

The evolution of quality of life in the oncological ENT patients

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Abstract

The article presents the predisposing and favouring factors for ENT cancers, which play a decisive role in the development of head and neck malignant tumours. The stages of acceptance of this devastating disease are reviewed with no significant difference from other cancers. Modern therapeutic approaches are emphasized with positive results, which lead to an increase in the quality of life of oncologic ENT patients.

Keywords: ENT cancer, quality of life, oncologic surgery

Cancer is the second leading cause of death among EU countries, Romania included. It is difficult to formulate a simple definition that can cover decades of research in the field. However, cancer must be seen as a chaotic, uncontrolled and fast cellular multiplication, which emergences in a mass of (tumour) tissue that does not resemble the normal tissue.

ENT cancers have several unique features:

- In rhinology the tumours develop from the nasal and sinuses structures, initially causing damage to normal functionality (nasal obstruction, purulent nasal discharge, nasal bleeding) and then they can cause deformities of the nose, face and orbital-frontal zone.
- In pharyngology, tumours can arise in the nasopharynx (behind the nose) usually causing unilateral nasal obstruction and epistaxis, or in the oropharynx associating pain in the tonsillar region and hypopharynx, causing difficulties in swallowing.
- In laryngology, cancer starts with hoarseness (dysphonia), which, over time, is associated with dyspnea (respiratory failure, shortness of breath) and whose resolution involves the performance of an emergency tracheostomy.

Another important feature of ENT cancers is the large number of nerves and blood vessels in the area, leading to a rapid growth and development of tumour tissue and possibly to very frequent metastasis.

All of these affect the patient’s quality of life both preoperatively, but especially after the oncology treatments have been established.

The key to a successful oncology therapy is staging the cancer correctly and implementing the appropriate therapy for each stage. However, the decisive role in ENT oncology treatment staging is stated by:

- the histopathological type of cancer (the most common is the epithelial cancer)
- tumour staging (from stage I to stage IV leads to an optimal treatment (modern medicine has managed to adequately encode an effective oncology treatment for each stage)

- the anatomo-clinical type of tumour (vegetative, infiltrative, ulcerative, etc.) that can determine the extent of the surgery and the adequate prognosis.

In staging the ENT cancer (and not only) what should be considered in the first place is the primary tumour (size, shape, consistency and neighbourhood extensions), local metastasis (nodal) and the distant metastases (in lung, liver, brain, bones), all these leading to a proper oncologic treatment and prognosis of cancer. The evolution of the quality of life in ENT oncologic patients aims the following:

- a better knowledge of the aetiology in ENT cancers.
- removing the predisposing and favouring factors for ENT cancers.
- early diagnosis of the cancer as much as possible during the first stages.
- careful counselling of cancer patients until accepting the idea of the disease.
- establishing adequate oncologic therapeutic management for each type of ENT cancer.
- social reintegration, which is perhaps the most important element to increase the quality of life in cancer patients.

Etiology and predisposing factors of ENT cancer

Knowing the cancer's etiology will obviously lead to the improvement of therapeutic modalities, to a better prognosis and to increased quality of life. When being asked the question "Why did I get cancer?", you will find yourself in a tough spot and the answer is often difficult to give.

Studies carried on for decades have discovered a genetic determinism for cancer (we are/ are not born with the chance of occurrence of cancer at a given time, in a particular organ), oncogenic genes (genetic mutations with a leading role in oncology determinism). Studies also revealed a more intense involvement of viruses even in ENT cancers etiology (cancer of the nasopharynx, some types of laryngeal cancer, etc.). One of the most harmful factors in the determination of ENT cancer is smoking. There have been many anti-tobacco campaigns worldwide and recently also in Romania based on the above-mentioned idea. These types of campaigns should be conducted more and more decisively because all studies state that smoking is a very important factor in the appearance of ENT cancers. Along with smoking, excessive alcohol consumption predisposes to cancer and the association of these two factors leads to an increasing carcinogenic effect, with a fast evolution of the illness.

Environmental factors, hazards and toxic substances from certain professions, unhealthy diet, ionizing radiation and certain drugs can all be incriminated in cancer development. Keeping them out of the patient's lifestyle can help increase the quality of life.

Another incriminated factor in the development of cancer is the immune status of the patient. We live in a world of constant motion, with economic, social and political changes that can determine a grater or a smaller amount of stress from an individual to another. Stress affects the immune system (the body's ability to defend itself) and once the immune deficiency is installed, the normal function of the cellular systems and organs is disturbed and the development of cancer is inevitable. As long as the immune system is affected the evolution of the cancer cells is unpredictable.

A highly important element in the fight against this terrible disease is the detection of cancer in early stages. In fact, this is the key to a successful treatment, with good results in developed countries and with disastrous ones in the third world countries. Ultimately, the

disease is "statistical" and therefore the early detection of ENT cancers leads to high rates of survival (80% at 5 years).

Stages of acceptance of the cancer disease

Once the disease was diagnosed (biopsy, histopathology), the patient is labelled as an "oncologic patient". In the watershed moments, like when he discovers he has cancer, the patient first needs an accurate, honest opinion regarding his illness, the treatment he needs to follow and information about the prognosis under the appropriate treatment.

Some patients accept the diagnosis with confidence, hope and desire for healing. Unfortunately, most patients cross acceptance stages of cancer diagnosis and the psychological counselling can increase their quality of life.

The first reaction of oncologic patients is *denying* strong emotion, the shock created by the diagnosis, the fear that life will change radically.

The second phase is when the intellect dominates denial and is represented by *anger* against oneself or the loved ones, sometimes even against divinity.

Once the anger is consumed the intellect moves towards accepting the disease. Then the *negotiation* with himself, the others and even the doctor starts. This stage is short and impossible to solve the illness just by searching for answers or the guilty ones.

After discussing with the oncologist (or an oncologic surgeon) and once finding out the proper therapeutic options, prognosis and life expectancy, *depression* starts to settle in. This is the most important psychological interference with the restoration of confidence, strength to fight the disease and reach the final stage – *accepting* the disease.

At this time, the disease is understood and accepted as part of life, so that cancer treatment should be started immediately, leaving the patient to choose, after having been properly explained and presented all the options.

Treatment in ENT cancer patients

A very important principle of ENT oncology (and not only) is the partial preservation (where oncologic possible) of the organ with a functional restoration.

The most common therapeutic modalities used in ENT cancers are the following:

- surgery - with multiple repercussions on the quality of life after surgery (aesthetic, nasal breathing, swallowing, mouth breathing, tracheal stoma, etc.).
- radiotherapy - also difficult to bear for patients, reducing the quality of life.
- chemotherapy with all signs and symptoms of post chemotherapy administration.
- immunotherapy treatments - non-specific (immune stimulators) or specific (monoclonal antibodies on tumour markers) in the first phases, but with a significant effect on increasing the quality of life.

Social and professional reintegration of the ENT cancer patients

Social reintegration represents the desiderate after a successful oncologic treatment, causing the decisive element on increasing the quality of life after therapy. In ENT oncologic patients, the evolution of the quality of life is mainly determined after surgical treatment.

Thus, in rhinologic oncologic surgery (nose and sinus cancers), the quality of life was observed at several levels:

- the first rhinosinusitis endoscopic investigative techniques were developed (nasal endoscopic examination or fiberscope), helping with the early detection of tumours and the correct assessment of surgical indications.

- radiological investigation methods, especially CT and MRI helped to establish the exact diagnosis, the tumour staging and thus choosing the optimal surgical solution.

- in the last two decades, endoscopic surgery has become extensively used, replacing conventional surgical techniques, external, open, which led to a faster recovery after surgery and an increase of the quality of life. One of the elements that affect the rhinologic patient's quality of life is the nasal packing. The posterior painful nasal packing (behind the nose) has been almost completely abandoned and now expandable sponges (even breathable) with quick unpacking (at 24-48 hours) are used with an obvious increase in the quality of life.

In oncologic surgery of the pharynx, the evolution of the techniques and therapeutic technologies has led to a remarkable increase in the quality of life.

Multiple endoscopic approach techniques have been developed for cancers of the nasopharynx (inoperable until now) using tissue destruction techniques with radiofrequency ablation, a fast surgery with minimal bleeding and with good oncologic results (if it is applied with proper indication).

Although the surgery techniques are mutilating in the cancer of the oropharynx, they have been improved with surgical reconstructive elements, the operations being most often performed in mixed teams (ENT, plastic surgeon, OMS surgeon).

Special attention should be paid to laryngeal cancer. Total laryngectomy leaves the patient with no voice and bearing tracheal stoma. In this case, the patient has a double handicap underlined by the lack of communication, but also by the presence of tracheal stoma ("hole in the throat" or "throat button") with devastating effects on the psyche and aesthetics of the patient. For these reasons, the patient's quality of life is very low. However, in recent decades, medicine has been trying and succeeded to accomplish a significant improvement in the quality of life of laryngeal cancer patients.

In the first place, anti-smoking campaigns and the increased level of medical culture and civilization led to a better understanding of the risk factors and early consult to an ENT specialist (from the first symptom - hoarseness).

The paraclinical methods of larynx investigation (pharyngo-laryngeal videofibroscopy, and imaging investigations - CT, MRI) led to an early diagnosis and staging of cancer with an immediate onset of a sustained oncology treatment.

The quality of life has been increased by the possibility (because of the factors mentioned above) of transition from the classical mutilating surgery (total laryngectomy, total pharyngolaryngectomy, "radical neck dissection"), to the partial operations (where oncology was indicated) with the partial preservation of the organ and its function (breathing, phonation, swallowing).

In the modern approach of cancer treatment, an important role was held by the implementation of laser surgery in laryngeal cancer, resulting in faster operations, less bleeding, short-term hospitalization and reduced convalescence. Oncology results of laser surgery have made it to impose the approach of laryngeal cancers (depending on staging, lymph nodes, metastases) and thus led to increased quality of life for cancer patients. Passing over aesthetics, the surgical technique and repeated admissions, the difficulty of

carrying radio- and chemotherapy treatment, the most difficult to bear for the total laryngectomy patient is the lack of communication. Although, at the time of acceptance of the disease and the decision to fight, the cancer patient has to choose the "voice or life", once the oncology therapeutics are completed, the patient would like to communicate more than anything.

Currently, the patient without larynx (the organ of speech) can communicate with others in three ways. First he can try (and the results are really impressive) to learn the oesophageal voice or erigmophonation. The patient learns to "swallow" the air into the oesophagus and afterwards to eject it; after phoniatics classes he will manage to make an initial phonation and, in time, will reach the performance of exceeding all (mental and phoniatics) complexes given by the lack of voice.

Another way, which is easily accepted by the patients, is the use of the laryngophone. This is actually a microphone positioned in the region of the mouth floor that manages to capture and amplify the voice created in the mouth. Using this device led to the possibility of an immediate communication (maybe "robotic" voice) with apparent increases in the patient's quality of life.

The best way to make a patient without larynx to speak is to use voice prosthesis. This is a titanium device mounted between the trachea and pharynx that allows air to pass from the trachea into the pharynx and does not allow saliva and food to pass from the pharynx in the trachea. By using this device, the patient's voice can sound almost normally and he can be reintegrated quickly in the society without having the complex of not being able to speak.

Thus, with regard to radiation, several methods of radiation with targeted oncology effects and reduced side effects have been developed, which led to an increase in the quality of life of ENT cancer patients.

In patients undergoing chemotherapy (curative, neoadjuvant, adjuvant or palliative), side effects (asthenia, anorexia, nausea and vomiting, hair loss, bleeding, anemia, recurrent infections, bowel disorders) are managed and improved by the development of modern chemotherapy with less side effects, leading to improved quality of life.

As a conclusion, two important ideas should be pointed out:

- although methods of investigations are improving and cancer treatment is becoming more advanced, millions of lives are lost to this insidious and devastating disease in the world (and obviously in our country).

- although studies of billions of dollars have been made during the last decades and the best, most modern therapeutic approaches have been established with positive results and statistically there has been an increase in the 5-years survival rate in cancer pathology, the total number of cancers reported annually to WHO is constantly increasing.

And we ask ourselves trying to keep optimistic: "Why is the number of cancers steadily and alarming increasing?"

We often try to find the answer in the following:

- environment
- nutrition
- population growth
- increasing lifespan
- stress

- decreased immunity
- or there are some elements that are still unknown...?