

DOES REMOVAL OF ADENOID VEGETATIONS PREVENT ACUTE DISEASE OF THE MIDDLE EAR?

DR. JOHN ZAHORSKY, St. Louis.

This article is written not with the intention of discrediting the recognized value of adenoid removal—an operative procedure which does so much good in selected cases—but its purpose is to assist in determining the indications and contraindications of the operation.

The aurist has found that adenoid removal frequently assists in the cure of a protracted or recurrent otorrhea and even small projections of adenoid tissue in the naso-pharynx are regarded with suspicion. There is no doubt that this operation by removing an infected area and by draining the mucous membrane does give the body a better chance to throw off the infectious process in the middle ear. This favorable experience is common enough and gradually the impression has been produced that acute inflammation of the tympanic cavity is due to the presence of adenoid vegetations in the pharynx. Even mastoid infection has been etiologically connected with hypertrophy of the pharyngeal tonsil. Hence the question—does removal of the adenoid vegetations prevent acute disease of the middle ear?

In another place (*Interstate Medical Journal*, Vol. 26, No. 1) I have already touched upon this subject. My own observation goes to show that children under eight years of age who have had their pharyngeal tonsils removed have about as much trouble with their ears as those who have not been subjected to the operation. After adenoid removal the mucous membrane of the naso-pharynx may be infected and the infection invade the tympanic cavity unless a normal resistance is acquired.

I studied the records of my patients during the last three years. In this series were 220 children who had their adenoids or adenoids and tonsils removed. Many of these were over nine years of age and were relatively immune to respiratory diseases.

I found thirty-two children who had one or more attacks of acute otitis media. Brief histories of twenty-nine cases will be given:

Note. Since writing the above I have encountered twelve more cases of otitis media in young children who have had their adenoids removed.

Case 1. S. B., 8 years old, boy; had his pharyngeal and faucial tonsils removed when 5 years of age. When 7 years old he passed

through a severe attack of pneumonia. Last winter had a double otitis media suppurative with mastoid involvement, which, however, gradually subsided without operation. Both ear drums were incised but an irregular fever persisted for nearly two weeks with copious discharge from the ears.

Case 2. T. L., girl. Was first seen when 9 years old. She had a grippal bronchitis with moderate fever (101°). Had another attack two months later. Her tonsils and adenoids were taken out when she was 6 years old. Three months later she suffered from a severe suppurating middle ear disease. The ears discharged for several weeks. The adenoids were again removed when she was 7 years old.

Case 3. E. H., 6 years old, boy. Subject to bronchitis. One attack of otitis suppuration when 2 years old. Tonsils and adenoids removed one year ago. Now has severe bronchitis and catarrhal otitis media.

Case 4. R. C., boy, 8 years old. Adenoids were removed when he was 5 years old. Otitis media suppuration when 3 years old. He has had three attacks of non-suppurative otitis media in the last three years.

Case 5. P. C., 6 years old, boy. Adenoids and tonsils were removed at 5 years on account of persistent cervical adenitis. Now has severe bronchiolitis and otitis media. Recovery without suppuration.

Case 6. B. C., 5 years old, boy. Tonsils and adenoids removed three years ago. Had Spanish influenza, complicated with a serious pneumonia. Two weeks later he suffered from acute otitis. No suppuration.

Case 7. J. O., 6 years old, boy. Several attacks of bronchitis, lately tonsillitis. Tonsils large, but adenoid vegetations were removed when he was 3 years old. Two attacks of otitis media. Last week he has suffered from a severe catarrhal inflammation of the nose and bronchial tube, followed by a double suppurative otitis.

Case 8. D. P., girl, 7 years old. Tonsils and adenoids removed at 4 years. Broncho-pneumonia the first part of the winter and now has "cold" with acute catarrhal otitis.

Case 9. M. L., 6 years old, girl. Adenoids removed when 2 years old, and both tonsils and adenoids at 5 years. Several attacks of bronchitis and one of acute otitis since.

Case 10. M. M., 6 years old, boy. Had broncho-pneumonia when 7 months old, pyelitis at 2 years. He has been well the last three years. Entered kindergarten last fall. Had three attacks

of middle ear inflammation during the winter. Ear discharging now for three weeks. Tonsils very large. Adenoids removed at 2 years.

Case 11. O. M., boy, aged 6 years. Adenoids and tonsils removed two years ago. No colds last two years. Now has acute otitic suppuration associated with bronchitis.

Case 12. H. M., 8 years old, male. Subject to acute catarrhal affections of the respiratory tract. Adenoids and tonsils excised two years ago. Last Christmas took a "cold," followed by bronchitis and middle ear inflammation. Both ears suppurated. General condition poor.

Case 13. H. V., girl, 6 years old. Has recurrent attacks of laryngitis and bronchitis. Tonsils very small and not subject to inflammation. The adenoids were removed at the age of 5. In February, 1919, was sick several days with grippal angina and otitis media catarrhalis.

Case 14. V. W., 6 years old, boy. Very nervous. Subject to bronchitis. Tonsils and adenoids removed when 4 years old. Suffered from frequent attacks of earache and bronchitis.

Case 15. M. S., boy, 9 years old. Subject to repeated attacks of bronchitis. Tonsils and adenoids were removed at 3 years of age. Two attacks of otitis media in the next six years.

Case 16. E. B., boy, 9 years old. Had an abscess in the ear when 1 year old. Subject to repeated colds. Very nervous boy. Adenoids removed at 6 years of age. Repeated attacks of earache since but no suppuration.

Case 17. C. A., girl, 8 years old. She has a long history of mucous colitis, pyelitis, bronchitis and tonsillitis. Tonsils small. Adenoid vegetations were excised at 2 years of age. She has had three attacks of otitis media since, once suppurating.

Case 18. B. E., girl, 7 years old. The little patient has had an acute catarrh for several weeks, dry, croupy cough. She is subject to bronchitis. Tonsils and adenoids removed one year ago. Now has disseminated bronchitis and acute inflammation of the middle ear. Gradual recovery of the ear without suppuration.

Case 19. R. H., boy, 7 years. Had large tonsils and adenoids which were removed in May, 1918. Took a severe cold six weeks ago (October, 1918) with the right ear drum inflamed, followed by suppuration. Bronchitis was associated with the ear inflammation. The ear discharged for six weeks.

Case 20. S. L., 5 years old, boy. Suffered from repeated attacks of colitis as an infant. One attack of bronchitis when 2 years old.

Then followed repeated attacks of tonsillitis. Adenoids removed at 2 years of age. Tonsils and adenoids removed at 4 years of age. Severe double suppurative otitis media when he was 5 years old. This was preceded by a general bronchitis. Always has a stuffy nose. Another attack of acute catarrhal otitis media occurred eight months later.

Case 21. C. E., aged 5, boy. Has had a cold recently and complains of his ear. Does not hear well. Both ear drums inflamed. Adenoids and tonsils removed one year ago.

Case 22. A. G., girl, 5 years old. Her adenoids were removed in September, 1917. Severe suppurative otitis media (*Streptococcic*) developed in the spring of 1918. Influenza, December, 1919, with double otitis media; one ear drum had to be lanced.

Case 23. B. G., boy, 4 years old. Adenoids were removed in the spring of 1918. Influenza, December, 1918. Suffered from acute catarrhal otitis media at the same time.

Case 24. F. B., boy, 7 years old. Subject to colds. Has had measles and whooping cough. The tonsils and adenoids were removed in June. In October had an attack of bronchitis and otitis media catarrhalis. The glands in the neck were enlarged and subsided very slowly.

Case 25. B. E., boy, aged 7 years. Has been subject to repeated colds all his life. Tonsils and adenoids removed one year ago. Now (October, 1918) has a severe cough and slight fever. Coughs incessantly. Bronchitis. Two days later had acute catarrhal otitis media. Recovery of bronchitis and otitis slow.

Case 26. R. M., girl, 6½ years old. Tonsils and adenoids removed at 3 years of age. She suffers from severe coughing spells every winter. Had acute suppurative otitis media one year ago. Now has another attack, double otitis media; one ear discharging. Severe cough. Physical signs of the chest were negative.

Case 27. M. L., girl, 6 years old. Was first seen suffering from a suppurative otitis and bronchitis. The bronchial inflammation subsided and an aurist treated the ears. She had her pharyngeal tonsils removed two years before. The aurist removed the adenoid tissue again. Gradual recovery.

Case 28. H. C., 10 years old, boy. Has been a cripple with cerebral palsy. Adenoids removed when he was 6 years old. Two attacks of ear inflammation in the last four years.

Case 29. S. S., boy. When he was 2 years old had his pharyngeal tonsils removed, although no enlargement was apparent, with the hope that asthmatic attacks might be prevented. Appar-

ently there was a favorable effect on the asthma for a few months; but the following winter had several paroxysms. When 4½ years old he had a severe septic otitis media suppuration, which was accompanied by intense general symptoms.

Conclusion. We cannot depend on adenoid removal as a prophylactic in acute infections of the middle ear.

I ask the question: May not healthy adenoid tissue by absorbing bacteria and their products have a protecting influence on the spread of catarrhal inflammation and consequently on acute infections of the tympanic cavity?

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"A SIMPLE, BLOODLESS TONSILLECTOMY, WITH A SIMPLE, SAFE, LOCAL ANESTHESIA."

DR. JOHN A. THOMPSON, Cincinnati.

Under the above title in the September number of *THE LARYNGOSCOPE* Dr. Sol Rosenblatt describes a method of obtaining local anesthesia that is almost ideal. If he appreciates the anatomical details that explain the success of the method, he does not mention them in his article. In the July, 1917, number of the *Ohio State Medical Journal* there is an article with an anatomical illustration showing why a method of injection, very similar to Dr. Rosenblatt's, is so successful. The special dissection of the nerve supply of the tonsil, made for me by Prof. Knowler at the University of Cincinnati, shows, just external to the constrictor muscles of the pharynx, a connective tissue space in which lie the vessels and nerves in the neck. Just external to the anterior pillar this space is covered only by mucous membrane. A needle inserted one inch, the point directed slightly away from the median line, in this connective tissue space, will surround the glosso-pharyngeal nerve with the procain solution and the nerve will be blocked. The palatine nerve can be blocked where it leaves the posterior palatine foramen better than by Dr. Rosenblatt's injection in the palate. The solution injected external to the tonsil, pushes it into the throat, puts the blood-vessels on such tension that they contract instantly when cut, and reduce the hemorrhage to the minimum. After five years' use of the method I find it almost ideal. My later experience with it will be published in the transactions of the American Laryngological, Rhinological and Otological Society for 1920.