
INCIDENCE OF MALIGNANT TUMORS OF LARYNX AND THEIR TREATMENT

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Abstract

We retrospectively analyzed patients with larynx cancer that were treated at ENT Clinics in Sarajevo in the last 5 years. According to the tumor site, TNM classification, operative procedure and postoperative treatment we found the following:

Over the last 5 years 156 patients underwent surgical treatment - 143 (91,6%) male and 23 (8,4%) female. According to the age 1 patient belonged in the age group 30-40 years (0,64%), 25 in the age group 40-50 years (16%), 51 in the age group 50-60 (32,7%), and 79 were over 60 years of age (50,6%). Of those 145 were smokers (93%), and 11 non-smokers (7%). Histological findings showed 100% cases with squamous cell cancer.

Most of the patients were surgically treated with total laryngectomy with unilateral or bilateral dissection and thyroidectomy or lobectomy (29%) or total laryngectomy with thyroidectomy or lobectomy (23%), total laryngectomy (22%). The rest of the patients underwent total laryngectomy with unilateral or bilateral dissection (16%) chordectomy (4%), supraglottic laryngectomy (3%), hemilaryngectomy (2%) and hemilaryngectomy with dissection (1%)

All patients were postoperatively irradiated and chemotherapy was combined with irradiation only in younger patients.

Key words: incidence of larynx cancer, surgical treatment

Introduction

Tumors located in the interior of larynx are considered as larynx tumors. They have different symptoms, metastases and prognosis than hypopharynx tumors. According to pathohistological findings most frequent larynx cancer is squamous-cell cancer while other types like adenocarcinomas, cylindromas and fibrous tissue malignancies are rather rare in larynx interior.

In 2001 incidence of larynx cancer in FB&H, treated in Clinics Center Sarajevo, was 110 new cases, 93 male and 17 female(1). In the same period in Croatia the incidence was 491 new cases, 397 male and 34 female, with ratio 12:1(2).

In other countries incidence is similar or slightly increased and male-female ratio ranges from 5:1 to 20:1. The highest incidence of larynx cancer is found in Sao Paulo, Bombay and Thailand. Industrial regions have higher in-

cidence in comparison to other regions. In USA incidence is higher in African Americans than in Caucasians, and male are more frequently affected in comparison to female.

When tumor is revealed, during the first examination, 65% of patients have local disease, 30 % neck metastases and 5% distant metastases (3). According to the age, male individuals in 60-75 age class are the most frequently admitted patients. In our material 50% of all patients are male individuals over 60 years of age.

In etiology of larynx cancer the abuse of tobacco and alcohol play an important role. They act synergistically and increase the risk of larynx cancer, along with chronic irritation with cement dust, asbestos, in workers in nickel and oil industry. According to the statistics 88-98% of patients with larynx cancer are smokers (4). Predisposing factors could be some forms of chronic laryngitis, keratosis, papillomas and leukoplakia. Laryngopharyngeal reflux is also associated with this disease, but it has not been proven yet (5).

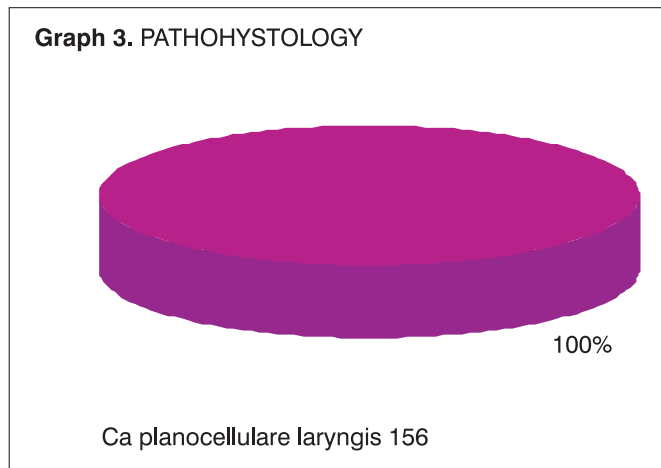
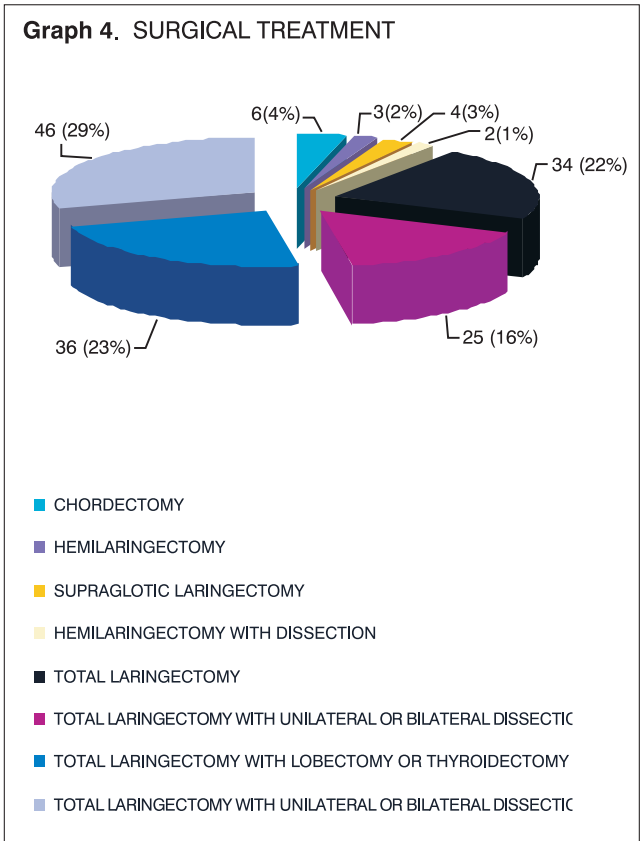
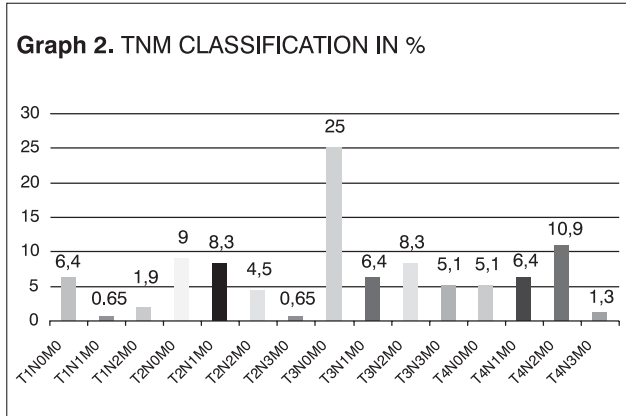
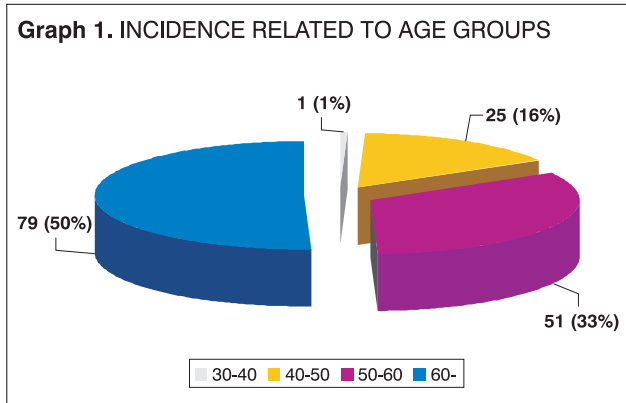
Goals

- Determination of larynx cancer incidence in the last 5 years in relation to sex, age and habits.
- Determination of tumor stadium according to TNM classification.
- Analysis of surgical treatment of patients with larynx cancer.

Material and methods

We retrospectively analyzed patients with larynx cancer that were admitted at ENT Clinics in Sarajevo over the last 5 years. All research described in the submitted publication involving human subjects and material derived from human subjects complies with ethical principles in World Medical Association Declaration of Helsinki- Ethical Principles for Medical Research Involving Human Subjects (initiated in June 1964, amended in October 1975; October 1983; September 1989; October 1996; October 2000). According to the tumor site, TNM classification, operative procedure and postoperative treatment we divided patients in groups.

Results



Discussion

Larynx cancer is an important health and social problem. In most number of cases it is diagnosed late and with grave prognosis. Thus, it requires special attention from the point of prevention, diagnostics and therapy. Increase in number of patients with larynx cancer is obvious from year to year, and since 1998 the rate is 5-17%. We proved this tumor prevalence in male in comparison to female patients which fits the data from Western Europe and USA where 95% of all patients are male (6).

According to the age group larynx cancer incidence is highest in the group of over 60 years (50%), than 50-60 years (33%), 40-50 years (16%), and 30-40 years (1%).

According to pathohistological findings, in our material, only squamous-cell cancer was found (100%). We did not encounter other types of cancer unlike other authors data who noticed anaplastic cancer in few patients, while other types of cancers were not encountered.

Incidence of squamous-cell cancer in the group of larynx cancers is by far the highest and according to European and American data amounts to 90-93%, while in our material it was 100% (7).

According to TNM classification our data showed highest incidence of advanced-stage tumors, 39 cases T3N0M0, T4N2M0-17; T2N0M0-14; T2N1M0-13; T1N0M0-10 cases. The results reveal the fact that number of advanced stage tumors is high what leads to the conclusion that diagnosis is established late and the amount of "time lost" is significant. Thus, the prognosis is questionable.

According to surgical treatment there is a prevalence of total laryngectomies with unilateral or bilateral dissection and lobectomy or thyroidectomy (29%), followed by total laryngectomies with lobectomy or thyroidectomy

(23%), total laryngectomies (22%), total laryngectomies with unilateral or bilateral dissection (16%), chordectomies (4%), supraglottic laryngectomies (3%), hemilaryngectomies (2%) and hemilaryngectomies with dissection (1%).

Conclusion

Malignant tumors of larynx are very complex group of diseases in sense of diagnosis, treatment and rehabilitation. In total amount of ENT tumors, malignant tumors of larynx are present in more than 50% patients and their number is increasing every year.

From our results it is obvious that the disease is diagnosed in an advanced stage which diminishes therapeutic possibilities. Modern diagnostic procedures enable quick diagnosis, thus time from first examination to definitive diagnosis is short, but the period from the onset of disease until first examination in most cases is rather long.

Stage analysis proved that most of our patients were in T3N0M0 stage, and according to that, the majority of surgical treatment consisted of total laryngectomies with dissection - 41,9%.

Larynx cancer is second most frequent cancer in University in Sarajevo Clinics Center, while in European and American data it is not found amongst ten most frequent malignancies. That is the most impressive aberration from the quoted statistics which points to the necessity of further investigation. This could be partially explained by extensive smoking habit and low living standard.

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