Oral health and oral and maxillofacial cancer - Related quality of life

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Summary:
Introduction. **Quality of life is a complex concept which draws the attention of specialists from various domains such as: sociology, medicine, finance, psychology, epidemiology, political science, etc.**
Data collection and methods. **In order to evaluate the oral health-related quality of life various instruments with a variable number of items were employed. A well-known and much employed instrument in evaluating the quality of life is World Health Organization Quality of Life (WHO-QOL). It has six domains, twenty-four facets or dimensions and one hundred items.**
Results. **An absolutely certain prerequisite for the improvement of the oral health-related quality of life is that which motivates, with strong arguments, the responsibility of dental specialists for a current preventive oncological check-up. In our experience only 30% of the oral cancer cases are detected and referred to experts by dental specialists.**
Conclusion. **Regarding the most important items in the questionnaires, the multiple choice options should be simplified and adjusted to the Romanian language and to the comprehension ability of the respondents (interviewees). Oral and maxillofacial oncological pathology does not draw the attention and interest of dental specialists as much as other pathologies such as dental caries and parodontopathy.**

Key words: quality of life, oral health, questionnaires, oral and maxillofacial oncological pathology.

Introduction

Quality of life is a complex concept which draws the attention of specialists from various domains such as: sociology, medicine, finance, psychology, epidemiology, political science, etc. Quality of life generally means the way and the extent to which the needs of individuals are met, irrespective of their complexity and their relationship with the subjective perception of the members of the reference community.

Quality of life cannot be properly analysed unless health is also brought into discussion, as health is considered as absolute value in contemporary axiology. The modern state takes responsibility for the social protection and implicitly for the health protection of its population. In order for this desideratum to be achieved, the state necessitates substantial funds. Economic sustainability is crucial for ensuring these neeeds. In the contemporary society the communities with a high living standard and the gross national product (GNP) of at least $10000/ inhabitant are likely to ensure the norm needs of health care at a high level in accordance with the requirements for general and oral health, which are able to influence the quality of life in a positive way. In Romania the interest and the funds alloted to the evaluation and preservation of oral health at a high level are very low.

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Care for health-related quality of life has increased in recent years. Thus, in the PubMed data base of The United States National Library of Medicine health-related quality of life constituted the topic of 1479 published articles in 1990. In 2005 the number of articles on the same topic raised to 8160, while the published articles during the period 1950-2005 reached the number of 70481 in the same year, 2005.

The quality of life is defined in specialty literature as follows: the quality of life is given by the individual perception of their social situations within the cultural beliefs in which they live and in direct connection to their own needs, standards and aspirations (WHO, 1998).

The definition given by I. Marginean (2002)[6] is much more complex; according to it „the domain of the quality of life can be defined by all the elements that refer to the physical situation, to the economic, social, cultural, political and health situation, etc., in which people live, to the individual's activities and their nature, to the characteristics of the relationships and social process in which the individual participates, to the possessions and services to which the individual has access, to the adopted consuming models, to the mode and style of living, to the evaluation of the circumstances and of the results of the activities which meet the people's expectations, as well as to the subjective states of satisfaction/ insatisfaction, happiness, frustration, etc." The definition implies that health in general, and oral health in particular have a small place within this group of needs. However, subjects' statements includ a greater importance alloted to health by patients, irrespective of them being subjective.

Henderson V. identified 14 individual needs; they are as follows:

1. Normal breathing.
2. Capacity of feeding oneself.
3. Elimination of body excretions.
4. Moving and maintaining certain desired body postures.
5. Sleeping and resting.
6. Selecting proper items of clothing-putting them on, taking them off.
7. Maintaining normal body temperature by adjusting clothing and by changing the environment.
8. Maintaining body cleanliness and protecting one's skin.
9. Avoiding environmental dangers and avoiding injuring and traumatizing other people.
10. Communicating with other people by expressing emotions, needs, fears, opinions.
11. Practicing the religious cult to which one belongs (religious freedom; spiritual pursuits).
12. Work, which gives sense and value to one's life.
13. Pastime and participation in recreational activities.
14. Learning, discovering, satisfying one's curiosity and using the available medical services. [1]

Data collection and methods

In order to evaluate the oral health-related quality of life various instruments with a variable number of items were employed. Thus, I. Lupu [5] suggests that the questionnaires presented in *Tabel 1* are being employed.

A well-known and much employed instrument in evaluating the quality of life is World Health Organization Quality of Life (WHOQOL). It has six domains, twenty-four facets or dimensions and one hundred items (I.Lupu 2005). The domains and the dimensions of this instrument are:

1. Physical health, which has three dimensions: vigour and fatigue, pain and discomfort, sleep and rest. Each of these dimensions is affected by oral and maxillofacial cancer. Even if pain occurs late, it is paroxistical and exacerbated by functional movements.

2. Psychic health, which has five dimensions: personal appearance, positive and negative emotional states, self-esteem or self-confidence, and cognitive abilities – thinking, learning, memory and concentration. When discussing psychic dimensions, personal appearance and negative emotional states are constantly mentioned. Because of lack of appropriate psychological instruction of patients, discouragement and renunciation to fighting the disease are also frequent reactions. Survival rate at average periods of time (5 or 8 years) is clearly higher in patients who can maintain a state of positive emotional state, of confidence in their own chance and who strictly follow the medical treatment and indications. The patient's compliance with the treatment bears the significance of a better prognostic.

3. The degree of independence, which has four dimensions: physical mobility, performance of daily activities, dependence on medicines and medical devices (for movement, hearing, speech, sight), work capacity. Cancer localized at the oromaxillofacial level does not affect the patient physically in general and does not limit the performance of independent daily activities. However, dependence on apparata and devices, and on oral surgical and maxillofacial prostheses, as well as work capacity are dimensions in which negative values occur and are record-

Table 1. Questionnaires administered in the evaluation of the oral health-related quality of life

The questionnaire and its authors	**Evaluated aspects of quality of dental life**
1. Sociodental scale - (Cushing et al., 1986).	Speaking, chewing of food, smiling, laughing, pain, physical appearance.
2. RAND Dental Index- (Dolan et al., 1991).	Pain, worry, conversation
3. General Oral Health Assessment Index- (Atchison şi Dolan, 1990).	Chewing, feeding, social contacts, physical appearance, pain, worry, shyness or social embarrassment.
4. Dental Impact Profile- (Strauss şi Hunt, 1993).	Physical appearance, feeding, speaking, self-confidence, happiness, social life, interpersonal relationships.
5. Oral Health Impact Profile- (Slade şi Spencer, 1994).	Functional limitation, physical pain, psychical discomfort, physical disability, psychic disability, social disability, handicap.
6. Subjective Oral Health Satus Indicators	Chewing, speaking, symptoms, feeding, communication with other people, social relationships.
7. Oral Health Quality of Life Inventory- (Cornell et al., 1997)	Oral health, nutrition, patient self-assessed oral health, global quality of life.
8. Dental Impact to Daily Living (Leao şi Sheiham, 1996).	Physical comfort, physical appearance, pain, daily activities, feeding.
9. Oral Health-Related Quality of Life (Kressin et al., 1996).	Daily activities, social activities, conversation.
10. Oral Impact on Daily Performance (Adulyanon, et al., 1996).	Capability of self-feeding, capability of speaking, oral hygiene, sleeping, physical appearance, emotional state.
11. UK Oral Health Related Quality of Life Questionnaire (McGrath şi Bedi, 2001).	Feeding, physical appearance, breath odor, social life, romance, self-confidence, sleeping, mood

ed. Malignant oral and maxillofacial pathology regard certain functions, such as speaking, chewing and swallowing.

4. Social health with three dimensions: interpersonal relationships, social support and sexual activity. The dimension of social health is strongly linked to the quality of life of the patient's family and friends. The relationships with the other people, including the family, are changed; the patient can become possessive, selfish and egocentric and as a result the quality of life of both the patient and the other people can be affected. The question arises whether and to what extent the quality of life of the family and friends is also altered.The two latter categories, without suffering from the disease, lead a life full of frustrations beside the person suffering from cancer. Sometimes in order to protect themselves they can abandon the cancer patient which worsens the patient's feeling of alienation. In our experience, such cases exist and we have always encountered shortage of services and of psychology and counseling specialists. The consequences of such cases are bad for both sides and from all points of view. Any investment in solving the issues of counseling and social care is beneficial and efficient from a macrosocial point of view. However, in order to solve these issues sustainability and political support are required.

5. Life environment, with eight dimensions: financial resources, physical movement freedom, work protection and work security, accessibility to and quality of medical and social health care services, housing conditions, access to personal instruction and to information, participation in outdoor activities, quality of physical environment. The patient suffering from cancer is almost always a pensioner on medical grounds, whose legal medical leave has come to an end. This has two immediate and serious consequences: the reduction of income and social isolation. Social and professional frustrations added to the medical ones can readily lead to the patient's discouragement. Such patients also perceive their own life as a sum of mishappenings, inaccessibility and failure. In surveys they will give very bad answers in terms of health-related quality of life.

6. The quality of spiritual life, which implies belonging to a religion or having personal beliefs and convictions. The spiritual aspect is probably the only dimension of the quality of life which can improve. The spectre of impending death or the precipitated realization of the inexorable end, which frequently occurs during physical suffering, make human beings get closer to the spiritual world.

Particular aspects of the clinical picture in maxillofacial cancer can be assessed by means of specific instruments. Thus, certain aspects such as: mucositis, stomatitis, xerostomia, radiotherapy etc., can be evaluated separately.

Results

An absolutely certain prerequisite for the improvement of the oral health-related quality of life is that which motivates, with strong arguments, the responsibility of dental specialists for a current preventive oncological check-up. In our experience only 30% of the oral cancer cases are detected and referred to experts by dental specialists. In the USA 70% of the oral and maxillofacial cancer cases are detected by dental specialists [4,7].

Professionally, Romanian medical specialists have appropriate instruction which allows them to perform preventive oncological check-ups in full competence. However, this type of oncological check-up is not correctly or currently performed. If we wish to examine the causes, as we have previously stated, doctors must have an incentive. We support that the ways, by which doctors' attitude can change, should constitute research objectives with practical applications and

definite positive consequences upon the improvement of the quality of life. The following objectives have been identified:

- raising dental specialists' awareness of the medical and social importance of the activities for the detection of oral and maxillofacial cancer;

- dispensarization and monitoring of patients detected with premalignant lesions in specialized centres organized in this respect;

- initiation of a national project aiming to inform and raise the level of cognitive and behavioral health care education of the population;

- implementing a joint interest in action with the Committee of Dental Specialists in Romania;

- creating material incentive for dental specialists and their success in this action by offering financial bonuses for confirmed cancer detection.

For the prophylaxis of oral and maxillofacial cancer the following steps must taken:

- Awareness of the determining and precipitating factors and their avoidance.

- Detection of premalignant lesions and of cancer in situ.

-Health care education and periodical medical check-up.

- Early detection of oral and maxillofacial cancer.

When referring to patients suffering from cancer all the aspects regarding the quality of life become more complex. The oral health-related quality of life is determined not only by the disease itself but also by the invasive therapy which constitutes the treatment for malignant tumors. Surgical interventions, radiotherapy and chemotherapy are the main ways of treatment employed in oncology. Medical practice allows all the possible combinations between the above ways of treatment. Treatment application can be intended as radical or palleative.

Mutilations or affected physiognomy, functional disorders, sensory or motor neurological modifications, taste and olfactive modifications – all of these can occur following surgery. They are invalidant and can overwhelm the patient by altering their quality of life. When cancer or any other severe disease is present, no other determinant of the quality of life is achieved. Even though other aspects of life are not affected by the disease, such patients cannot find any joy in them.

Chemotherapy affects patients by immunosuppression, hematological disorders, nausea and vomiting, problems of the skin appendages. Moreover, patients are susceptible to hemorrhagical and septical complications following accidents or surgery.

Radiotherapy induces acute and subacute modifications and chronic modifications. Acute side effects mainly refer to mucosa, glands and skin appendages. Chronic modifications are present the whole life of the patient. The irradiated patient remains a risk patient althroughout their life. Surgery in the irradiated area should be performed with caution according to specific protocols. Bone lesions must be protected with flaps after any dental extraction and antibioprophylaxis should always be administered.

In order to evaluate the oral health-related quality of life some of the hundreds of work instruments, that are employed, both in practice and in the speciality literature, can be adapted. On closer examination they are not appropriate for assessing aspects referring to oral and maxillofacial cancer. The people in the group under study ought to have an appropriate level of general knowledge and instruction in order to be able to respond correctly and efficiently to the proposed questionnaires.

Oral rehabilitation of the people with oral and maxillofacial cancer is extremely useful for patients and it improves their quality of life considerably. Certain defects of substance with functional consequences in terms of phonetics, feeding, chewing, phys-

iognomy and swallowing can occur following upper maxillary resections. Oroantral and oronasal communications realize direct links between the natural cavities or between a natural cavity and a pathological one. Obturators constitute surgery equipment with a role of temporary or lasting blockage of pathological communications between two natural cavities or between a natural cavity and a pathological one. There are obturation prostheses for lesser substance default and greater substance default. According to the moment of application they are immediate, secondary and permanent prostheses. Immediate prostheses are applied intraoperatively or postoperatively within the first 48 hours. The secondary prostheses are applied within an interval of time up to 6 months postoperatively and the permanent obturation prostheses are performed only after the prosthetic field has reached a certain stability, namely after about 6 months of the operation. The application of obturation prostheses has the following benefits:

- Control over the tumoral bed is allowed, and thus direct visual access to the operating area is possible at any moment; relapses can be detected in time and biopsies can be carried out at any time when needed.

- They are accessible prosthetic constructions in terms of technology as well as in terms of cost and biocompatibility.

- The functional rehabilitation is very good, better than that acquired by surgical techniques

- Possibility of adapting the obturation prostheses in time.

- Possibility of lining prostheses or rebasing them.

- Possible and beneficial association with epitheses when needed.

The application of an obturation prosthesis in a patient who needs it can have a major beneficial impact by improving the functions of the dental maxillary apparatus and the quality of life- as stated by the patient. The improvements in terms of fonetics and facial esthetics are spectacular and they occur immediately after the application of apparata and oral and maxillofacial surgical prostheses.

The above information indicates that the major negative impact upon the quality of life can be controlled on one hand by efficient prophylaxis pragmatically organized in a representative geographic area and on the other hand by complex oral rehabilitation of the patients with malignant tumors. Both activities are included as objectives of a national or regional programme financed with governmental and research funds.

The quality of life of patients with cancer localized in the head and throat can be evaluated by a QLQ H&N35 [2] questionnaire. The EORTC QOL type of questionnaire was used in more than 3000 studies and it was already translated into 81 languages.

By this questionnaire the quality of life can be evaluated in relation with oral health as the questionnaire has a specific version for this domain. However, there is no official translation into Romanian. Adapted versions of the questionnaire may exist according to the culture and homogenity of a population. For the population of Romania specialists could work on certain adaptations in order for the questionnaire to be more accessible to respondents.

The quality of life has more determinants. They can be as follows (Carr A. J., Higginson I. J., 2001)[3]:

- the extent to which people's hopes and desires get fulfilled according to their expectations;

- the manner in which individuals consider themselves accomplshed in their cultural and axiological context and according to their aims, aspirations, standards and interests;

- subjective self-evaluation of health condition according to the needs required by their health care;

- all that people consider important in their life.

Conclusion

The oral health-related quality of life is a life aspect with implications and multidimensional value. Health constitutes an essential dimension while oral health is important at least from the following perspectives: the patient's esthetics (physical appearance), pain, the comfort of the specific functions of the dental maxillary apparatus (mastication, phonation, swallowing, self-cleaning), social integration, professional accomplishment, and last but not least accessibility to dental health care services.

The complexity of these dimensions turns the choice of relevant dimensions and especially that of items difficult. In our opinion the most important aspects of the quality of life should be analyzed from the patient's perspective. Regarding the most important items in the questionnaires, the multiple choice options should be simplified and adjusted to the Romanian language and to the comprehension ability of the respondents (interviewees). Oral and maxillofacial oncological pathology does not draw the attention and interest of dental specialists as much as other pathologies such as dental caries and parodontopathy.

The social and economic importance of malignant pathology is twofold because of its major impact upon both patients and their quality of life. In Romania there is a shortage of studies and papers on this topic. Moreover, an evaluation project of required treatments and of the disease impact upon the increase in life expectancy becomes a domain of interest for a competent multicentric approach.

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