

Surgeons' Approaches and Professional Perspectives on Breast Masses: A National Survey in Turkey

Cerrahların Meme Kitleleri Üzerine Yaklaşımları ve Profesyonel Perspektifleri: Ulusal Bir Anket Çalışması

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ABSTRACT

Objective: General surgeons' approaches to breast masses in their daily practices and their perspectives for issues on breast diseases and breast surgery are investigated through a survey.

Materials and Methods: Answers of 524 general surgeons for the survey "Approach to breast diseases and breast surgery" between November 2012 and February 2013 were assessed. Demographic features, approaches to the breast masses, and answers for the clinical scenarios of surgeons were questioned. Surgeons were asked about management of breast cancer and the future role of surgeons for oncoplastic breast surgery and breast diseases.

Results: Participants were representing 14.6% of all general surgeons in Turkey. The survey revealed that breast diseases are the most common cause for admission in general surgery outpatient clinics. Needle biopsies were employed by 241 (60%) respondents. Three hundred and seventy-one (71%) participants indicated that breast cancer management could be accurately conducted by the general surgeons. Two hundred and seventy-three (52%) respondents think that oncoplastic breast surgery should be performed by a general surgeon and 241 (41%) respondents predict that the role of general surgeons for breast diseases and breast surgery will decrease in the future.

Conclusion: Basic approaches towards breast masses need to be improved in our country despite the highest frequency of breast diseases in outpatient admissions. The views and opinions of surgeons on breast diseases and the course of breast surgery in different regions and different communities need to be defined and clarified.

Keywords: Breast mass, Surgeons' approach, survey

ÖZ

Amaç: Çalışmamızda ülkemizdeki genel cerrahların günlük pratikte meme kitlelerinde yaklaşımları, meme hastalıkları ve cerrahisinde bazı tartışmalı konulardaki perspektifleri incelenmiştir.

Yöntem ve Gereçler: Kasım 2012 - Şubat 2013 tarihleri arasında "meme hastalıkları ve cerrahisine yaklaşım" adıyla yapılan anket çalışmasını yanıtlayan 524 cerrahın yanıtları incelendi. Cerrahların demografik özellikleri, meme kitlelerine yaklaşımları, verilen senaryo yanıtları sorgulandı. Meme kanserinin izlemi, onkoplastik meme cerrahisinde cerrahın rolü, gelecekte meme hastalıkları ve cerrahisinde cerrahın rolü konularında perspektifleri soruldu.

Bulgular: Katılımcılar ülkemizdeki tüm genel cerrahların %14.6'sını oluşturuyordu. Meme hastalıklarının genel cerrahi polikliniklerinde en sık görülen hastalık grubu olduğu saptandı. Yanıtlayanların 241'inin (%60) meme kitlelerinin tanısında iğne biyopsilerini kullandığı saptandı. Katılımcıların 371'i (%71) meme kanserli hastanın izlemini en iyi genel cerrahın yapabileceğini belirtti. Yanıtlayan 273 kişi (%52) onkoplastik meme cerrahisini cerrahın kendisinin yapması gerektiğini, 241 (%41) yanıtlayan gelecekte meme hastalıkları ve cerrahisinde cerrahın rolünün azalacağını düşünmektedir.

Sonuç: Genel cerrahi polikliniklerinde en sık görülen hastalık grubu olmasına rağmen, ülkemizde genel cerrahinin meme kitlelerine temel yaklaşımlarının geliştirilmeye gereksinim vardır. Meme hastalıkları ve cerrahisinin işleyişle ilgili farklı coğrafyalarda ve farklı toplumlardaki cerrahların görüşleri belirlenebilir ve literatürle paylaşılabilir.

Anahtar sözcükler: Meme kitlesi, cerrah yaklaşımları, anket

Introduction

Female breast changes throughout a woman's life under the effect of hormonal milieu; women consult doctors for symptoms that are observed because of these changes. Although vast majority of breast masses are benign, 10% of patients with breast complaints have breast malignancies (1). The most common breast lesions are cysts and fibroadenomas (2). Different approaches for breast masses in different regions have been published (3). Surgeons do not have uniform practices for breast masses (4). These approaches may vary according to the surgeon's level of knowledge, infrastructural facilities of the institutions, and trained manpower of the country. Thirty years ago, Fisher argued that breast cancer is a systemic disorder. He claimed that surgical treatment has come to the end of the road with the advent of new chemotherapy (CT), hormone therapy (HT), and/or radiotherapy (RT) regimens (5). Although surgery continues to play an active role in

Table 1. Characteristics of participants of the survey

Characteristics	N (%)
Institution	
State hospital	207 (39)
Training/research hospital	151 (29)
University hospital	84 (16)
Private hospital	72 (14)
Military hospital	10 (2)
Time in specialty (years)	
<10	189 (36)
10-20	177 (34)
21-30	105 (20)
>30	53 (10)
Number of annual breast surgery	
<20	131 (25)
20-50	173 (33)
51-80	100 (19)
81-150	68 (13)
>150	52 (10)
Frequency of breast diseases in office practice	
1 st	153 (29)
2 nd	146 (28)
3 rd	150 (29)
4 th	38 (7)
5 th or more	37 (7)
Average time for examination of breast patient (minute)	
1-5	105 (21)
5-10	258 (49)
10-15	94 (18)
15-25	56 (10)
25-40	11 (2)
Attendance for breast meetings	
Yes	283 (54)
No	241 (46)

breast cancer treatment, there is a debate on oncoplastic breast surgery (OBS) and the future and present management of breast cancer.

Management of breast diseases and breast surgery is undertaken by general surgeons in our country. There are 3594 active working surgeons in Turkey (6). There is no formal subspecialization on breast surgery in Turkey. This survey investigated surgeons' approaches for breast masses in daily practice and their perspectives on some controversial issues on breast diseases and breast surgery. According to our literature search (Pubmed, Cochrane database, etc.), this is the first and/or most comprehensive breast surgery perspective survey on this subject. The current status for breast surgery has been presented in this study.

Materials and Methods

This study is approved by the Ethics Committee of Tepecik Training and Research Hospital in accordance with the Declaration of Helsinki.

Between November 2012 and December 2012, a survey form entitled "Questionnaire for Surgeons' Approaches and Professional Perspectives on Breast Masses" was e-mailed once to 2800 members of the Turkish Surgical Association (TSA) with a short informative note via the website of TSA (Plexus IT Inc.). The survey was completed online after 6 weeks. Afterwards, more surgeons were reached directly, by phone or e-mail for 8 weeks, until February 2013. The survey was designed as a multiple choice questionnaire by three authors. The objectives of the study were investigated through 17 questions of the survey. The questions may be interpreted in three groups.

Demographic questions: Affiliation, time spent as a surgery consultant, mean annual breast surgery number (including surgical biopsies), frequency of breast diseases in general surgery outpatient clinics, average time spent for breast diseases in office examination (average examination time), and attendance at breast meetings such as congress, symposium, etc. in the past 2 years have been questioned.

Clinical scenarios for approaches to breast masses: Most preferred biopsy method for dominant masses of breast, ultrasonography practice of surgeons on their own, approach for breast mass of a 53-year-old woman, and most commonly observed breast lesion in women aged between 20 and 45 years have been questioned. In addition, the following approaches have been questioned: In Scenario A, the initial approach for a 28-year-old patient who has no risk factors (family history of breast cancer, prior breast biopsy, etc.) with a 1.5×1.5 cm solid, fixed, smooth palpable breast mass in the right upper external quadrant; in scenario B, the initial approach for a 57-year-old patient who has no risk factors with solid, fixed, smooth palpable breast mass in the left lower external quadrant; and in scenario C, the initial approach for a 49-year-old patient with risk factors (family history of breast malignity) who has a 2×2 cm solid, fixed, smooth, painful breast mass in the left upper internal quadrant, with a mammography and sonography revealing diffuse cysts in both breasts and a 2×1.5 cm simple cyst in the left upper internal quadrant with no lymphadenopathy (BIRADS-2).

Questions on professional perspectives

General surgeons were inquired about how they define (easy, difficult, complicated, etc.) diagnosis and treatment of breast diseases (practice perspective) and how they foresee the future role surgeon in diagnosis and treatment of breast diseases (future perspective). Finally, the role of the surgeon in OBS (OBS perspective) and in breast cancer management (management perspective) was questioned.

All answers were anonymized; duplicate responses were not allowed. Participants did not obtain any incentive benefit like a fee or a gift. Incomplete responders and/or surgeons who claimed not to perform breast cancer surgery were excluded from the study.

Data were analyzed by using SPSS v. 15 (Statistical Package for Social Sciences version 15, SPSS Inc, Chicago, USA). The results were classified by percentage distribution and were presented descriptively.

Results

Twenty-three of 547 participants were excluded from the study because of an incomplete response. The remaining 524 surgeons were representing 14.6% of all practicing surgeons in Turkey.

Table 1 demonstrates demographic features, Table 2 shows approaches for breast masses and responses for clinical scenarios, and Table 3 shows professional perspectives.

Table 2. Approaches of surgeons

Approaches	n (%)
Biopsy method	
Needle (Fine needle, Tru-cut)	314 (60)
Excisional	173 (33)
Incisional	26 (5)
Frozen biopsy	11 (2)
Sonography usage of surgeon	
No	428 (83)
Yes (sometimes)	53 (10)
Yes (frequently)	22 (4)
Yes (always)	16 (3)
Preference for breast assessment in a 53 year-old patient	
Mammography	367 (70)
MRI	61 (12)
Physical examination	59 (11)
Sonography	37 (7)
Most common lesions for ages 20-45	
Cysts	257 (49)
Fibroadenoma	168 (32)
Physiologic nodularity	98 (19)
Malignity	1 (0.2)
Scenario A	
Sonography	309 (59)
Needle biopsy (Fine needle, Tru-cut)	94 (18)
Excisional biopsy	68 (13)
Follow-up	53 (10)
Scenario B	
Mammography- Sonography	299 (57)
Needle biopsy (Fine needle, Tru-cut)	216 (24)
Excisional biopsy	84 (16)
MRI	4 (1)
Scenario C	
Aspiration	210 (40)
Needle biopsy	313 (25)
Follow-up	84 (16)
Excisional biopsy	68 (13)
Frozen biopsy	31 (6)

The largest group of participants were from training hospitals (n:358, 68%). The frequency of breast diseases in polyclinic practice ranked first for 153 (29%) participants and second for 146 (28%) participants. Two hundred and fifty-eight (49%) responders were spending 5–10 min on an average for the examination of a breast outpatient. Two hundred and forty-one (46%) participants attended a breast surgery meeting in the past 2 years. Needle biopsies were utilized by 314 (60%) and excisional biopsies were utilized by 199 (33%) responders. Three hundred and sixty-seven (70%) participants defined mammography and 61 (12%) participants defined magnetic resonance imaging (MRI) as the most effective method for imaging a breast mass of a

Table 3. Professional perspectives of surgeons

Perspectives	n (%)
Diagnosis and treatment of breast diseases	
Quite easy	74 (14)
Easy	178 (34)
Intermediate	162 (31)
Difficult	42 (8)
Difficult/complicated	68 (13)
Surgeon's future role in breast diseases	
will be diminished	241 (46)
will remain same	236 (35)
will increase	47 (9)
Management of a breast cancer patient should be led by	
Surgeon	371 (71)
Medical oncologist	120 (23)
Family physician	27 (5)
Radiation oncologist	6 (1)
OBS	
should be performed by general surgeon	273 (52)
should be performed by general surgeon-plastic surgeon collaboration	120 (23)
General surgeon should seek help for free flaps and prosthetic reconstruction	73 (14)
should not be performed by general surgeon	21 (4)
No idea	37 (7)

53-year-old woman. The most common breast lesion in women aged between 20 and 45 years was breast cysts for 257 (49%) participants. The initial approach in scenario A was ultrasonography (US) for 309 participants (59%), mammography and US for 299 participants (57%) in scenario B, and aspiration biopsy for 210 participants (40%) in scenario C.

Breast diseases and treatments were defined as easy by 178 responders (34%) and as quite easy by 74 responders (14%). Two hundred and forty-two responders (46%) estimate that the role of surgeons in breast diseases and treatment will diminish in the future. Three hundred and seventy-one participants (71%) think that breast cancer management can be accurately performed by the general surgeons. Two hundred and seventy-three (52%) responders are of the opinion that OBS should be performed only by a general surgeon.

Discussion and Conclusions

The survey has succeeded in sampling the demography of surgeons in Turkey with its wide contribution all over the country. The "Report on general surgery manpower, workforce and workload," which is published by TSA, introduced that general surgeons were distributed nationwide to the following institutions: 67% hospitals of Ministry of Health, 13% university hospitals, 16% private hospitals, and 2% military hospitals, (6). Our survey exhibited this distribution as 68% hospitals of Ministry of Health, 16% university hospitals, 14% private hospitals, and 2% military hospitals.

The survey has revealed problems in basic approaches to breast masses. Diagnosis of breast masses involve physical examination followed by

imaging studies, and if required, pathological sampling (7). While initial approaches for scenario A and scenario B were imaging for 309 (59%) and 299 (57%) responders, respectively, 162 (31%) and 210 (40%) responders' choice as initial approach for scenario A and scenario B was biopsy (needle or excisional), respectively. Unjustifiable breast biopsies for young patients impose both unnecessary workload on physicians and distress and risk to the patients. A diagnostic practice involving breast biopsy prior to an adequate imaging study may cause overlooks in some differential diagnoses in women of all ages (8). Because the cancer anxiety in the society is growing bigger, approach to patients with breast masses should be optimal.

The survey showed that the use of percutaneous needle biopsies is inadequate. Needle biopsy, which is cheap, easily applicable, and does not complicate subsequent procedures, replaced excisional biopsies to a great extent. A study from Canada demonstrated a 97% use of needle biopsies for diagnosis of breast masses (9). Cantürk et al. (10) reported a 60% rate of needle biopsy use in university hospitals of Turkey. Our survey showed a 60% use of needle biopsies and a 38% use of excisional biopsies. Cosmetic outcomes and potential subsequent imaging problems of excisional biopsy are evident. Requirement for improvement in diagnostic approaches for breast masses is obvious. In this survey, 367 (70%) responders indicated that mammography is the most effective diagnostic tool to assess the breast mass of a 53-year-old woman. Mammography is the essential imaging tool for breast masses; MRI and US are complementary modalities (11). The diagnostic accuracy of physical examination for breast masses is reported to reach 74% with experienced surgeons (12). In our study, 59 participants (11%) chose physical examination as the most useful diagnostic tool. Employment of mammography, which is inexpensive and widespread, could be encouraged for suitable cases. The survey indicated that the most common breast lesion in women aged between 20 and 45 years is cysts, which is seen in half of them, and the second most common lesion is fibroadenoma, which is seen in one-third of them, as concordant with the current literature (13).

The study revealed a dominant role of surgeons in OBS practice. OBS is the most developing field in breast surgery in the past 20 years, with longer survivals and improved quality of life in breast cancer treatment. However, the debate continues about who (general surgeon/plastic surgeon) can perform OBS. While one-fourth of the responders think that general surgeons and plastic surgeons should collaborate to perform OBS, more than half of the responders think that OBS should be performed by general surgeons alone. Chang et al. (14) emphasize the significant role of plastic surgeons in breast cancer and breast reduction surgery. Gwack et al. (15) reported that breast reconstructions for early stage breast cancers were performed by most breast surgeons in South Korea. Zucca et al. (16) stated that breast surgeons in Brazil could manage to perform OBS techniques without any help by learning reconstruction techniques. Meanwhile, in a survey for plastic surgeons in the United States, Alderman et al. (17) found that the interest of plastic surgeons for postmastectomy reconstruction started to decline. Because of the high numbers of patients requiring OBS and the limited number of plastic surgeons, training general surgeons for OBS may be a solution. Most of the surgeons wish to perform OBS on their own in our country.

The survey indicated that breast diseases are the most common cause for surgery outpatient clinic admissions. Breast diseases were the most common cause for surgery outpatient clinic admissions for one-third of the respondents. High incidence of benign breast disorders in young

women and the anxiety caused by the increasing risk of breast cancer with increasing age causes women to refer a surgeon. The interest of mass media on breast cancer enhanced the sensitivity of the population for early diagnosis. Half of the respondents spared 5-10 min for the examination of these outpatients.

There is no formal subspecialization for breast surgery in Turkey. The survey revealed that surgeons mostly consider diagnosis and treatment of breast diseases as easy and think that the future role of surgeon will diminish. Diagnosis and treatment of breast diseases was defined as easy by 252 (48%) respondents. Nearly half of the respondents think that the role of surgeon will diminish in the future. Until the 1980s, breast surgery mainly included biopsy and amputation. Breast operations were generally performed at end of the daily operation list and were performed by residents. It was thought that these operations were easier and less prone to development of complications. Breast and axillae conserving procedures, improvements in breast imaging studies, and spreading of screening programmes have expanded the field of surgery in breast diseases. These procedures are defined as difficult or complicated only by 68 (13%) respondents. Despite that common superficial apprehension, with developing adjuvant diagnosis and treatment modalities, multidisciplinary approaches and treatment planning, which starts with the breast conservation course, could lead to the development of complications in the surgery and the process as a whole. Only one-tenth of surgeons estimate an increase in the future role for surgeons. While an increase in sensitivity of patients towards breast diseases and breast and cosmetic conservation procedures may expand the role of general surgeons, advances in healthcare technologies and intervening of radiologists, oncologists, plastic surgeons, and family physicians in this field could limit the potential role for breast surgeons. Endoscopic breast surgery and radiofrequency ablation therapy could replace breast surgery in a suitable group of patients. This trend seems to depend on advances in healthcare technology rather than in surgery.

Surgeons think that they can accurately conduct breast cancer follow-up. The debate continues on who can conduct breast cancer follow-up, which screens local recurrences, new primary tumors, and provides psychological support. Three hundred and seventy-one (71%) respondents stated that breast cancer follow-up can be accurately performed by general surgeons. Most of the local recurrences and distant metastases after breast cancer are caught by patients (18). A survey from Canada demonstrated that 73% of family physicians contribute to the breast cancer follow-up (19). Given the inadequacy of the number of medical oncologists and the newly established family physician care system in Turkey, it is reasonable for surgeons to undertake follow-up of breast cancer, which are easy-to-access, and widely get involved in diagnosis and treatment of these group of patients.

Limitations

This study has some limitations. The answers were assessed according to the participants' statements and were not confirmed with official records and were presented briefly. Infrastructural facilities and qualified manpower of respondents were ignored. Non-palpable masses were not investigated. Assessments are limited with items of the survey and may include authors' biases. Lastly, because the results are presented definitively, they may not reflect different tendencies.

Although breast disorders are the most common cause of admissions in outpatient clinics, approaches of general surgeons towards breast masses need to be improved. National quality standards and practice

guidelines could be defined and supervised for their applications in countries with limited resources and special conditions. Although general surgeons wish to perform OBS, they also think that the role of surgeons will diminish in the diagnosis and treatment of breast diseases. Thus, we suggest to define and document perspectives of surgeons on breast diseases and breast surgery in different regions and populations.

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