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Well-being and Coping in Oral and Pharyngeal Cancer Patients

A. Langius and M.G. Lind

Patients with oral and pharyngeal cancer often suffer serious functional impairments. To achieve a broader understanding of the patients' situation it is important to include their appraisal of present functioning. There may also be other factors of importance in the evaluation of well-being such as personality and coping. 42 patients with oral and pharyngeal cancer answered the Oral and Pharyngeal Nursing Care Questionnaires 12 months after treatment. The questionnaires contain 25 conditions (grouped as Therapy- or Psychosocial-related Conditions) from three perspectives: perceived severity, received support and received information. Other questionnaires included in the study were the Sense of Coherence Scale, Somatic Anxiety Scale (from the Karolinska Scale of Personality) and Health Index. The patients were classified with regard to the extensiveness of their surgery. Severe disturbances related to therapy were significantly correlated to weaker sense of coherence ($r = -0.34$), more anxiety ($r = 0.31$) and to worse feelings about general health ($r = -0.37$). The corresponding data with regard to severe disturbances related to psychosocial situation were $r = -0.44, 0.52$ and -0.65, respectively. There was no significant correlation between perceived severity and surgical extensiveness. The support and information concerning Psychosocial-related Conditions were evaluated as less than those concerning Therapy-related Conditions. The level of support and information was not significantly correlated to sense of coherence, anxiety, general health or surgical procedure. The patient's subjective appraisal of the seriousness of the circumstances connected with oral and pharyngeal cancer and its treatment is an important parameter in the care of these patients.

Keywords: well-being, sense of coherence, anxiety, coping, oral and pharyngeal cancer, support, information, subjective measurement

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INTRODUCTION

CANCER OF the oral cavity and pharynx is treated by radiotherapy or surgery or most commonly by a combination of both methods. The disease itself and the different treatment procedures cause the patient functional losses, subjective suffering and discomfort. In the evaluation of treatment efficiency, patient survival is most often used as an indicator of success. However, the importance of quality of life has been stressed lately. The functional disturbances can be measured more or less objectively, but in clinical experience some patients with severe dysfunctions accept their life situations easily, while others with comparatively slight dysfunctions complain bitterly.

Many patients with oral and pharyngeal cancer suffer from serious functional impairments such as eating difficulties, reduced activity, decreased social acitivity, and speech problems for a long time after treatment [1–3]. Even before surgery some patients report poor health, eating problems, anxiety and limitations in functional ability [3, 4]. Limitations of both physical and psychosocial functioning, as well as difficulties in home management, eating and sleeping were exacerbated 12 months after treatment [3]. In most of these studies, the aim was that the symptoms and conditions should be evaluated by the patients as present or not present. The consequences with regard to severity were not asked about. To obtain such a comprehensive understanding of the patients' situations their own appraisals of their present conditions should be included in the evaluation of quality of life and health [5, 6].

There is agreement in the literature that the ability of individuals to cope with stressful situations is also important for their evaluation of their health. Coping has been studied from two different major perspectives. Most commonly, coping is seen as a process aimed at identifying the specific strategies used in specific situations as positive or negative to the health outcome [7]. Denial as a coping strategy has been shown to be an effective initial response to the diagnosis of cancer but poorer as a long-term strategy [8]. On the contrary, recurrence-free survival after 5 and 10 years of breast cancer was significantly more common in patients using denial or

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Correspondence to A. Langius.
Both authors are at the Department of Otorhinolaryngology; A. Langius is also at The Center of Caring Sciences North, Karolinska Institute, Stockholm, Sweden.
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fighting spirit than those patients who responded with stoic acceptance or feelings of helplessness or hopelessness [9]. Several researchers suggest that looking for the best or worst strategies is not an appropriate approach. Instead it is suggested that the mix and the flexibility of coping responses normally used by an individual as adaptive, in contrast to maladaptive, are to be analysed in a specific context [10–12]. The concepts of sense of coherence (SOC) [13] and hardiness [14] offer a more general perspective on coping. Some studies have shown that a strong sense of coherence and a hardy personality are related to subjectively better health [14–16]. The sense of coherence is defined as a relatively stable global orientation that expresses the extent to which one has a pervasive, enduring, though dynamic feeling of comprehensibility, manageability and meaningfulness. The stronger the sense of coherence, the more likely one is to cope successfully with stressful situations in life. A strong sense of coherence showed correlations to fewer function limitations, particularly those of a psychosocial character, in oral and pharyngeal cancer patients 12 months after treatment [3].

Two studies have investigated coping strategies in patients suffering from head and neck cancer in the early stages of treatment and in the early post-operative phase, respectively [17, 18]. The use of approach and avoidance, as coping strategies were found to reduce emotional and symptom distress, but self-care and social affiliation were important in coping with disfigurement and associated dysfunctions. Information and social support are sources described as having a positive impact on coping, independently of diagnosis [19–21]. Health-care providers are described as one important source of support in the care of cancer patients in the form of direct assistance, advice or guidance and emotional support [22].

The main purpose of this study was to analyse the perceived severity of disease and the treatment circumstances in patients with oral and pharyngeal cancer 12 months after treatment, to relate this to coping capacity, somatic anxiety and general health and to describe the support and information they received from health-care providers.

MATERIALS AND METHODS

Sample

The criteria for inclusion in this study were as follows. The patients had to have planned surgical treatment of oral or pharyngeal cancer, to be aged less than 80 years, to be resident in the Stockholm area and to be able to speak and read Swedish and to fill in questionnaires. 71 consecutive patients were eligible to participate in a prospective study between the years 1987 and 1989. 42 of these patients (25 men and 17 women, median age 60 years, range 23–77 years) participated 12 months after the treatment and constituted the group studied. The 29 non-participating patients were excluded for medical reasons ($n=21$) or refusal ($n=8$). (For more detailed information see Langius *et al.* [3].) 15 of the 42 patients also participated in a prospective study described elsewhere [3].

The patients in this study had all received surgical treatment. 13 had undergone minor surgery, for instance, local excision of the tongue border; 17 moderate surgery, for instance, hemiglossectomy; and 12 major surgery, for instance, a subtotal glossectomy. This grouping was subjectively estimated from the medical records by a surgeon (ML), independent of other data. 33 patients (79%) had also received radiation therapy.

Questionnaires

Four self-administered questionnaires were used to collect data.

(1) *Oral and Pharyngeal Nursing Care Questionnaires.* These questionnaires were developed for the purpose of the study. Twenty-five of the initial 31 statements were used, each concerning conditions related to the disease or the treatment of oral and pharyngeal cancer. Each condition could be scored from three analogous view points: perceived severity, received support and received information from health-care providers. The questionnaires have content validity, as long-term clinical experience and the literature were the basis for their development. The requested conditions are shown in Table 1. An example from the questionnaires, as seen from the three perspectives, concerns "difficulties in swallowing". The perception of difficulties in swallowing during the disease was evaluated as *no*, *some*, *rather severe* or *very severe disturbance.* Support from health-care providers concerning difficulties in swallowing during the disease was evaluated as *very good*, *rather good*, *very little* or *none.* Received information concern-

Table 1. Mean and S.D. of each statement in the Oral and Pharyngeal Nursing Care Questionnaires concerning perceived seriousness of disease-specific conditions

Perception of	Mean	S.D.
Surgery-related Conditions		
Difficulties in swallowing	2.6	1.1
Difficulties in eating	2.5	1.1
Problems with chewing	2.5	1.2
Difficulties in speech	2.4	1.0
The surgery	2.0	0.9
Tracheostomy	1.9	0.9
Pain in relation to surgery	1.8	0.9
Tube feeding	1.7	0.9
Disfigurement	1.6	0.9
Problems with breathing	1.5	0.8
Dribbling	1.5	0.9
Total	2.4	1.4
Radiotherapy-related Conditions		
Mouth dryness	2.7	1.1
Alteration in sense of taste	2.1	1.0
The radiotherapy	2.0	1.1
Pain in relation to radiotherapy	1.9	1.0
Alteration in sense of smell	1.7	1.0
Decreased appetite	1.7	1.0
Nausea	1.5	0.9
Total	2.3	1.5
Psychosocial-related Conditions		
The confirmation of the cancer diagnosis	2.8	0.9
Inability to do things as before	2.2	1.2
Worry about the future	2.1	1.1
General worry	2.0	1.1
Decreased social life	1.9	1.1
Pain in relation to disease	1.8	1.0
General fatigue	1.8	1.0
Total	2.3	1.3

Score range 1–4; the higher the score the more the perceived severity, $n=42$.

ing difficulties in swallowing during the disease was evaluated as *good*, *rather good*, *very little* or *none*.

The answer alternatives ranged from 1 to 4. The higher the score, the more the perceived severity of the conditions and the less the perception of received support and information, respectively. In addition, each statement, in all three questionnaires, had the answer alternative, *not applicable*, which is scored 0.

The answers scored 0 (*not applicable*) in the questionnaire concerning the perceived severity of conditions were replaced in the statistical calculations by the score 1 (*no disturbance*). Missing values were replaced by the means of the scores rated by other participants of the same sex and age group. This was not equally feasible in the other two questionnaires concerning received support and information. In these two questionnaires, the conditions scored 0 (*not applicable*) and the missing values were excluded in the calculations of means and standard deviations.

To facilitate the treatment of the data, each condition in the Oral and Pharyngeal Nursing Care Questionnaires were arbitrarily categorised by the authors as related to either surgery, radiotherapy or psychosocial situation, from our experience and knowledge. Some statements were more difficult to categorise than others. Difficulties in eating, difficulties in swallowing and tube feeding could all be seen as effects of both the surgery and the radiotherapy. Furthermore, decreased appetite and nausea could be seen as either effects of radiotherapy or as psychosocial problems. Therefore, these five conditions were correlated to the sum of the other statements in both possible categories and thereafter chosen as belonging to the one which it had the strongest correlation to. The categories are shown in Table 1.

The categories of Surgery- and Radiotherapy-related Conditions were further added to a category called Therapy-related Conditions. Furthermore, all three categories were added together to reflect the Total Perception of Conditions.

The three categories concerning the perceived severity in the Oral and Pharyngeal Nursing Care Questionnaires (Surgery-, Radiotherapy- and Psychosocial-related Conditions) showed Cronbach's [23] alphas of 0.89, 0.85 and 0.87, respectively, indicating high levels of internal consistency.

(2) *Sense of Coherence Scale* (*SOC*). The SOC scale has proved to be psychometrically sound and reliable in several languages including Swedish [15, 24]. The scale includes 29 items. A typical item is: "Do you have the feeling that you are in an unfamiliar situation and don't know what to do?". The 29 items were arranged on a seven-point scale with two anchoring responses (e.g. never and very often). The higher the score, the stronger the sense of coherence. Cronbach's alpha in the present study was 0.89.

(3) *Karolinska Scales of Personality* (*KSP*). The inventory consists of several subscales with a total of 135 items in a four-point Likert-scale format with the alternatives *applies completely*, *applies pretty much*, *does not apply very well* and *does not apply at all*. The KSP is constructed to reflect a biologically-based projection of personality as a marker of different kinds of vulnerability [25]. One of the subscales, Somatic Anxiety (SA, 10 items), was chosen for this study. A typical item is: "I often feel uncomfortable and ill at ease for no real reason". The higher the score, the more the somatic anxiety. In the present study Cronbach's alpha was 0.88.

(4) *Health Index* (*HI*). This scale measures general health and includes nine items regarding feelings of energy, temper, fatigue, loneliness, sleep, vertigo, bowel function, mobility and pain [26]. Each item has a Likert-scale format, ranging from 1 to 4 with the alternatives *very poor*, *rather poor*, *rather good* and *very good*. In this study the item pain was not included. The higher the score, the better the general health. In this study Cronbach's alpha was 0.88.

Procedure

The questionnaires were filled in at the hospital, mostly during the patients' regular visits. All the questionnaires were filled in 12 months after the treatment except for the 15 prospective patients who filled in the SOC Scale and KSP before surgery. One of the investigators (AL) was available to support the patients when needed. Participation was voluntary and confidentiality was guaranteed. The research protocol was approved by the Ethical Committee of the Karolinska Hospital.

Statistical procedure

The differences between the categories were tested by the means of the differences using the t-test. The measure of correlation used was Pearson's product-moment coefficient. Differences between gender were tested by means of the t-test. Internal consistency was tested by Cronbach's alpha [23].

RESULTS

Perceived severity of conditions

The confirmation of the cancer diagnosis (mean 2.8), mouth dryness (mean 2.7), difficulties in swallowing (mean 2.6), difficulties in eating (mean 2.5), problems with chewing (mean 2.5), difficulties in speech (mean 2.4) and inability to do things as before (mean 2.2) were the conditions that, on average, were perceived as most severe by the patients (Table 1).

There was no significant difference between the three groups of conditions. Thus, the degree of severity was similar with regard to the Surgery-, Radiotherapy- and Psychosocial-related Conditions.

The patients' total numbers of rather or very severe perceptions ranged from 0 to 22 (mean 7.4, S.D. 6.3, median 6.0).

Received support

The least support received from health-care providers with regard to applicable conditions was perceived in connection with decreased social life (mean 3.2), dribbling (mean 2.9), general worry (mean 2.7), worry about the future (mean 2.6), general fatigue (mean 2.5), inability to do things as before (mean 2.5) and difficulties in speech (mean 2.4) (Table 2). There were significant differences between the perceptions of received support in the Surgery- and Psychosocial-related Conditions ($P < 0.001$) and in the Radiotherapy- and Psychosocial-related Conditions ($P < 0.05$). Thus, the Psychosocial-related Conditions were evaluated with less received support than the Surgery- and Radiotherapy-related Conditions.

Received information

The least information received about applicable conditions was perceived with regard to worry about the future (mean

Table 2. The number of patients in the Oral and Pharyngeal Nursing Care Questionnaires concerning received support answering each statement as not applicable and the mean and S.D. of those patients who evaluated the statements as applicable

Support on	Not applicable *n*	Applicable *n*	Mean	S.D.	Missing *n*
Surgery-related Conditions					
Dribbling	30	10	2.9	1.1	2
Difficulties in speech	10	29	2.4	1.2	3
Disfigurement	26	14	2.1	1.1	2
Difficulties in swallowing	9	30	2.1	1.0	3
Problems with breathing	29	10	2.0	1.1	3
Problems with chewing	16	23	2.0	1.0	3
Difficulties in eating	7	33	2.0	0.9	2
Tube feeding	12	28	1.7	0.8	2
Tracheostomy	13	27	1.6	0.9	2
Pain in relation to surgery	12	28	1.5	0.8	2
The surgery	3	37	1.4	0.6	2
Total			1.8	0.7	
Radiotherapy-related Conditions					
Alteration in sense of smell	27	11	2.2	1.3	3
Mouth dryness	8	29	2.1	1.0	5
Alteration in sense of taste	17	21	2.0	1.1	4
Decreased appetite	20	18	1.9	1.0	4
Pain in relation to radiotherapy	17	23	1.7	0.9	2
Nausea	28	11	1.6	0.9	3
The radiotherapy	9	31	1.5	0.7	2
Total			1.9	0.9	
Psychosocial-related Conditions					
Decreased social life	26	12	3.2	1.2	4
General worry	20	20	2.7	1.1	2
Worry about the future	15	25	2.6	1.3	2
General fatigue	16	23	2.5	1.2	3
Inability to do things as before	26	12	2.5	1.2	4
The confirmation of the cancer diagnosis	2	36	2.1	1.1	4
Pain in relation to disease	16	24	1.8	0.9	2
Total			2.4	1.0	

The missing values are also given. Score range 1–4; the higher the score, the less the perception of support received.

3.1), general worry (mean 3.1), decreased social life (mean 3.1), inability to do things as before (mean 2.9), general fatigue (mean 2.8), problems with breathing (mean 2.8), difficulties in swallowing (mean 2.5) and dribbling (mean 2.5) (Table 3). There were significant differences between the received information in the Surgery- and Psychosocial-related Conditions ($P<0.05$) and in the Radiotherapy- and Psychosocial-related Conditions ($P<0.01$). Thus, the information concerning the Psychosocial-related Conditions was evaluated as less than the information concerning the Surgery- and Radiotherapy-related Conditions.

With regard to the need of support or information the majority of the patients reported the conditions related to breathing, alteration in sense of smell, inability to do things as before, decreased social life, dribbling and disfigurement as not applicable.

Correlations

The perception of Therapy-related Conditions was correlated significantly to the score values on the Sense of Coherence Scale ($r=-0.34$), the Somatic Anxiety Scale ($r=0.34$) and the Health Index ($r=-0.37$). It was not significantly correlated to the extensiveness of surgery ($r=0.15$), age ($r=-0.30$) or gender ($r=0.24$) (Table 4). Thus, the stronger the sense of coherence, the less the somatic anxiety and the better the perceived general health, the less the serious perception of conditions related to surgery or radiotherapy.

The perception of Psychosocial-related Conditions was correlated even more significantly to the score values on the Sense of Coherence Scale ($r=-0.44$), the Somatic Anxiety Scale ($r=0.52$) and the Health Index ($r=-0.65$). It was not significantly correlated to the extensiveness of surgery ($r=-0.06$) but was significant with regard to age ($r=-0.36$) and gender ($r=0.34$) (Table 4). Thus, the stronger the sense of coherence, the less the somatic anxiety, and the better the perceived general health, the less serious perception of psychosocial conditions. Men perceived seriousness less than women and the elderly less than the younger patients.

The Sense of Coherence Scale scores were divided into five groups each consisting of 20% of the scores, in order to visualise the distribution of perceived seriousness of conditions between lower and higher SOC scores (Fig. 1).

The evaluation of received support and information with

Table 3. The number of patients in the Oral and Pharyngeal Nursing Care Questionnaires concerning received information answering each statement as not applicable and the mean and S.D. of those patients who evaluated the statements as applicable

Information on	Not applicable *n*	Applicable *n*	Applicable Mean	Applicable S.D.	Missing *n*
Surgery-related Conditions					
Problems with breathing	26	12	2.8	1.0	4
Difficulties in swallowing	7	32	2.5	1.0	3
Dribbling	26	13	2.5	0.9	3
Disfigurement	18	22	2.4	1.1	2
Difficulties in speech	9	30	2.4	1.1	3
Problems with chewing	12	26	2.4	1.0	4
Difficulties in eating	8	30	2.3	1.0	4
Tracheostomy	14	24	2.2	1.0	4
Pain in relation to surgery	10	29	2.1	1.2	3
Tube feeding	10	28	2.1	1.0	4
The surgery	0	39	1.7	0.8	3
Total			2.2	0.9	
Radiotherapy-related Conditions					
Alteration in sense of smell	21	17	2.3	1.1	4
Alteration in sense of taste	11	28	2.2	1.0	3
Decreased appetite	11	27	2.2	1.0	4
Nausea	21	17	2.2	1.0	4
Mouth dryness	6	33	1.9	0.8	3
Pain in relation to radiotherapy	12	27	1.8	0.9	3
The radiotherapy	9	30	1.4	0.6	3
Total			2.1	0.9	
Psychosocial-related Conditions					
Worry about the future	13	25	3.1	1.1	4
General worry	14	24	3.1	1.1	4
Decreased social life	20	18	3.1	0.9	4
Inability to do things as before	20	18	2.9	1.1	4
General fatigue	13	25	2.8	1.1	4
Pain in relation to disease	12	27	2.3	1.2	3
The confirmation of the cancer diagnosis	0	40	1.8	0.8	2
Total			2.4	0.9	

The missing numbers are also given. Score range 1–4; the higher the score, the less the perception of information received.

Table 4. Correlation between perception of conditions related to oral and pharyngeal cancer and Sense of Coherence (SOC), Somatic Anxiety (SA), Health Index (HI), gender, age and extensiveness of surgery. The more serious the perception, the stronger the SOC, the more the SA, the older the age and the more the extensive surgery. Women had higher scores than men. r*-values are given*

Subjective perception of	SOC *r*	SA *r*	HI *r*	Age *r*	Gender *r*	Surgery extensiveness *r*
Therapy-related Conditions (surgery and radiotherapy)	−0.34*	0.34*	−0.37*	-0.30^{ns}	0.24^{ns}	0.15^{ns}
Psychosocial-related Conditions	−0.44†	0.52‡	−0.65‡	−0.36*	0.34*	-0.06^{ns}

ns = non significant; * = $P<0.05$; † = $P<0.01$; ‡ = $P<0.001$.

regard to Therapy- and Psychosocial-related Conditions was not significantly correlated to the SOC Scale, the SA Scale, the HI, surgical extensiveness, age or gender. Thus, the sense of coherence, somatic anxiety, general health, surgical procedure, age and gender did not influence the evaluation of received support and information.

Intercorrelations between the SOC, SA Scale and the HI

The scores on the SOC scale were correlated significantly with the scores on the SA Scale ($r = -0.62$, $P<0.001$), as well as with scores on the Health Index ($r=0.47$, $P<0.01$). Thus, the stronger the sense of coherence, the less the somatic anxiety and the better the feeling of general health. The scores

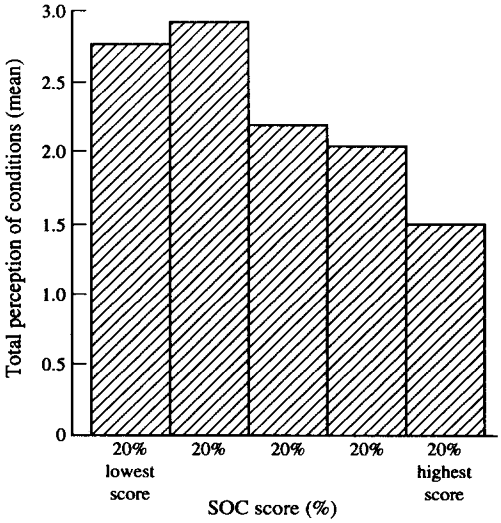

Fig. 1. The mean values of the Total Perception of Conditions as related to the SOC scores divided into five groups, each containing 20% of the SOC scores. The lowest 20% ($n=8$) scores ranged between 83 and 130 points, the next 20% ($n=10$) ranged between 131 and 147 points, the 20% ($n=8$) scores in the middle ranged between 150 and 153, the next 20% ($n=9$) ranged between 154 and 167 and the highest 20% ($n=7$) scores ranged between 168 and 186 points.

on the SA Scale were correlated significantly with the scores on the Health Index ($r=-0.66$, $P<0.001$). Thus, the less the somatic anxiety the better the feeling of general health.

Women had significantly lower ($P<0.001$, mean 136.5, S.D. 22.4) scores than men (mean 158.4, S.D. 16.9) on the Sense of Coherence Scale and women scored higher (mean 21.7, S.D. 6.8) on the Somatic Anxiety Scale than did the men (mean 14.5, S.D. 3.9). Thus, women had a weaker sense of coherence and more somatic anxiety. With regard to the HI, there were no significant diferences between women (mean 24.2, S.D. 5.1) and men (mean 25.4, S.D. 3.9).

DISCUSSION

The consequences of cancer and its treatment can be described on different levels. Objectively proven injuries to biological tissues are demonstrable anatomically and histopathologically. The functional disturbances can also be measured and evaluated objectively in relation to normal functions. However, the patients' subjective evaluations of functional losses may differ from objective estimations. Finally, the impact of the changed life situation on well-being is exclusively a subjective judgement. The perceptions of the severities of different conditions connected with oral and pharyngeal cancer and its treatment are important parameters that should be added to data on survival and functional impairments.

The patient sample in this study was reduced for medical reasons or by patient refusal. The patients were often in a poor condition and it is well known that patients with these diagnoses are often not able to fulfil planned protocols [27, 28]. Our patients were all examined at 12 months after treatment. However, 15 of the patients who also participated in a prospective study [3] answered the Sense of Coherence Scale and the Somatic Anxiety Scale before the surgery. As the developers [13, 25] of these scales suggest that they measure stable traits which do not in substance change over time, it may be presumed that this bias had no relevant influence on our results.

The Oral and Pharyngeal Nursing Care Questionnaires were developed in order to obtain an instrument suitable for clinical work and was intended to give a summary of the patients' appraisals of the first 12 months of the disease. The questions were based on general experience and knowledge of the problems which these patients often have. Most of the instruments available today, such as the Sickness Impact Profile and the EORTC (European Organization for Research and Treatment in Cancer) Quality of Life Questionnaire, describe the impact of cancer but do not include the patients' appraisals with regard to suffering [29, 30]. However, Ferrans has recently developed an instrument that measures the quality of life of patients with cancer which takes into account individual values and satisfaction [31].

The Sense of Coherence (SOC) Scale has been described by Antonovsky and used by several authors and found useful in the evaluation of the patient's capacity to cope with difficult life situations [15]. The Somatic Anxiety Scale is a subscale of the Karolinska Scales of Personality, which is designed to mirror different kinds of vulnerability [32]. The Health Index is suggested to be an instrument of use in the clinical setting in screening information about general health [26].

The perceptions of Surgery-, Radiotherapy- and Psychosocial-related Conditions were equal in seriousness. The worst experience was the confirmation of cancer diagnosis, followed by mouth dryness, difficulties in swallowing, eating and chewing. Difficulties in speech, worry about the future, general worry and the surgery and radiotherapy procedures were somewhat less embarrassing.

These findings confirm the general clinical impression and published opinions [2, 33].

The support given by the health-care providers was perceived as most insufficient as regarded decreased social life, dribbling problems, general worry, worry about the future, general fatigue, inability to do things as before and alteration in the sense of smell. The Psychosocial-related Conditions were significantly perceived as less well supported than the Surgery- and Radiotherapy-related Conditions, which may reflect the traditional concentration on survival, wound-healing and functional losses in clinical work. It is worth noting that the ward has for about 8 years paid special attention to psychosocial complications in the cancer treatment among both patients and personnel. Experienced nurses in a primary nursing organisation with responsibility for the individual patient's well-being and a specially interested, social worker have worked on the care of these patients. The patients have been asked to join patients' circles that meet every month to discuss psychological, social and other problems. Nevertheless the lack of help with psychosocial difficulties was ranked as greater than the lack of help with Surgery- and Radiotherapy-related Conditions. It is evident that the psychosocial aspects need even more resources, preferably introduced, at least for selected patients, even before advanced diagnostic or therapeutic procedures of oral and pharyngeal cancer. In a review of 22 controlled studies of psychological interventions in cancer patients it was concluded that such treatment has beneficial outcome in psychological as well as somatic functioning of the patients [34].

The perception of the received information was scored as least sufficient as regard the patients' worries about the future, general worry, decreased social life, inability to do things as before, general fatigue, problems with breathing, difficulties in swallowing, dribbling, disfigurement, etc. The patients perceived themselves as less well informed about the psychosocial aspects compared with the Surgery- or Radiotherapy-related Conditions. Also these results should be evaluated with the knowledge that the ward is specially organised and has a special interest in this type of patient. It is evident that the importance of the psychosocial aspects is evaluated higher by patients than by the medical professionals. The need for more extensive information is obvious.

The most interesting finding was that the perception of the seriousness of both Therapy- and Psychosocial-related Conditions was correlated significantly to the Sense of Coherence Scale, the Somatic Anxiety Scale and the Health Index but not to the extensiveness of surgery. In an earlier work we have shown that the Sickness Impact Profile (measuring functional status) was correlated to the extensiveness of surgery in the very same patients [3]. These results demonstrate the difference between the impact of the disease and the treatment on function as evaluated by the SIP, and the perception of the seriousness of the conditions. Evidently the perception of the seriousness of the situation was correlated better to psychological variations between individuals than to variations in the extensiveness of surgery between individuals.

Consequently the loss of function varied with the extensiveness of surgery, but the perception of the seriousness of these conditions did not vary with the extensiveness of surgery but mainly with the personality. The sense of coherence and the somatic anxiety seem to be important in predicting the patients' perceptions of their post-treatment condition of life. Women and younger people were more vulnerable, showing that age and gender also have some impact.

The goal of cancer treatment is objectively survival and subjectively well-being. Therefore, optimal treatment must be based on knowledge of objective facts about the patient and his or her disease. Equally important is knowledge of his or her personality and a prerequisite for coping as a basis for the nursing care which will have the major impact on the final, perception of post-treatment conditions and general well-being.

The results obtained are strong arguments for organised, pre-treatment, psychological and social inquiries that can be used in decision-making about the choice of treatment and supporting measures.

CONCLUSIONS

(1) Perceptions of the seriousness of disease-specific conditions in this group of patients mainly confirmed the generally accepted impression.

(2) Perception of the support and information given demonstrated an insufficiency mainly in the psychosocial aspects, and therefore there is a need for more resources to be spent on these aspects.

(3) Subjective perceptions of the seriousness of both Therapy and Psychosocial-related Conditions were correlated in this group of patients with oral and pharyngeal cancer to anxiety and coping but not with the extensiveness of surgery. An organised pretreatment inquiry about coping, personality traits and social conditions seems to be justified.

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