkina and 62 years in France [8,9]. In Switzerland, the highest rate of polyp detection between 2003-2007 was between 60 and 70 years old [18]. This difference between Western countries and African countries is also observed for colorectal cancer that would occur at a younger age in Africa. As adenoma-cancer filiation is well established, this may suggest the influence of other factors in colorectal carcinogenesis in Africa. Fifteen patients (25%) with an average age of 41.7 years had hyperplastic polyps. These polyps were characterized by their small size and their predominantly recto-sigmoidal location. Indeed, the hyperplastic polyp is a malignant lesion without evolutionary potential that affects the young adult and is frequently found in the rectum and sigmoid [8, 12, 19]. The existence of scallop polyps whose macroscopic appearance is of a hyperplastic type and the risk of possible malignant transformation should motivate a detailed examination of these polyps by the pathologist.

CONCLUSION

Our study confirms the relative rarity of colorectal polyps in African hospitals. However, the predominant histological type is the adenomas that constitute precancerous lesions. In our regions where the diagnosis of cancer is often made at a late stage, it is important to promote the easy practice of colonoscopy and to have a histological examination of all resected polyps so as not to disregard a precancerous lesion.

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