



## Our Colonoscopic Polypectomy Experience In The Tertiary Hospital Endoscopy Unit

### Üçüncü Basamak Hastane Endoskopi Ünitesinde Kolonoskopik Polipektomi Deneyimimiz

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#### Abstract

**Aim** The aim of this study is to present our experience with colon polyps detected during colonoscopy in our endoscopy unit.

**Material and Method** The files of patients who underwent colonoscopy and at least one polyp detected with colonoscopy in our endoscopy unit between March 2016 and March 2018 were reviewed retrospectively.

**Results** We included 428 patients in the study. While 96 (22.4%) polyps were located in more than one colon segment, 102 (23.8%) polyps were located in the rectum, 108 (25.2%) in the sigmoid colon, 33 (7.7%) in the descending colon, 41 (9.6%) in the splenic flexure, 25 (5.8%) in the transverse colon, 2 (0.5%) in the hepatic flexure, 33 (7.7%) were in the ascending colon, 20 (4.7%) were in the cecum.

**Conclusion** The compatibility of our polypectomy results with the literature can be considered as an indicator of the quality of colonoscopic examinations performed in our clinic.

**Keywords** Colonoscopy, Colorectal polyp, Malignancy

#### Özet

**Amaç** Bu çalışmanın amacı endoskopi ünitemizde kolonoskopi sırasında saptanan kolon polipleri ile ilgili deneyimimizi sunmaktır.

**Gereç ve Yöntem** Endoskopi ünitemizde Mart 2016-Mart 2018 tarihleri arasında kolonoskopi yapılan ve kolonoskopi ile en az bir polip saptanan hastaların dosyaları geriye dönük olarak incelendi.

**Bulgular** Çalışmaya 428 hasta dahil edildi. 96 (%22,4) polip birden fazla kolon segmentinde yer alırken, 102 (%23,8) polip rektumda, 108 (%25,2) sigmoid kolonda, 33 (%7,7) inen kolonda, 41 (%9,6) splenik fleksürada, 25 (%5,8) transvers kolonda, 2'si (%0,5) hepatic fleksürada, 33'ü (%7,7) çıkan kolonda, 20'si (%4,7) çekumdaydı.

**Sonuç** Polipektomi sonuçlarımızın literatürle uyumlu olması kliniğimizde yapılan kolonoskopik incelemelerin kalitesinin bir göstergesi olarak kabul edilebilir.

**Anahtar Kelimeler** Kolonoskopi, Kolorektal polip, Malignite

## INTRODUCTION

Colorectal cancers (CRC) constitute 10% of all cancers and are the second most common cause of cancer-related deaths<sup>1</sup>. Although the incidence of CRC increases with age, the incidence of CRC is increasing worldwide in young individuals, as in other cancers<sup>2,3</sup>.

The mortality rate is higher in CRC that are diagnosed in the late stage<sup>4</sup>. Screening programs are the most effective way to detect colorectal cancers at an early stage. Premalignant lesions located in the colon may be detected with screening tests. A screening program for colorectal cancers has been implemented in our country since 2012<sup>5</sup>. It is recommended to perform rectal examination and stool occult blood test starting from the age of 40, and a sigmoidoscopy every 5 years after the age of 50. As part of the screening program, a colonoscopy after the age of 50 and its repeat every 10 years is recommended. Also a colonoscopy examination is recommended for individuals if the stool occult blood test performed within the scope of the screening test is positive.

Knowing the symptoms of CRC allows the disease to be diagnosed at an early stage. The first symptoms of CRC are rectal bleeding and changes in defecation habits<sup>6</sup>. Evaluation of the colon with colonoscopy in patients with stool occult blood or with symptoms similar to colon cancer symptoms will help detect possible colon tumors. Colonoscopy is considered to be the most effective method for detecting colonic pathologies<sup>7</sup>.

The etiology of colorectal cancers includes genetic and environmental factors, diet, lifestyle, and obesity<sup>8,9</sup>. The adenoma-carcinoma sequence is well-defined and widely accepted for colorectal cancers<sup>10</sup>. Small adenomatous polyps can be detected by colonoscopy and resected in the early period without malignant transformation.

Colonoscopy should be performed by specialists due to being an expensive test, and moreover the possibility of

complications that may cause mortality during the colonoscopy procedure<sup>11,12</sup>.

The aim of this study is to present our experience with colon polyps detected during colonoscopy in our endoscopy unit.

## MATERIAL and METHODS

We obtained local ethical committee approval (E-71522473-050.01.04-136926-144) and subsequently conducted the recent study in General Surgery Endoscopy Unit between March 2016 and March 2018. The files of patients who underwent colonoscopy and at least one polyp detected with colonoscopy in our endoscopy unit were reviewed retrospectively. Patients under the age of 18 or who were previously diagnosed with colon cancer were excluded from the study. The age and gender of patient, location and size of the excised polyp, pathological examination result of the polyp were recorded.

Descriptive analyses were performed to provide information on the general characteristics of the study population. Analyses were performed with SPSS statistical software (IBM SPSS Statistics, Version 26.0. Armonk, NY: IBM Corp.)

## RESULTS

We evaluated the reports of 2067 colonoscopic examinations performed over a 2-year period in our endoscopy unit. one thousand one hundred and fifty-nine (56%) of them were female and nine hundred and eight (44%) were male. The mean age of the patients who underwent colonoscopy was 52.4 - 11.37 years. We included 428 patients in the study. The mean age of the patients was 61.36 - 13.817. 155 (36.2%) of 428 patients were female, and 273 (63.8%) were male.

Considering the largest diameter polyp detected in the colonoscopy performed for each patient, 321 (75%) of the polyps were sessile, and 107 (25%) were pedunculated

(Figure 1).

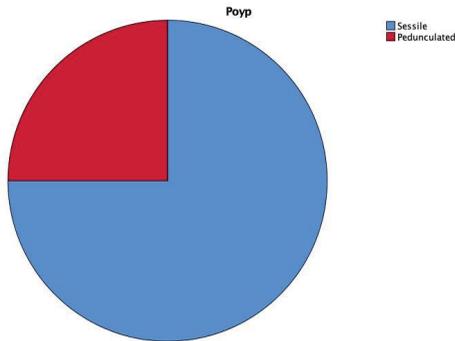


Figure 1: Polype Type (Sessile or Pedunculated)

Colonoscopic examination of patients revealed that 96 (22.4%) polyps were located in more than one colon segment, 102 (23.8%) polyps were located in the rectum, 108 (25.2%) in the sigmoid colon, 33 (7.7%) in the descending colon, 41 (9.6%) in the splenic flexure, 25 (5.8%) in the transverse colon, 2 (0.5%) in the hepatic flexure, 33 (7.7%) were in the ascending colon, 20 (4.7%) were in the cecum (figure 2).

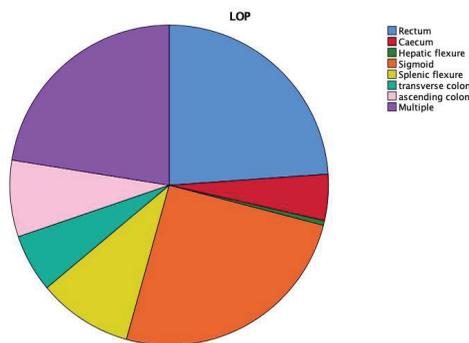


Figure 2: Location of polyps

Considering the largest diameter polyp detected in the colonoscopy performed for each patient, 217 (50.7%) polyps were smaller than 5 mm in size, 146 (34.1%) polyps were between 6 and 9 mm in size, 46 (10.7%) were between 10-19 mm in size, 19 (4.4%) were bigger than 2 cm in size.

Pathological examination of polyps revealed that, 140 (32.7%) polyps were found to be hyperplastic polyps, 167 (39%) polyps were found to be tubular adenomatous pol-

yps, 13 (3%) polyps were found to be villous adenomatous polyps, 38 (8.9%) polyps were found to be inflammatory polyps, 44 (10.3%) polyps were found to be tubulovillous adenomatous polyps, 8 (1.9%) polyps were found to be hamartomatous polyps. Adenocarcinoma was detected in the pathological examination of the excised polyps in 18 (4.2%) patients (Figure 3).

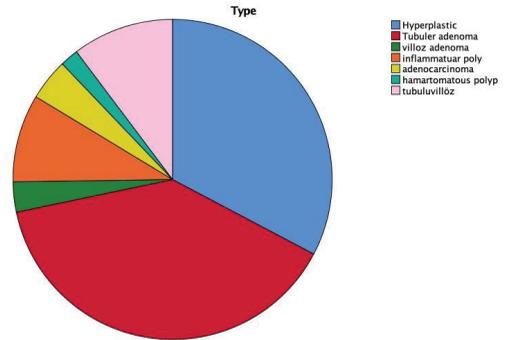


Figure 3: Histopathologic examination of polyps

## DISCUSSION

Since Wolff W. and Shinya H. invented colonoscopy in 1969, It has been used with increasing frequency in detecting colon pathologies. The ability to evaluate the proximal and distal colon with high sensitivity by colonoscopy has made colonoscopy the gold standard for detecting colon pathologies<sup>13</sup>. One of the most important of these pathologies is colon cancer due to the morbidity and mortality they cause. Survival rates increase significantly when colon cancers can be diagnosed at an early stage and when treatment can be started in the early period after diagnosis<sup>14</sup>. In order for colon cancers to be diagnosed at an early stage, colonoscopic examination should be performed after the age of 50 regarding the screening programs, and colonoscopy should be recommended to patients with symptoms suggesting colon pathology. When the colonoscopic examinations we performed in our endoscopy unit were examined, we found that the mean age of the patients who underwent colonoscopy was consistent with these recommendations.

Colorectal cancers mainly develop from adenomatous pol-

yps. Although there are studies claiming the contrary, it has been suggested that race is a risk factor for colon polyps<sup>15</sup>. Moreover, male sex is a risk factor for adenomatous polyps<sup>16</sup>. In our study, although the ratio of female patients to male patients was higher among patients who underwent colonoscopy, we found that patients with polyps in colonoscopy were male at a higher rate. This finding was consistent with the literature<sup>15</sup>.

Approximately 22% of colon cancers are located in the distal colon, while 41% are located in the proximal colon<sup>17</sup>. In the literature, similar to colonic location of colon cancers, it has been stated that 29% of colon polyps are located in the rectum, 31% in the left colon, and 40% in the right colon<sup>18</sup>. When we analyzed the localizations of the polyps we detected in the colonoscopic examinations we performed, we found that we detected more polyps in the right colon in accordance with the literature.

80-90% of adenomatous polyps are detected when they are smaller than one centimeter in colonoscopic examinations<sup>19</sup>. When we analyzed the colonoscopy reports, we found that 84.8% of the polyps we detected during colonoscopy in our endoscopy unit were smaller than one cm. This finding was consistent with the literature.

### CONCLUSION

The compatibility of our polypectomy results with the literature can be considered as an indicator of the quality of colonoscopic examinations performed in our clinic.

#### References

1. Ciardiello F, Ciardiello D, Martini G, Napolitano S, Tabernero J, Cervantes A. Clinical management of metastatic colorectal cancer in the era of precision medicine. *CA Cancer J Clin.* 2022;72: 372–401.
2. Patel SG, Karlitz JJ, Yen T, Lieu CH, Boland CR. The rising tide of early-onset colorectal cancer: a comprehensive review of epidemiology, clinical features, biology, risk factors, prevention, and early detection. *Lancet Gastroenterol Hepatol.* 2022;7: 262–274.
3. Gönüllü E, Gönüllü E, Tiryaki Ç, Çapoğlu R, Yazıcıoğlu MB, Haksal MC, et al. Comparison of clinicopathologic features of young and older patients with sporadic colorectal adenocarcinoma. *Cumhuriyet Med J.* 2014;36: 62.
4. Ladabaum U, Dominitz JA, Kahi C, Schoen RE. Strategies for Colorectal Cancer Screening. *Gastroenterology.* 2020;158: 418–432.
5. Yılmaz S, Emre N. 50-70 yaş arası kişilerin kolorektal kanser risk faktörleri ve erken tanısına yönelik bilgi tutum ve davranışlarının değerlendirilmesi. *Pamukkale Med J.* 2021;3:726-733.
6. Rajagopalan A, Antoniou E, Morkos M, Rajagopalan E, Arachchi A, Chouhan H, et al. Is colorectal cancer associated with altered bowel habits in young patients? *ANZ J Surg.* 2021;91: 943–946.
7. Siddique I, Mohan K, Hasan F, Memon A, Patty I, Al-Nakib B. Appropriateness of indication and diagnostic yield of colonoscopy: first report based on the 2000 guidelines of the American Society for Gastrointestinal Endoscopy. *World J Gastroenterol.* 2005;11: 7007–7013.
8. Vasen HF, Watson P, Mecklin JP, Lynch HT. New clinical criteria for hereditary nonpolyposis colorectal cancer (HNPCC, Lynch syndrome) proposed by the International Collaborative group on HNPCC. *Gastroenterology.* 1999;116(6):1453-6.
9. Kotzev I. Risk and Protective Factors for Development of Colorectal Polyps and Cancer. *Cancer Prevention - From Mechanisms to Translational Benefits.* 2012;3:24-28.
10. Leslie A, Carey FA, Pratt NR, Steele RJC. The colorectal adenoma-carcinoma sequence. *Br J Surg.* 2002;89: 845–860.
11. Al-Shamali MA, Kalaoui M, Hasan F, Khajah A, Siddiqe I, Al-Nakeeb B. Colonoscopy: evaluating indications and diagnostic yield. *Ann Saudi Med.* 2001;21: 304–307.
12. Yigit T. Kolonoskopi Deneyimlerimiz: Ardışık 983 Hastanın İrdelenmesi. *Kolon Rektum Hast Derg* 2007;17:154-159
13. Simon K. Colorectal cancer development and advances in screening. *Clin Interv Aging.* 2016;11: 967–976.
14. Aguiar Junior S, Oliveira MM de, Silva DRME, Mello CAL de, Calsavara VF, Curado MP. SURVIVAL OF PATIENTS WITH COLORECTAL CANCER IN A CANCER CENTER. *Arq Gastroenterol.* 2020;57: 172–177.
15. Penn E, Garrow D, Romagnuolo J. Influence of race and sex on prevalence and recurrence of colon polyps. *Arch Intern Med.* 2010;170: 1127–1132.
16. Sninsky JA, Shore BM, Lupu GV, Crockett SD. Risk Factors for Colorectal Polyps and Cancer. *Gastrointest Endosc Clin N Am.* 2022;32: 195–213.
17. Gangireddy VGR, Coleman T, Kanneganti P, Talla S, Annapureddy AR, Amin R, et al. Polypectomy versus surgery in early colon cancer: size and location of colon cancer affect long-term survival. *Int J Colorectal Dis.* 2018;33: 1349–1357.
18. Şahintürk, Y. & Çekin, A. H. (2018). Kolon polipleri: Lokalizasyon, histoloji, boyut - 5 yıllık kolonoskopik değerlendirme . *Endoskopi Gastrointestinal.* 2018;26 (2) , 57-60
19. Aarons CB, Shanmugan S, Bleier JIS. Management of malignant colon polyps: current status and controversies. *World J Gastroenterol.* 2014;20: 16178–16183.