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COLONIC ADENOMATOUS POLYPOSIS: DIAGNOSTIC DIFFICULTIES AND THERAPEUTIC IMPLICATIONS IN A SURGICAL SETTING IN DAKAR

A. Ndong [1], AC. Diallo[2], PM. Faye [1], M. Ndiaye[1], A. Diouf A [1], A. Niass[1], M. Faye[1], JA. Thiam [2], ISS. Sarr[1], Y. Seye[1], ML. Gueye [1], O. Thiam[1], M. Seck[1], AO. Touré[1], M. Cissé[1], O. Ka[1], M. Dieng[1]

[1] General Surgery Department, Aristide Le Dantec Hospital, Dakar, Senegal

[2] Joliot-Curie Institute, Aristide Le Dantec Hospital, Dakar, Senegal

ABSTRACT:

Colonic adenomatous polyposis is defined by the presence of more than 100 polyps in the lumen of the colon or rectum. The risk of progression to a colorectal cancer is 100%. The relative rarity of this condition in sub-Saharan Africa explains the problems associated with its management. The aim of this study is to report the diagnostic difficulties and therapeutic implications of colonic adenomatous polyposis at in a surgical setting in Dakar. This is a descriptive retrospective study from January 2012 to December 2015 including patient with colonic adenomatous polyposis confirmed by colonoscopy and histology. In total, 4 patients were included in the study. The mean consultation time was 13.7 years ± 11.8. The mean age was 44.3 years ± 2.8. The sex ratio was 3. Due to their silent symptomatology, colonic adenomatous polyposis is most often found in our context at the stage of complications (metastatic cancer, occlusion, perforation peritonitis). Genetic tests essential for the diagnosis are unavailable in our context. This could explain the relative rarity of this condition in sub-Saharan Africa and the problems associated with its management. Improving the prognosis will necessarily involve the improvement of means both for diagnosis and treatment.

Keywords: Adenoma, Colon, Colonoscopy, Cancer, Polyps, Prophylactic colectomy.

Corresponding Author:
Dr Abdourahmane Ndong, **MD.**
Address: General Surgery Department, Aristide Le Dantec Hospital, Dakar, Senegal.
E-mail: rahmandong@hotmail.com
Tel.: + (221)707833155

INTRODUCTION

Colonic adenomatous polyposis is defined by the presence of more than 100 polyps in the lumen of the colon or rectum. Its origin is mainly hereditary in the context of a familial adenomatous polyposis whose confirmation is based on the analysis of the APC gene [1]. The risk of progression to a colorectal cancer is 100% [2]. It is an entity described as rare among Africans in several studies [3]. However, the lack of national cancer registries and the diagnosis at the cancer stage may be a source of underestimation. The diagnostic difficulties are mainly related to the unavailability of the genetic study and consultation at the stage of degeneration. Surgery hold an important place in the treatment, in a context where other therapeutic options are limited [4]. The relative rarity of this condition in sub-Saharan Africa explains the problems associated with its management [5,6]. The aim of this work was to report the diagnostic difficulties and therapeutic implications of colonic adenomatous polyposis at the Department of General Surgery of Aristide Le Dantec Hospital in Dakar.

PATIENTS AND METHODS

This is a descriptive retrospective study from January 2012 to December 2015 at the General Surgery Department of Aristide Le Dantec Hospital. Inclusion criteria were the existence of a colonic adenomatous polyposis confirmed by colonoscopy and histology. The studied parameters were: age, sex, clinical signs, results of paraclinical examinations, treatment, anatomopathological data and evolution.

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RESULTS

In total, 4 patients were included in the study. The mean consultation time was 13.7 years ± 11.8. The mean age was 44.3 years ± 2.8. The sex ratio was 3. The first patient had consulted with occlusive syndrome. He had also a history of colon cancer in the father. CT scan showed an occlusive sigmoid tumor on colonic polyposis without metastases. A Hartmann procedure were performed. Anatomopathological examination revealed infiltrating adenocarcinoma associated with adenomatous polyps with high grade dysplasia. A proctocolectomy with ileal-pouch anal anastomosis was then performed in scheduled surgery. The patient died 1 month after the procedure.

The second patient consulted in surgical emergencies department for a peritoneal irritation. These symptoms have been evolving for 10 days. Surgical exploration showed a perforation of a sigmoid tumor associated with a splenic flexure tumor with multiple polyps. A left hemi colectomy with loop colostomy was performed. Anatomopathological examination of the operative specimen showed an adenocarcinoma with lymph node extension. The CT scan showed multiple hepatic metastases. Chemotherapy with FOLFOX was done after a multidisciplinary meeting. With a follow-up of 6 months, this patient is still alive.

The third patient had chronic abdominal pain and constipation. Colonoscopy showed multiple polyps with a left colonic angle tumor. Pathological examination revealed high grade tubular adenoma. CT scan did not show metastases. A proctocolectomy with ileal-pouch anal anastomosis was performed. He presented a postoperative anastomotic leakage for which an ileostomy was made. The evolution was favorable with a recovery 3 weeks later. With a follow up of 2 years, the patient is still alive.

The fourth patient had chronic abdominal pain and vomiting. The endoscopy showed gastroduodenal and colorectal polyps. Anatomopathological examination revealed gastric adenoma and tubular colonic adenoma with high grade dysplasia. CT scan showed a suspicious nodule of segment VII. Surgical exploration showed a micronodular liver indicating surgical abstention. In the evolution, this patient died 5 months later, before the start of a chemotherapy.

DISCUSSION

Colonic adenomatous polyposis is reported to be infrequent in Senegal and in black people [3]. Peghini et al. found 3.8% of polyps and no polyposis in a series of 1500 colonoscopy in Dakar [7]. This rarity of colonic adenomatous polyposis in sub-Saharan Africa reported in several studies [5,6]. The explanation of this possible low incidence could be due to the inaccessibility of endoscopy. Therefore, it is possible that this low incidence reflects, at least in part, a verification bias [5,8]. The clinical diagnosis of colonic adenomatous polyposis is based on a colonoscopy showing the presence of more than 100 polyps [1]. Confirmation is done by highlighting a mutation of the APC gene. Molecular diagnosis was not performed in any of our patients because of the unavailability of screening tools required in our institution. The diagnosis is made at a late stage in our study (13.7 years). All our patients consulted at the stage of degeneration (metastatic adenocarcinoma or adenoma with high grade dysplasia). An earlier study in our department of General Surgery, found an incidence of 8.8 patients per year [9]. The absence of a national cancer registry explains that these findings do not necessarily reflect reality. Denis et al. found a frequency of degeneration at the time of diagnosis of 22% [10]. This lower proportion could be explained by the screening colonoscopy that is available in these countries. In addition, a systematic excision of the polyps found is performed.

Early diagnosis could be facilitated by screening first-degree relatives. It is done in an oncogenetic consultation for the purpose of seeking a mutation [1]. Given the unavailability of these genetic tests in our context, colonoscopy remains the only possible means of screening. This endoscopic surveillance cannot be systematic but only proposed according to age and the existence of digestive symptoms [1,11]. Colonoscopy screening in the family was proposed in our patients but it was not done because of financial issues.

A study on colonoscopy in Dakar found 376 patients over a period of 3 years. Therefore, only 2.6% (n = 10] among these colonoscopies were made for screening colorectal cancer [12].
A family history of colonic adenomatous polyposis is a high risk of colorectal cancer. People with this risk need to be screened before age 45 [11]. In our context, the lack of a screening program even for colorectal cancer contributes to the late diagnosis of our patients.

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The treatment of colonic adenomatous polyposis is surgical and is based on proctocolectomy with ileal-pouch anal anastomosis [4]. Often, it is difficult to perform this surgery in our practice because of the diagnosis at the stage of complications. We performed this surgery in two of our patients. Consultation in an emergency context makes treatment even more difficult. We have 2 cases of complicated colon cancer (occlusion and peritonitis). Total colectomy in emergency is associated a higher rate of complications. In this context, performing a colostomy or ileostomy is preferred to resection.

CONCLUSION

Due to their silent symptomatology, colonic adenomatous polyposis is most often found in our context at the stage of complications (metastatic cancer, occlusion, perforation peritonitis). Genetic tests essential for the diagnosis are unavailable in our context. This could explain the relative rarity of this condition in sub-Saharan Africa and the problems associated with its management. Improving the prognosis will necessarily involve the improvement of means both for diagnosis and treatment.

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