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Adenotonsillectomy and its Effect on the Quality of Life in Adult Patients

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Abstract

Introduction: One of the most common treatments for chronic and recurrent tonsillitis is a tonsillectomy. It must considered patient satisfaction and quality of life before and after tonsillectomy are two key factors in evaluation of successful surgery. The aim of this study was to investigate the effect of adenotonsillectomy on quality of life for adults over 14 years.
Materials and methods: 40 adults with more than 14 years old were studied with chronic or recurrent tonsillitis in a cross-sectional study. The standardized questionnaire was used to assess the quality of life before and after surgery (GBI and GHSI). Questionnaires were completed before surgery and during the postoperative follow-up for each patient.
Results: Total score of quality assessment questionnaire, public health subscale and social health subscale were significantly different before and after surgery. Quality of life after surgery has increased considerably. There was no significant difference in physical activity before and after surgery.
Conclusions: Tonsillectomy in adults with recurrent and chronic tonsillitis can effectively improve the quality of life of patients.

Keywords: chronic tonsillitis, tonsillectomy, quality of life

Introduction

Chronic tonsillitis means persistent tonsillitis for 3 months and recurrent tonsillitis is occurrence of 3 or more than 3 period of tonsillitis in a year (1). Diseases of the head, neck and oral cavity have been known for centuries to affect human life quality (2-4). In addition to the natural diseases process, iatrogenic airway complications also contribute to discomfort and decreased post-operative quality of life (5, 6). Not considering tonsillectomy in the childhood could also contribute to impaired growth (7). Though tonsillectomy is considered a painful procedure, especially in adults, the post-

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operative pain could be managed using different approaches (8, 9).

By considering the large population of patients older than 14 years with chronic or recurrent tonsillitis referring to the ENT for adenotonsillectomy and absence of clear indications in adults, doctors don't do this operation routinely. It is unclear that if patients are satisfied after operation or no and if quality of life and signs are improved or no (10).

Many studies have confirmed indications and benefits of tonsillectomy in children while findings are limited about adults (10). Although there are several studies about the usefulness of tonsillectomy in chronic and recurrent tonsillitis but most of these studies evaluates the effect of surgery objectively such as the number of illness episodes and subjective effects (such as Well -Being) has been investigated less.(11). Studies in recent years have focused on the effects of tonsillectomy on chronic or recurrent tonsillitis in all areas was a retrospective.

The overall success of a medical treatment or surgical can not only be achieved by evaluating technical success but the patient's quality of life also should be assessed as a result of treatment (12). A vital issue in this context is using the right tool for the assessment of quality of life. According to the international standard on quality of Life questionnaire, it seems that using them in studies will increase the credit of researches (13). We studied the effects of tonsillectomy in adults with recurrent or chronic tonsillitis on patients' life quality based on the health assessment questionnaire (Health Status) standards (GBI, GHSI).

Materials and methods

In a cross-sectional study, 40 tonsillectomy candidates with more than 14 years old were studied with chronic or recurrent tonsillitis during the first 6 months of 1391 referred to clinic or Imam Reza hospital.

Standard GBI and GHSI questionnaire was used for collecting data in this study. Each of these questions had a 3 public, social support and physical health Subscale and each question had five options that have been rated from 1 to 5. The questionnaire was evaluated after completing using the following scoring system.

GBI: total of 18 item's scores were divided by 18; we decreased 3 and then multiplied it on 50.

GHSI: total of 18 item's scores were divided by 18; we decreased 1 and then multiplied it on 25.

Obtained positive score indicating improvement in quality of life and negative meaning reduction in quality of life and zero means no change. Questionnaires were filled by patients itself or as interviews depending on the patient's education level and culture. The collected data were statistically analyzed. Patients with suspected malignancy, same time uvulopalatopharyngoplasty, Pre tonsillar abscess, coagulopathy, immunodeficiency disease and craniofacial anomalies were excluded from study. The statistical software SPSS version 17 was used to test the frequency (percentage, mean ± SD) Wilcoxon, Pired T-Test was analyzed after completing the questionnaire data. Significance level for the P in this study is considered less than 0.05.

Results

Minimum age of patients was 15 years and maximum age was 45 years. The mean age of patients was 26.20 ± 6.42 years old. 24 patients (60%) were males and 16 (40%) were female. The most common complaint was bad breath and snoring which includes 30% of all cases; after that septic sore throat 22.5%, repeated sore throat 20%, bad breath 17.5% and snoring 10% were placed in next steps of complaint.

Difference between quality of life before and after tonsillectomy is given in Table 1 based on the questionnaire. 35 patients (87.5%) were satisfied with their surgery, 2 patients (5%) were not satisfied with the outcome of surgery, and 3 patients (7.5%) had a partly satisfactory state of the operation. In 33 patients (82.5%) symptoms generally was eliminated; 5 patients (12.5%) had residual symptoms; 2 patients (5%) had partially symptoms.

Variable	Before tonsillectomy	After tonsillectomy	P
Mean of total scale	14.10±9.16	45.27±9.33	001.<0
Mean of general Subscale	9.37±8.93	47.08±7.27	001.<0
Mean of Subscale social support	10.83±14.39	36.35±18	001.<0
Mean Subscale physical activity	42.25±26.28	43.12±16.65	0.922

Table 1: Difference between quality of life before and after tonsillectomy

Discussion:

As mentioned, tonsillitis is one of the most common chronic diseases of ear, nose and throat and tonsillectomy is one of the most available standard therapies to treat tonsillitis (10). Most candidates for tonsillectomy are patients with recurrent or chronic tonsillitis. This surgery can affect on patient's quality of life (13). There are several arguments tonsillectomy indications in adults, especially those who are suffering from chronic tonsillitis despite being clear indications for tonsillectomy in children (14). One of these challenges is the quality of life before and after tonsillectomy surgery and how it can affect the quality of life in patients; Treatments such as antibiotic therapy was unsuccessful and most patients are associated with low tolerance. Patient satisfaction and quality of life before and after tonsillectomy surgery can play a determining role in the decision to perform surgery (15).

Patient satisfaction from the results of the surgery will depend on several factors such as shortening course of the disease, reducing the number of doctor visits, less antibiotic use, reducing absenteeism from work and school days and etc. These cases affect on the quality of life in patients before and after surgery. Tonsillectomy is the most successful procedures in ear, nose and throat medicine according to various articles which in most cases is related with a reduction in symptoms. In this study we examined the effect of adenotonsillectomy on the quality of life for people over 14 years old with chronic or recurrent tonsillitis. GHSI GBI questionnaire was used to assess the quality of life before and after surgery that is standardized questionnaire for evaluating quality of life in otolaryngology operations. Based on the findings of this study, the mean age of patients undergoing tonsillectomy was equal to 26.20±6.42 years old and the majority of patients in this study were male.

Bhattacharyya et al studied the effect of tonsillectomy on adult patients with chronic tonsillitis; mean age patients were reported 27 years old. The mean age of patients in Schwentner et al study was 30 years old (13, 16). In other studies the prevalence of chronic and recurrent tonsillitis had the highest level in patients between 25 to 35 years old (17-19). As mentioned before, most of the cases in recent study were male (60%). By comparing the results of different studies, we have found

different results in gender distribution in our study and other studies; the difference can be attributed to the greater tendency of males to surgical treatment (20-23). There was significant difference in total score of the questionnaire before and after tonsillectomy, general subscale, and social activities subscales before and after tonsillectomy based on questionnaire results for patients life quality ($P<0.001$). This means that the overall quality of life after surgery has improved dramatically than before surgery. There was not statistically significant difference between the before and after group unlike higher subscale scores of physical activity after operation compared to before tonsillectomy.

Variety of physical and social factors has involved in the evaluating patients satisfaction from therapeutic process. Results indicate that tonsillectomy improves the overall health of patients with chronic and recurrent tonsillectomy and simultaneously improves the patient's other conditions such as social activities. These findings are comparable with the results of other studies about this subject. In a study conducted by Baumann et al, the overall rating was 16.9, the general health 12.9 and physical activity 46.6 for patients after surgery; these values indicate an overall increase in quality of life after tonsillectomy that is agree with our study (10). In our study the greatest improvements were in the public health (Subscale 47.8±7.27) that the findings are consistent with Baumann study results (10). Baumann reported improvement of symptoms prior to surgery (60% of patients). Based on the results of our study 82.5% of patients had relief of symptoms indicating the overall success of tonsillectomy in our study.

In Amanda et al study the greatest improvement in quality of life was in physical activity and public health. Difference before and after surgery was not statistically significant despite better performance in the social field. In Amanda et al study majority patients have declared their satisfaction following tonsillectomy. Based on our study 87.5% of patients were satisfied with the results of operations and our findings are in accordance with recent study (12). Battacharyya study showed a significant improvement in the overall situation and in each Subscale including general health, physical activity and social activity of patients after tonsillectomy. However, in this study the greatest improvement was in the general health of the patients after surgery and the social and physical activity take the next place. These results are in accordance with our study that shows the greatest improvements in public health, social health and physical performance orderly (12). In our study 35 patients (87.5%) were satisfied with their surgery, 2 patients (5%) were not satisfied with the outcome of surgery, and 3 patients (7.5%) had a partial satisfactory state of the operation. symptoms generally was resolved in 33 patients (82.5%). 5 patients (12.5%) had residual symptoms and 2 patients (5%) with relative improvements. The result of the study is comparable with Richards et al research that reported eradication of all symptoms and general satisfactory of patients (13). Richards also showed an overall improvement in the overall score of GBI questionnaire and all three Subscales (general health, physical activity and social activity); these findings are in accordance with our study. Richards et al demonstrated the highest improvement in public health and lowest improvement in the social activity (13). In our study, the greatest improvement was in public health and the minimal improvement was in physical activity. This could be due to difference in age and sex distribution of the studies. Oluwasanmi et al reported the overall improvement in quality of life after tonsillectomy compared to before surgery that is same line with the findings of our study (24).

Based on our results, we conclude that the most common age for chronic and recurrent tonsillitis aged between 15 and 35. There was a significant difference in quality of life before and after tonsillectomy; this mean improvement of life quality after operation. Most of improvements were in public and social health and lowest improvement was in physical activity. Tonsillectomy can be a choice method by considering the findings of tonsillectomy in adults with recurrent or chronic tonsillitis.

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