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Clinicopathological Evaluation of 1815 Hysterectomy Materials

Objective: Hysterectomy is one of the most frequent surgical procedures of women. The aim of this study was to evaluate the distribution of the diseases that were diagnosed in hysterectomy materials.

Materials and Methods: 1815 female patients who underwent hysterectomy because of any reason were clinicopathologically evaluated retrospectively.

Results: The mean age of hysterectomy was 48.94. The leading reason and histopathological diagnosis of hysterectomy was leiomyomas with a ratio of 47.82%. The second leading reason and histopathological diagnosis was prolapsus uteri (24.63%) and the third leading diagnosis was adenomyozis (12.84%) which usually coexisted with the other diseases, especially leiomyomas. Even though the malignant tumors of endometrium, myometrium, cervix, vagina, tuba uterina and ovary accounted less in number; they are the most dangerous gynecological diseases that shorten lives of the women. So it is very important to diagnose these tumors as early as possible in order to begin the appropriate treatment quickly to provide better survivals for the patients.

Conclusion: As a result the reasons of the symptoms like abnormal uterine bleeding, pelvic pain must be evaluated in detail for gynecological carcinomas and the cervical screening method with the cervicovaginal papanicalaou smear test must be applied to every women in fertility period for early diagnosis of cervical carcinomas.

Key words: Hysterectomy, abnormal uterine bleeding, uterine diseases, gynecological malignancies

1815 Histerektomi Materyalinin Klinikopatolojik Olarak Değerlendirilmesi

Amaç: Histerektomi, kadınlara en sık uygulanan cerrahi prosedürlerden biridir. Bu çalışmanın amacı, histerektomi materyallerinde tanı almış hastalıkların dağılımını değerlendirmektir.

Gereç ve Yöntem: Herhangi bir nedenle histerektomi yapılmış olan 1815 kadın hasta retrospektif şekilde klinikopatolojik olarak değerlendirildi.

Bulgular: Ortalama histerektomi geçirme yaşı 48.94 idi. Histerektomİnin önde gelen nedeni ve patolojik tanısı %47.82 oranında leiomyoma idi. İkinci önde gelen neden ve histopatolojik tanı prolapsus uteri idi (%24.63) ve üçüncü sırada tanı konan adenomyozis (%12.84) ise, başta leiomyomlar olmak üzere genellikle diğer hastalıklarla birliktelik gösteren bir durumdu. Endometriyum, myometriyum, serviks, vajina, tuba uterina ve over malign tümörlerinin sayıları daha az olsa da; kadınların hayatlarını kısaltan en tehlikeli jinekolojik hastalıklardı. Bu nedenle, hastalara daha iyi sağkalım sağlamak için erkenden uygun tedaviye başlamak amacıyla bu tümörleri mümkün olduğunca erken teşhis etmek çok önemlidir.

Sonuç: Sonuç olarak, Anormal uterin kanama, pelvik ağrı gibi belirtilerin nedenleri jinekolojik karsinomlar açısından ayrıntılı olarak araştırılmalı ve özellikle serviks karsinomlarının erken teşhisi için doğurganlık dönemindeki her kadına Servikovajinal Papanicalaou Smear tarama testi uygulanmalıdır.

Anahtar Kelimeler: Histerektomi, anormal uterin kanama, uterin hastalıklar, jinekolojik maligniteler

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Introduction

Hysterectomy is one of the most frequent surgical procedures of women. The prevalence of it changes by race, development of the countries and the geographic location (4%-40%) (1, 2). Education level, age at first birth, gravity, parity, the number of alive children, the number of miscarriages and other risk factors like genetic tendency to malignancies (Lynch Sendrom) have been found to be associated with the risk of hysterectomy (3, 4). The indication of hysterectomy varieses between the regions. However the leading indication is leiomyoma (5-7). The other indications are abnormal uterine bleeding (AUB) (8), endometriosis, adenomyosis (9-11), endometrial, cervical, tubal, ovarian benign and malignant masses (12-16).

In this study we have searched the diversity of the diagnosis of the hysterectomy materials in order to present the most frequent diseases of the uterus that require surgery.

Materials and Methods

We analyzed 1815 female patients retrospectively who underwent hysterectomy because of any reason and histopathologically evaluated at the pathology laboratory between the beginning of 2012 to the end of 2017 in this study. Clinicopathological parameters of the patients were obtained from the hospital automation system. The histopathologic diagnosis were evaluated and the distribution of the lesions were determined.

This Project was evaluated by Hospital Research and Publication Ethics Committee and it was approved in terms of scientific researches and patient ethics.

In statistical analysis of data, mean and standard deviation for continuous variables and percentages for categorical variables were used. Descriptive statistics and categorical variables were given as frequencies (percentages).

Results

The mean age of 1815 patients included in the study was 48.94. The minimum age was 30; the reason of hysterectomy by this patient was leiomyoma. The maximum age was 85; the reason of hysterectomy by this patient was endometrial carcinoma. The distribution of the lesions diagnosed in the patients listed in Table 1.

Table 1: The results of the diagnostic evaluation of hysterectomy materials.

Tissue	Diagnosis	Subtype	Number (n)	Rate (%)
Endometrium	Polyp		131	7.22
	Hyperplasia	without atypia	20	1.10
		with atypia	5	0.27
	Malignancies	Endometrioid carcinoma	36	1.98
		Serous carcinoma	2	0.11
		Stromal sarcoma	2	0.11
Myometrium		Leiomyoma	818	47.82
		Lipoleiomyoma	2	0.11
		Angiolipoleiomyoma	1	0.05
	Smooth Muscle tumors	Cellular leiomyoma	58	3.20
		Atypical leiomyoma	5	0.27
		Smooth Muscle Tumors of Uncertain Malignant Potential (STUMP)	4	0.22
		Leiomyosarcoma	2	0.11
	Adenomyosis		233	12.84
	Placental Diseases	Acreta	1	0.05
		Increta	6	0.33
		Percreta	8	0.44
Cervix	Endocervical Polyp		13	0.72
	Squamous Intraepithelial Lesion (SIL)	Low grade SIL (LSİL)	9	0.50
		High grade SIL (HSIL)	12	0.66
	Squamous Cell Carcinoma		11	0.61
	Endocervical Glandular Intraepithelial neoplasia		1	0.05
	Endocervical Adenocarcinoma	in situ	1	0.05
		Invasive	7	0.39
Vagina	Squamous Cell Carcinoma		2	0.11
	Clear Cell Carcinoma		2	0.11
Tuba uterina	Paratubal Cyst		122	6.72
	Ectopic Pregnancy		8	0.44
	Carcinoma	Serous	2	0.11
Ovary	Simple Cyst		197	10.85
	Endometriosis		41	2.26
	Fibroma		12	0.66
	Fibrothecoma		3	0.16
	Fibrosarcoma		1	0.05
	Teratoma	Mature	43	2.37
	Serous Tumors	Benign	48	2.64
		Borderline	3	0.16
		Malignant	13	0.72
	Seromucinous Tumors	Benign	1	0.05
		Borderline	1	0.05
	Mucinous Tumors	Benign	12	0.66
		Malignant	2	0.11
	Clear Cell Carcinoma		2	0.11
	Endometrioid Carcinoma		1	0.05
	Granulosa Cell Tumor	Adult	3	0.16
	Brenner Tumor	Benign	1	0.05
		Malignant	1	0.05
	Metastasis	Metastasis of Colonic Adenocarcinoma to Ovary	3	0.16
Uterus Anomaly	Bicornis Unicollis		1	0.05
Uterine atony			3	0.16
Prolapsus Uteri			447	24.63

Discussion

AUB is the most common symptom of gynecological conditions, which is defined as any type of bleeding in which the duration, frequency or amount is excessive for a woman. It is generally an indicator of possible uterine disease (8, 17). Previous studies have shown that the prevalence of AUB varies in different populations (between 10% and 30%) (18, 19). It frequently enforces medical intervention in order to improve the comfort of the patient's life (20, 21). In the AUB conditions that do not respond to medical or small surgical treatments, the last choice is hysterectomy. These patients have either structural diseases like benign/ malignant situations (40%) or dysfunctional uterine bleeding (DUB) in the absence of demonstrable structural or organic abnormalities (60%). Most of the DUB patients can be treated medically, rarely hysterectomy is needed to be applied (0.05%-0.09%). In our study 14 patients (0.77%) underwent hysterectomy because of the DUB in parallel with the literature (1,17-22).

The leading reason of hysterectomy was presented as leiomyomas (or fibroids in other words) in the literature (1-7, 23). Pavone et al. declared that leiomyomas accounted for 40%-60% of all the hysterectomies, this was compatible with our results (47.82%). There were also subtypes of the leiomyomas diagnosed as seperately from the usual leiomyomas accounting 3.64%. Total rate is also compatible with the Pavone et al's results. Also we have found 2 leiomyosarcomas and 2 stromal sarcomas in 4 patients which were presumed leiomyomas (0.22%) in paralel with the study of Ruengkhachorn et al (0.2%) (24). This means masses that seem like leiomyomas must be closely monitored and carefully managed.

The second leading reason of hysterectomy was prolapsus uteri (24.63%) paralel to the literature (25, 26). These patients were generally older than 50 years old.

Adenomyozis seemed to be the third common diagnosis with a rate of 12.84%. However in most of these patients, the diagnosis of the adenomyozis was not the only disease alone in hysterectomies. It was mostly diagnosed together with leiomyomas. This means leiomyomas and adenomyozis often coexist in the same uterus with a prevalence ranging from 15% to 57% (10, 11, 27).

Another group of lesions that was composed of benign lesions (endometrial/endocervical polyps, Hyperplasias without atypia, Paratubal Cysts, Simple Cysts of ovary- follicular cysts, surface epithelial inclusion cysts, cystic corpus luteum-, Endometriosis) generally do not require hysterectomy but encountered as an accompanying disease by tumors (especially leiomyoma), adenomyosis and prolapsus uteri. They were diagnosed in 28.87% of the hysterectomies (28). The next small group was composed of premalignant lesions (Endometrial hyperplasia with atypia, LSIL, HSIL,GIN) with a ratio of 1.49% and benign tumors of the ovary (fibroma, fibrothecoma, serous/ seromucinous/ mucinous cystadenomas, Benign Brenner tumor, mature teratoma) with a ratio of 6.61%.

The last group was the most important group as it was composed of borderline tumors (serous and seromucinous borderline tumors: 0.22%) and the malignant tumors (Endometrial endometrioid/serous carcinomas, ovarian fibrosarcoma, serous/mucinous carcinoma, clear cell carcinoma, granulosa cell tumor, brenner tumor, endometrioid carcinoma and metastasis of colonic carcinoma to ovary, cervical squamous/ adeno carcinomas, vaginal squamous/clear cell carcinomas and tubal serous carcinoma: 4.90%). These malignant tumors were the cases with the highest indication for hysterectomy (13-16, 29, 30). Fortunately malignancies occupy a very small group; however they are the most dangerous diseases that shorten the lives of the patients. So it is very important to diagnose these tumors as early as possible in order to begin the appropriate treatment quickly to provide the patients better survivals. As a result the reasons of the symptoms like AUB, pelvic pain must be researched in details for gynecological carcinomas and the cervical screening test with the cervicovaginal papanicalaou smear test must be applied to every women in fertility period for early diagnosis of cervical carcinomas.

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