

early symptoms of breast cancer typical and atypical manifestations

by drg bayuindra

Submission date: 22-Jul-2020 10:22AM (UTC-0400)

Submission ID: 1358468508

File name: mptoms_of_breast_cancer_typical_and_atypical_manifestations.docx (86.85K)

Word count: 2766

Character count: 17755

Early symptoms of breast cancer: typical and atypical and atypical manifestations

NAZAR K. SEIDALIN¹, DMITRY O. BOKOV², ALEXANDER MARKOV³, BAYU INDRA SUKMANA⁴, HULDANI⁵, VITALY V. GONCHAROV⁶

¹Medical Center Hospital of the President's Affairs Administration of the Republic of Kazakhstan

²Sechenov First Moscow State Medical University, Moscow, Russian Federation

³Tyumen State Medical University, Tyumen, Russian Federation

⁴Department of Oral Biology, Lambung Mangkurat University, Banjarmasin Indonesia

⁵Department of Physiology, Faculty of Medicine, Lambung Mangkurat University, Banjarmasin, Indonesia

⁶Department of state and International Law of the Kuban State Agrarian University named after I. T. Trubilin

Krasnodar territory Russia

Received: 18.03.20, Revised: 19.04.20, Accepted: 24.05.20

ABSTRACT

The article discusses the early typical and atypical signs of breast cancer. Research shows that a significant number of patients have atypical symptoms of the disease in question. At the same time, women who do not have seals in their breasts often do not seek help. Accordingly, today it is necessary to popularize the features of breast cancer diagnosis with atypical symptoms. The author concludes that take into account all the symptomatic manifestations of the disease in question will allow detecting breast cancer at an early stage and increasing the percentage of patients cured. This study provides detailed data on the sign of breast cancer symptoms, as well as on the frequency and diagnostic intervals associated with various symptoms, which can be used to popularize methods to fight breast cancer.

It can be concluded that increasing the awareness of patients and doctors about possible non-specific symptoms of breast cancer will significantly increase the effectiveness of medical care in the fight against this disease. The article notes that only 1 out of 6 women who have been found with breast cancer without the presence of seals, they experience a wide range of signs before finding help. Accordingly, the presence of non-specific signs of breast cancer increases the length of time between their first manifestations and going to the doctor, which reduces the subsequent effectiveness of medical care.

It should also be noted that all participants in the experiment had free access to primary health care services, and primary health care doctors were able to quickly send patients to oncologists. However, the frequency of seeking medical attention in most women with non-specific symptoms was very low, and the interval between the first manifestation of symptoms and seeing a doctor was long.

The results of the study emphasize the need for medical interventions to improve the diagnostic process in women with atypical manifestations and development of methods aimed at focusing on non-specific signs of breast cancer through medical public health education activities.

Keywords: breast, cancer, typical symptoms, atypical symptoms, diagnostics

INTRODUCTION

Although more than 200,000 women are diagnosed with invasive cancer every year [1], Breast cancer mortality rate has decreased due to progress in screening and improved treatment [2]. Routine mammography screening improves early-stage cancer detection, potentially decreasing the need for more extensive treatment and improving chances of a better overall prognosis [3]. Early-stage breast cancer includes stage I breast cancer, which is divided into stages IA and IB. Stage IA of breast cancer is defined as a tumor <20 mm and negative lymph nodes. Stage IB is defined as a tumor

of <20 mm with micrometastases in the mobile ipsilateral axillary lymph nodes, or without signs of a primary breast tumor, but with micrometastases in the mobile ipsilateral axillary lymph nodes of level I and II). Studies are showing that the 5-year survival rate for stage IA-IB breast cancer is 99.1% [4].

As the number of women with early breast cancer increases, so the number of breast cancer survivors does which underscores the importance of further care for these women. A prerequisite for intensive

monitoring of breast cancer survivors is that detecting an early recurrence, before symptoms develop, will allow earlier treatment and may improve survival rate [5]. However, controlled examinations have shown that routine testing for distant metastatic diseases does not provide benefits for survival or health-related quality of life, and an intensive surveillance approach is expensive. Moreover, although many doctors and patients prefer intensive initial testing and follow-up, patients overestimate the value of laboratory and imaging studies and may misinterpret the meaning of the normal test [5]. Unnecessary imaging can delay treatment, which is problematic because it has been shown that delayed treatment affects the stage and outcome of breast cancer [6].

Breast compaction is one of the most common symptoms among breast cancer's women and has a relatively high prognostic value for malignancies [11]. Consequently, this symptom has long been the focus of public health awareness campaigns to inform about the symptoms of cancer [13]. Although the rate of diagnosis of breast cancer in women is quite high, there are still situations in which the diagnosis of this disease is delayed [2]. This leads to a decrease in the survival rate of patients with this disease, as well as a decrease in the effectiveness of treatment applied to patients [9].

A number of authors have drawn attention to the fact that late breast cancer diagnosis associated with the following: women who do not have calcification in the breast, associate the causes of deterioration with hormonal changes, breast feeding, injuries, etc. [16], [17]. Accordingly, today it is very important to describe the various manifestations of symptoms that are common among women who have breast cancer, as well as to study the relations between the various symptoms and the duration of diagnostic intervals.

MATERIALS AND METHODS

The study is based on data from the English audit of the national cancer diagnosis in primary care, with information about the cancer patients diagnosis in 14% of all English General practices [18]. The patient population was representative by age, gender, and combination of breast cancer cases in England. The studied analytical sample included 2,316 women with breast cancer with complete information about age, ethnicity, and the presence

of symptoms.

As part of the audit, information provided by general practitioners was reviewed, which included data on the main symptoms presented by patients, based on their records information. In accordance with international standards, the primary care interval was defined as the number of days between the first presentation and the first visit to a specialist [17].

The description of the frequency of reported signs and the associated exact confidence intervals were investigated, and the presented taxonomy of symptoms was studied, which included 3 categories: (a) breast compaction, (b) no breast compaction, but there are other symptoms (chest pain, skin of breast shape abnormalities and nipple abnormalities), (c) non-specific breast cancer signs (including axillary symptoms, neck compaction, backache, fatigue and shortness of breath).

In the literature, it is noted that a number of women had several signs from different categories. From the seven results combinations, the most common symptoms were identified in three categories ("calcification," calcification and its absence", "lack of calcification "and "non-specific symptoms not directly related to the breast").

RESULTS

2,316 women with breast cancer signs were examined. The number of detected symptoms was 2,543, with an average of 1/1 signs per patient. A total of 56 signs were registered, as shown in table 1.

Calcification in the breast was the most common symptom, which was observed in about four-fifths of all women(83%). The other common signs were nipple abnormalities(7%), chest pain(6%), and breast skin abnormalities(2%)

Frequency of the most common signs(with a relative frequency of 0,2% or above) among 2,316 women with breast cancer included In the analysis

	Symptom and		Preliminary		Post-presentation		
	Number of women diagnosed with the symptom	% Relative frequency (95% CI)	Median of the patient's interval	% Patient Interval > 90 days ^b	Median of primary care interval	% Primary care interval >	% 2+ preliminary consultation ^b (n = 2002)
Breast cancer	1022	83,0% (IQR) 90th	7 (1-27)	8% (7-8)	0 (0-0)	1% (1-1)	6%
Anomalies of	158	6,8%	17 (2-71)	23%	0 (0-1)	1% (0,4-1)	13%
Chest pain	149	6,4%	10 (3-41)	12% (8-12)	0 (0-2)	3% (1-3)	20%
Anomalies of	46	2,0%	13 (1-30)	10% (4-10)	0 (0-1)	2% (0,4-2)	8%
Axillary lump	37	1,2%	2,5 (0-2)	0% (0-0)	0 (0-1)	4% (1-4)	26%
Ulceration of	35	1,1%	122 (0-122)	56%	0 (0-1)	0% (0-0)	7%
Backache	34	1,0%	9,5 (1-9)	10% (3-10)	21 (0-21)	26%	65%
Dysplasia of	17	0,7%	5 (4-18)	15% (4-15)	0 (0-1)	0% (0-0)	7%
Breast infection	15	0,6%	2,5 (0-2)	21% (8-21)	0 (0-2)	7% (1-7)	60%
Swelling of the	14	0,6%	3,5 (0-3)	10% (2-10)	0 (0-2)	0% (0-0)	15%
Musculoskeletal	14	0,6%	0,5 (0-0)	10% (2-10)	54 (0-54)	25% (9-25)	75%
Dyspnea	11	0,5%	5 (0-5)	0% (0-0)	1 (0-1)	0% (0-0)	57%
Rash on chest	10	0,4%	1 (0-1)	0% (0-0)	0 (0-2)	0% (0-0)	20%
Abnormalities	9	0,4%	0 (0-1)	0% (0-0)	4,5 (0-4)	0% (0-0)	20%
Abdominal	9	0,3%	39 (18-39)	17% (3-17)	0 (0-1)	0% (0-0)	71%

anomalies of the breast		(0,2–0,7%)		43%)		(10–70%)	
Chest pain	8	0,3% (0,2–0,7%)	18 (10-43)	0% (0–32%)	24 (9.5-83)	25% (7–59%)	75%
Fatigue or weakness	7	0,3% (0,1–0,6%)	10.5 (1.5-33)	0% (0–49%)	2 (0-27)	14% (3–51%)	29%
Weight loss	6	0,3% (0,1–0,6%)	56 (51–61) ^a	0% (0–66%)	18 (11-22)	0% (0–43%)	60%
Cough	6	0,3% (0,1–0,6%)	5,5 (0-11)	0% (0–66%)	13,5 (6.5-38)	0% (0–49%)	60%
Axillary pain	5	0,2% (0,1–0,5%)	15 (0–126) ^a	33% (6–79%)	5 (1-8)	0% (0–43%)	40%
Bruised chest	5	0,2% (0,1–0,5%)	7 (7–14) ^a	0% (0–43%)	0 (0-8)	0% (0–43%)	40%
Edema of the upper limb	5	0,2% (0,1–0,5%)	76 (19–133) ^a	50% (10–91%)	0,5 (0–1) ^a	0% (0–49%)	0%
Total number	2316	-	7 (1–28) 80	9% (8–10%)	0 (0–1) 7	2% (1–2%)	10%

The results of the study showed that, in general, 164 women(9%) had waited for more than 3 months before asking for doctors help. Among the more important non-calcification-related breast signs, more than 1 in 5 women reported breast ulceration (50%), nipple pathology(23%), and inflammation of infection of the breast(21%). These women also didn't ask for medical help for more than 90 days.

Only 2% of women who also had medical attendance 3 months after the onset of the disease the had non-specific breast abnormalities, chest & back pain, musculoskeletal pain, fatigue or weakness.

The majority of women (99%) had the above symptoms, presented in 4 groups: “only calcification”(76%);

“no calcification” (11%); “presence of calcification and their symptoms(6%); and “non-breast-related symptoms”(5%)

DISCUSSION

It was determined that only 1 out of 6 women who were with breast cancer without the presence of calcification experience, had a wide range of signs before asking for help. Accordingly, the presence of non-specific symptoms of breast cancer increases the length of time between their first manifestations

and going to the doctor, which reduces the subsequent effectiveness of medical care.

It should also be noted that all participants in the experiment had free access to primary health care services, where doctors were able to quickly send patients to oncologists. However, the frequency of asking for medical care among most women with non-specific symptoms was very low, and the internal between the first manifestation of symptoms and seeing a doctor was long. Accordingly, the above groups of symptoms of breast cancer should be more carefully studied by specialists in the field of Oncology in order to diagnose the disease in question in a timely manner and provide medical care. This will help to increase the survival rate of women with breast cancer in the future.

CONCLUSION

Surveys of breast cancer patients show that most of them prefer monitoring to detect diseases, including metastases [13]. Surveys of physicians indicate that most of them also favor intensive surveillance programs for asymptomatic patients [12]. Positive impacts on patient management or treatment outcome can often be expected when imaging tests are administered to asymptomatic patients. Numerous studies have shown wide variability in visual observation in asymptomatic women with

1
prior breast cancer. It is important to emphasize the goal of early breast cancer surveillance to detect early local or contralateral recurrence, since early detection of breast cancer recurrence is correlated with increased survival. The goal is not to detect asymptomatic metastatic cancer, as there is no evidence that early detection of metastases in asymptomatic patients improves clinical outcome [6].

This study provides detailed data on the signs of breast cancer symptoms, as well as on the frequency and diagnostic intervals associated with various symptoms, which can be used to popularize methods to combat breast cancer. It can be concluded that increasing the awareness of patients and doctors about possible non-specific symptoms of breast cancer will significantly increase the effectiveness of medical care in the fight against this disease .

2
The results of the study highlight the importance for medical interventions to improve the diagnostic in women with atypical manifestations and the development of methods aimed at focusing attention on non-specific symptoms of breast cancer through medical public health education activities

REFERENCES

1. S. Walker, C. Hyde, W. Hamilton Risk of breast cancer in symptomatic women in primary care: a case-control study using electronic records *Br. J. Gen. Pract.*, 64 (2014), pp. e788-e793
2. M.T. Redaniel, R.M. Martin, M.J. Ridd, J. Wade, M. Jeffreys Diagnostic intervals and its association with breast, prostate, lung and colorectal cancer survival in England: historical cohort study using the clinical practice research datalink *PLoS One*, 10 (2015), p. e0126608
3. N.K. Janz, M.H. Becker, L.A. Anderson, B.C. Marcoux Interventions to enhance breast self-examination practice: a review *Publ. Health Rev.*, 17 (1989), pp. 89-163
4. M.M. Roberts, K. French, J. Duffy Breast cancer and breast self-examination: what do Scottish women know? *Soc. Sci. Med.*, 18 (1984), pp. 791-797
5. P. Baughan, B. O'Neill, E. Fletcher Auditing the diagnosis of cancer in primary care: the experience in Scotland *Br. J. Cancer*, 101 (Suppl) (2009), pp. S87-S91
6. G. Lyraztopoulos, G.A. Abel, S. McPhail, R.D. Neal, G.P. Rubin Measures of promptness of cancer diagnosis in primary care: secondary analysis of national audit data on patients with 18 common and rarer cancers *Br. J. Cancer*, 108 (2013), pp. 686-690
7. R.P. Hansen, P. Vedsted, I. Sokolowski, J. Søndergaard, F. Olesen Time intervals from first symptom to treatment of cancer: a cohort study of 2,212 newly diagnosed cancer patients *BMC Health Serv. Res.*, 11 (2011), p. 284
8. R.D. Neal, N.U. Din, W. Hamilton, O.C. Ukoumunne, B. Carter, S. Stapley, G. Rubin Comparison of cancer diagnostic intervals before and after implementation of NICE guidelines: analysis of data from the UK General Practice Research Database *Br. J. Cancer*, 110 (2014), pp. 584-592
9. C. Webber, L. Jiang, E. Grunfeld, P.A. Groome Identifying predictors of delayed diagnoses in symptomatic breast cancer: a scoping review *Eur. J. Cancer*, 26 (2017)
10. S.C. Mendonca, G. Abel, C.L. Saunders, J. Wardle, G. Lyraztopoulos Pre-referral general practitioner consultations and subsequent experience of cancer care: evidence from the English Cancer Patient Experience Survey *Eur. J. Cancer Care (Engl.)*, 25 (2016), pp. 478-490
11. M.A. Richards, A.M. Westcombe, S.B. Love, P. Littlejohns, A.J. Ramirez Influence of delay on survival in patients with breast cancer: a systematic review *Lancet*, 353 (1999), pp. 1119-1126
12. A. Marcu, G. Lyraztopoulos, G. Black, P. Vedsted, K.L. Whitaker Educational differences in likelihood of attributing breast symptoms to cancer: a vignette-based study *Psychooncology*, 25 (2016), pp. 1191-1197
13. G. Lyraztopoulos, G. Abel Earlier diagnosis of breast cancer: focusing on symptomatic women *Nat. Rev. Clin. Oncol.*, 10 (2013), p. 544
14. M.J. Rutherford, S.R. Hinchliffe, G.A. Abel, G. Lyraztopoulos, P.C. Lambert, D.C. Greenberg How much of the deprivation gap in cancer survival can be explained by variation in stage at diagnosis: an example from breast cancer in the East of England *Int. J. Cancer*, 133 (2013), pp. 2192-2200
15. M. O'Mahony, G. McCarthy, P. Corcoran, J. Hegarty Shedding light on women's help seeking behaviour for self discovered breast symptoms *Eur. J. Oncol. Nurs.*, 17 (2013), pp. 632-639
16. A.J. Ramirez, A.M. Westcombe, C.C. Burgess, S. Sutton, P. Littlejohns, M.A. Richards Factors predicting delayed presentation of symptomatic breast cancer: a systematic review *Lancet*, 353 (1999), pp. 1127-1131
17. Z. Khakbazan, A. Taghipour, R.L. Roudsari, E. Mohammadi Help seeking behavior of women with self-discovered breast cancer symptoms: a meta-ethnographic synthesis of patient delay *PLoS One*, 9 (2014), pp. 1-24
18. C. Burgess, A. Ramirez, M. Richards, S. Love Who and what influences delayed presentation in breast

- cancer? *Br. J. Cancer*, 77 (1998), pp. 1343-1348
19. M. Redondo, I. Rodrigo, T. Pereda, R. Funez, M. Acebal, E. Perea-Milla, E. Jimenez Prognostic implications of emergency admission and delays in patients with breast cancer *Support. Care Cancer*, 17 (2009), pp. 595-599
 20. A. Poum, S. Promthet, S.W. Duffy, D.M. Parkin Factors associated with delayed diagnosis of breast cancer in northeast Thailand *J. Epidemiol.*, 24 (2014), pp. 102-108
 21. K. Innos, P. Padrik, V. Valvere, E. Eelma, R. Kütner, J. Lehtsaar, M. Tekkel Identifying women at risk for delayed presentation of breast cancer: a cross-sectional study in Estonia *BMC Publ. Health*, 13 (2013), p. 947
 22. G.P. Rubin, S. McPhail, K. Elliot, S. McPhail Royal College of General Practitioners National Audit of Cancer Diagnosis in Primary Care, London (2011)
 23. G. Lyratzopoulos, G.A. Abel, S. McPhail, R.D. Neal, G.P. Rubin Gender inequalities in the promptness of diagnosis of bladder and renal cancer after symptomatic presentation: evidence from secondary analysis of an English primary care audit survey *BMJ Open*, 3 (2013), p. e002861
 24. S. Doan, M. Conway, T.M. Phuong, L. Ohno-Machado Natural language processing in biomedicine: a unified system architecture overview *Methods Mol. Biol.* (2014), pp. 275-294
 25. S. Keeble, G.A. Abel, C.L. Saunders, S. McPhail, F.M. Walter, R.D. Neal, G.P. Rubin, G. Lyratzopoulos Variation in promptness of presentation among 10,297 patients subsequently diagnosed with one of 18 cancers: evidence from a National Audit of Cancer Diagnosis in Primary Care *Int. J. Cancer*, 135 (2014), pp. 1220-1228
 26. G. Lyratzopoulos, C.L. Saunders, G.A. Abel, S. McPhail, R.D. Neal, J. Wardle, G.P. Rubin The relative length of the patient and the primary care interval in patients with 28 common and rarer cancers *Br. J. Cancer*, 112 (2015), pp. S35-S40
 27. D. Weller, P. Vedsted, G. Rubin, F.M. Walter, J. Emery, S. Scott, C. Campbell, R.S. Andersen, W. Hamilton, F. Olesen, P. Rose, S. Nafees, E. van Rijswijk, S. Hiom, C. Muth, M. Beyer, R.D. Neal The Aarhus statement: improving design and reporting of studies on early cancer diagnosis *Br. J. Cancer*, 106 (2012), pp. 1262-1267
 28. P. Vedsted, F. Olesen Are the serious problems in cancer survival partly rooted in gatekeeper principles? An ecologic study *Br. J. Gen. Pract.*, 61 (2011), pp. 508-512
 29. A. Leiva, M. Esteva, J. Llobera, F. Macià, S. Pita-Fernández, L. González-Luján, M.A. Sánchez-Calavera, M. Ramos Time to diagnosis and stage of symptomatic colorectal cancer determined by three different sources of information: a population based retrospective study *Cancer Epidemiol.*, 47 (2017), pp. 48-55
 30. F.M. Walter, J.D. Emery, S. Mendonca, N. Hall, H.C. Morris, K. Mills, C. Dobson, C. Bankhead, M. Johnson, G.A. Abel, M.D. Rutter, W. Hamilton, G.P. Rubin Symptoms and patient factors associated with longer time to diagnosis for colorectal cancer: results from a prospective cohort study *Br. J. Cancer*, 115 (2016), pp. 533-541
 31. F.M. Walter, K. Mills, S.C. Mendonça, G.A. Abel, B. Basu, N. Carroll, S. Ballard, J. Lancaster, W. Hamilton, G.P. Rubin, J.D. Emery Symptoms and patient factors associated with diagnostic intervals for pancreatic cancer (SYMPTOM pancreatic study): a prospective cohort study *Lancet Gastroenterol. Hepatol.*, 1253 (2016), pp. 1-9
 32. Markov A.A. The Development of Dental Implant with the Bioactive Covering on the Basis of Synthetic Complex with Biogenic Elements. *Sys. Rev. Pharm.* 2020;11(2): 278-283.
 33. Markov A.A., Timokhina T.H., Perunova N.B., Malyugina O.A. Production technique of bifidobacterium's exometabolites with high antimicrobial activity towards *Staphylococcus aureus*. *Sys. Rev. Pharm.* 2020; 11(2): 273-277.
 34. Markov Alexander. Results of the Experimental Research and Clinical Application of Cannulated Screw with Bioactive Coverage on the Basis of Natural Hydroxiapatite during Osteosynthesis of Medial Fractures of Femur's Neck. *Journal of Biomimetics, Biomaterials and Biomedical Engineering* ISSN: 2296- 9845, Vol. 46, pp 52-59 ©2020 Trans Tech Publications Ltd, Switzerland
 35. Markov A.A. Problems of the surgical treatment of patients with fractures of the proximal femur on the basis of osteoporosis. *Sys. Rev. Pharm.* 2019; 10(1): 143-145

early symptoms of breast cancer typical and atypical manifestations

ORIGINALITY REPORT

13%

SIMILARITY INDEX

12%

INTERNET SOURCES

12%

PUBLICATIONS

10%

STUDENT PAPERS

PRIMARY SOURCES

1	acsearch.acr.org Internet Source	4%
2	www.repository.cam.ac.uk Internet Source	3%
3	Submitted to Universitas Katolik Indonesia Atma Jaya Student Paper	2%
4	Submitted to CSU, San Jose State University Student Paper	1%
5	www.scientific.net Internet Source	1%
6	Minjoung Monica Koo, Christian von Wagner, Gary A. Abel, Sean McPhail, Greg P. Rubin, Georgios Lyratzopoulos. "Typical and atypical presenting symptoms of breast cancer and their associations with diagnostic intervals: Evidence from a national audit of cancer diagnosis", <i>Cancer Epidemiology</i> , 2017 Publication	1%

7

Eike Adams, Lisa McCann, Jo Armes, Alison Richardson, Daniel Stark, Eila Watson, Gill Hubbard. "The experiences, needs and concerns of younger women with breast cancer: a meta-ethnography", *Psycho-Oncology*, 2011

<1%

Publication

Exclude quotes Off

Exclude matches Off

Exclude bibliography On