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Efficacy of Tonsillectomy and Clinical Outcomes and Quality Of Life in Children and Adults of RIMS, Adilabad

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Original Research Article

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Abstract: Tonsillectomy is one of the commonest procedures performed in ENT clinics. The most common indications include recurrent tonsillitis, tonsillar hypertrophy, and sleep apnoea. The outcomes of such operations are generally good however the operations sometimes results in postoperative complications such as hemorrhage, pain and nutritional problems in children. With this background, we in the present study tried to evaluate the clinical outcomes and quality of life of the patients those who have undergone tonsillectomies. Methods: This cross-sectional study was conducted in the Department of ENT, Rajiv Gandhi Institute of Medical Sciences and Hospital [RIMS], Adilabad. Only patients (children and adults) who had undergone tonsillectomy for recurrent episodes of acute or chronic tonsillitis were included in the study. Patients (or parents in case children less than 12 years) were given a prefabricated questionnaire and were asked to compare the details of their (child's) health and symptoms before and after tonsillectomy. Out of a total of 110 tonsillectomy patients, we were able to follow up 90 patients. Results: We found in the present study that the average school/work loss by the patients due to throat infection before tonsillectomy was 8.21 days 95% CI was 7.52 – 8.9 days after tonsillectomy the rate of school/work loss was reduced to 2.02 days [95% CI was 2.0 - 2.04 days]. The average values of wellbeing assessed by the patients (1=Poor, 2= moderate, 3=good, d= very good) before the operation was 1.48 and after the operation it was 3.6 and the general health assessment before the operation was 1.38 before the operation and after the operation it was 3.5 and the energy levels before the operation was 1.57 and after the operation it was 3.65. Conclusions: Within the limitations of the present study we can conclude that Tonsillectomy is beneficial for the patients with recurrent acute and chronic tonsillitis. The overall outcomes after tonsillectomies have been encouraging and a vast majority of patients reporting improvement in the quality of life after the operation. Therefore tonsillectomy may still be considered as a standard procedure as it reduces the morbidity in the patients with tonsillitis.

Keywords: Tonsillitis, Tonsillectomy, Clinical Outcome, Quality of life.

INTRODUCTION

Tonsillectomy is one of the oldest surgical procedures performed for tonsillitis by otolaryngologists; however, there is no standard technique amongst all surgeons [1]. In the United Kingdom alone 50,000 procedures were performed in England and Wales in 2005 [2]. The efficacy of tonsillectomy in the treatment of chronic tonsillitis remains controversial. A randomized controlled trial of tonsillectomy in children with mild disease suggested no major clinical benefit of surgical intervention. [3] Other studies have confirmed that there is a benefit involved in treatment particularly in children with the more severe disease [4, 5]. Current indications for tonsillectomy include recurrent tonsillitis and tonsillar hypertrophy resulting in sleep-disordered breathing. More numbers of tonsillectomies are conducted for the treatment of sleep-disordered breathing fuelled by the increasing numbers of pediatric patients being diagnosed with the conditions and understanding the consequences of not treating the condition. In the year 2000, the American Academy of Otolaryngology published a set of clinical indicators for patient selection for tonsillectomy. They specified the presence of three or more episodes of tonsillitis or adenoiditis per year despite an adequate medical therapy a criteria for surgical intervention [6]. The Scottish Intercollegiate Guidelines Network has suggested that the patients should meet all the five criteria sore throats due to tonsillitis, five or more episodes of tonsillitis per year, symptoms for at least one year and episodes of a sore throat disable normal functions [7]. One of the concerns

is occurrence of transient bacteraemia due to tonsillectomy, it usually does not cause any problems in healthy individuals, but it may cause high mortality in high-risk patients of congenital/acquired heart disease or orthopedic prosthesis [8, 9] prophylactic antibiotics are usually administered in high-risk patients [10, 11] with this background we in the present study tried to evaluate the clinical outcomes and quality of life of the patients using a prefabricated questionnaire to be filled up by the patients.

MATERIALS AND METHODS

This cross-sectional study was conducted in the Department of ENT, Rajiv Gandhi Institute of Medical Sciences and Hospital [RIMS], Adilabad from the periods of January 2015 to November 2016. Only patients (children and adults) who had undergone tonsillectomy for recurrent episodes of acute or chronic tonsillitis were included in the study. Patients (or parents in case children less than 12 years) were given a prefabricated questionnaire and were asked to compare the details of their (child's) health and symptoms before and after tonsillectomy. Out of a total 110 tonsillectomy patients, we were able to follow up 90 patients. All operations were performed or supervised by an expert team of otolaryngologist; standard surgical techniques were used.

A sample of the questionnaire given to the patients-

Tick/fill the most relevant option

One year before operation

1) How many times did you suffer from tonsillitis in one year?
   a) Two b) three c) four d) many e)_____days
2) How many days you were off work/school due to throat infection
   a) Four b) eight c) ten d) fourteen e)_____days
3) How many times did you visit the doctor for throat infection
   a) Two b) three c) four d) many e)_____days
4) Were the episodes of sore throat associated with high temperature and painful swallowing?
   Yes/ NO.
5) Your general health assessment before the operation was
   1) Poor 2) moderate 3) good 4) very good
6) Your energy levels were
   1) Poor 2) moderate 3) good d) very good

One year after your operation

1 How many times did you suffer from tonsillitis in one year?
   a) One b) two c) three d) none e) _____days
2. How many days you were off work/school due to throat infection
   a) two b) four c) five d) none e)_____days
3. How many times did you visit the doctor for throat infection
   a) Two b) three c) four d) none e) _____days
4. Were there any episodes of sore throat associated with high temperature and painful swallowing?
   Yes/ NO.
5. How would you rate your feeling of: Well-being:
   1) very poor, 2) poor moderate 3) Good, 4) very good
6. and compared with before the operation has this:
   a) improved b) stayed same c) worsened
7. Your general health assessment after the operation was
   1) Poor 2) moderate 3) good 4) very good
8. Your energy levels were after operation
   1) Poor 2) moderate 3) good 4) very good
9. Your overall assessment regarding the operation and the outcome
   1) Poor 2) satisfactory 3) good 4) very good

RESULTS

Out of which 58 were male and 32 were female. The average age of the patients was 22 yrs age range from 14-32 yrs. We found in the present study that the average school/work loss by the patients due to throat infection before tonsillectomy was 8.21 days 95% CI was 7.52 – 8.9 days after tonsillectomy the rate of school/work loss was reduced to 2.02 days [95% CI was 2.0 -2.04 days] shown in figure 1. The average numbers of doctors' visits before the operation were 4.92 times [95% CI 4.51 to 5.33] times in one year and it reduced to 1.69 times in one year [95% CI 1.56 to 1.82] times shown in figure 2.

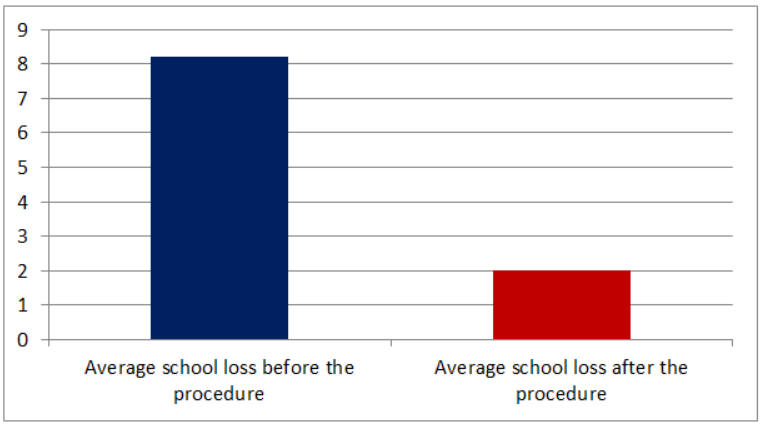

Fig-1: Showing the comparison of average values of school/work loss due to tonsillitis before and after the procedure

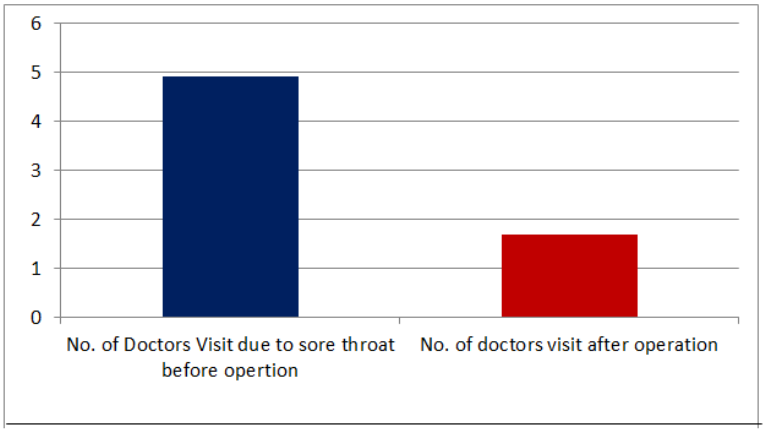

Fig-2: Showing the Average numbers of Doctors visits due to throat infection before and after the procedure

The average values of wellbeing assessed by the patients (1=Poor, 2= moderate, 3=good, d= very good) before the operation was 1.48 and after the operation it was 3.6 and the general health assessment before the operation was 1.38 before the operation and after the operation it was 3.5 and the energy levels before the operation was 1.57 and after the operation it was 3.65, shown in figure 3.

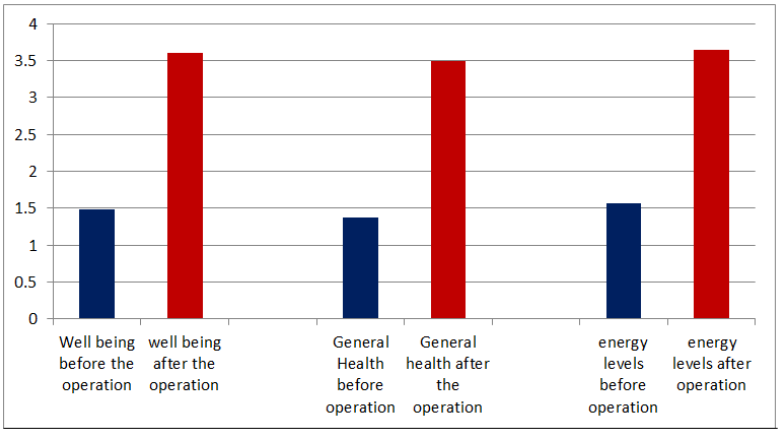

Fig-3: showing the average scores of perception of wellbeing, general health and energy levels before and after the operation. (1=Poor, 2= moderate, 3=good, d= very good)

The overall assessment by 90% of the patients was the overall situation has improved for them and the outcome of the operation was good to very good.

DISCUSSION

Tonsillectomy is recommended in patients with chronic recurrent tonsillitis and for those who are persistent carriers of streptococcal spp and to some

degree the diagnosis is also extended to the pediatric population [12]. Although mostly it is performed in children however a significant portion of adults also undergo the procedure due to chronic recurrent tonsillitis or as a part of surgical airway management in the treatment of obstructive sleep apnoea. The diagnosis of chronic tonsillitis is based on frequency and severity of episodes but the criteria to satisfy diagnosis varies. Less common indications for tonsillectomy are halitosis, chronic cryptic debris, as an adjunct to uvulopalatopharyngoplasty for the patients with obstructive sleep apnoea. Even though tonsillectomy is very common interestingly very few studies have been done so far on the clinical and quality of life outcomes of patients undergoing tonsillectomies. We in the present study found that there is an overall improvement in patient's quality of life post tonsillectomy. The perception of wellbeing, general health and energy levels were found to significantly better in patients post tonsillectomy. Mui *et al.* [13] have shown that tonsillectomy significantly reduces the number of physician visits and the need for antibiotics and also improves the attendance at the work and school [13]. In the present study we found a reduction in the mean number of physician visits from 4.92 to 1.69 times due to sore throat infections. Some authors have demonstrated that the mean number of physician visits and antibiotic prescriptions reduces significantly after the operation and 87% of the patients also confirmed that they would recommend the procedure to anyone suffering from tonsillitis [13-15]. In a similar study by R Fox *et al;* [16] to determine the effect of tonsillectomy on morbidity in patients listed for tonsillectomy found that the morbidity reported by patients suffering from chronic untreated tonsillitis decreases with time and tonsillectomy significantly causes greater reduction in morbidity than time alone. The time resolution of the disease is a matter of debate. It is quite possible that the proportion of the population may experience symptom resolution without surgical intervention or alternative may have become accustomed to their symptoms and accepts them as normal. But it is not possible to predict the future behavior of the disease in any individual Therefore using clinical judgment is of prime importance and there is very little doubt that correctly selected cases undergoing tonsillectomy will benefit from it in the long term.

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