La qualité de vie des patients avec laryngectomie totale

Introduction. La qualité de vie des patients après une laryngectomie totale est influencee à la fois par la maladie et par les interventions thérapeutiques radicales. Après un traitement chirurgical, une rééducation vocale, ainsi qu’une rééducation pulmonaire et de déglutition, sont nécessaires.

L’objectif de l’étude était d’évaluer la qualité de vie des patients atteints de laryngectomie totale.

Matériaux et méthodes. Un questionnaire de 14 questions a été adressé au hasard à 100 patients avec laryngectomie qui présentent à l’hôpital clinique Coltea, Bucarest, Roumanie, sur une période de trois mois.

Résultats. Cinquante patients ont répondu qu’ils n’avaient aucune douleur. Concernant les activités quotidiennes, 34 patients ont répondu qu’ils étaient aussi actifs qu’avant la chirurgie. Concernant leur apparence, 50 patients ont répondu qu’il n’y a pas de...
INTRODUCTION

The World Health Organisation defines health as a "state of complete physical, mental and social well-being, nor merely the absence of disease", while the quality of life is a "complex concept defined as an individual’s perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards and concerns."

Total laryngectomy represents a radical surgery, that affects the patients’ quality of life. Also, employment or resources are challenges a laryngectomee often encounters. Connecting in the society is difficult as they have trouble communicating and also, the lack of medical education makes people avoid or be afraid of patients with trach tubes. These patients need psychotherapy and counselling in order to understand and cope with every day challenges.

The quality of life of patients after total laryngectomy is usually affected by both the disease and the radical therapeutic interventions. The main entities in assessing patients with locally advanced laryngeal cancer are the quality of life and the health status. After the surgical treatment, vocal rehabilitation, along with pulmonary and deglutition rehabilitation, are necessary. Also, psychotherapy and counselling are key parts of the treatment.

LIKE patients diagnosed with other types of carcinoma, patients with laryngeal cancer are often unable to fulfil their basic needs. Dedicated physicians, nurses and therapists must work with these patients and help them in the recovery.

THE OBJECTIVE OF THE STUDY was to assess the quality of life in patients with total laryngectomy.

MATERIALS AND METHODS

In order to assess the quality of life and health status in patients with total laryngectomy, a questionnaire with 14 questions was randomly addressed to

Conclusions. The quality of life is influenced by the patients' appearance after total laryngectomy, and their ability to maintain everyday activities. Swallowing, taste and saliva quality have a great impact on the quality of life of patients with total laryngectomy and also influence their nutritional status.

Keywords: quality of life, total laryngectomy, voice rehabilitation.
patients who presented to Coltea Clinical Hospital, Bucharest, Romania, for follow up over a period of three months. The inclusion criteria were patients who have underwent total laryngectomy, at least one month after surgery. We excluded from the study the patients with neurological disabilities or any other severe pathologies, not related to laryngeal carcinoma, that affected their understanding. Patients with any other severe pathologies that may affect their quality of life were also excluded from the study.

The study included 100 patients, both patients who benefit from voice rehabilitation and patients who did not benefit from this procedure. We assessed the ability to communicate, swallow, anxiety or depression and health status. All patients have given their written consent and the questionnaire was approved by the Ethics Committee. All the patients included in the study had radiotherapy and 30% received chemotherapy as well.

The questionnaire assessed the ability to communicate, swallow, depression and anxiety and their current health status. All patients had completed the questionnaire themselves. We used Microsoft Excel to collect and process the data.

**RESULTS**

Regarding pain, 50 patients answered that they felt no pain, while 34 answered they have mild pain that does not need medication. Only 10 patients had moderate pain that requires regular medication and 6 patients complaint of severe pain controlled only by prescription pills (Figure 1).

Regarding everyday activities, 34 patients answered that they were as active as before surgery, 28 answered that there are moments when they can’t keep up as before, other 28 patients complained of feeling often tired but still get out of the house every day, while only 10 answered that they spend most of the time inside (Figure 2).

Regarding their appearance, the results were surprising, 30 patients answered that there is no change, or the change is minor, while 39 answered that their appearance bothers them, but they remain active and 5 answered that they feel disfigured and limit their activity, while 6 patients answered that they cannot be with other people because of their aspect.

In western countries, associations of laryngectomees have developed necklaces and other accessories for the trach tube in order to improve their aspect (Figure 3).

Most patients with head and neck malignancies are underweight or even cachectic, especially those in advanced stages. Nutritional assessment is very important in any oncological patient, as they need special nutritional support. Their ability to swallow and to taste food must be evaluated. In our study, 34 patients answered that they could swallow as well as before surgery, other 34 patients answered that they cannot swallow certain foods, while 21 answered that they only swallow liquid food or are dependent on a feeding tube. This was directly related to the size of the tumour and how large the pharyngeal resection is necessary in order to have negative margins (Figure 4).

Regarding mastication, 50 patients could eat soft food, but not solid food, while 34 could chew as well

![Figure 1. Results regarding the presence of pain in patients with total laryngectomy.](image-url)
as before surgery. 16 could not even chew soft foods (Figure 5).

Speech is a very important aspect for patients with laryngeal cancer, so doing voice rehabilitation per primam, in the same time with total laryngectomy, represents the gold standard in the surgical treatment of advanced laryngeal carcinoma. In this study, 50 patients could speak with a voice prosthesis,
10 by using the oesophageal voice and 5 patients with
the help of a laryngophone. 20 patients answered that
they could not make any sounds, but their family usu-
ally understands what they are trying to say, while 15
patients could not speak and have a hard time mak-
ing themselves understood (Figure 6).

Regarding smell, most patients have a lack of
smell or don’t usually sense smell, this emphasizing
once more the need for specialised therapy of olfacto-
ry rehabilitation and the need to make these methods
known to the entire ENT community. 35 patients an-
swered that they never sense smells, 38 answered that
they don’t usually sense smells, 22 can smell intense
scents and only 5 patients answered that their smell
is the same as before surgery (Figure 7).

Taste is very important in assessing the quality
of life and maintaining an optimal nutritional status.
In our study, 50 patients could taste food or most
foods normally, while 30 patients answered that they
could taste some foods and 20 could not taste any
food (Figure 8).

From the 100 patients, 61 patients answered the
question regarding their saliva which is of normal
consistency and 25 answered that they have less saliva
but it’s enough. Only 10 patients answered they have
too little saliva, while 4 answered that they have no

![Results regarding swallowing in patients with total laryngectomy](image1.png)

**Figure 4.** Results regarding swallowing in patients with total laryngectomy.

![Results regarding mastication in patients with total laryngectomy from the group of study](image2.png)

**Figure 5.** Results regarding mastication in patients with total laryngectomy from the group of study.
RESULTS REGARDING SPEECH IN PATIENTS WITH TOTAL LARYNGECTOMY FROM THE GROUP OF STUDY.

| Description                                                                 | Percentage |
|----------------------------------------------------------------------------|------------|
| I can not speak and I am having a hard time making myself understood       | 15%        |
| I can not make sounds, but my family usually understands what I am trying to say | 20%        |
| I can speak with the help of a laryngophone                                | 5%         |
| I can speak with esophageal voice                                          | 10%        |
| I can speak with a voice prosthesis                                        | 50%        |

Figure 6. Results regarding speech in patients with total laryngectomy from the group of study.

THE RESULTS REGARDING SMELL IN PATIENTS WITH TOTAL LARYNGECTOMY FROM THE GROUP OF STUDY

| Description                        | Percentage |
|------------------------------------|------------|
| My smell is the same as prior to surgery | 5%         |
| I can smell intense scents         | 22%        |
| I don't usually sense smells       | 38%        |
| I never sense smells               | 35%        |

Figure 7. Results regarding smell in patients with total laryngectomy from the group of study.
saliva. This is a common side effect of radiotherapy (Figure 9).

Regarding activity, 67 patients answered there are times when they cannot keep up with their old pace, but they get out of the house and enjoy life. This is a satisfying response, as we aim for a good quality of life for these patients, even after extensive surgery for laryngeal cancer. Eleven patients answered that they were as active as ever, while 16 said there are many things they wish they could do but
Figure 10. Results regarding everyday activity in patients with total laryngectomy from the group of study.

Figure 11. The presence of any discomfort regarding the shoulder after total laryngectomy and neck dissection in patients from the group of study, with advanced disease.
cannot, 5 patients answered that they don’t go out because they don’t have the strength and one patient answered that he cannot do anything that brings him joy (Figure 10).

Regarding the pain felt in the shoulder after surgery, 40 patients answered that they had no problem with their shoulder, 35 complained about weakness or pain, 16 felt their shoulder stiff and 9 had limited

Figure 12. Results regarding the mood of patients with total laryngectomy from the group study.

Figure 13. Results regarding the presence of anxiety in patients with laryngeal carcinoma who benefit from total laryngectomy, from the group study.
movements. All these patients had advanced disease with metastatic lymph nodes (Figure 11).

About their mood, most of them (38 patients) answered that they were not in a good mood, nor depressed, while 36 said their mood is generally good and only occasionally affected by cancer. 6 patients answered that their mood is excellent while 15 patients were somewhat depressed and 5 were extremely depressed. It is important to stress the importance of psychotherapy and specialized counselling, as important parts of the oncological treatment and the need to be helped by the government.

About their anxiety, most of them admitted of being a little anxious (64 patients), while 28 patients answered that they are not anxious. 6 were anxious and 2 very anxious (Figure 12,13).

**DISCUSSION**

Total laryngectomy represents a radical surgery, necessary in advanced laryngeal malignancies, with a great impact over the quality of life. The treatment of patients with laryngeal cancer is complex, a multidisciplinary team is necessary, formed by the head and neck surgeon, oncologist, anaesthesiologist, speech therapist, pulmonary and olfactometry rehabilitation therapist, psychiatrist, kinesitherapist and also nutrition assessment and pain team.

In this study, we addressed the main concerns that may influence the quality of life for these patients, including voice, smell and deglutition. Comparing the results with the published literature, the outcome was similar, voice rehabilitation and the ability to communicate had a positive influence over the quality of life for the total laryngectomee.

Swallowing-related quality of life is influenced by the support given to these patients by trained personnel in deglutition rehabilitation.

The main limit of this study is represented by the number of patients involved and that it assesses one moment in the patient’s evolution. In the future, the questionnaire will be addressed again in order to evaluate the quality of life over time for patients with total laryngectomy.

There is a great need for specialised medical personnel, physicians, nurses and therapists to help the patient with total laryngectomy gain a good quality of life. This is useful for their physical and mental status, but the health education of communities is also important, in order to make the social reintegration of these patients possible. The cost and burden for this kind of care are high, but necessary.

**CONCLUSIONS**

The radical treatment necessary for patients with advanced laryngeal carcinoma represents a great burden for the patient, affecting their quality of life.

The quality of life is influenced by the patients’ appearance after total laryngectomy, and their ability to maintain their everyday activities. Swallowing, taste and saliva quality have a great impact over the quality of life of patients with total laryngectomy and also influence their nutritional status.

**Author contributions**

R.G., A.L.A.O., B.P., L. N., A.N. and SVG.B. were responsible for the diagnostic procedures, clinical diagnosis and treatment decisions. C.S.A., P.B., G.M., A.C., M.C., L.S., A.O., B.T., S.R., R.N., T.D., D.M., E.A., T.P., C.C., R.A. and A.D. wrote the manuscript. All authors have read and agreed to the published version of the manuscript.

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