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Problemy rehabilitacji mowy u osób po laryngektomii z powodu raka krtani

Rehabilitation of speech among patients laryngectomized due to laryngeal carcinoma

Streszczenie

Wstęp. Rak krtani jest najczęściej występującym nowotworem głowy i szyi. Z piśmiennictwa wiadomo, że nałóg palenia papierosów przez chorych na raka krtani i gardła dolnego jest powszechny. Pacjenci z nowotworem krtani pomimo wielu objawów alarmujących późno zgłaszają się do lekarza, więc zaawansowanie nowotworu jest duże w chwili podjęcia terapii i wymusza wykonanie rozległej operacji. W wyniku całkowitego usunięcia krtani chorzy są pozbawieni aparatu fonacyjnego i tracą możliwość słownego porozumiewania się z otoczeniem. Zasadniczym celem postępowania rehabilitacyjnego po resekcji krtani jest reedukacja mowy warunkująca powrót tych chorych do normalnego funkcjonowania w społeczeństwie. Równie ważnym zagadnieniem dla chorego jest przewidywana jakość życia po leczeniu.

Cel. Ocena procesu rehabilitacji mowy u osób po laryngektomii, którzy za pomocą różnorodnych ćwiczeń nabywają umiejętność posługiwania się pozostałym aparatem mowy w życiu codziennym.

Materiał i metody. W badaniu uczestniczyło 151 pacjentów po operacji całkowitego usunięcia krtani z powodu raka, leczonych na oddziałach laryngologicznych makroregionu lubelskiego.

Wyniki. Większość – 88,08% pacjentów została objęta rehabilitacją foniatryczno-logopedyczną. Tylko 22% regularnie korzystało z porad foniatry w zakresie nauki mowy.

Wnioski. Mowę przełykową wystarczającą do samodzielnego kontaktu z otoczeniem opanowała ponad połowa pacjentów 57,89%. Pseudoszeptem rozumianym tylko przez najbliższe otoczenie posługuje się 34,58% badanych. Z pisma i gestykulacji korzysta 7,53%, a z krtani elektronicznej 11,25% badanych. Pacjenci wykonywali ćwiczenia nieregularnie, poświęcali na ćwiczenia zbyt mało czasu.

Słowa kluczowe: rak krtani, jakość życia, rehabilitacja mowy, laryngektomia.

Abstract

Introduction. Laryngeal carcinoma is the most frequent cancer of head and neck. Available literature confirms smoking cigarettes as the most common habit among patients affected with laryngeal and pharyngeal cancer. Despite many symptoms, patients with laryngeal carcinoma rarely refer to hospital and therefore, due to intensive extension of tumor, patients have to be cured with serious surgeries. As a result of larynx removal and loss of phonation organ, patients are unable to communicate verbally. Rehabilitation in case of larynx resection aims to regain speech abilities and bring back patients to the normal social life. Patients also do concern about quality of their life once treatment is accomplished.

Aim. Evaluation of rehabilitation progress among laryngectomized patients treated with various techniques enabling to use speech organ in everyday life.

Material and methods. Studies were conducted among 151 patients with laryngeal carcinoma subjected to larynx removal operation. Patients were hospitalized in the laryngological departments in macro-region of Lublin.

Results. Majority – 88.08% of patients subjected to operation of larynx removal followed phonetic and logopedic rehabilitation. However, only 22% of patients followed instructions given by phoniatrist regarding aspects of speech therapy.

Conclusions. Esophageal speech efficient for basic contact with society was mastered by almost half of patients reaching 57.89 %. Pseudo-whisper was followed by 34.58% of patients, being recognized only by the closest members of society**.** Writing and gesticulation refers to 7.53% of patients, whereas 11.25% of patients use electrolarynx**.** Rehabilitation procedures are irregularly followed by patients; patients do not devote enough time for rehabilitation procedures.

Keywords: laryngeal carcinoma, quality of life, rehabilitation of speech, laryngectomy.

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INTRODUCTION

Larynx is azygous organ, found in the middle body tract, in interior triangle of pharynx. It is an essential part of phonation; it contributes to respiratory and protective functions. Respiratory function is generated by free flow of air from nose and oral cavity towards lungs and reversely. Phonation origins from vibration of local folds and synergism between cavities tracts situated posterior or superior to the larynx. Larynx is also responsible for preventing foreign bodies and swallowed material from entering lower respiratory tracts [1].

Laryngeal cancer is the most common carcinoma of neck and head. Most laryngeal cancer cases originate from squamous cell carcinoma, which reflects 90% of all malignant tumors of larynx and human pharynx [2].

The highest incidence of cancer of larynx and pharynx is noticed in the following countries: Brazil, Spain, Italy, France, Poland and USA [3].

Apart from genetic factors, tobacco and chronic consumption of alcohol are considered to be the most important risk factors for laryngeal cancer. Patients with laryngeal carcinoma usually admit to hospital at the latest time when the advancement of tumor intensifies and therefore in most cases the treatment involves serious surgeries which lead to loss of voice.

AIM

Evaluation of rehabilitation progress among laryngectomized patients treated with various techniques enabling to use speech organ in everyday life.

MATERIAL AND METHODS

The research was conducted from February to July 2007 among patients of laryngological departments in macroregion of Lublin. It comprised 151 patients (86.1% men and 13.9% women). The time interval between operation procedures and carrying out of the studies varied from few weeks to several months. Patients were chosen randomly and agreed for participation in the research. Each time, medical history of patients was accompanied by one of the authors of the present study. Results have been statistically elaborated. To identify the differences and dependences the Chi2 test, with 5% interference error considered, was used. Statistical analysis was made on the basis of STATISTICA V.6.0 software (StatSoft, Poland)

RESULTS

The total of 151 patients at the age from 43 to 87 years, was included in the study (among whom there were 21 women and 130 men). The respondents were divided into 5 groups depending on their age, each group included patients with 10 years age range (the groups were as following: 40-49 years old, 50-59; 60-69; 70-79 and 80-89 years old). The group of 60-69 years-old patients was the most numerous one, including 69 patients, which accounted for 45.69% of all respondents. The second great number of patients including 48 respondents, accounting for 32%, was reported in the group of 50-59 years-old patients. Minimal number of patients (2 of respondents in each) was found in the group at the age of 40-49 and group 80-89. Most of respondents graduated from vocational school (41.72%) or had secondary education diplomas (36.43%). Only 15.23% of respondents held diploma of higher education, whereas the percentage of respondents with primary education accounted for 6.62%.

City dwellers accounted for 51.65% whereas village dwellers for 48.53%. Pronounced number of respondents had settled family life (78.14%).

Cigarettes were smoked habitually by 130 patients (85.09%). Non-smokers included 21 patients; however they were exposed to the risk of passive smoking due to their smoking household members. Time period during which respondents were exposed to cigarettes smoke varied from 10 to 44 years.

Among the respondents, 130 patients (86.09%) were informed about possibilities of temporary speech activities during initial hospitalization; the others were not informed. Almost all of the respondents (96.02%) admitted that having contact with patients speaking well after removal of larynx, did have positive influence on their decision for speech re-education activities. The courses for temporal speech were followed by 80.08% of patients. Surprisingly, 11.92% of patients did not make any attempt for speech renewal after being laryncogemtized.

Fifty percent of those who practiced temporary speech rehabilitation begun their courses under supervision of a phoniatrist/speech therapist. This group included 58.94% of respondents. The speech courses were attended by 19.86% of patients already during their first stay in hospital, whereas by 7.94% – during rehabilitation session dedicated for laryngectomized patients. The respondents who participated in rehabilitation procedures admitted that they managed to obtain speech understandable by society.

All patients who practiced under guidance of a phoniatrist/speech therapist in courses for temporary speech followed all exercises in regular manner. More than half of the respondents (65.16%) dedicated daily few minutes for the recommended exercises. Spending daily 1-2 hours on training procedures was declared by 34.84% of patients. None of the respondents practiced more than 2 hours during the day. Out of 133 patients practicing esophageal speech, 57.89% developed speech efficiently understandable by society.

Pseudo-whisper recognized only by the closest members of society was followed by 34.58% of patients, whereas writing and gesticulation abilities referred to 7.53%.

Significant majority of respondents (96.02%) was encouraged to practice speech abilities by husbands, spouses, adult children, their grandchildren and other family members. Speech prosthesis was provided to 9.93% of respondents, with good and very well developed fistular speech. Electrolarynx referred to small number of patients – only 11.25% of respondents made use of it. The period during which patients with speech prosthesis developed speaking abilities varied from few days till one year, whereas for the others the time period was from 3 months till 1.5 year.

DISCUSSION

In male population, laryngeal cancer takes seventh place in the list for total death rate, followed by cancer of lungs, stomach and prostate; while in female population cancer of the larynx is listed on the third place just after cervical and breast cancer [4,5].

Available literature points to smoking and alcohol drinking habits as common incidence among patients diagnosed with cancer of the larynx. Determination of risk factors responsible for laryngeal cancer with reference to the above mentioned habit is not efficient. Breathing-in cigarette smoke and alcohol abuse are separate risk factors, however when combined, they appear to have significant effect. Zatonski et al., reported that long-term exposure to cigarette smoke among non-drinking patients increases 30 times the risk for laryngeal cancer, whereas alcohol abuse among non-smokers increases the risks 10 times [6]. Laryngeal cancer is almost 330 times more likely in case of simultaneous exposition to both of these risk factors. In available research, smoking and consumption of alcohol are quoted as the most important risk factors for laryngeal cancer. In the present studies, 85.09% of respondents smoked cigarettes habitually. Non-smokers accounted for 13.9% of respondents including patients exposed to passive smoking. Diagnosis of laryngeal cancer in Poland is estimated as not efficient. Widely developed cancer of larynx entails serious surgical procedures with consequences of larynx removal, loss of speech and significant changes of life style. Laryngeal cancer is often associated with disfigurement, malnutrition and social disorders [7].

It is challenging both for patients as well as for medical staff to regain speech abilities after being submitted to removal of the larynx. Among laryngectomized patients, social cooperation is noticed to be priority in their life quality [8].

It is estimated that 60-70% of patients who followed regular rehabilitation are able to regain their natural voice and speech. Based on localization of glottis, patients developed epiglotto or pharyngeal speech. Naturally, all laryngectomized patients should be provided with possibilities for voice recovery. However, surprisingly 13.9% of hospitalized patients were not given information concerning speech courses. According to many authors, introducing trainers responsible for temporary speech re-education courses, might positively influence patients' psychophysical conditions and positively encourage them for rehabilitation [9].

According to 96.02% of hospitalized patients, having contact with people speaking well after removal of larynx, did have positive influence on their decision for speech re-education activities. The courses for temporary speech were followed by 80.08% of patients, out of whom almost 50% begun their courses under supervision of a phoniatrist/speech therapist. All patients who practiced under guidance of a phoniatrist/speech therapist followed all exercises in regular manner. Unfortunately almost 65.16% of rehabilitees, dedicated only few minutes for daily exercise. Longer lasting exercises (1-2 hours per day) were reported only among 34.84% of patients. None of the respondents spent daily more than 2 hours on rehabilitation procedures. With reference to the literature, patients identified with larynx removal are initially recommended to spend on rehabilitation 40 minutes per day, subsequently 2-3 hours, and further even 5-6 hours daily [10].

Rehabilitation in health resorts plays a significant role. According to many authors, participation in remedial meetings brings more efficient results, due to their regular and intensive exercising schedules [9,11]. Remedial meetings were attended by 7.95% of the respondents. Support and determination is crucial in any rehabilitations manners. Family importance is especially significant. Lack of family support impairs social contacts and leads to loss of motivation for speech reeducation [12].

The great part of respondents was encouraged to enroll in speech reeducation courses by their husbands, wives, grandchildren and other members of their families. There are wide studies concerning life quality of patients diagnosed with chronic disease, however numerous studies implicate deterioration of quality condition. [13].

Evaluation of treatment efficiency should include not only performance of surgery but also life quality of laryngectomized patients. Recovery determines patients' professional and personal achievements.

RESULTS

1. Esophageal speech was used by 57.89% of patients, recognized by self-reliant social contacts.
2. Pseudo-whisper was spoken by 34.58% of patients recognized only by the closest members of society.
3. Writing and gesticulation abilities referred to 7.53%, whereas 11.25% – to patients with electronic larynx.
4. Patients followed exercises irregularly; they did not devote enough time for rehabilitation.

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