ISSN: 2392-7674
https://proscholar.org/jcis
https://proscholar.org/media

J Clin Invest Surg. 2019; 4(1): 27-31
doi: 10.25083/2559.5555/4.1/27.31

Received for publication: November 14, 2018
Accepted: January 24, 2019

Research article

Quality of life challenges for larynx cancer patients

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Abstract

Laryngeal cancer continues to raise challenges for specialists all over the world even if there has been improvement in its diagnosis, therapeutic options and comprehensive view of the malignant tumor process. The decision of the oncological committee is not subject to the preferences of the patient, since in terms of therapy, this is the role of the specialist treating the patient. It is very important that the patient should know the implications of total surgery and that the patient has a poorer quality of life after total laryngectomy. The quality of life of these patients has been assessed by means of European quality of life questionnaires in terms of physical status and symptoms, social integration and psycho-emotional status. The absence of voice, the impairment in swallowing, the esthetic impairment, the family and social reintegration need to be addressed by the oncological team so that the quality of life of these patients be at optimal levels. The specific questionnaires for the quality of life evaluation need to be used for any patient with laryngeal cancer and key points need to be addressed individually to meet each patient's expectations.

Keywords : psycho-emotional status, oncology therapy, larynx cancer

Highlights

- ✓ Larynx cancer is not only a life-threatening disease but also a condition that alters lifestyle of the patients (absence of voice, the impairment in swallowing, the aesthetic impairment, family and social reintegration).
- ✓ The specific questionnaires for quality of life evaluation need to be used for any patient with larynx cancer and key points need to be addressed individually to meet each patient's expectations.

To cite this article: Popescu B, Ionescu R, Oașă ID, Bertesteanu SVG, Balalau C, Scaunasu RV, Lupușoru MD. Quality of life challenges for larynx cancer patients. *J Clin Invest Surg*. 2019; 4(1): 27-31. DOI: 10.25083/2559.5555/4.1/27.31

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Introduction

Laryngeal cancer continues to raise challenges for specialists all over the world even if there has been improvement in its diagnosis, therapeutic options and comprehensive view of the malignant tumor process. This type of cancer benefits from surgical removal, radiotherapy with chemotherapy in single or concurrent therapy with radical intent. When dealing with a patient with laryngeal cancer, the specialist has to present the therapy options to the patient which include the ones mentioned before. Depending on the stage of the disease, surgery might be the best option for therapy (1).

The decision of oncological therapy in laryngeal cancer is something that is being discussed by the Oncological Committee and afterwards the therapy plan is performed (2). In selected cases, surgical therapy for laryngeal cancer means that the entire organ needs to be removed in a radical surgery, i.e. total laryngectomy. The outcome of surgery has to incline towards oncological safety, while the oncological radical therapy function should have a 2nd perspective. After the larynx is removed, the patient will face the situation of a permanent tracheostomy, the absence of voice and normal feeding through the mouth. However, voice rehabilitation can be performed with a primary intent during radical laryngeal surgery or, in a second stage, after the oncological therapy has been completed.

The decision of the Oncological Committee is not subject to the preference of the patient in terms of therapy, this being the role of the specialist treating the patient. It is very important that the patient should know the implications of total surgery and a poorer quality of life after total laryngectomy. The quality of life depends on the ability of the patients to eat through their mouth, to speak and to be reintegrated in the social environment (3).

Cancer is a pathology which alters lifestyle in a fundamental way for the patients and their relatives and these patients are expected to experience psychological impairment such as denial, fear, anxiety, depression, including suicidal intent. Complete oncological therapy has various implications on each patient. Therefore, there is the need for psychological therapy and follow-up for the disease so that the patients have a lower rate of psycho-somatic decline.

Current theories about laryngeal cancer presume that the appearance of the malignancy is the result of an evolutionary process in different multiple stages. The appearance of cancer must be put into the perspective of multiple factor association and not as a cause-effect relationship (4). There is a direct implication of the presence of external factors linked to the multiple genetic defects in the appearance of laryngeal cancer. Tobacco and alcohol consumption along with urban environment gases are the most important factors linked to the appearance of malignancies in the upper respiratory tract (5).

Another important external factor is considered to be the viral infection with HPV and HIV (6). These viral infections are more linked to the appearance of pharyngeal and oral cancer but still, they are also present in patients who develop laryngeal cancer. After being diagnosed with laryngeal cancer and after following a therapeutic plan, patients are required not to smoke nor consume alcohol, this being an important lifestyle change. According to Weider et al., the risk of developing laryngeal cancer increases by 13 times after being exposed for 10 years to tobacco consumption. The risk of developing laryngeal cancer due to tobacco consumption depends on the amount of smoked cigarettes and it is not time dependent, according to Flanders and Rothman. There are no significant data to confirm that smoking as a risk factor for laryngeal cancer is influenced by factors such as age, race or education level (7). Considering all these, the habit of smoking in laryngeal patients that undergo oncological therapy needs to be excluded from their lifestyle. There are some cases in which laryngeal cancer patients do not cease the consumption of tobacco which increases the risk of recurrence.

Materials and Methods

Due to the fact that radical surgery implies large incisions in the neck region, there is a possibility of esthetic impairment and a low self-esteem for the patient in terms of family and social relationships. In this paper, the authors present a study conducted on a series of patients who underwent total laryngectomy and had to fill in questionnaires on the quality of life to better understand the fears, the needs and the psychosomatic impairment that they experience.

Patients with laryngeal cancer are especially vulnerable due to the effects of the malignant pathology especially those coming from lower economic and social strata. This can involve the fact that these patients have a lower social integration rate due to the fact that medical knowledge and social relations are poorer in a rural environment. Patients who find themselves in this situation have to benefit from comprehensive medical services in the hospital and at home to prevent physical and psychological alterations of environment in their personal life.

Within a 3-year time interval, 278 patients with laryngeal cancer were treated in “Coltea” ENT Clinic and were evaluated in terms of their life quality. Only 120

patients went on to meeting the inclusion criteria, the diagnostic procedure, the therapeutic management and the follow-up according to the study protocol.

Results

The study included 93 male patients and 27 female patients. 101 malignant tumors were diagnosed as squamous cell carcinoma, 7 tumors were adenocarcinoma and 12 tumors verrucous carcinoma. All patients were classified as stage 3 and 4 laryngeal cancer. The nutritional status of the patients was assessed at admission using the NRS 2002 scaled score and 77 patients were classified as severely malnourished. The psychological status was evaluated with specific questionnaires and 87 patients suffered from anxiety at admission and 7 patients were diagnosed and treated for depression prior to the oncological therapy. Due to the upper respiratory tract insufficiency, 21 patients have undergone tracheostomy prior to the beginning of the surgical therapy.

The quality of life of these patients has been assessed by means of European quality of life questionnaires in terms of physical status and symptoms, social integration and psycho-emotional status. Physical status and symptoms have been assessed in terms of functional activities, strength, fatigue, sleep and rest, general physical status and pain.

All parameters were successively investigated at admission, during admission, six months after surgery and 12 months after surgery. Social integration has been evaluated regarding the stress caused by family, the social role and social interaction, the sexual function, the esthetic aspect, leisure activities, isolation, financial aspects and activity at the workplace.

Psychological status and psycho-emotional status have been discussed with the patients in terms of control, anxiety, depression, fear of recurrence, attention and the stress caused by surgery. All the data were gathered from specific questionnaires related to the moment of admission, hospitalization, 6 months after surgery and 12 months after surgery.

Discussions

The functional activities of laryngeal cancer patients showed an important prevalence of unsatisfactory status of the patients according to the criteria the authors took into consideration. 89% of the patients considered that the functional activity did not improve while being admitted for surgical therapy. This is correlated to the stage of the disease and the progression of oncological therapy.

Although the functional activity did not improve while performing the oncological therapy, 56% of the patients said that their physical strength increased after the oncological therapy was concluded. Satisfaction rates in terms of muscular strength and fatigue have increased in the group of study from admission to the conclusion of oncological therapy from 2.5 to 4 folds. This parameter shows that the oncological therapy, although being stressful to the entire organism, leads to the treatment of the cause of functional impairment.

Restful sleep and optimum use of rest periods were appreciated by the patients as satisfactory, only 3 patients stating that they had problems sleeping and resting 12 months after the oncological therapy.

Pain was significantly correlated with the stage of the disease, with the type of surgery performed, so that a more extensive surgical intervention had a lower satisfaction rate and a higher impairment in the quality of life. However, pain was evaluated by means of a specific scale and pain therapy was optimized according to the radical type of surgical intervention and pain threshold for each patient.

The lack of medical education and the functional and esthetic implications of total laryngectomy have been poorly accepted by the family of the patients. However, after completing the oncological therapy, family was considered by the patients one of the major key points in solving the psycho-somatic impairments caused by the oncological therapy.

Social environment dependency of patients with total laryngectomy has been investigated throughout the study and it was considered to be a favorable one, helping the patients regain their healthy lifestyle and their normal social life.

The sexual function of the patients has been considered by 85% of them as being favorable correlating it with increased self-esteem during oncological therapy and esthetic rehabilitation. The esthetic aspect is another key point in the psychological status of the patients and the quality of life. It has been considered low by the patients at the beginning of the therapy, since scarring and the side effects of radiotherapy leading to skin damage were present. However, when the oncological therapy was concluded, the self-esteem ended up to be satisfactory for 92% of the patients. This is correlated with the acceptance of therapy and the normal follow-up for these patients.

The improvement of leisure activities has been correlated with the improvement of physical status and the improvement of family relationships along with the favorable evolution of social reintegration. The acceptance of the disease, therapy and side effects of the oncological therapy were important aspects for patients to regain normal psychological status in terms of lowering anxiety and increasing self-esteem. The involvement of the family and friends in the oncological therapy and its side effects was considered by the patients to be satisfactory in 91% of the cases.

Psychological counselling is very important for laryngeal cancer patients that undergo oncological therapy and needs to be started from admission and continued throughout the oncological therapy until the patient has an optimal psychological status, even after therapy was concluded.

The perspective of recurrence and multiple malignancies needs to be discussed with cancer patients and they do not need to be alarmed if signs are present and they should present themselves for normal follow-up.

This perspective caused a moderate degree of anxiety for 20% of the patients and they underwent psychological counselling for a period of 20 months from the beginning of the oncological therapy. Psycho-emotional status implies variations in cognitive function, intellectual activities, family and social life. As a key aspect of the social life, only 10 patients out of 120 returned to the jobs that they had prior to oncological therapy. This is still an aspect that needs to be discussed and improved due to the fact that work strength is lost although there is the possibility for these patients to be reintegrated in an active workplace and regain social activities that will improve their quality of life and their financial status.

The financial status is a key point in the decision of oncological therapy for 62% of the patients and this is correlated with the fact that these patients come from a rural environment where poverty is at high rates. In 15 cases, patients consider that they needed money to complete the oncological therapy even though the entire therapy is covered by the National Healthcare system. In 23 cases, this kind of stress meant that the patients presented themselves in a late stage to the ENT specialist.

Conclusions

Laryngeal cancer patients face an alteration of their lifestyle and this pathology is life-threatening following its natural evolution. These patients need to undergo oncological therapy to increase their chances of survival. The oncological therapy includes surgery, radiotherapy and chemotherapy and the decision of the oncological therapy is being evaluated by the Oncology Committee. The quality of life for laryngeal cancer patients that undergo oncological therapy is subject to evaluation at admission to the hospital and throughout the oncological therapy. The absence of voice, the impairment in swallowing, the esthetic impairment, family and social reintegration need to be addressed by the oncological team so that the quality of life of these patients be at optimal levels. The specific questionnaires for the quality of life evaluation need to be used for any patient with laryngeal cancer and key points need to be addressed individually to meet each patient's expectations.

Conflict of interest disclosure

There are no known conflicts of interest in the publication of this article. The manuscript was read and approved by all authors.

Compliance with ethical standards

Any aspect of the work covered in this manuscript has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

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