Original Article Pol J Public Health 2017;127(3): 113-117

DE GRUYTER OPEN

EWA HUMENIUK[1], OLGA DĄBSKA[1], KATARZYNA PAWLIKOWSKA-ŁAGÓD[2], ALEKSANDRA KRUPA[1]

Depression among oncological patients

Abstract

Introduction. The issue of depression in the context of cancer is a very important and complex problem. Suffering from depression and cancer at the same time concerns from 20% to 80% of the patients.

Aim. Assessment of depression occurrence among oncological patients depending on the profile of the disease.

Material and methods. The research group consisted of 63 oncological patients. Diagnostic poll method, survey technique was used. Occurrence and intensity level of depression symptoms were measured according to the Beck Depression Inventory (BDI) which was accompanied by the authorial questionnaire analyzing socio-demographic situation of the surveyed as well as the cancer profile i.e. type of cancer, ailments accompanying the disease and the frequency of their occurrence, undertaken therapies and their results.

Results. The analysis conducted with the help of BDI questionnaire presented the following results: more than half of the surveyed (54%, n=34) suffered from moderate depression and roughly 1/10 (n=7) of the surveyed suffered from severe depression. Only 1/3 (n=22) of the surveyed showed no signs of depression and complained only about low mood. Side effects of the treatment preventing patients from everyday functioning determined the occurrence of depression symptoms. Severity of cancer symptoms, duration of illness, time of diagnosis and number of attempts to fight the disease had no influence on the occurrence of depression symptoms.

Conclusions. Cancer influences every part of a patient's life. Because of this, a holistic approach should be applied when treating such patients and that approach should be based on cooperation of doctors with clinical psychologists.

Keywords: depressive disorders, cancer, patients.

DOI: 10.1515/pjph-2017-0024

INTRODUCTION

Depression is one of the most common mental disorders. Very often it is a symptom of other underlying diseases. Dudek and Siwek emphasize the influence of psychological symptoms as well as mental condition on the occurrence and on the course of somatic diseases [1]. Lately a strong emphasis was put on the coexistence of depression and cancer [2]. The issue of depression in the context of cancer is a very important and complex problem. Depression accompanying cancer is interpreted as a pathological emotional reaction as a result of reality disturbance through diagnosis, therapeutic process and complications it entails [3].

Coexistence of depression and cancer concerns from 20% to 80% of oncological patients. Those discrepancies stem from differences occurring within the surveyed population, especially regarding diagnostic criteria of depression [4], cancer stage and cancer placement. It was detected that breast cancer and genital cancer influence mental state of patients the most because of the social role that is associated with men and women [5]. Depression often accompanies nasopharynx cancer (22%-57%), pancreas cancer (33%-50%), lung cancer (11%-44%) and intestine cancer (13%-25%) [6]. Duration of illness, type of treatment and fear it instills, coexisting ailments, pain and lack of sufficient knowledge about the disease also contribute to the rise of depression, aside from the diagnosis itself [2,7]. Furthermore, side effects of therapy such as physical prowess limitation and changes in appearance leading to distortion of body image, as well as lack of acceptance of one's body, also contribute to the intensification of depression. Aside from that, female sex, young age, low social standing, bad financial situation, lack of social support and living environment [8] give rise to depression as well. Last but not least, individual traits, ways of coping with difficulties instilled in the past, need for lifestyle change, fear of losing control over one's life, feeling of life endangerment, fear of uncertain future, lack of control over the course of illness, retreat from professional life, resignation from various social roles, feeling

[1] Department of Pathology and Rehabilitation of Speech, Medical University in Lublin, Poland
[2] Department of Ethics and Human Philosophy, Medical University in Lublin, Poland

of solitude and helplessness [9] influence the intensification of depression as well. Depressive episodes occurring in the past, family history of cancer and mental disorders are also the factors that can contribute to the development of depression among oncological patients [10].

Mental disorders accompanying cancer influence therapy in a negative way. According to Dębski and Kulik „(...) depression worsens results of cancer treatments and as a consequence it diminishes a person's chance to live" [11]. Oncological patients who struggle with depression recover slower, apply doctor's advice rarely, experience somatic afflictions more intensely, require additional tests, specialists consultations and medicine more often. „Independently of aetiology it was detected that depression among cancer patients influences remission (treatment results). Oncological patients who struggle with depression, experience worse life quality, they are unwilling to fully cooperate with medical personnel and they stay longer in the hospital. Depression also entails bigger pain intensity and functional restrictions" [12]. Cancer patients who suffer from depression, more often try to deal with the disease in a non-adaptive way which can lead to behavior disorders, psychosomatic diseases and suicidal attempts [10] and occurrence of demoralization syndrome understood as „(…) changes in morality encompassing spectrum of personal traits starting with discouragement (mild lack of trust), gloom (beginning of withdrawal), despair (lack of hope) and ending with demoralization (surrender and total loss of hope)" [13].

AIM

Assessment of depression occurrence among oncological patients depending on the profile of the disease.

MATERIAL AND METHODS

The research group consisted of 63 oncological patients from Top-Medical Sp. z o.o. in Lublin and Multidisciplinary Centre of Outpatient Care NZOZ MARMED in Świdnik. The surveyed were in the age group of 23-74 years and the average amounted to 48.32±11.92 years old. The majority of the group consisted of women (97%, n=61), city residents (81%, n=51) and married individuals (60%, n=38). Almost half of the respondents had secondary education (49%, n=31). According to the surveyed, their own financial situation was mediocre (57%, n=36). Most of the surveyed suffered from malignant neoplasm (87%, n=55). The cancer was most often located in breast (46%, n=29), uterus (12%, n=8), lungs (6%, n=4), thyroid (5%, n=3), large intestine (5%, n=3) and other organs (26%, n=16).

The Beck Depression Inventory (BDI) created by Aaron Temkin Beck was the research tool. Parnowski and Jernajczyk carried out its Polish adaptation. As many as 21 symptoms of depression were specified in the BDI. A 0-3 scale can be attributed to them where 0 stands for lack of a symptom and 3 stands for strong intensity of a symptom. The symptoms include sadness, gloom, pessimism, neglect, loss of pleasure and interests (including sex), feelings of guilt and punishment, aversion towards oneself, high self-criticism, suicidal thoughts, cry, agitation, difficulties making choices, low self-esteem, loss of energy, sleep and eating disorders, irritability, body weakness and fatigue [14]. A surveyed can gather from 0 to 63 points and the higher the score the more severe the depression symptoms. The scoring system is the following: ≤10 points – no signs of depression, benign mood disorder, 11-27 points – moderate depression, ≥27 points – severe depression [15]. Aside from that, the authorial questionnaire was used which consisted of closed questions in alternative and conjunctive forms. The aim of the questions was to analyze the profile of cancer such as its type, cause of occurrence, accompanying ailments and frequency of their occurrence, undertaken therapies and their results.

The surveys were voluntary, individual and anonymous. They were conducted in accordance with the Declaration of Helsinki. The surveyed were informed about the goal and the course of the research. STATISTICA 12 and Microsoft Office Excel were used to analyze the gathered data. Statistical significance of $p<0.05$ was assumed which indicated statistically important differences or correlations. Values of immeasurable data were presented with the use of quantity and percentage. Ch2 homogeneity test was used for unrelated qualitative features in order to detect differences between compared groups and to study reliance that occurs among the researched traits.

RESULTS

Average assessment of depression level amounted to 14.33±10.47 (spectrum of 0-49 points). Only 1/3 (n=22) of the surveyed showed no signs of depression and complained only about low mood. More than half of the respondents (54%, n=34) suffered from moderate depression and 1/10 (n=7) of the respondents suffered from severe depression.

During the course of the illness the surveyed experienced many afflictions. More than half of the respondents (56%, n=35) experienced them a few times a week while some patients experienced them a few times a day (17%, n=11) or all the time (27%, n=17). The most common afflictions accompanying the disease were: fatigue (70%, n=44), lack of appetite (22%, n=14), bleedings (21%, n=13), headaches (21%, n=13), abdomen pains (19%, n=12), body weight loss (19%, n=12), nausea and vomiting (19%, n=12), anemia (10%, n=6) and painful urination (6%, n=4). In order to alleviate the afflictions, the patients often slept (32, n=20), undertook pharmacotherapy (25%, n=16), applied diet (19%, n=12) and undertook physical activity (16%, n=10). The surveyed experiencing above mentioned afflictions, more often experienced symptoms of moderate and severe depression as opposed to the patients whose afflictions were not as frequent and intense. Detected differences were not statistically significant (p=0.33) (Table 1).

TABLE 1. Occurrence of depression depending on experiencing afflictions accompanying cancer.

Experiencing symptoms associated with cancer none/depressed mood		The occurrence of depression	
		moderate/severe	
several times a day	n	3	8
	%	27	73
a few times a week	n	15	20
	%	43	57
all the time	n	4	13
	%	23	77
Statistical analysis: $Chi^2=2.23$; p=0.33			

n – number, % – percentage, p – level of statistical significance,
Chi^2 – the result of Chi-square test

The biggest group consisted of patients struggling with cancer for 1-3 years (38%, n=24). The rest of the respondents have been struggling with the disease for 5 years (21%, n=13), 4-5 years (19%, n=12), 7-12 months (19%, n=12) and 3-6 months (3%, n=2). It was detected that the patients struggling with the disease for the longest period of time were experiencing symptoms of moderate and severe depression a little less often than the rest of the patients. Despite that fact, detected differences were not statistically significant (p=0.76) (Table 2).

TABLE 2. Occurrence of depression depending on duration of illness.

Duration of cancer disease		The occurrence of depression	
		none/ depressed mood	moderate/ severe
≥ 4 years	n	10	15
	%	40	60
1-3 years	n	8	16
	%	33	67
to year	n	4	10
		29	71
Statistical analysis: Chi^2=0.56; p=0.76			

n – number, % – percentage, p – level of statistical significance,
Chi^2 – the result of Chi-square test

Cancer was most often diagnosed among people within the age group of 30-40 years (51%, n=32) and 50-69 years (40%, n=25). It was diagnosed much less often among people within the age group up to 29 years (7%, n=5) and within the group of 70 years and above (2%, n=1). It was detected that the patients whose disease occurred after reaching the age of 50 years old experienced symptoms of moderate or severe depression (73%) slightly more often than the patients who fell ill at a younger age (59%). Detected differences were not statistically significant (p=0.26) (Table 3).

TABLE 3. Occurrence of depression depending on age of the surveyed at the time of diagnosis.

Age of diagnosis		The occurrence of depression	
		none/ depressed mood	moderate/ severe
to 50 years old	n	15	22
	%	41	59
50 years old and more	n	7	19
		27	73
Statistical analysis: Chi^2=1.25; p=0.26			

n – number, % – percentage, p – level of statistical significance,
Chi^2 – the result of Chi-square test

Almost all of the surveyed (98%, n=62) started treatment immediately after getting diagnosed. More often the surveyed were undertaking a few treatments at once (60%, n=38). Chemotherapy (17%, n=11), surgical treatment (14%, n=9) and radiotherapy (3%, n=2) were used during the course of treatment among the rest of the patients. The current form of treatment was the so called first attempt for most of the surveyed in the course of fight with the disease (75%, n=47). Symptoms of moderate and severe depression were experienced by those patients slightly less often (60%) than by the patients who had relapse (81%). However, detected differences were not statistically significant (p=0.12) (Table 4).

TABLE 4. Occurrence of depression depending on the number of attempts to fight the disease.

Is the current treatment the first attempt in the fight against the disease?		The occurrence of depression	
		none/ depressed mood	moderate/ severe
yes	n	19	28
	%	40	60
no	n	3	13
		19	81
Statistical analysis: Chi^2=2.47; p=0.12			

n – number, % – percentage, p – level of statistical significance,
Chi^2 – the result of Chi-square test

Cancer therapy often entails a lot of side effects which negatively influence biological and mental health of patients. Almost half of the respondents (46%, n=29) stated that the side effects of treatment were burdensome but manageable. The rest of the surveyed claimed the side effects did not disrupt their everyday lives (21%, n=13) or did not even experience them at all (17%, n=11). Unfortunately, 16% (n=10) of the respondents stated that the side effects prevent them from day to day functioning. The patients complained about the following side effects: fatigue, weariness (70%, n=44), weakening (68%, n=43), loss of appetite (48%, n=30), hair loss (41%, n=26), pains (38%, n=24) and reddening of the skin on the irradiated areas (10%, n=6). According to the surveyed, weakening (32%, n=20), fatigue, weariness (25%, n=16) and pains (14%, n=9) were the hardest to manage. Statistically significant difference was acknowledged between the influence of side effects on everyday life and occurrence of depression (p=0.002). The surveyed who claimed that side effects prevent them from everyday functioning experienced symptoms of moderate or severe depression (79%) more often than the rest of the respondents (42%) (Table 5).

TABLE 5. Occurrence of depression depending on the influence of side effects on everyday functioning.

The impact of side effects of treatment on the hindrance of daily functioning		The occurrence of depression	
		none/ depressed mood	moderate/ severe
yes	n	8	31
	%	21	79
no	n	14	10
		58	42
Statistical analysis: Chi^2=9.35; p=0.002			

n – number, % – percentage, p – level of statistical significance,
Chi^2 – the result of Chi-square test

DISCUSSION

The assessment of depression intensity among oncological patients was the research subject. Conducted analysis demonstrated occurrence of moderate depression in more than half of the respondents (54%, n=34) and severe depression in 1/10 (n=7) of the respondents. Side effects preventing patients from living their everyday lives determined the occurrence of depression symptoms. Experiencing afflictions accompanying cancer, duration of illness, time of diagnosis and number of attempts in fight with the disease had no influence on the oc-

currence of depression symptoms. The gathered results were compared with other researches focusing on the same issue.

Kurowska and co-workers were researching the Sense of Coherence (SOC) and occurrence of depression among cancer patients from Radiotherapy Ward in Oncological Centre in Bydgoszcz. The researchers detected strong, inversely proportional correlation between SOC and depression. Type of cancer had no influence on neither SOC nor depression [16]. Cuneo and Schiaffino detected correlation between disease stage, depression and issues with mental adaptation [17]. Stankiewicz and co-workers analyzed correlation between time of diagnosis and a psychological profile which included personality traits as well as level and type of anxiety and depression. The researchers demonstrated that strong susceptibility to anxiety was shaped among a group of female patients who have been undergoing treatment for more than 5 years. Less severe depressive states were also noticed among the same group of patients compared to their mental health from the beginning of the therapy [18]. De Walden-Gałuszko and co-workers reached the same conclusions which emphasize the tendency to more frequent occurrence of endogenous depression shortly after the time of diagnosis and depression without anxiety symptoms among the patients in the advanced stage of the disease. Despite that fact, depression occurred mostly in people struggling with the disease for 1-5 years [19]. Ng and co-workers conducted a research which demonstrated that depression symptoms occurred in 50.2% of the patients right after the diagnosis, in 51.6% of the patients six months after the diagnosis and in 40.3% of the patients one year after the diagnosis. Those authors also claim that the level of fear, anxiety and depression diminishes as the disease progresses [20]. The authorial analysis points to the same conclusions. Despite the fact that no statistically significant correlation between duration of illness and depression intensity was noticed, it was demonstrated that cancer patients who have been suffering from the disease for no longer than three years were showing signs of depression more often as opposed to the patients who have been suffering from the disease longer.

Osmańska and co-workers compared the intensity of mental disorders among oncological patients who finished the treatment and those who were currently undergoing chemotherapy. As many as 40% of the surveyed who were undergoing chemotherapy and 18.5% of the surveyed who finished the treatment showed signs of anxiety disorder. Depression was detected in 14.6% of the surveyed who were underground chemotherapy and in 9.3% of the surveyed who finished the treatment. The researchers claim that worsened social functioning stemmed from stronger intensification of depression, anxiety and aggression. Light negative correlation between physical prowess and depression symptoms was detected, which means that depression was more intensified among people who were in worse physical shape [21]. Frączak claims that more than half of the surveyed women and around 40% of the surveyed men who underwent surgeries showed signs of depression. In comparison, in the group of healthy people, the number was significantly lower, as almost no one showed signs of depression [22]. Sobielarska-Michalak and co-workers detected that intensification of depression symptoms does not influence the type of treatment that the surveyed were subjected to, in this case women suffering from breast cancer (conservative operation, amputation) [8]. Kosowicz and co-workers were comparing intensification of negative emotions and depression among oncological patients who were treated for the first time and multiple times. Patients treated for the first time showed more signs of depression and maintained worse internal control than patients treated for the umpteenth time. According to the researchers, adaptation to cancer differs, depending on the stage of the disease, and that is why therapeutic process should take into account patients' mental health [23]. The authorial analysis does not reach such conclusions. Even though no statistically important correlations between number of relapses and intensification of depression symptoms were noticed, it was detected that signs of moderate or severe depression occurred more often among patients treated for the first time than among patients treated for the umpteenth time.

Stępień and Wrońska were analyzing levels of anxiety and depression among women subjected to radical surgeries in the context of: physical and emotional state, family and social life, everyday functioning and certain ailments accompanying the therapy. Everyday functioning deteriorated with the intensification of negative emotions. A correlation between levels of anxiety and depression and physical condition, family life and social life was detected [24]. Goudarzian and co-workers were analyzing correlation between self-care and depression among oncological patients. A negative correlation between self-care, physical condition, mental condition, emotional frame of mind and depression was detected. According to the authors, self-care means like physical exercises, advisory sessions and psychotherapy can diminish the level of depression [25]. In the authorial research, the intensity of depression symptoms was analyzed in the context of respondents' physical condition. Statistically significant correlation between an influence of treatment results on everyday life and depression occurrence was detected. Patients, who claimed that side effects of treatments prevent them from living everyday lives, more often experienced moderate or severe depression (79%) as opposed to the rest of the patients (42%). It was also detected that the surveyed permanently experiencing ailments accompanying the disease showed moderate or severe depression symptoms more often as opposed to the patients suffering less.

CONCLUSIONS

1. The analysis conducted with the use of BDI demonstrated occurrence of moderate depression among more than half of the respondents (54%, n=34) and severe depression among 1/10 (n=7) of the surveyed. Only 1/3 of the surveyed showed no signs of depression and complained only about low mood.
2. Side effects of the treatment preventing patients from everyday functioning determined the occurrence of depression symptoms.
3. Severity of cancer symptoms, duration of illness, time of diagnosis and number of attempts to fight the disease had no influence on the occurrence of depression symptoms.

REFERENCES

1. Dudek D, Siwek M. Współistnienie chorób somatycznych i depresji. Psychiatria. 2007;4(1):17-24.
2. Murawiec S. Depresja u osób z chorobą nowotworową. Rozpoznawanie i leczenie – aspekty praktyczne. OncoReview. 2012;2(3):201-8.
3. Mziray M, Żuralska R, Postrożny D, Domagała P. Poczucie depresji, lęku i bólu a style radzenia sobie w sytuacji trudnej u pacjentów z chorobą nowotworową. Przeds Zarz. 2014;XV(12):7-18.
4. Pasquini M, Biondi M. Depression in cancer patients: critical review. Clin Pract Epidemiol Ment Health. 2007;3(2):1-9.
5. de Walden-Gałuszko K, Majkowicz M, Trzebiatowska I. Najczęstsze problemy psychiatryczne w ambulatoryjnej praktyce onkologicznej. Psychoonkol. 1998;2:21-6.
6. Massie MJ. Prevalence of depression in patients with cancer. J Nat Cancer Inst Monogr. 2004;32:57-71.
7. de Walden-Gałuszko K. Psychoonkologia w praktyce klinicznej. Warszawa: PZWL; 2011.
8. Sobieralska-Michalak K, Kowalska J, Tudorowska M. Rodzaj zabiegu, a lęk, depresja, przystosowanie do choroby u kobiet z rozpoznanym rakiem piersi. Pol Forum Psychol. 2016;21(3):432-46.
9. Guglas N, Mackiewicz J, Pawlik P, Cichy W. Aspekty psychologiczne raka piersi u kobiet w okresie menopauzy. Prz Menopauz. 2007;1:19-22.
10. Kieszkowska-Grudny A. Dystres i depresja u chorych na nowotwory – diagnostyka i leczenie. OncoReview. 2012;2(4):246-52.
11. Dębski R, Kulik R. Rozpoznanie i leczenie depresji towarzyszącej nowotworom narządu rodnego. Ginekolog jako lekarz „pierwszego" kontaktu. Wektory Ginekologii. 2004;1:3-9.
12. Onitilo AA, Nietert PJ, Egede LE. Effect of depression on all-cause mortality in adults with cancer and differential effects by cancer site. Gen Hosp Psychiatr. 2006;28:396-402.
13. Kissane DW, Wein S, Love A, et al. The Demoralization Scale: a report of its development and preliminary validation. J Palliat Care. 2004;20:269-76.
14. Zawadzki B, Popiel A, Pragłowska E. Charakterystyka psychometryczna polskiej adaptacji Kwestionariusza Depresji BDI-II Aarona T. Becka. Psychol Etol Genet. 2009;19:71-95.
15. Zając T. Struktura agresji i kontrola emocji u osób z rozpoznaniem depresji. Psychiatr Psychoter. 2014;10(4):16-29.
16. Kurowska K, Dahms S, Głowacka M, Haor B. Poczucie koherencji a depresyjność u osób z chorobą nowotworową. Psychogeriatr Pol. 2010;7(3):91-8.
17. Cuneo KM, Schiaffino KM. Adolescent self-perceptions of adjustment to childhood arthritis: The influence of disease activity, family resource, and parent adjustment. J Adolescent Health. 2002;31:363-71.
18. Stankiewicz A, Radziwiłłowicz W, Bidzan M. Związek cech osobowości, depresyjności i lęku z przebiegiem leczenia kobiet z nowotworem piersi. Psychoonkol. 2011;2:48-54.
19. de Walden-Gałuszko K, Majkowicz M, Zdun-Ryżewska A. Zaburzenia przystosowania do choroby nowotworowej – trudności diagnostyczne zespołów depresyjnych. Psychoonkol. 2013;1:10-5.
20. Ng CG, Mohamed S, Kaur K, et al. Perceived distress and its association with depression and anxiety in breast cancer patients. PLoS One. 2017;12(3): 0172975.
21. Osmańska M, Borkowska A, Makarewicz R. Ocena jakości życia, nasilenia cech lęku i depresji u pacjentów ze złośliwym zarodkowym nowotworem jądra w trakcie chemioterapii i po zakończonym leczeniu onkologicznym. Psychiatr Pol. 2010;XLIV(4):543-56.
22. Frączak P. Wybrane aspekty jakości życia u chorych leczonych z powodu złośliwych nowotworów w obrębie części twarzowej czaszki. Ann Acad Med Stetin. 2008;54(3):69-76.
23. Kosowicz M, Kulpa M, Ziętalewicz U, et al. Umiejscowienie kontroli zdrowia a lęk i depresja u pacjentów z chorobą nowotworową tkanek miękkich i kości. Med Paliat. 2014;3:165-9.
24. Stępień R, Wrońska I. Lęk i depresja jako emocjonalne uwarunkowania możliwości funkcjonalnych kobiet po radykalnym leczeniu raka piersi. Stud Med. 2008;10:31-5.
25. Goudarzian AH, Bagheri Nesami M, Zamani F, et al. Relationship between Depression and Self-care in Iranian Patients with Cancer. Asian Pac J Cancer Prev. 2017;18(1):101-6.

Corresponding author
dr Olga Dąbska
Department of Pathology and Rehabilitation of Speech
Medical University of Lublin
4-6 Staszica St., 20-081 Lublin, Poland
E-mail: olga49a@wp.pl;
Phone: 511413167