

ORIGINAL PAPER

OCCURRENCE OF ANNOYING SYMPTOMS OF PATIENTS WITH CANCER

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Accepted October 15, 2014**Abstract**

Aim: To determine symptoms those occur by patients with cancer. *Design:* A cross-sectional survey. *Methods:* The sample of research consisted of 100 patients with cancer. We used Memorial Symptom Assessment Scale (MSAS) to evaluate the symptoms. This Scale determines 32 symptoms in three subscales (physic, psychic symptoms, and complete distress) focused on frequency, intensity and distress of symptoms of Likert Scale 1–4. *Results:* The research results demonstrate that in terms of frequency, intensity and distress the patients most frequently suffer pain (4.30 ± 3.30), despite of all the pain treatment options. The other symptoms that patients encountered include nausea (3.52 ± 2.70), restless sleep (3.92 ± 3.48), anxiety (3.81 ± 3.55) and feelings of sadness (1.30 ± 0.22). In terms of disease severity, we had greater incidence of symptoms in patients with stage 3 – cancer metastatic disease ($p \leq 0.05$). Our research also confirmed the correlation between the occurrence of symptoms and duration of illness. Greater incidence of symptoms has been reported in patients with longer lasting disease, in most cases, end-stage disease ($p \leq 0.05$). *Conclusion:* A key part of palliative care is minimizing of annoying physical, psychological, social and spiritual symptoms of patients. Assessment of the annoying symptoms in clinical practice allows the planning and implementation of effective interventions to promote quality of life of patients and their families in palliative care.

Key words: annoying symptoms, cancer, palliative care.**Introduction**

Management of the symptoms and maintaining the best possible quality of life of patients with cancer is one of the foundations of palliative care. The multidisciplinary palliative care team helps the patients and their families to live a quality life until the end.

Therefore, to find out what is important and significant for the patients and their families, it is necessary to carry out the symptoms assessment. It is a systematic and continuous data collection about a patient with incurable, finite disease, their ability to perform daily activities, the impact of the pain and other symptoms on meeting their biological, psychosocial and spiritual needs, the expectations of the patient and their families as well as support options (Nemcová, 2008, p. 29–30).

The reality of symptoms is multidimensional as the negative impact on the patients' quality of life and on their ability to engage in daily activities is observed. They occur in the face of death, dying, loss as well as the change in social roles and interpersonal relationships. The results of several international studies show a negative impact of individual symptoms on the overall quality of patients' lives (Lloyd-Williams, Dennis Taylor, 2004; McMillan, Rivera, 2009). Patients should feel that their symptoms are controlled and being dealt with. At the same time, sensitivity is important for the development of the disease and the adjustment of daily activities according to the patient's health status (Bužgová, Zeleníková, 2012, p. 407). A systematic review of 44 studies showed that patients in terminal-stage cancer most commonly complain of pain (80–90%), fatigue (75–90%), constipation (70%), dyspnoea (60%), nausea (50–60%), vomiting (30%), delirium (30–90%) and depression (40–60%) (Teunissen et al., 2007, p. 94–104). While planning the treatment and care, it is necessary to understand that the complete elimination of the symptoms in the advanced disease is often not possible and the elimination of a symptom may cause a deterioration

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of another symptom. Corner (2007, p. 271) identifies a number of principles that can help both professional and non-professional caregivers with the symptom management. The first and the most important step is to adopt a critical position with regards to as to why the particular symptoms occur and the reasons why they are distressing and the change that is needed to address these symptoms from a broader perspective.

The second step is to use the principles of patient-focused communication, which means the patient's discourse and active listening on the part of the team becomes the main basis for intervention and support. Talking about the symptoms may have a therapeutic effect on the patient and may elicit new suggestions for symptom management. Thirdly, the aim is for the families and health professionals to facilitate the patient's life with specific symptoms help them to manage and mitigate them. This step can be more efficient than the present role of "controlling" the symptoms. The last step in the symptom management is to enable the patient's ability of self-management, which means maintaining their habits of caring for themselves and sustaining the things that are important and irreplaceable to them.

The aim is to teach the patients to address a specific symptom on their own instead of addressing them to the health care professionals (e.g. patient gets aids to manage the symptoms alone, for example dealing with attacks of breathlessness or in achieving a certain level of coping with the impending death). It is important that strategies that patients have and use are active. The above principles may represent an important new direction in, what is in clinical practice, known as symptom management.

Aim

Using the Memorial Symptom Assessment Scale describe the most common symptoms occurring in patients with cancer at different stages of severity of the disease (no infiltration, with the infiltration, cancer metastatic disease). Determine the relationship between the occurrence of annoying symptoms and duration of illness of patients.

Methods

Design

A cross-sectional survey.

Sample

The sample consisted of 100 patients with cancer; of whom 47 women and 53 men. The mean age of patients was 55, in an age range of 20-79 years. The mean disease duration was 27 months, in a range of 1–96 months. Regarding disease severity, the sample

included 17 patients with stage one – without node infiltration, 35 patients with stage two – node infiltration and 48 patients with stage three – cancer metastatic disease.

Data collection

Empirical data collection was conducted between August and November 2012 on the Palliative Care Unit at the Hospital with out-patient clinic in Trstena. For the collection of empirical data, the valid and reliable assessment tool, the Memorial Symptom Assessment Scale (MSAS) was used to assess symptoms occurring by patients with cancer. The Memorial Symptom Assessment Scale (MSAS) was designed to assess 32 items and three subscales: the global distress index (GDI), the physical symptom distress score (PHYS) and the psychological symptom distress score (PSYCH). The GDI is the average of the frequency of four prevalent psychological symptoms (feeling sad, worrying, feeling irritable, and feeling nervous) and the distress associated with six prevalent physical symptoms (lack of appetite, lack of energy, pain, feeling drowsy, constipation, dry mouth). PHYS is the average of the distress associated with 12 prevalent physical symptoms: lack of appetite, lack of energy, pain, feeling drowsy, constipation, dry mouth, nausea, vomiting, change in taste, weight loss, feeling bloated and dizziness. PSYCH is the average of the frequency associated with six prevalent psychological symptoms: worrying, feeling sad, feeling nervous, difficulty sleeping, feeling irritable and difficulty concentrating. Items reflecting symptoms in three dimensions: severity of the symptom, frequency with which it occurs and the distress it produces. Physical symptom distress is scored from 0 to 4 (not at all, a little bit, somewhat, quite a bit, very much) and psychological symptom frequency is scored from 1 to 4 (rarely, occasionally, frequently and almost constantly).

Data analysis

The empirical data of individual questionnaires were encoded and subsequently converted into electronic form in MS Excel 2007. Statistical functions of Statistical Package for the Social Sciences (SPSS) version 15 software program was used for statistical data processing. We applied the methods of descriptive and inductive statistics. The mean score, standard deviation (s), median, minimum (min) and maximum (max) scale values of responses were determined for each item of the questionnaires. In categorical variables with multiple values (disease severity) the non-parametric Kruskal-Wallis test was used. The Spearman correlation coefficients $r(S)$

were used to determine the relationship between the obtained values of the score of individual domains in relation to the patient's disease duration.

Results

The basic statistics relating to the assessment of individual items of MSAS (The Memorial Symptom Assessment Scale) are shown in table 1-3. In relation to each item, a mean score (average), standard deviation (SD), median, minimum (min) and maximum (max) of the scale values of responses are shown.

Table 1 presents the results of the distress scale which is used to assess 10 symptoms.

Table 1 Descriptive characteristics of the items score of subscale Global Distress Index (GDI)

Items	Mean	SD	Median	Min	Max
feeling sad	1.30	0.22	1	0	4
worrying	1.20	0.22	1	0	4
feeling irritable	0.83	0.28	0	0	4
feeling nervous	1.27	1.22	1	0	4
lack of appetite	1.21	0.36	1	0	4
lack of energy	1.22	1.36	1	0	4
pain	1.34	0.51	1	0	4
feeling drowsy	0.90	0.25	0	0	4
constipation	0.88	0.36	0	0	4
dry mouth	0.79	0.41	0	0	4

SD – standard deviation, min – minimum value, max – maximum value

The results of the descriptive statistics conclude that the most prevalent symptoms in cancer patients are pain and feeling of sadness. The least frequent symptom occurring in this subscale was dry mouth.

Table 2 shows the results of the scale presence of physical symptoms which are calculated from frequency, severity and distress in twelve physical symptoms.

Table 2 Descriptive characteristics of the items score of subscale The physical symptom distress score (PHYS)

Items	Mean	SD	Median	Min	Max
lack of appetite	3.82	3.70	3	0	12
lack of energy	3.15	3.90	3	0	12
pain	4.30	3.30	4	0	12
feeling drowsy	2.98	2.60	0	0	12
constipation	1.75	1.28	0	0	8
dry mouth	2.46	2.39	0	0	12
nausea	3.52	2.70	3	0	12
vomiting	1.99	1.12	0	0	12
change in taste	2.51	2.26	2	0	8
weight loss	2.28	1.46	2	0	8
feeling bloated	3.27	2.75	2	0	12
dizziness	1.85	0.22	0	0	12

SD – standard deviation, min – minimum value, max – maximum value

The results of descriptive statistics conclude that the prevalent symptoms occurring in cancer patients are pain and nausea. In the subscale, the symptom with the lowest occurrence is constipation.

Table 3 presents results of the scale presence of mental symptoms which are calculated from the frequency, severity and distress in six psychological symptoms.

Table 3 Descriptive characteristics of the items score of subscale The psychological symptom distress score (PSYCH)

Items	Mean	SD	Median	Min	Max
worrying	3.68	2.73	3	0	12
feeling sad	3.26	2.49	3	0	12
feeling nervous	3.81	3.55	4	0	12
difficulty sleeping	3.92	3.48	4	0	12
feeling irritable	2.45	1.84	0	0	12
difficulty concentrating	2.48	1.90	0	0	12

SD – standard deviation, min – minimum value, max – maximum value

The results of descriptive statistics conclude that the most prevalent psychological symptoms in cancer patients are difficulty sleeping and feeling nervous. The least frequent symptom in this subscale is feeling irritable.

Table 4 shows statistically significant differences in frequency, severity and distress of the symptoms (MSAS – PHYS, MSAS – PSYCH, MSAS – GDI) in terms of disease severity. Statistically significant differences are observed in all three subscales of the groups.

Table 4 The score of MSAS domains regarding disease severity

Disease severity		MSAS-GDI	MSAS-PHYS	MSAS-PSYCH
stage 1	Mean	1.57	1.51	1.64
	SD	0.85	0.78	0.79
stage 2	Mean	1.75	1.80	1.68
	SD	0.95	0.85	0.91
stage 3	Mean	2.17	2.27	2.09
	SD	0.87	0.57	0.73
	P(K-W)	0.027	0.001	0.028

SD – standard deviation, P(K-W) – the non-parametric Kruskal-Wallis test

The patients with the severity of the cancer with stage 3 (cancer metastatic disease) experienced the highest occurrence of symptoms in individual areas when compared to patients with disease severity 2 (node infiltration) and patients with disease severity 1 (no node infiltration).

The results of descriptive statistics also show that the lowest level of symptom occurrence is experienced by patients with disease severity 1 – no node infiltration.

Table 5 presents a statistically significant relationship between the length of the disease and symptom occurrence.

Table 5 The relationship between the occurrence of annoying symptoms and duration of illness of patients

Disease duration	r(S)	p
MSAS-GDI	0.200	0.047**
MSAS-PHYS	0.251	0.012**
MSAS-PSYCH	0.231	0.021**

Legenda: r(S) – the Spearman correlation coefficients

Based on the results of the correlation analysis, it can be concluded that statistically significant relationship between the symptoms occurrence in individual subscales and the duration of illness had been confirmed. In view of the positive correlation, it has been observed that the symptom occurrence is lower in patients with a shorter duration of disease.

Discussion

In terms of frequency, severity and the degree of distress, pain was identified as the most significant symptom within the Global Distress Index subscale.

According to the WHO (2004, p. 11–17), the occurrence of pain in patients with cancer is estimated at 30–50% of the patients with solid tumours who go through the active treatment and at 70–90% in patients with advanced disease. Several studies (Corner 2007; Kazanowski 2006; Paz, Seymour, 2007) suggest that 90% of cancer patients who suffer from chronic pain would sufficiently benefit from simple pharmacotherapy, but in routine clinical practice, the success rate falls short.

Inadequate pain relief is the result of different factors. It is related to the lack of outpatients' department of chronic pain and the palliative care development in our conditions, as well as the fear of patients' addiction on opiate and non-opiate analgesics. Patients with cancer may experience a variety of psychological, social and spiritual issues that go beyond the actual physical pain. The problems which nurses and other members of the multidisciplinary team have to face while caring for a patient suffering from pain due to cancer are defined by a term "total pain". The concept of total pain points out the fact that pain is a deeply personal experience that can not be understood as purely biological phenomenon. One of the greatest benefits for the pain management is the fact that a nurse understands other influencing

factors in addition to physical and physiological ones (Paz, Seymour, 2007, p. 297). McMillan and Rivera (2009, p. 47) incline to similar results. Patients from the research group reported pain, feeling of bloating and nausea as the most distressing symptom on the physical symptom subscale (MSAS – PHYS). In professional literature sources, nausea is not described as the most distressing symptom compared to pain, breathlessness or fatigue. Matzo, Sherman (2004, p. 328) nevertheless draw attention to its high occurrence. Nausea occurs in 40–50% of patients with advanced cancer, most often in patients with gynaecological cancer, breast cancer, or in patients with gastric cancer. These symptoms are associated with exhaustion and significantly decrease a patient's quality of life. Persistent nausea and vomiting can lead to several physical problems - epigastric pain, pain when swallowing, pain in the oral cavity (mucositis, stomatitis during chemotherapy), the psycho-social problems - such as anxiety, fear (e.g. anticipatory vomiting during chemotherapy) (Nemcová, 2008, p. 26–27). Corner (2007, p. 266) states that indigestion and weight loss (nausea, changes in appetite, decreased appetite) often accompany severe cancer in advanced stage. The electronic database search (EBSCO, MEDLINE, CINAHL) found only 50 studies addressing the issue of nutrition for patients with cancer, methods of measurement of symptom occurrence, patients' experience and professional as well as non-professional carers' experience and the interventions to remove the symptoms. Besides distressing physical symptoms in patients with cancer, mental disorders occur, although the precise diagnosis is not established in most patients (Lloyd-Williams, 2007; Murray et al., 2002; Pirl, Roth, 1999). Bužgová et al. (2013, p. 632) and their research, aimed at the evaluation of the needs of the patients with cancer in palliative care, found that patients preferred the need of not being in pain, no shortness of breath, no fatigue and the need not to suffer from the leakage of stool and urine in terms of the physical realm. On the psychological symptoms subscale (MSAS – PSYCH), the patients from the research group indicated the greatest rate of occurrence of restless sleep and nervousness. Sleep disorders are a very common problem in cancer patients and in patients who require palliative care. There are several factors that can cause them. The most common are mental problems such as anxiety, fear, loneliness, depression and remorse (Nemcová, 2008, p. 31). The results of foreign studies (Breitbart et al., 2000; Lloyd-Williams, Dennis, Taylor, 2004; McMillan, Rivera, 2009) show that 38% of cancer patients demonstrate changes in mental health.

One of the factors influencing the occurrence of annoying symptoms confirmed in the study is the severity of the disease. Statistically significant differences in terms of disease severity are observed in the prevalence of physical and psychological symptoms as well as the global distress. Patients with the severity 3 (cancer metastatic disease) experienced the highest occurrence of the symptoms in individual areas as compared to patients with disease severity 2 (with node infiltration) and patients with disease severity 1 (no infiltration node). The results of descriptive statistics show that the lowest level of symptoms are experienced by patients with disease severity 1 (no infiltration node). The same results are concluded in Kazanowski (2006). The results of the study indicate that the occurrence of distressing symptoms (especially pain, fatigue, constipation, vomiting, weight loss) persists particularly in patients with stage 3 and in patients in the terminal stage of the disease requiring palliative care. Another significant factor influencing the occurrence of symptoms in the study is the duration of illness. The results of the statistical analysis show that the occurrence of the symptoms is higher in patients whose disease lasts longer. The results can be explained by the fact that the patients whose disease lasted a long time were in the terminal stage of the disease which intensifies the occurrence of distressing symptoms. The results of systematic reviews show that in the last 2 weeks of life, the occurrence of predominantly physically distressing symptoms in patients: fatigue, weight loss, weakness, loss of appetite, pain, nausea is recorded (Teunissen et al., 2007, p. 97).

Limitations

The choice of the sample of respondents from a Hospital with out-patient clinic in Trstena, as well as the limited size of the sample is considered a limitation. In terms of the generalising aspect, the limitation could be removed by a larger sample and a wider selection of respondents throughout Slovakia. The study can be considered partial and may form the basis for the implementation of further quantitative studies using similar methodology.

Conclusion

The aim of specialized palliative care is to address the physical, psychological, social and spiritual problems of the patient and their relatives. Despite the fact that when working with distressing symptoms in palliative care an integrated approach is emphasised where the symptoms are often linked together, in real clinical practice the individual symptoms are treated in isolation without

understanding the relationship between them. This highlights the need to implement further research of the issues.

For nurses in clinical practice, the assessment of distressing symptoms using available tools may be used in planning and implementation of effective interventions to promote quality of life for dying patients and their relatives in palliative care.

Ethical aspects and conflict of interest

The research was approved by the ethical committee of Hospital with out-patient clinic in Trstena. Participants were informed of the purpose of research and only those who signed an informed consent form were included in the research sample. The authors are not aware of any conflict of interest.

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Author contribution

Study conception and study design (RK, KŽ, EG), data analysis and interpretation (RK, KŽ, GŠ), manuscript draft (RK), critical revisions of the manuscript (KŽ, EG, GŠ), final approval of the manuscript (RK).

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