

Should colonoscopy screening be performed in patients with adnexal mass?

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Abstract

Aim: Besides primary ovarian tumor, a part of adnexal masses are metastatic colorectal cancers (CRC). Additionally, the risk of CRC is increased if the genitourinary cancers are present. In this study, we want to examine the separation of primer ovarian tumor and colorectal tumor metastasis and we investigated whether the routine colonoscopy is necessary in patients with adnexal mass.

Material and Methods: This study included 58 women who underwent colonoscopy due to adnexal mass (Group 1) and 438 women who underwent colonoscopy for other reasons (Group 2). The colonoscopy results compared retrospectively in both groups between March 2014 and June 2016 at Harran University, Faculty of Medicine.

Results: The mean age were 46.18 ± 16.89 (range 20-84) and 48.72 ± 17.95 (range 20-94) years in group 1 and 2, respectively. CRC was seen in two women (3.4%) and polyp in five (8.6%) in group 1. However, CRC was detected in 22 women (5%) and polyp in 71 (16.3) in group 2. The incidences of CRC and polyp were found to be lower in women with adnexal mass than group 2.

Conclusions: The incidences of CRC and polyp were found to be lower in women with adnexal mass than those of without adnexal mass. Nevertheless, routine colonoscopy screening should be considered for women with adnexal mass due to the difficulties in the discrimination of primary and metastatic ovarian cancer in preoperative period.

Keywords: Adnexal mass; Colorectal cancer; Colonoscopy.

INTRODUCTION

Extragenital tumors, which are of poor prognosis, are quite rarely metastatic to the female genital system. Breast and gastrointestinal tract are the most common extragenital primary regions. Ovaries are the common target for malignant tumor metastases. The distinction between primary and metastatic tumors is important because misinterpretation of a metastatic tumor as a primary tumor may result in inappropriate and incomplete treatment. A multidisciplinary approach is needed for the management and follow-up of those patients (1).

Adnexal masses can be caused by gynecological and non-gynecological etiologies ranging from normal luteal cysts to ovarian cancer and bowel abscess. The transvaginal ultrasonography (USG) is the first option imaging method in the adnexal mass examination. A large, complex, septated, irregular, and bilateral mass indicates malignancy. Computed tomography (CT) is a more appropriate option if it is considered to be a non-ovarian disease, and magnetic resonance imaging (MRI) is a more appropriate option if it is considered to be an ovarian malignancy. Serial USG and periodical CA-125

measurement may help in distinguishing benign and malign adnexal masses (2-5).

Colorectal cancer (CRC), which causes significant rates of morbidity and mortality, is the third most common type of cancer worldwide and leads to approximately 700.000 deaths per year. Although effective screening programs for CRC in the past decade have reduced the incidence and mortality of the disease, the number of people suffering from this disease has increased in some parts of the world for reasons such as western-style nutrition and life (6,7). The likelihood of a person getting CRC for life is 6% (8). More than 90% of patients are over 50 years of age, and 75% have no other known risk factors except of age (9). In the studies by Uyanikoğlu et al., the frequency of CRC in colonoscopy series was found to be 2.4% in İstanbul and 2% in Şanlıurfa region (10,11).

The incidence and mortality of CRC varies according to the geographical variations. CRC screening programs are being implemented in many European countries, Canada, America, and Asia. Occult blood in stool (OBS) and recently applied fecal immunohistochemical test (FIT) are the most common screening methods (12-14).

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However, colonoscopy every 10 years is the most effective screening CRC (15).

It is difficult to distinguish an undiagnosed primary gastrointestinal cancer metastasis in ovary from the gross and microscopic primary ovarian tumor (16). It has been reported that CRC metastasis should be considered in the differential diagnosis when adnexal mass and CA-125 are elevated even in patients without previous gastrointestinal malignancy history (17). On the other hand, it is known that the risk of colon cancer increases in genitourinary cancer cases (18).

In this study, it was investigated whether patients with adnexal mass should routinely undergo the colonoscopy and whether the CRC and polyp risks increase or not.

MATERIAL and METHODS

The study was conducted through a retrospective evaluation of the files and hospital records of 496 patients who underwent a colonoscopy in the Department of Gastroenterology Clinic of Harran University, Faculty of Medicine between March 2014 and June 2016. The study's design was in accordance with the guidelines of the Declaration of Helsinki (Second revision, 2008) and was approved by the local ethics committee.

Fifty-eight female patients (Group 1) with adnexal mass and 438 female patients (Group 2) with no adnexal mass but underwent colonoscopy for various reasons in the same age group were retrospectively compared. Patients who did not have sufficient information in their files or have with gastrointestinal system cancer along with adnexal mass were excluded from the study.

Colonoscopy

Adnexal mass colonoscopy screening indication has introduced with gastroenterology consultation in patients planned for

operation due to adnexal mass. The control group was randomly selected from female patients of the similar age group for whom colonoscopy was requested for various reasons in the gastroenterology clinic. After the written informed consent taken from the participants, patients were normatively prepared with aqueous diet 3 days before the procedure, 2 bottles of oral lactulose syrup every 2 hours the day before the procedure, sorbitol enema, and again were normatively prepared with sorbitol enema on the day of the procedure. The procedures were performed without sedation by a single experienced gastroenterologist. Patients who were examined until cecum were included in the evaluation.

Statistical Analysis

All analyses were performed using Statistical Packages for Social Sciences (SPSS) for Windows, Version 18.0 (SPSS, Chicago, IL). The continuous variables were presented as mean ± standard deviation. A p value < 0.05 was accepted as statistically significant.

RESULTS

The mean age of the patients in the first group who underwent colonoscopy for adnexal mass was 46.18 ± 16.89 (range 20-84), and the mean age of the patients in the second group was 48.72 ± 17.95 (range 20-94). The age distributions of both groups were similar (p > 0.05).

In Group 1, 2 (3.4%) patients had cancer and 5 (8.6%) patients had polyps.

In Group 2, 22 (5%) patients had colon cancer and 71 (16.3%) patients had polyps. The colon cancer detection rate was lower in patients with adnexal mass but there was no statistically significance (p > 0.05).

Patients with adnexal mass were determined to have polyps at a lower rate (Table 1, p < 0.05).

Table 1. Colonoscopy findings of the patients with and without adnexal mass

	Adnexal mass (+) (%)	Adnexal mass (-) (%)	P
Colon cancer	2/58 (3.4%)	22/438 (5%)	p > 0.05
Polyp	5/58 (8.6%)	71/438 (16.3%)	p < 0.05

DISCUSSION

In a study evaluating approximately 3,000 CRC patients between 1989 and 2005, the mean age of diagnosis was 46 years (range 14-72) in 103 patients diagnosed with ovarian metastasis, and 74 patients were diagnosed with synchronous, and 29 patients with metachronous metastases. Primary tumors were more detected in the colon than in rectum. The study has shown a role of regular CT and tumor markers assessments every 6 months to detect early ovarian metastasis in patients in the postoperative period, especially after poorly prognostic colon-involvement cancer operation (16). In our study, patients with an adnexal mass undergoing colonoscopy for metastatic ovarian cancer and patients undergoing colonoscopy for other reasons were evaluated, and the average age of both groups was around 45 years as in the

mentioned study. In the present study, only colonoscopy screening results were evaluated but USG, CT, and tumor markers were not evaluated. Sakakura et al. showed that the ovarian-metastasis was detected in 9 (2%) of 452 female patients who had colon cancer (19). In the present study, CRC was detected in the colonoscopy screenings of 2 (3.4%) of 58 patients with an adnexal mass.

On the other hand, it has been reported that CRC frequency increases in patients with genitourinary cancers (18). In the present study, patients with adnexal mass were compared with the group of patients undergoing colonoscopy for any other reason. We detected that the cancer rates were similar in both groups, however, polyps were fewer detected in patients with adnexal mass than in group 2. The fact that the number of patients is low, the number of patients between groups is not similar, and most importantly the fact that patients with adnexal

mass were not compared with healthy volunteers make it difficult to comment.

The most frequent types of cancer metastatic for ovary are breast cancer (55%), colon cancer, gastric cancer, lymphoma, and cancers of unknown primary, respectively. Pre-operative USG findings and CA-125 levels may be helpful in distinguishing primary and metastatic ovarian tumors (20). Bruchim et al. have reported that increased CA 19-9 may help to distinguish a metastatic tumor from a primary ovarian tumor (21). In the present study, adnexal mass data, tumor markers and other organ scans have not been examined, and this is the weakness of our study.

It is difficult to distinguish ovarian tumor with undiagnosed primary gastrointestinal cancer metastasis from macroscopic appearance and microscopically primary ovarian tumor. The ovarian metastasis of CRC causes clinical and pathological confusion even after diagnosis. Judson et al. have compared 20 patients with previously unrecognized CRC ovarian metastasis and 22 patients with known CRC ovarian metastasis. The first group was determined to be younger (mean age 48) and the patients with previously diagnosed CRC were determined to be older (mean age 61) ($p = 0.002$). Some researchers thought the postmenopausal adnexal mass management is an important problem (23). Routine application of preoperative colonoscopy screening can be considered when these diagnostic difficulties are taken into account in patients with adnexal masses.

CONCLUSION

In conclusion, patients with adnexal mass were found to have colon cancer less frequently and polyps twice as low as patients who underwent colonoscopy due to other reasons, although there was no statistically significance. However, routine colonoscopy should be considered in patients with adnexal mass when the difficulties in distinguishing primary ovarian cancer from metastatic ovarian cancer and the increasing frequency of CRC in genitourinary cancers are taken into account. In this particular, there is a need for better planned and prospective studies with high patient numbers.

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