

CLINICAL AND PATHOHISTOLOGICAL FEATURES OF BREAST CANCER IN ELDERLY WOMEN

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Breast cancer in elderly women is the major health issue and therapeutic challenge. The aim of the study was to determine specific characteristics of breast cancer biology in elderly patients.

Retrospectively, we followed: breast cancer clinical and pathohistological characteristics of patients treated during the 5-year period at the Surgical Clinic in Nis. Patients were divided into study (≥ 65 years) and control group (< 65 years).

The study involved 1098 women (431 from the study group; 667 from the control group). The mean age was 71, 3 years in the study group, and 50, 7 years in the control group. Ductal carcinoma was the most frequently observed histological early-stage type (70,3% vs. 61,92%; $p = 0.5236$). The majority of our patients presented with an early-stage disease (69,02% vs. 60,20%). Estrogen receptor positive tumors occurred in 67.88% of elderly patients versus 28.42% of young cases ($p < 1 \times 10^{-8}$), while negative axillary lymph nodes were observed in 45,78% and 34,40% of patients in the elderly and young group, respectively.

There are some clinical and pathohistological breast cancer specifics in elderly patients. This study showed similar pathohistological tumor characteristics. Our results confirm that elderly patients present with more favorable prognostic factors (estrogen receptor positive tumors, negative axillary lymph nodes). *Acta Medica Medianae 2005;44(4): 31 – 34.*

Key words: breast cancer, elderly, pathohistological features

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Introduction

Breast cancer is the most common lethal neoplasm in women. The incidence of breast cancer increases dramatically with age: in fact, approximately 70% of cases are diagnosed in women aged 50 and older (1).

Breast cancer in older women is the major health issue and therapeutic challenge. Although there is some controversy about the biology of breast cancer in the elderly, a general consensus is that age and stage-related survival is not different in elderly patients compared to that in their younger cohorts, except for those younger than the age of 40, who are considered to have a worse prognosis (1-6). Though the breast cancer in elderly patients is commonly diagnosed at a more advanced clinical stage (7-12), this may be counterbalanced by the fact that patients in the groups of 70 years of age and older, are more frequently found to have positive estrogen and progesterone receptors, which generally augur better prognosis (9). Tabor et al. (8,9) examined survival rates of women in the 5th, 6th, and 7th decades with localized and regional breast cancer and found them to be the same. Breast cancer in elder-

ly patients, however, is diagnosed at a more advanced clinical stage (7,10,11).

Aims

This study examines specific characteristics of breast cancer biology in elderly patients.

Material and methods

The study population included women treated for nonmetastatic breast cancer at the Surgical Clinic in Nis between 1999 and 2003. The study group was divided into two age groups: patients under 65 years of age and patients over 65 years of age. The data were obtained from our collected database. Tumor staging was conducted according to the TNM system of the American Joint Committee on Cancer (AJCC). The tumor size was measured on histopathological sectioning. The clinical characteristics, tumor histology, and axillary status were recorded prospectively for each patient. Hormone receptor status was measured by using biochemist DCC method or LSAB₂ method.

Results

There were 1098 patients, 667(60,75%) in the <65-year old group (younger) and 431(39,25%) in the 65-year old group (older) treated for breast carcinoma (Table 1).

Table 1. Patients' characteristics

	≥65 years	<65years
Age on diagnosis		
Mean age	71,3	50,7
Range	65-83	26-64
Number of patients	431(39,25%)	667(60,75%)
Number of cases	439	686
Synchronous	2	11
Metachronous	6	8
Physical examination		
Non-palpable mass	198(45,11%)	301(42,48%)
Palpable mass	241(54,89%)	385(57,72%)

The mean age in the younger group was 50,7 years (range 26-64) and 71,3 (range 65-83) years in the older group. In the younger group, 20 patients had bilateral breast cancer during the study period with 11 synchronous and 8 metachronous events. In the older group, there were 8 bilateral breast cancers during the study period, 2 synchronous and 6 metachronous occurrences. Tumors were discovered only by mammogram more frequently in the younger group (45,11% vs. 42,48%) than in the older one.

Infiltrating ductal carcinoma was the most frequently observed histological type in both groups (78,36% vs. 81,05%; $p = 0.5236$). Patients 65 years old or older had larger tumors on diagnosis than younger patients. The majority of patients, in the older group (35,53%) compared with the younger ones (35,28%), presented with T2 (2-5cm) tumors. The majority of patients, (69,02%) in the older group compared with (60,20%) younger one, presented with stage I or II disease. Absence of ipsilateral axillary lymph node involvement was observed in 45,78% and 34,40% of older and younger patients, respectively. Estrogen receptor positive tumors occurred in 298 elderly (67,88%) and 195 (28,42%) younger patients ($p < 1 \times 10^{-8}$). Progesterone receptor positive tumors occurred in 185 (42,15%) elderly and 305 (44,46%) younger patients $p = 0.22$ (Table 2).

Discussion

Breast cancer in elderly women is a major health issue and therapeutic challenge. This study clearly demonstrates that breast cancer in the elderly has distinctive biological and clinical characteristics. Approximately 40% of the patients' populations undergoing treatment for breast cancer at our institution are 65 years old or older. Almost half of our patients presented with mammographically identified lesions.

The detection rate for early-stage non-palpable breast cancer in our younger patients was actually slightly higher and statistically significant when compared with our patients older than 65. There has been

Table 2. Tumor characteristics by age group

	≥65 years	<65 years	P-value
Histology			
Ductal	344(78,36%)	556(81,05%)	0.5236
Lobular	55(12,53%)	89(12,97%)	0.0022
Medullar	19(4,33%)	8(1,17%)	0.9234
Other	21(4,78%)	33(4,81%)	
pT			
T1	101(23,01%)	242(35,28%)	
T2	156(35,53%)	224(32,65%)	
T3	123(28,02%)	198(28,86%)	
T4	59(13,44%)	22(3,21%)	0.000095
Positive lymph nodes			
0	201(45,78%)	236(34,40%)	
1-3	119(27,11%)	305(44,46%)	0.0029
>4	101(23,01%)	113(16,47%)	
Unknown	18(4,10%)	32(4,67%)	
Stage at diagnosis			
I	87(19,82%)	125(18,22%)	0.000083
II	216(49,20%)	288(41,98%)	0.0013
III	95(21,64%)	214(31,19%)	$<1 \times 10^{-8}$
IV	41(9,34%)	59(8,61%)	0.000394
Estrogen receptor			
Positive	298(67,88%)	195(28,42%)	$<1 \times 10^{-8}$
Negative	81(18,45%)	431(62,83%)	$<1 \times 10^{-8}$
Unknown	60(13,67%)	60(8,75%)	
Progesteron receptor			
Positive	185(42,15%)	305(44,46%)	0.22
Negative	210(47,83%)	361(52,62%)	0.313
Unknown	44(10,02%)	20(2,92%)	

controversy regarding the optimal screening recommendations for older patients. There are two potential benefits from screening mammography: (1) a reduction in breast cancer mortality by making diagnosis earlier, and (2) greater likelihood for breast-conserving surgery (12).

The majority of our patients presented with an early-stage disease. It is commonly reported that older patients present with more advanced disease, but the literature is variable on this point (12,13,14,15). The finding that older patients had larger tumors than younger ones could be explained by a delay in the diagnosis of breast cancer in older patients because of fewer breast (16) and screening mammography (16,17) examinations. A recent study by Busch et al. (18) reported that older females were diagnosed at more advanced stage. Infiltrating ductal carcinoma, as expected, accounted for the largest percentage of tumors in both

groups. This is reflected in the literature in other series (15,19).

Our results confirm that elderly patients present with more favorable prognostic factors (20-22). In fact, estrogen receptor positive tumors occurred in 67,88% of elderly patients versus 28.42% of young cases, and negative axillary lymph nodes were observed in 45,78% and 34,40% of patients in the elderly and younger group, respectively.

Conclusions

There are some clinical and pathohistological breast cancer specifics in elderly patients. This study showed similar pathohistological tumor characteristics. Our results confirm that older patients present with more favorable prognostic factors (estrogen receptor positive tumors, negative axillary lymph nodes).

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KLINIČKE I PATOHISTOLOŠKE KARAKTERISTIKE KARCINOMA DOJKE KOD BOLESNICA STARIJE ŽIVOTNE DOBI

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Karcinom dojke žena starije životne dobi danas predstavlja veliki zdravstveni i terapijski problem. Cilj ove studije bio je da utvrdi specifičnosti biologije karcinoma dojke kod bolesnica starije životne dobi.

Retrospektivno su praćene: kliničke i biološke karakteristike tumora dojke kod bolesnica lećenih tokom petogodišnjeg perioda u Hirurškoj klinici-Niš. Bolesnice su podeljene na ispitivanu grupu (≥ 65 godina) i kontrolnu grupu (< 65 godina).

Ispitivanjem je obuhvaćeno 1098 žena: 431 ispitivana i 667 kontrolna grupa. Prosećna starosna dob iznosila je 71,3 godina ispitivana i 50,7 godina kontrolna grupa. Najzastupljenija histološka forma bila je carcinoma ductale - rani stadijumi (70,3% vs. 61,92%). Estrogen receptor pozitivni tumori bili su kod 67,88% starijih i 28,42% mlađih bolesnica. Odsustvo zahvaćenosti aksilarnih limfnih žlezdi bilo je kod 45,78% starijih i 34,40% mlađih bolesnica.

Postoje određene kliničke i patohistološke specifičnosti karcinoma dojke kod bolesnica starije životne dobi. Ova studija je pokazala slične patohistološke karakteristike tumora između ispitivane i kontrolne grupe. Utvrđeno je da starije bolesnice poseduju bolje faktore prognoze tumora (estrogen receptor pozitivni tumori, negativne aksilarne limfne žlezde). *Acta Medica Medianae* 2005;44(4): 31 – 34.

Ključne reći: karcinom dojke, patohistološke karakteristike, starije osobe