Research Article

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Analysis of unexpected malignancy rates in patients undergoing hysterectomy for benign causes.

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ABSTRACT

Background/aim: Hysterectomy is the most common operation performed for gynecologic reasons. In this study, we aimed to investigate unexpected malignancies in patients who underwent hysterectomy for benign reasons.
Materials and methods: In this retrospective study, pathology results of hysterectomy cases performed in our clinic between 2013 and 2023 were analyzed and unexpected malignancy results were reported.
Results: A total of 1954 patients underwent hysterectomy between 2013 and 2013. The mean age of the patients was 50.31 years and the most common indications for hysterectomy were myoma uteri (48.41%) and abnormal uterine bleeding (38.41%). Patients with no suspicion of malignancy in preoperative imaging and endometrial sampling results were operated and 21 patients with malignant final pathology results were identified. The mean age of these patients was 55.47 years and 13 of them had endometium cancer and 7 of them had ovarian malignancy.
Conclusion: In the literature, the rate of unexpected malignancies in hysterectomy cases was 0.73%, of which approximately half (58.3%) were uterine and the other half ovarian. In our study, the rate of endometrial malignancies was 0.66% and ovarian malignancies were 0.30%. Although malignancies can be excluded by preoperative imaging methods and endometrial sampling, tumors are rarely encountered.

Keywords : Hysterectomy, malignancy, pathology.

INTRODUCTION

Hysterectomy is the most common operation performed in gynecology. The most common indication for hysterectomy, which is usually performed for benign causes, is myoma uterus [1]. Uterine prolapse, abnormal uterine bleeding, adenomyosis, pelvic inflammatory diseases and chronic pelvic pain are also benign causes of hysterectomy [2-3]. Abdominal, laparoscopic, vaginal and robotic surgery can be used for hysterectomy. Although the indication for hysterectomy plays an important role in the choice of one of the open, closed or vaginal routes, the most common abdominal (open) surgeries have been replaced by minimally invasive methods thanks to the developing technology [4].
Before the hysterectomy decision is made, a detailed physical examination and imaging methods are used to clarify the correctness of the indication. Endometrial sampling is also performed preoperatively, especially in patients with vaginal bleeding, to rule out suspicion of malignancy. Although recent studies do not necessarily recommend it, there is a consensus that it should be performed especially in patients with vaginal bleeding [5]. Rarely, it has been reported that endometrial sampling may be confused with malignancy in patients with no complaints [6-7]. While some malignancies can be partially excluded by imaging methods, unexpected gynecologic malignancies are also reported despite endometrial sampling. The surgical method to be used in case of malignancy and the extent of the operationary.
In our study, we aimed to investigate the incidence of unexpected malignancy in patients undergoing hysterectomy for benign reasons. We evaluated the concordance and unexpected results by comparing the preoperative endometrial sampling with the final pathology results.

MATERIAL METHOD

This study was conducted with the approval of Erzincan Binali Yıldırım University Clinical Research Ethics Committee numbered 2023-20/23. In this retrospective study, the data of patients who underwent hysterectomy for benign reasons between 2013 and 2023 were accessed from the hospital automation system and evaluated. Patients with malignancy, suspected malignancy and those who underwent hysterectomy for obstetric reasons were excluded from the study, and the data of patients who had preoperative preparations and were operated in a planned manner were

included in the study. Age, indication, preoperative smear, endometrial sampling, type of surgery and final pathology results were recorded.

For statistical analysis and ratios, descriptive statistical analysis was performed using SPSS 22.0 program, and mean, standard deviation, percentage and frequency values were analyzed.

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RESULT

A total of 2425 patients underwent hysterectomy between 2013 and 2013. When patients who underwent hysterectomy for malignancy, obstetric reasons and patients who were sent frozen during the operation were excluded from the study, it was seen that there were 1950 patients who met the study criteria. The ages of the patients included in the study ranged from 33 to 83 years with a mean age of 50.31 years. In terms of hysterectomy methods, 192 (9.8%) patients underwent vaginal hysterectomy, 289 (14.8%) underwent laparoscopic hysterectomy and 1469 (75.3%) underwent total abdominal hysterectomy. In terms of indications, 749 patients underwent hysterectomy for abnormal uterine bleeding, 944 for myoma uteri, 54 for ovarian causes and 203 for uterine prolapse. The most common indications for hysterectomy were myoma uteri (48.41%) and abnormal uterine bleeding (38.41%). 1118 of 1950 patients underwent endometrial sampling in the preoperative period and 462 (41.3%) of them had endometrial polyps, 21% had superficial endometrial glands (n=235), 11% (n=124) had secretory endometrium, 8.4% (n=94) had proliferative endometrium, 16.2% (n=182) had endometritis findings and 21 patients were reported as simple endometrial hyperplasia.(Table 1)

Patients with no suspicion of malignancy in preoperative imaging and endometrial sampling results were operated and a total of 21 patients with malignant final pathology results were identified. The ages of the patients with malignancy ranged between 40 and 74 years with a mean age of 55.47 years. Laparoscopic hysterectomy was performed in 4, vaginal hysterectomy in 1 and total abdominal hysterectomy in 16 patients. Smear results were obtained in 17 of the cases in which malignancy was detected and the results were found to be normal, while endometrial sampling was performed in the preoperative period in 19 cases and no finding in favor of malignancy was detected. Endometrial adenocarcinoma was found in 11 cases, endometrial carcinosarcoma in 2 cases, ovarian serous papillary tumor in 4 cases, endometrioid ovarian carcinoma in 1 case, granulosa cell tumor in 2 cases and endometrial intraepithelial neoplasia in 1 case. In 5 patients with ovarian cancer, sonography revealed ovarian masses between 5 and 11 cm and all of them had normal Ca-125 values (Table 2).

Table 1. Indications for hysterectomy

Indication	N	%
Myoma uteri	944	48.41
Abnormal uterine bleeding / treatment-resistant menometrorrhagia	749	38.41
Adnexial mass	54	2.76
Prolapse uteri	203	10.41

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Tablo 2. characteristics of patients whose final histopathological results were reported as malignant

Indication for hysterectomy	age	Endometrial sampling	Operation	Final pathology result
1. Case involved during colon operation	71	None	TAH+BSO	Endometrial adenocarcinoma
2. Adnexial mass	56	Superficial endometrial glands	TAH+BSO	Serous papillary tumor
3. Abnormal uterine bleeding	45	Endometrial polyp	TAH+BSO	Endometrioid adenocarcinoma on polyp background
4.Postmenopausal bleeding	74	Endometrial polyp	TAH+BSO	adenocarcinoma on polyp background
5. Adnexial mass	51	Superficial endometrial glands	TLH+BSO	Granulosa cell tumor
6. Abnormal uterine bleeding	46	Simple endometrial hyperplasia	TLH	Endometrial adenocarcinoma
7. Myoma uteri	49	Superficial endometrial glands	TAH+BSO	Uterine sarcoma
8.Postmenopausal bleeding	67	Superficial endometrial glands	TLH+BSO	Endometrioid adenocarcinoma
9. Desensus uteri	62	Superficial endometrial glands	VAH	Endometrioid adenocarcinoma
10. Adnexial mass	46	Simple endometrial hyperplasia	TAH+BSO	Endometrioid ovarian ca
11. Adnexial mass	56	Superficial endometrial glands	TAH+BSO	High grade serous carcinoma
12. Myoma uteri	65	Endometrial polyp	TAH+BSO	Endometrial carcinosarcoma
13.Postmenopausal bleeding	60	Superficial endometrial glands	TAH+BSO	Endometrioid adenocarcinoma
14.Postmenopausal bleeding	64	Superficial endometrial glands	TAH+BSO	Endometrioid adenocarcinoma
15. Abnormal uterine bleeding	40	None	TAH+BSO	Endometrial adenocarcinoma
16. Adnexial mass	58	Atrophic endometrium	TAH+BSO	High grade serous carcinoma
17. Abnormal uterine bleeding	48	Superficial endometrial glands	TAH+BSO	Endometrial intraepithelial neoplasia
18. Abnormal uterine bleeding	57	Simple endometrial hyperplasia	TLH+BSO	Endometrioid adenocarcinoma
19. Postmenopausal bleeding	62	Simple endometrial hyperplasia	TAH+BSO	Endometrioid adenocarcinoma
20. Adnexial mass	42	Secretory endometrium	TAH+BSO	Granulosa cell tumor
21. Abnormal uterine bleeding	46	Endometrial polyp	TAH+BSO	Endometrial stromal sarcoma

DISCUSSION

The aim of this study was to investigate the incidence of unexpected gynecologic malignancy in patients undergoing hysterectomy for benign reasons. The data of 1950 patients who met the inclusion and exclusion criteria in our center were accessed. Endometrial sampling was performed in 1118 (57.3%) of these cases, and the incidence of unanticipated gynecologic cancers was 1.07%, of which 61.9% were uterine malignancies and 33.3% were ovarian malignancies.

Hysterectomy is the most common operation performed in gynecology. Hysterectomy is performed for many benign indications such as abnormal uterine bleeding, myoma uteri, prolapse and adenomosis [7-8]. In our study, 48.41% of all hysterectomies were performed for myoma uteri and 38.41% for abnormal uterine bleeding. The results of this study support that the most common reasons for hysterectomy are myoma uteri and abnormal uterine bleeding in accordance with the literature.

All studies in the current literature recommend preopretive endometrial sampling in all symptomatic women with abnormal uterine bleeding [5]. In the study by Pessoa et al., it was argued that the diagnostic value of endometrial sampling was higher in women over 50 years of age and therefore endometrial sampling should be performed in women over 50 years of age [9]. There are also studies suggesting that endometrial sampling in patients with abnormal uterine bleeding has a negative prediction of 91% [10]. In our study, it was observed that endometrial sampling was not performed in only 1 of the patients whose final pathology result showed endometrial malignancy because the patient refused, and the pathology results of all patients who underwent endometrial sampling were reported as benign.

In a study by Yuk et al. including 12850 patients, the rate of unexpected endometrial malignancy was reported as 0.19% [11]. In a study conducted by Kadıoğlu et al. and similar in size to our study, the rate of unexpected endometrial malignancy was reported to be 0.73% [12]. In a study by Ouldamer et al. in which unexpected endometrial malignancies were examined, it was found that the malignancy rate was 0.4% after accurate and reliable endometrial sampling [13]. In our study, this rate was found to be 0.66% and is similar to the studies mentioned. Again, in terms of unexpected ovarian malignancies, Desai et al. found an unexpected malignancy rate of 0.19% [14], which is similar to the rate of 0.3% in our study.

Sarcoma rate was 0.15% in the study by Desai et al. [14], 0.13% in the study by Multinu et al. and 0.9% in the study by Elliot et al. [15-16]. In our study, sarcoma was detected in only 1 patient and the rate was 0.05%. In a similar study by Parsons et al. involving 6981 patients, the rate of unexpected endometrial cancer was reported as 0.19% [17]. In our study, this rate was 0.66%, which is similar to this study.

Chao et al. 2019, which examined patients who underwent reoperation for pelvic mass following hysterectomy for benign reasons, it was found that 34.01% were diagnosed with malignant tumors, which emphasizes the importance of postoperative follow-up and follow-up for patients undergoing hysterectomy for benign indications [18].

CONCLUSION

In the literature, the rate of unexpected malignancy in hysterectomy cases is 0.73%, of which approximately half (58.3%) are uterine and the rest ovarian. In our study, the rate of endometrial malignancies was 0.66% and ovarian malignancies were 0.30%. Although malignancies can be excluded by preoperative imaging methods and endometrial sampling, it is possible to encounter tumors rarely.

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