QUALITY OF LIFE FOR HEAD AND NECK CANCER PATIENTS

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ABSTRACT
HEAD AND NECK CANCER PATIENTS ARE A GROUP OF PATIENTS THAT REQUIRE A CERTAIN AMOUNT OF ATTENTION DUE TO THE IMPLICATIONS OF THE ILLNESS ON THE QUALITY OF LIFE AND THEIR RELATIONSHIP WITH FAMILY AND SOCIETY. THE MOST FREQUENT SITES AFFECTED BY MALIGNANCY ARE THE ORAL CAVITY AND THE OROPHARYNX, FOLLOWED BY THE HYPOPHARYNX AND THE LARYNX. HEAD AND NECK CANCER AFFECTS THE UPPER AERO-DIGESTIVE TRACT LEADING TO IMPAIRED BREATHING, FEEDING AND SPEAKING. TAILORED ONCOLOGY THERAPY ALONG WITH PSYCHOLOGICAL COUNSELING, NUTRITIONAL MANAGEMENT THERAPY NEED TO BE DECISIVE MEDICAL OPTIONS THAT A CANCER PATIENT SHOULD HAVE ACCESS TO.

KEY-WORDS: CANCER, SELF-DETERMINATION, TRACHEOSTOMA, DEPRESSION, ONCOLOGY THERAPY

INTRODUCTION

Head and neck cancer patients are a group of patients that require a certain amount of attention due to the implications of the illness on the quality of life and their relationship with family and society. Most of the head and neck cancers have the histology of squamous cell carcinoma, other histology being possible and took into consideration when necessary. This particular type of cancer is usually present in the 50 to 60 years of age group of patients. However, recent studies showed that dramatic changes took place in the age distribution over

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the past 3 decades. This meaning that young patients, with ages between 25 and 40 years, are more likely to have the disease. For young, vibrant and active adults such a diagnosis is life altering in the most profound ways possible. Changes are present in the life of any other patient in this situation, but the psychological implications in young adults are more devastating than in older patients. Recent studies indicate that incidence of the head and neck malignant pathology is increasing [1,2]. This may be due to increased narcotics abuse and the presence of human papilloma virus at the level of the mucosa of the upper aero-digestive tract [3,4,5].

Head and neck cancer affects the upper aero-digestive tract this meaning that breathing, feeding and speaking are impaired. Fundamental physiological functions are altered by the presence of malignant neoplasia in the head and neck region. The most frequent sites affected by malignancy are the oral cavity and the oropharynx, followed by the hypopharynx and the larynx. Of course, other sites are also affected by the occurrence of the solid malignant disease such as, nasal cavity, paranasal sinuses, salivary glands, soft tissue, lymphatic system, ear.

The quality of life of each individual is defined by the personal well-being and the interaction with society members. Breathing and feeding are essential for an individual and speaking is the tool for social bonding. When these are impaired several events take place.

Malignant tumors located in the hypopharynx and the supraglottic larynx manifest a tendency to induce odinophagia and dysphagia which result in partial feeding or, at the extreme, in the impossibility of feeding. The result of this is the appearance of malnutrition directed towards malignant cachexia. The stage of malnutrition is in direct correlation to the site of the primary tumor, the stage of the disease, histology type, tumor grading, comorbidities, risk factors and immune status. Malignant disease is consumptive therefor energy deposits are diminished. At first fatty tissue is reduced and in the late stages of the disease proteins are being metabolized. The reparatory processes are impaired and immune function is altered making the organism more susceptible to endogenous and external environment aggressions. In terms of patient's perception this is translated into a more passive attitude, lack of will and interest in the normal situations of life, all the way to depression. The lack of energy makes normal activities harder to be performed, decreased efficacy and on a global scale reduces the well-being of the patient.

Treatment of the malignant disease of the upper digestive tract in all stages of the disease should be considered in an oncology committee in which several specialist need to be part of. Regarding the oncology treatment the surgeon, the radiotherapist, the oncologist play a decisive role in determining the optimal course of action. However, patients need to be addressed in a complete manner. Psychological counseling, nutritional management therapy are two decisive medical options that a cancer patient should have access to.

Feeding head and neck cancer patients

It is well known that nutritional therapy plays an important role in the outcome of the oncology therapy. When nutrition is to be considered in an oncological patient there are a few principles that need to be taken into consideration. The informative principle requires that a cancer patient is informed by the physician about the need for enteral, parenteral or mixed nutrition, the advantages and disadvantages of each method. In addition to this principle the patient has the right of self-determination. The patient has the right to chose a certain nutritional therapy after being presented with all the options and, of course, the nutrition therapy should be tailored according to the patient's preferences. The self-determination principle is more likely to be followed by the physician in late-stage patients when only

palliative care is possible. In these cases the will of the patient should govern the entire medical care, assuring (a minimum of) the best quality of life possible.

Patients in which the surgical procedure altered the status of the upper digestive tube need to be fed through a naso-gastric feeding tube or via PEG (percutaneous endoscopic gastrostomy). Both have advantages and disadvantages that must be discussed with the patient. The decision making should involve the patient due to the social implications of placing a naso-gastric tube. Most of the patients that come to the E.N.T. Department of Colțea Clinical Hospital are from a rural environment where evident signs of disease lead to banishment. This is due to the incomplete understanding of the disease by the people and, ultimately by their lack of medical culture. Still, this is a particular situation that most patients want to avoid. The question ”Am I really going to have a tube inserted inside my nose?” is still being asked before the patients agree to the surgical treatment as an imposition to their social lives. Therefor counseling should be considered for these patients.

Ensuring the air pahway and speaking

No doubt that for the head and neck cancer patients the most important thing is to make sure that the patient has a clear upper airway path. Tumors located in the glottic and subglottic regions of the larynx make the passage of air into the lungs difficult or impossible in some cases. These are the situations in which tracheostomy is imperative. Total laryngectomy is one of the surgical interventions that leads to a definitive tracheostomy. Other situations include partial laryngectomies with endolaringeal complications. The perspective of a tracheostomy tube is very unpleasant for the patient. Most of the patients that undergo a total laryngectomy ask the E.N.T. surgeon about voice rehabilitation options. This is because despite the life-threatening disease patients have difficulties in accepting the impossibility of communication with fellow individuals. The presence of the tracheostoma leads to altered properties of the air that goes into the lungs because of the lack of purifying, humidifying and heating processes that take place inside the upper airways. This might lead to the formation of crusts, tracheal and bronchal deposits, infections of the inferior airways. In terms of quality of life for the patientsthis situation leads to coughing, exteriorizing secretions through the tracheostoma and ocasinally bleeding. The bleeding occurs because of the fact that the plastic tracheostomy tube is a foreign body inside the trachea.

The management of the tracheostomy includes aspiration of the secretions, cleaning and constant attention to lessions induced by the tracheostomy tube.

The ability of speaking and the voice rehabilitation options are considered by the patients as an improvement in the quality of life. This is why each preoperative discussion with a patient that undergoes a total laryngectomy needs to address the problem of voice rehabilitation. It is easier for the patient to accept the removal of the voice organ knowing that eventually speech will be possible.

There are 3 methods for rehabilitating a laryngectomised patient speaking-wise. None of the 3 methods have 100% chances of success, therefor the patient needs to be aware of all the possibilities. One of the methods is the use of a laryngophone which is a digital device that converts vibrations of the neck in sound processed by a sound processor and expressed through a speaker. In our experience some 50% of the patients manage to use this device in an optimum manner. Those who cannot adapt to the device can benefit from one of the other 2 types of voice rehabilitation.

Erigmophonia, or esophageal voice, is another type of voice rehabilitation in which the patients are taught to use a volume of air traveling from the stomach to the oral cavity to set the pharynx walls into vibration and by this produce sounds. This is a non-invasive technique

of voice rehabilitation. Still, the main disadvantage is that only some 30% of patients manage to master the technique.

The last of the voice rehabilitation procedures that may be attempted for a laryngectomised patient is the insertion of a voice prosthesis. There are different types of voice prosthesis but the functioning principle is the same. The surgeon creates a communication between the trachea and the cervical esophagus at the top of the tracheostoma through which he inserts the voice prosthesis. This device allows the unidirectional passing of air from the trachea towards the cervical esophagus due to unidirectional valve when the tracheostoma is shut by the patient's fingers. This setting makes sure that food and secretions do not enter the trachea. The volume of air that is pushed up towards the tracheostoma is pointed to the walls of the cervical esophagus and the remaining pharynx in the attempt to set the mucosa into vibration. The esophagus and pharynx mucosa acts like pseudo vocal cords generating the primary sound. The advantage of the method is that as much as 80% of the patients manage to speak when using a voice prosthesis. There are several disadvantages that have to be taken into consideration such as, remaining eso-tracheal fistula, tracheal ang lung infections, aspiration of food and liquids into the lungs, complex management of the voice prosthesis. A voice prosthesis needs to be replaced every other 3 months, this being a time management problem for the patient and, nonetheless a money consuming activity.

The use of fingers to close up the tracheostomy in order for the patient to speak has been replaced by the introduction of the hands-free systems for the voice prosthesis. It is a simple valve placed at the surface of the skin that allows air to go only into the lungs and only a small amount of air through the tracheostomy. Most of the air goes through the voice prosthesis allowing the patient to speak freely. The use of such devices improves the quality of life for larynx cancer patients.

CONCLUSIONS

The quality of life for head and neck cancer patients is a concept which modern medicine has to operate with due to moral, ethical and legal reasons. E.N.T. surgeons need to explain to their patients the entire therapy plan with all the consequences, advantages and disadvantages. The self-determination of the patient is of outmost importance and the patient needs to be involved into the decision making process. The probability of a tracheostomy and the lack of speech abilities are pitfalls for the patients and the physician needs to be prepared to offer solutions. This is a field of neverending questions for the head and neck cancer patients that need to be reinserted into the family and social life without considering this to be un unsurpassable condition.

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