Depression in patients with oral or facial malignancy

Monika Rutkowska¹, Hanna Gerber², Rafał Nowak², Jan Piątkowski¹

¹Clinical Division of Maxillofacial Surgery, 4th Military Hospital, Wroclaw, Poland ²Department of Maxillofacial Surgery, Wroclaw Medical University, Poland

Submitted: 13 September 2007 **Accepted:** 28 October 2007

Arch Med Sci 2007; 3, 4: 392-395 Copyright © 2007 Termedia & Banach

Corresponding author:

Rafał Nowak Department of Maxillofacial Surgery Wrocław Medical University Chałubińskiego 5 50-365 Wrocław, Poland Phone: +48 71 784 22 78 E-mail: rafimail@wp.pl

Abstract

Introduction: For many years interest in cancer patients concerned mainly their physical state, treatment efficacy and survival time. Meanwhile, a consequence of oncological treatment is physical and mental disability. Anxiety, fear and uneasiness, being the most common reactions to biological and social threat, can lead to severe mental disorders. The incidence of anxiety and depressive disorders in cancer patients ranges from 20 to 80% in different study centres. Polish scientific literature lacks publications dealing with the mental state of patients treated for facial and oral malignancies. Research attempting to evaluate the way a disfiguring procedure aggravates the patient's mental state is also missing in Polish and foreign academic writing. It is estimated that 20-25% of cancer patients suffer from undiagnosed depression. The aim of the present study was to assess depression level in patients with diagnosed oral and facial malignancy shortly after diagnosis, as well as to pinpoint mental changes caused by extensive surgery. Material and methods: The study was performed one day before surgery, and then 7 days after it, during the convalescence period on 31 patients in the ward. To measure depression severity the Beck Depression Inventory (BDI) was used. Results: Symptoms of depression were found in more than 40% of patients before surgery and 58.5% after it.

Conclusions: Surgical treatment of face and neck cancer may increase the level of depression. Patients treated with extensive surgery should be able to obtain professional psychological help both before and after treatment.

Key words: depression, face and neck neoplasm, surgical treatment.

Introduction

Diagnosis of malignancy is commonly perceived as a major threat irrespective of the socioeconomic status of a given society. Oncological treatment results in physical and mental disability [1, 2].

Surgical treatment of face and neck neoplasms cripples the patient visibly and may impair breathing, chewing or swallowing or lead to loss of speech function [3-5]. Functionally and aesthetically unsatisfactory reconstructive procedures limit a patient's social capacity [6]. Nevertheless, effective treatment as understood by an average patient entails full mental and physical recovery [7].

For many years, interest in cancer patients focused solely on their physical health, treatment efficacy and pertinent survival time. Meanwhile, anxiety, fear and uneasiness, being the most common reactions to biological and social threats, lead to severe mental disorders [8, 9].

Malignant disease most often results in maladjustment, depression and anxiety, next in consciousness disturbances and less often in psychoorganic and psychotic disturbances [10]. Depression is the most common disorder and is more likely to coexist with a somatic disease. The basic symptoms of depression according to the International Statistical Classification of Diseases and Related Health Problems include mild depression, loss of interest and enjoyment, low energy levels leading to increased tiredness and decreased activity. Other basic symptoms are weakened concentration and attention, low self-esteem and self-worth, feelings of guilt, suicidal thoughts and attempts, sleep disorders and loss of appetite.

Depression may follow diagnosis or deterioration of quality of life after treatment. Depression in the case of diagnosed cancer directly affects the course of disease and treatment [11, 12].

Immunological dysfunctions in patients with depression delay recovery or even make it impossible [13]. Patients with depression are less responsive to treatment and experience more adverse effects than non-depressive patients [14]. The incidence of anxiety and depression in cancer patients ranges from 20 to 80% in various study centres [15, 16].

Research on the topic of facial and oral cancers affecting the patients' mental state is lacking. As far as we know, there have been no attempts to assess the link between a disfiguring procedure and the patient's mental state.

The aim of the present study was to assess depression level in patients with diagnosed oral and facial cancers shortly after diagnosis as well as to pinpoint mental changes triggered by extensive surgical procedure.

Material and methods

The study was conducted in the Department of Maxillofacial Surgery of Wroclaw Medical School and in the Clinical Division of Maxillofacial Surgery of the 4th Military Hospital in Wroclaw among patients having surgical treatment for face and oral cancers.

The study group included 34 patients aged 19 to 74, 9 women and 25 men. The mean age of falling ill was 52.84. The questionnaire results were analyzed for 31 patients, the rest failing to complete the written test. These patients had been diagnosed with a malignancy approximately 20 days earlier and had undergone extensive surgery.

For most patients a large part of the maxilla or mandible bone was removed, and also a sizable part of the tongue soft tissues, the oral floor or palate.

Also bilateral lymphangectomy was performed for most patients. The patients had various degrees of face deformation after the procedure, and sometimes impaired speech and swallowing functions. None of the patients had been treated for depression before the diagnosis of malignancy was made.

The aim of the present paper was to assess the incidence of depression; therefore the social status data of patients have been disregarded.

The study was conducted one day before the surgical procedure and then 7 days after the surgery during the convalescence period in the ward.

The method used was a questionnaire self-report. In order to assess severity of symptoms of depression the Beck Depression Inventory (BDI) was used. The inventory comprises 21 sets of statements describing different emotional states. The patient chooses only one statement in each set, the one that most accurately describes the way they have felt for the past week. There is a scale for each item ranging from 0 to 3 and the correlation between the total score and severity of depression is directly proportional. The scale assessment is as follows: 0-11 no depression, 12-26 mild, 27-40 moderate and 50-63 severe depression.

Results

Qualitative analysis of the results was performed, and then the results were characterized using descriptive statistics.

Before surgery mild depression was diagnosed in 10 patients (32%), moderate in 3 (9.7%). On the whole, more than 40% of the patients were diagnosed with depression. Seven days after surgery this percentage rose to 58.5% – 16 patients had mild depression (51.61%) and 2 moderate. After surgery the mental state of patients worsened, which corresponded to a score increase of over 3 points.

For two patients, both prior to and after the procedure, no depressive disorders were found (BDI=0). One of the patients, a 19-year-old man, had been battling against lymphoma for 7 years. A 56-year-old woman had a neoplasm diagnosed by a histopathological examination in a small palate tumour, which had been noticed by the woman 3 weeks earlier. Her postoperative condition was probably due to the fact that the procedure had not impaired her functioning at all. The biggest noted increase was 13 points. For one patient a definite mood improvement was noticed after the procedure (28 points before surgery, 23 after it). For 6 patients their mental status after surgery did not change (5 patients in this group did not have depressive symptoms before and after surgery, for one mild depression persisted).

The mean for the BDI index before surgery was 11,1290 points, the median 9 points. After surgery these values were 14,4516 and 12 points respectively. In both statistics values 3 points higher on average were obtained in the measurement of the depression index after surgery.

In order to check whether BDI values before and after surgery differed significantly, Student's t-test was used to compare the two means in dependent

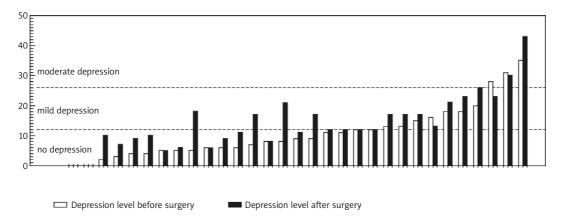


Figure 1. Patients' depression level study results using the BDI self-evaluation test

trials. T-test could be used because the distribution of results in both measurements approximated the normal distribution (Z K-S=0.861, p=0.449 for BDI values before surgery and Z K-S=0.718, p=0.681 for BDI after surgery).

On the basis of Student's t-test comparing the averages from both measurements of BDI it was found that the difference between them is 3.3 points and is significant statistically (t=4.373, p<0.001).

The correlation between BDI values before and after surgery was examined and high positive codependence (0.882) of both measurements was found.

The chart (Figure 1) shows the study results (only patients who have BDI>1).

The patients treated in the 4th Military Hospital sought psychological consultation while they were hospitalized. One of the patients, in whom a moderate form of depression was diagnosed, and has developed alcoholic disease, is still under the care of the Outpatient Psychiatric Clinic.

Discussion

The main aim of this study was to evaluate the influence of diagnosis and then extensive surgery on the mental state of patients with oral and facial malignancies. The available scientific literature lacks evaluation of the patient's condition almost directly after diagnosis and, even more so, a short time following extensive surgery. Assessment of depression level is usually performed among patients of psychiatric clinics planning to return to a normal life.

De Walden-Gałuszko et al. state that among cancer patients who report to psychiatric clinics with diagnosed oral and facial malignancies, 45.85% suffer from depressive disorders [15]. The studies conducted in Canada in patients with head and neck malignancies, treated with radiotherapy by Katz et al. using BDI, show that depression was diagnosed in 20% of the patients [16].

Our studies seem to indicate that counselling may be most needed in the first stage of the disease, when the patient has to deal with fear after getting the diagnosis (40% of patients) and also when after a disfiguring procedure they realize to what extent his/her life will be altered (nearly 59% of patients). Although no severe depression was noted in any of the patients, our study concerned patients at the initial stages of a neoplastic disease.

The studies were performed during hospitalization when persons with a similar issue and similarly disfigured were around. For these patients, returning to a daily routine is likely to cause further frustration. Many of them will have to resign from work, which will only aggravate the problem. As far as care of the patients is concerned, according to specialists, mild and moderate depression should be managed by primary care physicians and severe depression by a psychiatrist. Hence, accurate diagnosis and severity assessment seem vital [17].

The authors' experience suggests that the main problem of the patients in the first stage was sleep disorders. The use of hypnotics significantly improved the way they felt. Prolonged contact with the attending physician during hospitalization enables observation of changes in behaviour and suggests a possible treatment plan. Screening scales will not replace medical examination, but they are worthwhile in situations where the doctor's contact with the patient is sporadic and short.

It has been shown that 20-25% of cancer patients suffer from undiagnosed and untreated depression [1].

It follows from the conducted studies that disability resulting from surgical treatment intensifies stress. This is confirmed by our data showing an increase of depressive scores in the BDI in cancer patients by almost 20%, and also a worse mental and physical state (by 3.56). Visible deformity adversely affects the patient's self worth (approximately by 3.56) [8, 18]. Furthermore, mental

disorders are an embarrassing issue for Polish patients. An offer of counselling is often rejected for fear of being stigmatized by society. Proper management seems necessary considering the number of patients affected, especially because the risk of suicide in patients with depression is estimated at 25% [19, 20]. Meanwhile, accurately diagnosed depression is a curable disease.

In Poland there are support groups for women after mastectomy, people with stomy and patients after laryngectomy; however, there is no support for patients most affected, whose disability is difficult to hide, i.e. patients treated for facial and oral neoplasms. Significant physical impairment and the resulting mental disorders require special support [3, 5].

Coping with the negative emotions experienced by patients is one of the more decisive factors influencing the course of treatment and recovery.

In conclusions surgical treatment of face and neck cancer results in significant deformation and impairment of speech, swallowing and breathing, which can increase the level of depression after surgery.

Patients with head and neck cancer should be able to obtain professional psychological help both before and after surgery, first to prepare for extensive surgery, then to accept changes and difficulties after it.

High positive codependence between BDI before and after treatment makes it possible to conclude that in patients with symptoms of depression before surgery, these symptoms can be exacerbated after it.

References

- 1. Bottomley A. Depression in cancer patients: a literature review. Eur J Cancer Care 1998; 7: 181-91.
- Widera A, Juczyński Z, Popiela T. Psychologiczne wyznaczniki stresu pourazowego u pacjentów onkologicznych po okaleczających zabiegach chirurgicznych [Polish]. Psychoonkologia 2003; 7: 31-6.
- Siemińska M. Niedopowiedziane cierpienie pacjentów. Psychospołeczne konsekwencji nowotworu języka [Polish]. Ann Acad Med Stetin 2006; 52 (Suppl 3): 17-21.

- 4. Stankiewicz C, Skorek A. Estetyczne i czynnościowe skutki leczenia nowotworów nosa i zatok przynosowych [Polish]. Psychoonkologia 1999; 5: 17-20.
- Zarek A. Psychologiczne reakcje chorych po częściowym lub całkowitym wycięciu języka z powodu nowotworu jamy ustnej [Polish]. Ann Acad Med Stetin 2006; 2 (Suppl 3): 113-7.
- Nyka W, Dziewulska-Bokiniec A. Niepełnosprawność fizyczna jako skutek leczenia onkologicznego [Polish]. Psychoonkologia 1997; 1: 61-6.
- Stecewicz M, Wysocki R, Halczy-Kowalik L. Wymowa i połykanie u chorych z pooperacyjnymi ubytkami języka po wycięciu nowotworu jamy ustnej [Polish]. Ann Acad Med Stetin 2006; 52 (Suppl 3): 97-106.
- Pers K. Zależność liczby i nasilenia objawów ubocznych chemioterapii od poziomu depresji i lęku u pacjentów onkologicznych [Polish]. Psychoonkologia 2002; 6: 9-12.
- Maraste R, Brandt L, Olsson H, Ryde-Brandt B. Anxiety and depression in breast cancer patients at start of adjuvant radiotherapy. Relations to age and type of surgery. Acta Oncol 1992; 31: 641-3.
- Tomaszewska I. Psychologiczne aspekty depresji w chorobach nowotworowych [Polish]. Psychoonkologia 2000; 7: 9-19.
- 11. Tomaszewska I. Struktura i nasilenie depresji u osób chorych na białaczkę przewlekłą [Polish]. Psychoonkologia 2000; 7: 19-22.
- 12. Trzebiatowska IA. Depresja w chorobie nowotworowej [Polish]. Psychoonkologia 2002; 6: 27-30.
- 13. Radziwiłłowicz P, Nitka A. Aspekty psychosomatyczne depresji [Polish]. Psych Prakt Ogólnolek 2002; 2: 15-9.
- 14. Trzebiatowska IA. Leczenie depresji w chorobie nowotworowej aspekty praktyczne [Polish]. Psychoonkologia 1999; 4· 47-52
- de Walden-Gałuszko K, Majkowicz M, Trzebiatowska I. Najczęstsze problemy psychiatryczne w ambulatoryjnej praktyce onkologicznej [Polish]. Psychoonkologia 1998; 2: 21-6.
- 16. Katz MR, Kopek N, Waldron J, Devins GM, Tomlinson G. Screening for depression in head and neck cancer. Psychooncology 2004; 13: 269-80.
- 17. Święcicki Ł. Depresje definicja, klasyfikacja, przyczyny [Polish]. Psych Prakt Ogólnolek 2002; 2: 151-9.
- Trzebiatowska IA. Zaburzenia psychiczne w chorobie nowotworowej [Polish]. In: de Walden-Gałuszko K (ed.), Psychoonkologia. Kraków 2000.
- Kotowicz-Kadyszewska J, Maciejewska K, Zedler A. Zagadnienie cierpienia u chorych leczonych z powodu nowotworów jamy ustnej i twarzy [Polish]. Psychoonkologia 1999; 5: 11-6.
- 20. Valente SM, Saunders JM, Cohen MZ. Evaluating depression among patients with cancer. Cancer Pract 1994; 2: 65-71.