Subjects were 58 patients who underwent total laryngectomy in three hospitals located in Prefecture A, Japan, agreed to participate in the research, and returned questionnaires before discharge from hospitals and 3, 6, 12 months after discharge from hospitals. Main study subjects were age, sex, no of family members, employment status and the QOL, and the data of diagnosis, staging, and medical treatment were collected from medical records. SF-36,2-3 and mail survey were used in the analysis of the QOL data.

As an analytical method we conducted descriptive statistics of basic attributes and QOL scale scores. Norm-based scoring (NBS) was used in the calculation of the later. We confirmed that there was no statistical difference on QOL scale scores in age and staging. Then subjects were classified into two groups: patients who underwent total laryngectomy and patients who underwent both total laryngectomy and radiation therapy for conducting t-tests to examine their associations with the QOL (p < 0.05). This study was approved by ethical review committees of an affiliated university and medical facilities.

Results

There were 43 responses from those who were treated before discharge from hospital. Among them PF_N of those who underwent only total laryngectomy was 25.0 ± 3.8 (mean and standard deviation) and PF_N of those who underwent both total laryngectomy and radiation therapy was 39.5 ± 3.6, showing that there was statistical difference between them (p = 0.009). Yet, there was no statistical difference between them on PF_N, RP_N, BP_N, VT_N, SF_N, RE_N, and MH_N (There was no investigation on RP_N, SF_N, and RE_N). There were 38 responses from those who took treatment 6 month after discharge from hospital. Yet, there was no statistical difference in every item. There were 5 responses from those who took treatment 3 month after discharge from hospital. GH_N of patients who underwent only total laryngectomy was lower than the QOL of patients who underwent both total laryngectomy and radiation therapy before discharge from a hospital and 3, 6, 12 months after it.

Conclusions

Laryngectomy is done for advanced cancers of the head and neck and of cervical esophageal. Radiation therapy is also used for advanced cancers of the head and neck and of cervical esophageal. Radiation therapy is also used as adjuvant therapy for conducting total laryngectomy and radiation therapy. This research showed that the QOL of patients who underwent both total laryngectomy and radiation therapy before discharge from a hospital and 3, 6, 12 months after it was consistently below the national standard value. Previous studies gained the results that the QOL of patients who underwent only total laryngectomy was 25.0 ± 3.8 before discharge from a hospital and 39.5 ± 3.6 before discharge from a hospital and 44.5 ± 3.1 twelve month after discharge from a hospital. These results show that in both treatment patients' physical functions improved with time. In this study we examined patients who underwent preoperative, postoperative, and preoperative and postoperative radiotherapy but we could not examine irradiation period due to the size of sample number. This is a future subject. We also need to examine the reasons why physical functions of patients who underwent only total laryngectomy are more likely to improve than those of patients who underwent both total laryngectomy and radiation therapy by focusing on patients' awareness of functional disorder.