

THE PROBLEM OF TONSILLECTOMY AND ADENOIDECTOMY IN THE ALLERGIC PERSON

Kemal Özkaragöz, M. D.* and Ataman Dereli, M. D.**

Tonsillectomy and adenoidectomy are still frequently performed operations in Turkey, constituting about 25 to 30 per cent of all surgical operations.

For the last decade, management and indications for this operation have been questioned by many authorities.¹⁻⁴ The lowered resistance to infection caused by allergy made the physician in the past look for a remedy by removing the tonsils. However clinical and statistical work revealed that there is not only no benefit but often harm in this operation on the allergic person. Advances in the study of allergy and improvement in the hyposensitization techniques have gradually changed the clinical picture, while concepts of enzymatic change, adaptive stress syndrome and endocrine and hormonal imbalance have materially altered the therapeutic indications for the management of allergic problems.

Sobel in 1953 discussed adeno-tonsillectomy and its relation to asthma.⁵ She pointed out that there are three schools of thought: 1. tonsils and adenoids act as a focus of infection and if removed the asthmatic condition will improve. 2. tonsils and adenoids play an important role in preventing the spread of infection from the upper respiratory tract to the lower respiratory tract, therefore the removal of tonsils and adenoids may precipitate asthma. 3. the indications for adenotonsillectomy are the same for allergic and non allergic patients. Sobel, herself, studied 100 patients and came to the conclusion that the indications for adenotonsillectomy were the same for the allergic as the non-allergic patient and made no difference to the severity of the asthma.

A pioneer study of the effect of tonsillectomy and adenoidectomy on the health of children was reported by Kaiser in 1932.⁶ He compared the health of two groups of children, one group having had tonsils removed, the other although the operation had been recommended, had for one reason or another not been operated on.

From Ankara University Hacettepe Faculty of Medicine and Hacettepe Children's Hospital.

* Assistant Professor of Pediatrics, Head of the Department of Allergy.

** Fellow in Pediatric Allergy. .

Kaiser in a ten year follow-up study observed a reduction in the frequency of tonsillitis and sore throat after operation which lasted during the entire period of study. For a period of three years after operation, the surgically treated children enjoyed greater freedom from colds but during the next seven years, the children who had had the operation actually had more colds than the unoperated group. Kaiser concluded that on the whole the children who were operated on showed slight advantage over the others and that this advantage could not be considered statistically significant. The incidence of pneumonia and bronchitis was greater in the tonsillectomized than in the nonoperated on group.

Frankland wrote from London in 1959 that all allergist are only too familiar with the story that asthma began after the removal of tonsils and adenoids.⁷ He claims that at least this operation is becoming less popular than it used to be.

Sobel warned that in patients with repeated attacks of asthma considered caused by infections, tonsillectomy was followed by a recurrence of asthma in 82 per cent within one year and in 100 per cent of the patients within four years.⁸

Badger minimized the benefits of tonsillectomy under certain conditions stating that he would not «waste time in a discussion of the benefit of tonsillectomy in such various conditions as respiratory allergy, anorexia, mental deficiency, pyelitis and cyclic vomiting.»⁸

Lerner reported 50 allergic tonsillectomy patients and 20 non-allergic patients who had had tonsillectomies because their symptoms resembled those of the allergic patient.⁹ He noticed that after tonsillectomy all of these patients showed allergic symptoms.

Fowler in his studies on tissue hypersensitivity, stated that there is ample clinical documentation of the fact that local tissue injury as well as nerve injury tends to hypersensitize a tissue.¹⁰ This can cause increased capillary permeability, edema, hemorrhage followed by more or less necrosis. This probably is the mechanism that occurs in rhinologic surgical procedures.

Bullen reporting on 300 cases of patients who showed nasal or pulmonary symptoms of allergy on whom tonsillectomies had been performed and on 300 similar patients whose tonsils had not been removed concluded that the positive results and the failures from treatment were almost identical in the two groups.¹¹ He concluded

that tonsillectomy does not, with rare exceptions, improve the results of treatment for nasal or pulmonary manifestations of allergy.

If tonsillectomy and adenoidectomy are indicated, surgery should never be performed during the pollen season. In Timmon's series, 80 per cent of those developing asthma had had tonsillectomies between April 1st and October 31st, which was that area's pollination season.¹² In all events preoperative allergic management should be continued postoperatively.

Material and Method

According to the records, during the last four years from 1961 to 1965 we have seen 854 patients with asthma and 310 patients with perennial allergic rhinitis at the allergy clinic of the Hacettepe Faculty of Medicine. At present 230 of these patients are under hyposensitization programs. Thirty-seven of these 230 patients had had tonsillectomies prior to their visit to our clinic and another two with definite indications, had tonsillectomies at our hospital. The indications for tonsillectomy and adenoidectomy of the 39 patients are shown in Table 1 and their age at the time of operation in Table 2.

TABLE 1

INDICATIONS FOR TONSILLECTOMY AND ADENOIDECTOMY

Reason	Number of patients	%
Recurrent rhinitis, tonsillitis and fever	25	64
Rheumatic fever	3	7.5
Bronchial asthma	10	26
Polyp and sinusitis	1	2.5

The cases of these patients were followed for a period of from one month to four years after surgery and from varying standpoints, age of onset of allergic disorder, age of tonsillectomy and adenoidectomy, cause of surgery, type of allergic manifestation and relief or increase of symptoms following surgery.

TABLE 2
AGE OF PATIENTS AT OPERATION

Ages	Number of patients
0-5	3
5-10	13
10-15	5
15-20	4
20	14

Discussion

In our series, the reasons for tonsillectomy and adenoidectomy among 39 cases were recurrent rhinitis, frequent tonsillitis and bronchial asthma. The diagnoses of these allergic patients are shown in Table 3. These patients were chosen from the 230 cases under hyposensitization for respiratory allergies such as perennial allergic rhinitis, and bronchial asthma. Detailed histories revealed similar symptoms in 72 cases from the 191 cases under hyposensitization programs. These 72 control patients also had had recurrent rhinitis, frequent tonsillitis and bronchial asthma, but tonsillectomies were not performed. Their allergic state changed little other than changes caused by seasonal variations.

TABLE 3
TYPE OF ALLERGIC DISORDER

Diagnosis	Number of patients	%
Perennial allergic rhinitis	4	11
Bronchial asthma	13	33
Perennial allergic rhinitis + Bronchial asthma	13	33
Allergic bronchitis + Perennial allergic rhinitis	8	20.5
Bronchial asthma + urticaria + Perennial allergic rhinitis	1	2.5

This control, unoperated on, group was treated symptomatically with antibiotics and hyposensitization treatment. As their allergic condition improved the frequency of tonsillitis also decreased. Surgery was recommended for only two of this number.

The results of the tonsillectomy operation on all patients, including our two cases are summarized in Table 4. Only one patient (2 per cent) benefited completely from the operation, of the others, four (10.7 per cent) showed limited recovery, 16 (41 per cent) remained unchanged, and in 18 cases (46 per cent) the symptoms increased. Our two cases were among those listed under complete and limited recovery.

We found this percentage (46 per cent) of patients whose allergic symptoms became worse significant. There was no such exacerbation of allergic symptoms among the 72 in the unoperated on group. Although tonsillitis was less frequent in the first year after operation, the frequency and duration of rhinitis increased and the number of attacks of bronchial asthma became more frequent and more severe.

TABLE 4
RESULT OF TONSILLECTOMY AND ADENOIDECTOMY

Results	Number of Patients	%
Complete recovery	1	2.7
Limited recovery	4	10.8
Unchanged	16	41
Worse	18	46

In order to prevent these results from the tonsillectomy operation, all candidates should have a thorough study of their personal and family allergic histories. Studies should be made for an increase in peripheral blood eosinophilia and cytologic content of respiratory secretion so that allergy may be distinguished from a purely infectious process. Whenever the two conditions coexist the decision for surgery should be made only after a trial period of allergic management. If tonsillitis and adenoiditis recur three or more times in a one month period after a course of good allergic management

and antibiotic treatment, tonsillectomy and adenoidectomy can be considered. The size and appearance of the tonsils, however, *cannot* be used as a criterion for tonsillectomy.

Summary and Conclusion

A study was made in the Allergy Department of Hacettepe Medical Center of types of allergic disorders and the causes and results of tonsillectomy and adenoidectomy in 39 patients with tonsillectomies out of 230 allergic patients with respiratory tract allergy who were under hyposensitization. The majority were operated on for recurrent tonsillitis, rhinitis and bronchial asthma. The results of this operation among allergic patients were poor. Only five patients had complete or partial recovery, the others remained either unchanged or became worse. None of the patients among the unoperated group, showed any exacerbation of allergic symptoms clinically during the period of observation.

Indications for tonsillectomy had been accepted as similar in allergic and nonallergic children. However allergy per se cannot be considered a mandate for tonsillectomy but should be an index warning of the incipient danger in performing a tonsillectomy.

We believe that there are very few cases among allergic persons in which tonsillectomies are necessary. Our experience as well as that of many other authors showed that poor results from the operation often indicate that these patients may have been allergic and that common allergic symptoms such as sneezing, rhinorrhea, nasal blockage, bronchitis and asthma should not necessarily be considered indications for tonsillectomy.

In order to avoid negative results following tonsillectomy, all candidates for this operation should have a thorough study of their personal and family allergic history and whenever allergic and infectious conditions coexist, the decision for surgery should be made only after a trial period of allergic management. If after such a period, the allergy improves, but the infectious state remains, tonsillectomy may be considered. The operation should be performed in a pollenfree season and allergic management should be continued postoperatively.

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