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ORIGINAL ARTICLE

Is preoperative colonoscopy in all gynecologic cancer patients necessary?

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ABSTRACT

Objective: The aim of this study was to evaluate the necessity of preoperative colonoscopy in gynecologic cancer patients.

Material and Methods: Retrospectively, patients diagnosed with gynecologic cancers and undergoing preoperative colonoscopy between January 2013 and April 2020 in Zonguldak Bülent Ecevit University were included in the study, and their information was recorded.

Results: A total of 186 patients with gynecologic cancers were included in the study. Of these, 64 (35%) were less than 50 years of age, and 122 (65%) were 50 years or older. The mean age was 58.83±14.20 years (min: 31, max: 85). In the study, 96 (51.6%) of the patients had endometrial cancer, 54 (29%) had ovarian cancer, 34 (18.3%) had uterine-cervix cancer, and 2 (1.1%) patients had vulvar cancer. Extrinsic compression in 18 (9.7%), colonic polyps in 16 (8.6%), primary colorectal cancer in 4 (2.2%), and metastases to the rectum or sigmoid colon in 2 (1.1%) of patients were detected.

Conclusion: Colonoscopy permits more excellent detection of colorectal lesions and may give surgeons some vital information about the spreading of gynecologic cancer, which may, in turn, alter the treatment modality.

Keywords: Colonoscopy, colorectal cancer, gynecologic cancers.

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INTRODUCTION

Ovarian cancer (OC) is the seventh most commonly diagnosed cancer in women and the most lethal gynecologic cancer.[1] Surgery is the primary treatment for OC, and therefore early diagnosis is the most important prognostic factor. The poor prognosis is usually attributed to advanced stage at diagnosis and inadequate chemotherapy. About 60% of women with OC have metastatic disease at the time of diagnosis.[2] According to the National Comprehensive Cancer Network guideline, patients with newly diagnosed pelvic masses suspected of OC should be considered as candidates for gastroscopy/colonoscopy. Krukenberg tumor is a rare metastatic malignancy involving the ovaries characterized by mucin-rich signet-ring adenocarcinoma, and it has been reported that about 3.2%–7.0% of ovarian tumors are metastasized, primarily arising from a gastrointestinal site.[3,4] The intraabdominal gynecologic region is a common site where metastases from various malignant tumors occur. In women with colorectal cancer (CRC), the ovaries are the most common metastatic organ in the abdominal cavity. Many studies have reported that 0.9% of women with CRC have synchronized OC metastases and 0.9%–7% of women with CRC have metachronous OC metastases.[5–7] Colonoscopy and flexible sigmoidoscopy are widely used to diagnose gastrointestinal tract diseases and treatment.[8] In studies conducted, the incidence of colon cancer is approximately twice as high in women who have had breast, uterine, and OC and have recovered.[9] This study wanted to evaluate the preoperative colonoscopic results in patients with gynecologic cancer without gastrointestinal findings.

MATERIAL AND METHODS

Prior to initiating the study, Institutional Review Board approval was obtained. Zonguldak Bülent Ecevit University ethics council approved this study (institution review board number: 2021/08-9). The records of patients scheduled for major surgery due to gynecologic oncology pathology at Zonguldak Bülent Ecevit University and who underwent preoperative colonoscopy in the general surgery endoscopy unit between January 2013 and April 2020 were retrospectively evaluated. More than 700 files were evaluated. To eliminate potential bias, only "asymptomatic" individuals were included in the study group. Therefore, those with signs and symptoms of primary colorectal disease or a known familial history of adenomatous polyposis and those who did not undergo preoperative colonoscopy were excluded from the study. As a result of the evaluation, 186 patients were determined as the study group. The age of the patients, colonoscopy results, and surgical diagnosis were obtained from the records of the University (MIA Med.) system. Pathological confirmation was received for all excised tissues.

Statistical Analysis

SPSS program (version 18.0, SPSS Inc., Chicago) was used for statistical calculations. Kolmogorov–Smirnov test was performed to determine whether the data were proper to the normal distribution, and it was found that it did not have a proper normal distribution. Nonparametric tests were used for the analysis; descriptive statistics were shown with mean, standard deviation, median and minimum–maximum values. A Chi-squared test was used to compare categorical data.

Table 1: Gynecologic cancers type according to age

	Mean±SD (years)	Min–Max (years)
Age ≥50 years		
Endometrial CA	59.58±12.83	39–82
Ovarian CA	58.67±16.42	31–85
Vaginal or vulvar CA	68±00.00	68–68
Cervix CA	56.41±14.51	33–85
Total	58.83±14.20	31–85
Age <50 years		
Endometrial CA	45.20±2.90	39–49
Ovarian CA	39.78±5.95	31–48
Cervix CA	43.13±4.74	33–49
Total	43.16±4.90	31–49

CA: Cancer; SD: Standard deviation; Min: Minimum; Max: Maximum.

RESULTS

A total of 186 patients with gynecologic cancers were included in the study. Of these patients, 64 (35%) were less than 50 years of age, and 122 (65%) were 50 years or older. The mean age was 58.83±14.20 years (min: 31, max: 85). Gynecologic cancer types according to age are given in Table 1. In the study, 96 (51.6%) of the patients had endometrial cancer, 54 (29%) had OC, 34 (18.3%) had uterine-cervix cancer, and 2 (1.1%) patients had vulvar cancer. According to the results of preoperative colonoscopy, extrinsic compression was seen in 18 (9.7%) patients. Colonic polyps, sessile or pedunculated, smaller than 1 cm was seen in 16 (8.6%) patients, and polypectomy was performed. The histopathology of the removed polyps was reported as adenomatous or hyperplastic polyps. Primary CRC, small polypoid, and fragile masses that allow lumen passage were detected in 4 (2.2%) patients, and the biopsy was taken (pathology showed adenocarcinoma). Gynecologic cancer had metastasized to the rectum or sigmoid colon in an additional 2 (1.1%) patients. Biopsy was taken from the irregular area seen in the mucosa (pathology showed squamous metaplasia), and there was no anorectal junction involvement. Diverticulum was observed in 14 (7.5%) patients. Types of gynecologic cancer and colonoscopy findings were given in Table 2. Under 50 years of age with gynecologic cancers and colonoscopy findings are shown in Table 3.

DISCUSSION

In our study, preoperative colonoscopic findings were detected in 54 of 186 patients. Preoperative colonoscopic findings were detected in 28 of 96 patients with endometrial cancer, 14 of 54 patients with OC, and 12 of 34 patients with cervix cancer. Preoperative colonoscopy results were normal in patients with vaginal or vulvar cancer. Modern colonoscopes have greatly simplified the procedures. Technological innovation in this regard is increasing day by day.[10] CRC incidence has been rapidly rising in those under 50 over the last 20 years.[11] Lindell and Anderson concluded in their study that sigmoidoscopy is not necessary for all patients with early-stage cervical or endometrial

Table 2: Types of gynecologic cancer and colonoscopy findings

	Normal findings		Extrinsic compression		Colonic polyps		Diverticulum		Primary colorectal cancer		Gynecologic cancer metastasis to rectum or sigmoid		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Endometrial CA	68	70.8	14	14.6	4	4.2	8	8.3	2	2.1	0	0	96	51.6
Ovarian CA	40	74.1	4	7.4	8	14.8	2	3.7	0	0	0	0	54	29
Vaginal or vulvar CA	2	100	0	0	0	0	0	0	0	0	0	0	2	1.1
Cervix CA	22	64.7	0	0	4	11.8	4	11.8	2	5.9	2	5.9	34	18.3
Total colonoscopy findings	132	71	18	9.7	16	8.6	14	7.5	4	2.2	2	1.1	186	100

CA: Cancer.

Table 3: Under 50 years of age with gynecologic cancers and colonoscopy findings

	Normal findings	Extrinsic compression	Colonic polyps	Diverticulum	Primary colorectal cancer	Gynecologic cancer metastasis to rectum or sigmoid	Total n (%)
Endometrial CA, n	20	8	0	0	2	0	30 (46.8)
Ovarian CA, n	14	2	0	2	0	0	18 (28.1)
Cervix CA, n	8	0	2	2	2	2	16 (25)
Total colonoscopy findings, n (%)	42 (65.6)	10 (15.6)	2 (3.1)	4 (6.2)	4 (6.2)	2 (3.1)	64 (100)

CA: Cancer.

carcinoma,[12] and according to the study of Ras et al.,[13] colonoscopy is not a mandatory examination in patients with suspected OC. However, colonoscopy distinguishes colon cancer from synchronous OC and OC-induced intestinal metastases and diagnoses nonneoplastic lesions such as diverticulum and polyps in the intestines. In our study, colonoscopic findings were detected in 14 of 54 patients with OC. Extrinsic compression was found in 4 patients, colon polyps in 8 patients, and diverticulum in 2 patients. According to the literature, only two-thirds of OCs are confirmed at the same time and one-third are cancers that follow OC such as CRCs, and colonoscopy is the gold standard in differential diagnosis.[13] When we look under the age of 50 years in our study, colonoscopic findings were detected in 22 of 64 patients. We found external compression in 10 patients, colon polyps in 2 patients, diverticulum in 4 patients, primary CRC in 4 patients, and metastasis in 2 patients (Table 3). This shows once again the importance of early diagnosis. Screening colonoscopy helps to understand that most, if not all, colorectal adenocarcinomas arise from preexisting adenomas; therefore, its aim is to detect early cancers and to remove the precursor adenomas.[14–17] Colonic polyps were detected in 16 of 186 patients in this study (Table 2). The colorectal region is frequently affected by metastatic cancers and primary gynecologic cancers due to its proximity to gynecologic organs.[18] In this study, gynecologic cancer metastasis to rectum or sigmoid was detected in 2 patients and primary CRC was detected in 4 patients (Table 2). Colonoscopic screening is important in terms of both preoperative evaluation and early diagnosis, as stated in this study. Preoperative colonoscopy is a required evaluation method in the early diagnosis of synchronous or metastatic tumors and the planning of surgical treatment in the gynecologic oncology patient group. The limitations of this study are: it was a cross-sectional retrospective study, small number of patients were included in the survey, and the long-term patient outcomes was unknown.

In conclusion, we think that preoperative colonoscopy will help to determine both early diagnosis and treatment methods in patient groups with gynecologic oncology pathology. However, prospective studies with a larger number of patients and long-term patient follow-up are needed.

Statement

Ethics Committee Approval: The Zonguldak Bülent Ecevit University Clinical Research Ethics Committee granted approval for this study (number: 2021/08-9).

Informed Consent: Written informed consent was obtained from patients who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – İT, HB; Design – İT, HB; Supervision – İT, HB; Resource – İT, HB; Materials – İT; Data Collection and/or Processing – HB; Analysis and/or Interpretation – İT, HB; Literature Search – HB; Writing – İT, HB; Critical Reviews – HB.

Conflict of Interest: The authors have no conflict of interest to declare.

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