

Colorectal neoplasia in elderly versus young patients in Tunisia : analysis of colonoscopic findings

Asma Ouakaa-Kchaou, Hela Elloumi, Afef Ouaz, Dalila Gargouri, Rania Hefaiedh, Asma Kochelf, Afef Kilani, Malika Romani, Jamel Kharrat, Abdeljabbar Ghorbel.

Department of Gastroenterology. Habib Thameur Hospital. Tunis-Tunisia
Tunis El Manar University

A. Ouakaa-Kchaou, H. Elloumi, A. Ouaz, D. Gargouri, R. Hefaiedh, A. Kochelf, A. Kilani, M. Romani, J. Kharrat, A. Ghorbel.

A. Ouakaa-Kchaou, H. Elloumi, A. Ouaz, D. Gargouri, R. Hefaiedh, A. Kochelf, A. Kilani, M. Romani, J. Kharrat, A. Ghorbel.

Néoplasie colorectale : Une étude comparative entre les patients jeunes et âgés

Colorectal neoplasia in elderly versus young patients in Tunisia: analysis of colonoscopic findings

LA TUNISIE MEDICALE - 2011 ; Vol 89 (n°03) : 262 - 265

LA TUNISIE MEDICALE - 2011 ; Vol 89 (n°03) : 262 - 265

R É S U M É

Prérequis : Une meilleure connaissance des particularités des néoplasies colorectales en fonction de l'âge serait utile à l'institution d'un programme de dépistage du cancer colorectal.

But : Comparer les caractéristiques des néoplasies colorectales comprenant les polypes entre les patients jeunes et âgés.

Méthodes: Il s'agit d'une étude rétrospective, basée sur les comptes-rendu des colonoscopies réalisées entre 2004 à 2008. Durant la période d'étude, 1510 patients avec un âge moyen de 54 ans ont eu une colonoscopie. Les patients étaient subdivisés en 2 groupes : le groupe des patients âgés (Groupe 1, âge ≥ 60 ans, $n = 626$) et le groupe des patients jeunes (Groupe 2, âge < 60 ans, $n = 884$). Les données relatives à l'âge, le sexe, l'indication de la colonoscopie, les résultats de la colonoscopie, les caractéristiques macroscopiques et histologiques des polypes et des tumeurs étaient étudiés et comparés entre les 2 groupes.

Résultats: La fréquence des polypes et des tumeurs retrouvés à la colonoscopie augmentait avec l'âge (29,4% dans le groupe 1 et 11% dans le groupe 2 ($p < 0.05$)). Les lésions coliques gauches étaient plus fréquemment notées dans les 2 groupes (66% et 67% respectivement).

Conclusion: Le risque de mettre en évidence une néoplasie colorectale par la colonoscopie est plus important chez les patients âgés.

S U M M A R Y

Background: Colorectal cancer occurs more frequently in older patients. Since the older population is increasing, a better understanding of the characteristics of colorectal neoplasm according to the age would be useful.

Aim: To determine the differences of clinical characteristics of colorectal neoplasm including polyps between the elderly and young patients.

Methods: Colonoscopy database from 2004 to 2008 was retrospectively analyzed. There were 1510 eligible patients who underwent colonoscopy with a mean age of 54 years. Patients were classified into two groups: the older age group (Group 1, aged ≥ 60 years, $n = 626$) and the younger age group (Group 2, aged < 60 years, $n = 884$). Data were recorded on age, gender, colonoscopic indications, colonoscopic findings, and their related histological findings and tumor location.

Results: The risk of finding polyps and cancer at colonoscopy increases with age (29.4% in the older age group and 11% in the younger age group ($p < 0.05$)). Left-sided lesions were noted to be more frequent in both age groups (66% and 67% respectively).

Conclusion: The chance of detecting colorectal neoplasm by colonoscopy was higher in the elderly. However, both groups had the lesions predominately located in the left side.

M o t s - c l é s

Néoplasie colorectale ; colonoscopie ; âge

Key - words

Colorectal neoplasm; colonoscopy; elderly

Colorectal cancer is one of the most common malignancies worldwide. Incidence rates increase sharply after 50 years. The use of colonoscopy to diagnosis and remove polyps has been effective at reducing both the incidence and mortality of colorectal cancer. Furthermore, no previous studies have focused on the older population from Tunisian patients. Therefore, and since there is not yet a screening program of colorectal cancer in general population in Tunisia, we intended to examine the association between age and colorectal neoplasm, which include adenomatous polyps, in Tunisian patients, in order to better define the right threshold age of beginning of screening.

This study was aimed to analyze the relationship between age and clinical characteristics of colorectal neoplasm including polyps in both older and younger patients.

METHODS

Patients:

This is a retrospective study based on the colonoscopic database information from all examinations performed at the unity of endoscopy of the department of gastroenterology in Habib Thameur Hospital, Tunis, Tunisia from January 2004 to December 2008. Patients who underwent colonoscopy were included in the study. Exclusion criteria included: a history of colorectal neoplasm followed-up, post-colectomy patients. There were 1510 patients eligible for the study that underwent colonoscopy during this period. They were classified into two age groups: Group 1, older age group (aged ≥ 60 years, $n = 626$) and Group 2, younger age group (aged < 60 years, $n = 884$).

Methods:

The majority of patients had only one colonoscopic clinical indication. For the patients who had more than one clinical indication, the most serious indication was put as the first indication and was considered for analysis. The indications for colonoscopy are summarized in table 1.

Colonoscopes were all standard. No magnified colonoscope was available and chromoendoscopy was rarely performed.

Bowel preparation was by ingestion of 4L of polyethylene glycol-containing solution. Moreover, patients were asked to refrain from fruit and vegetable 3 days prior to the examination. Patients with suboptimal bowel preparation were rescheduled. Sedation was scarcely used for our colonoscopies (1.2%, in the group 1 vs. 1.7% in the group 2, $p = 0.146$). When performed, propofol was used. Examination to the cecum was attempted in all patients.

Data were recorded on age, gender, colonoscopic indications, colonoscopic findings and their related histological findings. Epidemiological (diet, life habits, weight, use of non steroidal anti-inflammatory drugs, calcium intake, family history of polyps or gastrointestinal tumors or personal history of polyps) data were not consistently retrievable with this database.

Colorectal neoplastic lesions were categorized into colorectal polyp and colorectal cancer. Colorectal adenoma and colorectal cancer were termed as colorectal neoplasia. Size and location of all polyps and tumors discovered were recorded. Colorectal

neoplastic lesions were designated as right-sided lesions if they were proximal to the splenic flexure (including cecum, ascending colon, transverse colon) and left-sided lesions if they were distal to splenic flexure (including descending colon, sigmoid colon, and rectum). Patient with synchronous polyp and cancer was registered as a cancer case. Non-epithelial malignancies such as lymphoma or carcinoid were excluded.

Table 1 : Indications for colonoscopy according to a colonoscopy database of the unity of endoscopy of Habib Thameur Hospital from January 2004 to December 2008

Indications	Group 1, ≥ 60 years		Group 2, < 60 years	
	N = 626		N= 884	
	N	%	N	%
Anemia	107	17	102	11.5
Bowel habit change	174	27.8	242	27.5
Abdominal pain	98	15.7	141	16
Hematochezia	71	11.4	137	15.5
Melena	16	2.5	7	0.8
Weight loss	35	5.6	19	2.1
Abdominal mass	11	1.8	15	1.7
Hepatic metastases	36	5.8	12	1.4
Occlusion	62	9.9	57	6.5
Inflammatory bowel diseases	16	2.5	152	17

Statistical analysis:

Descriptive statistics were expressed as number (%). Statistical data were generated using (SPSS version 11.5). Differences were assessed by the Chi square test for categorical variables. For all statistical analyses, a two tailed p value < 0.05 was considered significant.

RESULTS

During the study period, 2450 patients were referred for colonoscopy. The colonoscopic records of 1510 patients were enrolled and examined. There were 742 men and 768 women. The mean age was 54 years old (8 – 93 years).

The colonoscopy was achieved to the cecum in 1306 patients (85% in group 1 and 87.5% in group 2). There was no serious complication (perforation or death) in any patient as a result of colonoscopy.

Relationship of age with colonoscopy findings:

There was a statistical difference in colonoscopic findings between age groups (tables 2 and 3). Colorectal malignancy related lesions were more often found in the older age group (29.4%) than in the younger age group (11%), ($p < 0.05$). When we classified colorectal neoplastic lesions into adenoma and cancer, we found that adenoma cases were detected significantly more often in the older age group (23% vs. 5.2%, $p < 0.0001$). Although colorectal cancer was more often found in the older patients, this difference was not statistically significant (6.4% vs 5.8%).

Table 2 : Age groups and colonoscopic findings according to a colonoscopy database of the unity of endoscopy of Habib Thameur Hospital from January 2004 to December 2008

Colonoscopic finding	Group 1, ≥ 60 years N = 626		Group 2, < 60 years N= 884	
	N	%	N	%
Normal	226	36	458	51.8
Colorectal polyps	185	29.5	129	14.6
Adenoma	144	23	46	5.2
Non Adenoma	41	6.5	83	9.4
Colorectal cancer	40	6.4	51	5.8
Diverticulosis	99	15.8	35	4
Ulcerations	31	5	155	17.5
Angiodysplasia	22	3.5	5	0.5
Other diagnosis	23	3.7	51	5.8

Table 3 : Characteristics of polyps according to a colonoscopy database of the unity of endoscopy of Habib Thameur Hospital from January 2004 to December 2008

Characteristics of polyps	Group 1, ≥ 60 years N = 185		Group 2, < 60 years N = 129		p
	N	(%)	N	(%)	
Type					0.113
Sessile	135	73	95	74	
Pedunculated	37	20	23	18	
Flat	13	7	11	8	
Number					0.009
1	117	63	46	36	
2	35	19	22	17	
3	13	7	19	15	
> 3	20	11	21	16	
Polyposis	0	0	21	16	
Histology					< 0.0001
Hyperplastic	37	20	81	63	
Adenoma	144	78	46	35.5	
Serrated	4	2	2	1.5	
High-grade dysplasia	10	5.4	2	1.5	

Right versus left-sided colorectal neoplasm with respect to age: There was no statistical difference in sites of lesions found between younger and older age groups (table 4). Left-sided lesions were detected more commonly than right-sided in both age groups (66% and 67%). Additionally both colorectal cancer and adenoma were detected more often in the left than in the right. When we analyzed subgroups of adenoma and cancer, we found no statistically significant difference between location of either adenoma or cancer and age groups.

Table 4 : Age groups and site distribution of colorectal neoplasia according to a colonoscopy database of the unity of endoscopy of Habib Thameur Hospital from January 2004 to December 2008.

Cancer site	Group 1, ≥ 60 years N = 184		Group 2, < 60 years N = 97	
	N	(%)	N	(%)
Right-sided	63	34	32	33
Adenoma	46	25	16	16.5
Cancer	17	9	16	16.5
Left-sided	121	66	65	67
Adenoma	98	53	30	31
Cancer	23	13	35	36

DISCUSSION

Evidence supports that the proportion of colorectal neoplasm increases with age, with more than 40% of cases occurring in patients older than 70 years of age or older [1]. For patients undergoing colonoscopies, the detection rate of a neoplasm was significantly higher in the older age group. These findings are supported by reports of neoplasm at colonoscopy of higher yield in the older patients [1, 2, 3]. The present series has shown that colorectal neoplasm was more likely to be found in older age Tunisian patients. This finding was consistent with previous studies in Western countries [2, 4, 5].

Several previous studies have found an increased proportion of right-sided colorectal neoplasm with increasing age; nevertheless, the left-sided neoplasm remained more frequent [4, 6-12]. This study as well has shown that left-sided cancer and polyp were detected more often than the right side in both age groups. However, the completeness of colonoscopy is important to consider. In fact, incomplete colonoscopy may cause a falsely low prevalence of right-sided lesion. Our series demonstrated 86.5% of complete colonoscopy, which is lower than other studies [1, 6]. The variation of frequency of right-sided and left-sided lesions can be explained by differences in some environmental factors including dietary and life style or genetic factors [1, 6, 7, 9].

Currently, colonoscopy is widely used for detection of colorectal neoplasm among the older age group because of its high diagnostic yield to detect right-sided lesions [1, 4]. In this study, the right-sided neoplasm represented approximately 34% of all subjects. However, it suggests that colonoscopy continues to be the best screening method for colorectal neoplasm detection because of its capacity to examine the entire colon and rectum [1, 2, 6, 8, 13]. The major limitation of this study was the possibility of a referral bias since our center is a referral center of endoscopy. Therefore, the results of this study may over estimate the overall percentage of colorectal neoplasm.

CONCLUSION

This endoscopy database study showed that colorectal neoplasm was more likely to be found in elderly. Left-sided neoplasm still predominated in the symptomatic elderly.

Références

1. Rerknimitr R, Ratanapanish W, Kongkam P, Kullavanijaya P. Differences in characteristics of colorectal neoplasm between young and elderly Thais. *World J Gastroenterol* 2006; 12:7684-9.
2. McCashland TM, Brand R, Lyden E, De Garmo P. Gender differences in colorectal polyps and tumors. *Am J Gastroenterol* 2001; 96:882-9.
3. Arora A, Singh P. Colonoscopy in patients 80 years of age and older is safe, with high success rate and diagnostic yield. *Gastrointest Endosc* 2004; 60:408-13.
4. Nelson RL, Dollear T, Freels S, Persky V. The relation of age, race and gender to subsite location of colorectal carcinoma. *Cancer* 1997; 80:193-7.
5. Brenner H, Hoffmeister M, Arndt V, Haug U. Gender differences in colorectal cancer: implications for age at initiation screening. *British J Cancer* 2007; 96:828-31.
6. Okamoto M, Shiratori Y, Yamaji Y et al. Relationship between age and site of colorectal cancer based on colonoscopy findings. *Gastrointest Endosc* 2002; 55:548-51.
7. Slater G, Papatestas AE, Tartter PI, Mulvihill M, Aufses AH. Age distribution of right and left-sided colorectal cancers. *Am J Gastroenterol* 1982; 77:63-6.
8. Strul H, Kariv R, Leshno M et al. The prevalence rate and anatomic location of colorectal adenoma and cancer detected by colonoscopy in average-risk individuals aged 40-80 years. *Am J Gastroenterol* 2006; 101:255-62.
9. Nawa T, Kato J, Kawamoto H, et al. Difference between right and left-sided colon cancer in patient characteristics, cancer morphology and histology. *J Gastroenterol Hepatol* 2008; 23:418-23.
10. Wu X, Chen WV, Martin J, et al. Subsite-specific colorectal cancer incidence rates and stage distribution among Asians and pacific islanders in the United States, 1995 to 1999. *Cancer Epidemiol Biomarkers Prev* 2004; 13:1215-22.
11. Wu XC, Chen WV, Steele B et al. Subsite-specific incidence rate and stage of disease in colorectal cancer by race, gender and age group in the United States, 1992 – 1997. *Cancer* 2001; 92:2547-54.
12. Wu XC, Cokkinides V, Chen WV et al. Associations of subsite-specific colorectal cancer incidence rates and stage of disease at diagnosis with country-level poverty, by race and sex. *Cancer* 2006;107: 1121-7.
13. Rex DK, Chak A, Vasudeva R et al. Prospective determination of distal colon findings in average-risk patients with proximal colon cancer. *Gastrointest Endosc* 1999; 49:727-30.