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Evaluation of life quality, self-confidence and sexual functions in patients with total and partial laryngectomy☆

Ayşegül Batıoğlu-Karaaltın [a,*], Zerrin Binbay [b], Özgür Yiğit [c], Zehra Dönmez [d]

[a] Department of Otolaryngology Head and Neck Surgery, Istanbul University Cerrahpasa Medicine Faculty, Istanbul, Turkey
[b] Department of Psychiatry, Haseki Education and Research Hospital, Istanbul, Turkey
[c] Department of Otolaryngology Head and Neck Surgery, Istanbul Education and Research Hospital, Istanbul, Turkey
[d] Department of Otolaryngology Head and Neck Surgery, Haseki Education and Research Hospital, Istanbul, Turkey

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ABSTRACT

Objective: In this study patients who have undergone partial (PL) or total laryngectomy (TL) were evaluated for life quality, self-esteem and sexual dysfunctions.
Methods: 108 patients who received TL or PL without tracheostoma were included in this study. During patient interview, sociodemographical data form, European Organization for Research and Treatment of Cancer, Life Questionnaire Core 30 Items, Cancer and Head and Neck module-35 Items (EORTC QLQ-C30 and H&N35) were filled and patients were also asked to fill in Arizona Sexual Experiences Scale (ASEX), Beck's Depression Inventory (BDI), Beck's Anxiety Inventory (BAI) and Rosenberg Self-Esteem Scale (RSES) forms.
Results: Depression and anxiety scores and points taken from RSES were significantly different between TL and PL patients ($p = 0.045$, $p = 0.041$ and $p = 0.006$ respectively). Although the difference was not significant in ASEX ($p = 0.174$), the average scores of sexuality subunit (QL-35 59-60) of EORTC QLQ-H&N35 module were significantly different in these patients ($p < 0.001$). Besides, it was shown that 90.3% of TL patients and 63.9% of PL patients have experienced negative effects in sexual functions.
Conclusion: TL patients were more often observed to have problems regarding depression, anxiety, self-esteem and sexual functions and it is concluded that they may need psychosocial support more than PL patients.

1. Introduction

Cancer of the larynx constitutes 1% to 2.5% of all human neoplasms and is the most common malignancy of the Head and Neck region [1]. Larynx carcinoma is held responsible for 80,000 deaths per year [2]. Operations performed in the surgical treatment of larynx carcinoma may cause various negative effects on life quality of these patients. Thus, the width of surgical excision and chemo-radiotherapy after surgery should be evaluated not only for oncological results, but also the life quality of the patient after treatment. The surgical techniques have varied and advanced greatly in the last decades to at least partially enable preservation of vocal functions [3].

Life quality is a multi-factorial notion which is related to physical, functional, psychological and social well-being. Mood, sexuality, occupational functionality, satisfaction from treatment and general evaluation of life quality are also

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* Corresponding author at: Istanbul University, Cerrahpaşa Medical Faculty, Department of Otolaryngology Head & Neck Surgery, Cerrahpasa Yerleşkesi, Fatih, 34098 Istanbul, Turkey. Tel.: +90 532 7760385; fax: +90 0212 4143498.
E-mail address: batioglu@yahoo.com (A. Batıoğlu-Karaaltın).

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included in this notion. Cancer and cancer-related treatment regimen may damage life quality in various ways. Detailed evaluation of all these various ways may provide valuable information for determining long-term consequences of cancer treatment and rehabilitation needs and also for performing appropriate applications [4].

Alterations in life quality depend mostly on the type of treatment and the adaptation of the patient to certain situations. The most validated Questionnaire of Life (QoL) tool in oncology is the EORTC QLQ-C30 including the H&N35 module [5]. State of constant exhaustion, health impairment and sexual dysfunction are common in male patients after cancer treatment [6]. When compared to other life quality factors, sexual problems arise even more than the speech problems as the 2nd most common among the encountered problems. However interestingly, not only in clinical routine, but also in scientific research, very few people discussed sexual issues in patients with head–neck cancers [7].

The purpose of this study is to evaluate the patients who have undergone total or partial laryngectomy and compare the conservative surgeries and total larynx surgeries leaving a permanent stoma with respect to life quality, self-confidence and sexual dysfunction.

2. Materials and method

2.1. Ethical considerations

This study was employed after receiving an ethical board permit from Istanbul Education and Research Hospital Clinical Investigations Ethical Board and obtaining informed consent forms from patients.

2.2. Patients

A total of 108 patients who have undergone total laryngectomy (TL) or partial laryngectomy (PL) without tracheostoma in Istanbul Education and Research Hospital between 2010 and 2013 were included in this study. Patients under 80 years of age who completed their 6-month period without disease after surgery and post-operative treatments such as radiotherapy (RT) or chemotherapy (CT) were selected. The exclusion criteria were (1) being female patients (since the number of female patients who met the inclusion criteria was very low, only male patients were included in this study to form a homogenous group), (2) the presence of tracheostoma after PL, (3) the presence of medical disease in the terminal stage, and (4) the presence of acute psychiatric disorders. Patients were divided into two groups according to the surgical treatment as either total laryngectomy (Group 1) or partial laryngectomy (Group 2).

Each patient was interviewed individually by the same physician reassuring their privacy and the patients were instructed to fill the study forms. During the interview sociodemographical data form, EORTC QLQ-C30 and H&N35 were filled out. All the patients were questioned using the ASEX to measure sexual functions, BDI and BAI to inquire depression and dysphoria and RSES to evaluate self-esteem. Demographical data, education level, monthly income, TNM stage of the tumor, post-operative follow-up period and treatment modalities were recorded and a detailed ENT examination was made. Sexual function disorders were evaluated by the questions in ASEX and sexual difficulties subunit of EORTC QLQ-H&N35 module that contains questions such as ‘‘During the last week have you felt less interest in sex?’’ and ‘‘During the last week have you felt less sexual enjoyment?’’, and patients were also asked ‘‘How did the surgery affect your sexual life?’’. Options given to the patients for response were ‘‘positive’’, ‘‘negative’’ and ‘‘did not affect’’. These questions were taken from the Questionnaire of Psychosocial Adjustment after Laryngectomy [7].

2.3. Instruments

The Arizona Sexual Experiences Scale (ASEX) is a brief five-item scale designed to assess the core elements of sexual functioning: drive, arousal, penile erection, orgasm and satisfaction. Each item is rated with a six-point Likert system, with higher scores reflecting impaired sexual function. According to reliability and validity study of ASEX in Turkey, scores above 11 were regarded as sexual dysfunction [8,9].

Beck’s Depression Inventory (BDI) is a scale consisting of 21 items, evaluated by values between 0 and 3. Studies for validity and reliability of the Turkish version of BDI were performed by Hisli and 17 was determined as cut-off score [10–12].

Beck’s Anxiety Inventory (BAI) consists of 21 items with values ranging from 0 to 3 like BDI. The validity and reliability studies of BAI were performed by Ulusoy et al. (1998) [13]. The patients getting higher scores in this scale represent higher anxiety levels.

Rosenberg Self Esteem Scale (RSES) consists of 12 items that question general considerations of a person about him/herself [14,15]. In this study, a subset of RSES that contains 10 questions regarding self-esteem was used; the validity and reliability studies of which were done by Cuhadaroglu. Individuals who got 0–1 points were accepted to have ‘‘high’’, 2–4 points to have ‘‘intermediate’’ and 5–6 points to have ‘‘low’’ self-esteem [15].

European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) is a life quality questionnaire commonly used worldwide for cancer patients [16]. It consists of three sections such as general health status scale (GHS), functional scale (FS) and symptom scale (SS) and has 30 questions in total.

European Organisation for Research and Treatment of Cancer, Head and Neck Cancer Module (EORTC QLQ-H&N35) has been developed to better evaluate life quality of patients with head and neck cancers as an additional inquiry form for EORTC QLQ C-30 [17,18]. It consists of 35 questions in total and contains eight symptom scales. The scoring of the questionnaire is calculated by the formula present in EORTC QLQ-C30 symptom scores [19].

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