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Gender Differences In Disease Distribution In Patients Who Prefer A Woman Surgeon

Bir Kadın Cerrahi Tercih Eden Hastalarda Hastalık Dağılımında Cinsiyet Farklılıkları

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ÖZ

Amaç: Bu çalışma, dört kadın cerrahtan birinin polikliniğine başvuran hastaların hastalık dağılımı, cinsiyet ve bir yıllık cerrahi verileri analiz edilerek, İç Anadolu Bölgesi'ndeki kadın cerraha bakış açısını yansıtmayı amaçlamaktadır.
Yöntem: Kayseri Şehir Eğitim ve Araştırma Hastanesi Genel Cerrahi Kliniği'nde 3 aylık bir süre içinde bir kadın cerrahın polikliniğine başvuran hastalar geriye dönük olarak hastane bilgi işletim sisteminden incelendi. Ocak 2020- Mart 2020 tarihleri arasında 785 kadın ve 56 erkek hastanın bilgileri çalışmaya dahil edilerek, Uluslararası Hastalık sınıflaması (ICD) tanı kodları ve demografik veriler değerlendirmeye alınmıştır.
Bulgular: Kadın hastaların yaş ortalaması 43± 13.9 (dağılım, 18-93), erkek hastaların yaş ortalaması 43,1± 14.1 (dağılım, 8-71) idi. Hastaların %93,3'ü kadındı. Toplamda kadınların %78,6'sında meme ve anorektal hastalık nedeniyle başvurduğu görüldü ve bunlar utanma duygusu nedeniyle cinsiyete özgü doktor seçiminin en yaygın nedenleriydi. Buna rağmen erkeklerde ikinci en sık başvuru yakınması %26.8 ile anorektal hastalıklar olup, kadınlara göre istatistiksel olarak anlamlı derecede yüksekti (%14,3).
Sonuç: Cerrahların cinsiyetine yönelik hastaların bakış açısıyla ilgili ülkemizde yeterli çalışma bulunmamaktadır. Bu çalışmada, üç aylık süreç içerisinde değerlendirilen hastaların çoğunluğu kadındı ve en sık başvuru nedeni meme hastalıkları idi. Bu durumun cerrahların kariyer yönelimini etkileyebileceği vurgulanmaya çalışılmıştır.
Anahtar Kelimeler: Genel cerrahi, hasta tercihi, cerrah, kadın

ABSTRACT

Objective: This study aims to reflect people's point of view regarding a female surgeon in the Central Anatolia Region by analyzing the disease distribution, gender, and one-year surgery data of patients who admitted to the outpatient clinic of one of the four women surgeons.
Material and Methods: Patients who applied to the outpatient clinic of a female surgeon, in a 3-month period, in Kayseri City Training and Research Hospital General Surgery Clinic were analyzed from the electronic medical report system retrospectively. The information of 785 female and 56 male patients were included in the study between January 2020 and March 2020. The International Classification of Diseases (ICD) diagnosis codes of the patients and their demographic data were evaluated.
Results: The mean age of the female patients was 43± 13.9 (range, 18-93), and the mean age of male patients was 43.1± 14.1 (range, 8-71). Of the patients, 93.3% were female. In total, 78.6% of women had breast and anorectal diseases, and these were the most common reasons for gender-specific doctor selection due to the feeling of embarrassment. Despite that, the second most common complaint of men (26.8%) was anorectal diseases, which was statistically significantly higher than that of women (14,3%, p=0,000).
Conclusion: In our country, there are not enough studies about the patients' perspectives on the gender of the surgeons. In this study, almost all of the patients in the three months were women, and most of them had breast diseases. It was attempted to emphasize that this can influence the career orientation of a surgeon.
Keywords: General surgery, patient preference, surgeon, women, female

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INTRODUCTION

In Western civilization, the history of women performing surgery dates back to 3500, before the common era and Queen Shubad of Ur (1). In our history, midwifery is the first known profession of women in the health field (2). The oldest known female surgeon in our country is Saliha Hatun, who lived in the 17th century and was known under the name of Küpeli and is known to perform hernia surgeries (3,4). Women's medical training was first started in1915 by sending them abroad; their education in our country only started in 1922 (5). Six female physicians graduated from the medical school in Istanbul in 1928, one of them, Dr. Fitnat Celal Taygun, became a general surgeon, and another, Dr. Suat Rasim Giz completed general surgery residency and then became Turkey's first thoracic surgeon (5). Dr. Müfide Kazım Küley, an internal medicine specialist, was one of the most influential names in the struggle for women to have medical education and was the only physician with an academic career among the first graduates (6). Nowadays, the percentage of women in medical science has increased dramatically. While only 6.9% of U.S. medical school graduates were women in 1965, the data from 2017 indicate that half of the students are female (50.7%) (7). In many studies, not limited to surgery, it was found that female physicians are more patient-centered, spend more time with their patients, exhibit more empathy and psychosocial orientation, and are less likely to be sued (8-11). However, female physicians are not valued as highly by patients as one would expect based on physicians' practice styles and patients' values (12). This discrepancy was at least partly explained by the effect of gender stereotyping and implicit bias in patients' perception of their physicians (12).

This study aims to analyze the gender distribution, complaints/diagnoses, and one-year surgery data of patients who presented to the outpatient clinic of a surgeon who started to work as the first female general surgery specialist in an Anatolian city, to try to reflect people's point of view of female surgeons in the Central Anatolia Region.

MATERIAL AND METHOD

Patients who were admitted to the outpatient clinic of a single female surgeon in Kayseri City Training and Research Hospital General Surgery Clinic were analyzed retrospectively from the electronic medical report system. For this study, ethical approval was obtained from the Non-interventional Clinical Research Ethics Committee of Kayseri City Training and Research Hospital (Protocol No:418/2021). The information of a total of 841 patients was included in the study between January 2020 and March 2020. The International Classification of Diseases (ICD) diagnosis codes of the patients and their demographic data were evaluated. The diagnoses are divided into groups breast diseases, anorectal diseases, endocrine system diseases, gastrointestinal system diseases, and colorectal diseases. In the same period, the first examinations of the patients who had more than one entry for control examination or result evaluation took into consideration. Patients examined in the emergency department and consulted from the other clinics were also excluded from the study.

In our hospital, there are currently 20 male and 2 female surgeons employed, and there are four female surgeons in the city, one in a private hospital and the other in a district hospital.

Statistical Analysis

Descriptive statistics were given as mean ± standard deviation, minimum maximum (min-max) depending on the distribution of the continuous variables, while categorical variables were summarized as numbers and percentages. The Kolmogorov-Smirnov test controlled the normality test of the numerical variables. The Chi-square and Fischer's exact tests were used to compare categorical variables. While independent student's t-test was used for the groups that conform to the normal distribution, Mann-Whitney U tests were used in the groups that did not fit the normal distribution. The statistical significance level was taken as 0.05 in all tests.

RESULTS

Disease groups, numbers of patients, and gender data are summarized in Table1. A total of 785 (93,3 %) female and 56 male patients were admitted. The mean age of women was 43± 13.9 (range, 18-93), and the mean age of men was 43.1± 14.1 (range, 8-71). There was no statistically significant difference in age distribution between both genders (p = 0.753). While the most common complaint of female patients was breast diseases with a rate of 64.3%, it was observed that males had gastrointestinal system diseases with 37.5%. It was observed that 88.2% of 124 patients who applied with anorectal complaints were women, but the second most common reason for admission was anorectal diseases with 26.8% of men. The percentage of male patients presenting with anorectal diseases was higher than that of women.

In total, 78.6% of women had breast and anorectal diseases, and this was the most common reason for gender-specific doctor selection due to the feeling of embar-

rassment. When the distribution of diseases according to gender was evaluated, a statistically significant difference was found (p = 0.000), with a higher rate of breast diseases in women and anorectal and gastrointestinal diseases in men. The distribution of diseases within a gender is summarized in Figure 1. Among the disease groups, patients who presented with gastrointestinal complaints were statistically significant older (p = 0.021).

Distribution according to the diagnosis of patients is as follows; 67 (13.2%) had breast cancer, 60 had a breast mass (11.9%), 151 (29.8%) had mastodynia, 28 (3.3%) had a screening examination, 13 (1.5%) had inflammatory breast diseases, and 187 (22.2%) had other breast diseases. The mean age for all breast patients was 42.7 ± 12.8, and the mean age of breast cancer patients was 53.7 ± 12.8 (26-93).

Table 1. Number of diseases groups by genders.

	Age*	**Female†**	**Male†**	**Overall†**
Breast Disease	42,6±12,8 (18-93)	505 (64,3)	2 (3,6)	507 (60,3)
Anorectal Diseases	41,3±14,5 (18-82)	112 (14,3)	15 (26,8)	127 (15,1)
Gastrointestinal Diseases	49,2±17,3 (19-88)	86 (11)	21 (37,5)	107 (12,7)
Endocrine Diseases	42±13,9 (18-66)	35 (4,5)	5 (8,9)	40 (4,8)
Other/Hernia Diseases	40,9±14,1 (19-73)	47 (6)	13 (23,2)	60 (7,1)

*: mean± standard deviation (minimum-maximum) †:n (%) ***:

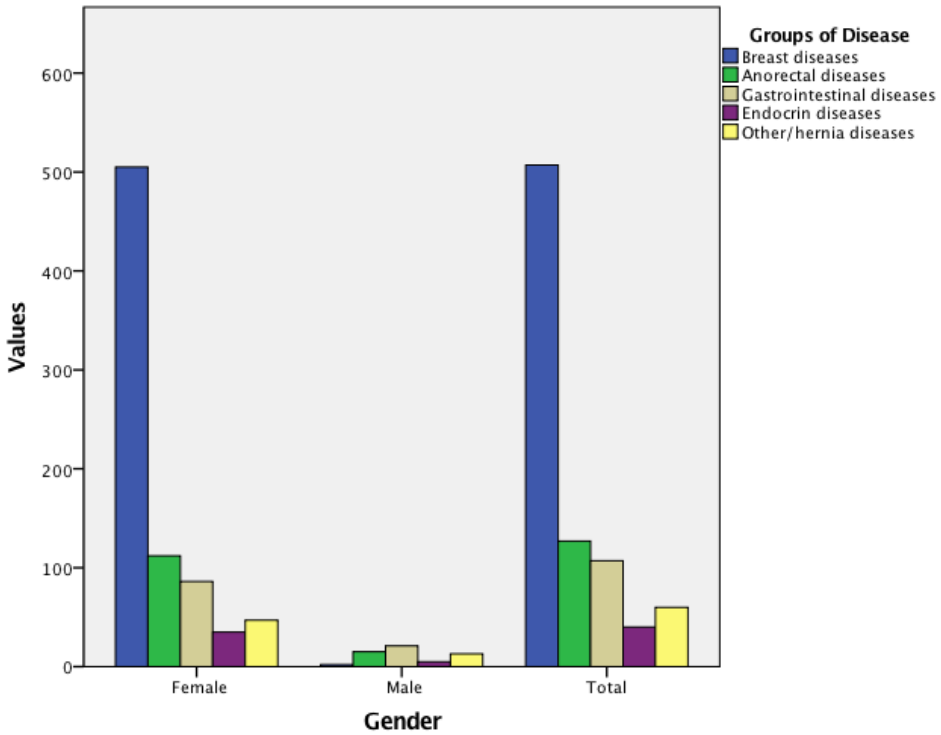

Figure 1. Distrubition of disesases by gender

DISCUSSION

It was seen that there are various studies conducted in a very broad perspective related to the effect of the surgeon's gender on postoperative results (13,14), working in different surgical specialties (15-17), income differences (18), the factors that affect their leaving surgical training (19), the status of pregnant surgeons (20), and the effect of surgeon's attitude on the patients' preference (21), when a search of MEDLINE/Pubmed using the terms "women surgeon", "female surgeon" "patient preferences gender of physicians/surgeon" was performed. In a review evaluating the factors affecting the decision of patients when choosing surgical care, it has been shown that the most crucial factor is the reputation and competence of the surgeon. Also, patients select surgeons based on their interpersonal communication (22).

Studies have shown that women prefer gynecologists, especially in sensitive medical situations such as gynecological procedures and colonoscopy (23,24). Likewise, it has been shown that women want to be examined for their breasts by a female breast surgeon. However, when it comes to breast surgery, preference for a female surgeon is less obvious, with the professional skills of the surgeons becoming the predominant factor. Additionally, the feeling of embarrassment is a more relevant factor in the examination room, where the patient interacts with the surgeon consciously rather than in the operating room (25). In our country, there is no study on this subject.

In a survey study conducted among female patients scheduled for colonoscopic screening, it was found that 43% of the participants preferred a female endoscopist, 87% of them would want to wait more than 30 days for a female endoscopist, and 14% would be willing to pay more (23). In a study about gender preferences for urologists, it was shown that 62.3% of women preferred urologists of the same gender, whereas 60% of men did not make a choice related to gender. Also, gender preference was not correlated with the age and education level of the patients (24). In our study, male patients' second most common complaints were anorectal diseases. They presented with a higher frequency than women, so it can be concluded that male patients' preference is less based on gender.
When the preferences of 200 women regarding the gender of plastic surgeons were questioned, about half of the patients had no preference concerning the gender of their surgeon, and those who had a preference statistically significantly preferred a female surgeon (26). In another study on preferences when choosing an orthopedic surgeon, most of the patients surveyed did not declare a choice in age, gender, race, the religion of surgeons. Among those who did, it has been shown that both male and female patients mainly chose a male surgeon (27).

It is seen that there are different results in the literature on this subject, especially in different surgical specialties. In cases requiring privacy, it is observed that women often choose a surgeon based on gender. All these studies were conducted in regions with different development levels. The region's socio-cultural and development level is likely effective in choosing a physician based on gender. Patients who choose a female surgeon made comments such as "it is easier to talk to women" and "I am less ashamed of women" (28). Therefore, it can be expected that the choice of a same-gender physician is higher in breast-anorectal region diseases and gynecological surgery, similar to the preferences of our patients.
In a study that reflects patients' perspectives based on their evaluation of eight short scenarios that differed regarding the gender of the surgeon and their demeanor for breast and lung cancer surgery (21), they found a significant interaction in participants choice between the surgeon's demeanor and the type of surgery; they preferred a communal surgeon for breast cancer surgery, regardless of the gender of the surgeon or patient. The communal surgeon was defined as a surgeon who was supportive and nurturing, because of expected gender norms for women, on the other hand, characteristics described for men included being assertive and independent, again, due to expected gender norms (21). This situation supports that the only effect of gender-based surgeon selection is not the feeling of embarrassment but a behavioral expectation of the patients.
In our country, there are a limited number of studies on this subject; in a study evaluating the choice of physician in antenatal follow-up, they take the physician's personal characteristics as professional experience, carefulness, and communication skills, rather than the physician's gender into regard (29). On the contrary, in a different study in another province, most women, because of feeling ashamed preferred female obstetricians and gynecologists (30).

The limitation of this study is that the data are of one surgeon in a province, and in the literature, these kinds of studies are conducted through patient questionnaires. However, "non-response bias" and "response bias" are the conditions that affect the results of survey studies (31), and age, marital status, and education level affect the response and bias status in questionnaire responses (32,33). It has been shown these factors reduce the representa-

tiveness of the results, increase the bias of the tendency prediction, and limit the comparability of the results between population groups. At this point, the preferences of the patients who applied to the outpatient clinic for three months, when compared with the results obtained from the survey conducted in a specific group, may reflect the perspective of society. However, they are not attributed to the whole society.

In a review examining the experiences of female surgeons around the world, it has been shown that country income and the Global Gender Gap Index do not predict gender equality. It has been shown that cultural norms between geographical regions affect the variability of the experience of women surgeons. It was emphasized that more studies are needed in low-income and Global Gender Gap Index countries to understand women surgeons' experiences and promote gender equality.

In an international survey study of factors affecting the careers of female surgeons in low-intermediate risk countries, 55% of respondents stated that there are cultural barriers to female surgeons.

My experience as a surgeon who worked as the only female surgeon in an Anatolian city for about five years is that the patients who applied are primarily women. They come with complaints such as breast and anorectal diseases where the feeling of embarrassment predominates. This situation led me to direct my career orientation specifically to breast-endocrine diseases. This situation does not indicate that it reflects our country's general approach. In the General Surgery Residency Training Report published by the Turkish Surgical Association in 2010, it was reported that approximately 500 female surgeons in all surgical specialties and 150 female general surgeons registered in the association. However, there is no official information about the trends of female surgeons in choosing general surgery subspecialty.

In conclusion, here, we tried to reflect the perspective of the people based on the gender and disease distribution of the patients of a female surgeon, and it was tried to be emphasized that it can influence the career orientation of a surgeon.

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