

THE REMOVAL OF THE THIRD AND FAUCIAL TONSILS.

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The indications for the removal of these tonsils are as follows:

1. Chronic enlargement of the tonsils, interfering with free nasal respiration, giving rise to mouth breathing and, during sleep, to snoring.

2. Recurrent attacks of tonsillitis, either follicular or suppurative, especially the latter.

3. A degree of chronic tonsillitis which causes persistent soreness about the throat.

4. Persistent congestion about the fauces and pharynx when associated with chronic enlargement of the tonsils.

5. Enlarged tonsils when associated with aural complications. These aural complications may be either one of three kinds—first, progressive deafness, with few or no visible changes in the drum head, in which case the deafness is due to defective ventilation of the middle ear caused by mouth breathing; second, to catarrhal otitis media; and third, to suppurative otitis media. These aural indications for tonsillotomy have been, in my experience, more commonly observed in children than in adults, and are among the most urgent indications for the operation.

6. Chronic lacunar tonsillitis characterized by a persistent morbid secretion, of a caseous, calcareous material and its deposit in the crypts and on the surface of the tonsils.

7. Tubercular cervical lymphadenitis when the lungs are as yet not involved. Here the tonsillotomy should be combined with the removal of the glands of the neck. This indication is based upon the generally admitted fact that tubercule bacilli may enter through the tonsils into the lymph glands of the neck and, if not arrested, reach in this way the general circulation. This source of tubercular infection has received increasing recognition in re-

cent years, and when present constitutes one of the most urgent indications for the removal both of the tonsils and the entire gland-bearing tissue of the neck.

8. I have convinced myself that many cases of cervical lymphadenitis, especially in children, are due to septic absorption by the tonsils; and this is true in many cases which are not tubercular. Such cases call for the removal of the tonsils.

9. Mouth breathing, snoring and nocturnal enuresis, especially when occurring in children, are strong indications for the removal of the third and faucial tonsils.

10. In fine, whenever the tonsils show pathology, associated with nasal or throat symptoms, as nasal catarrh, hoarseness, laryngitis, etc., they should be removed.

Technic of operation: The faucial tonsils may be removed in a number of ways, any one of which will often give the desired relief and yet any one of them will sometimes fail of such relief. I shall briefly describe several of the more commonly used methods and call attention, in passing, to the advantages and disadvantages of each:

1. The tonsillotome is more generally employed than any other instrument. It is used by many of the best operators, both in this country and abroad. The Mackenzie instrument is probably the best of the different tonsillotomes. Its use is safe and requires very little experience or technical skill. I think the tonsillotome the best instrument for removing tonsils only in one condition, that is where, as sometimes happens in young children, the tonsil tissue is so soft and friable that the vulsellum forceps will not hold, but will pull out. In these cases the tonsillotome is probably the best instrument to use. The

objection to the tonsillotome is that it removes such a small part of the tonsil. From this cause the symptoms are incompletely relieved, the tonsils are said "to return" and a second operation becomes necessary. I think the tonsillotome therefore, is not the best instrument for removing faucial tonsils.

2. In the operation I have for years employed, the tonsil is held taut by the vulsellum forceps and shaved off from below upward by a curved, probe-pointed bistoury. In this way as much of the tonsil tissue as desired can be removed. Even a complete tonsillectomy can be done in this way. Some have thought that the bistoury, while suitable for older patients and adults, would not be advisable in operating upon refractory children. It is, however, in the case of these refractory children that I find the advantages of the bistoury most marked.

3. The use of the cold snare has but one advantage over a sharp cutting instrument, and that is that it lessens hemorrhage. In most operations upon the tonsils the hemorrhage is a matter of no consequence, but in "bleeders" and in adults with large fibrous tonsils the tendency to bleed is at times excessive. The use of the cold wire snare does far more to control hemorrhage than any sharp cutting instrument can. In fact there is scarcely a well authenticated case on record where severe hemorrhage followed the removal of the tonsils by the cold snare. The cold snare, therefore, is indicated only where we fear troublesome hemorrhage, as in "bleeders" and in adults with hard, fibrous tonsils. The Kratzmueller's snare is easily the best tonsil snare made. In using any of these snares after the wire is placed loosely around the tonsil the gland should be grasped with a vulsellum forceps and forcibly drawn well within the grasp of the wire. In this way more of the tonsil is removed.

4. The electro-cautery and the electro-cautery snare have been advised and used by some because of their supposed effect in con-

trolling hemorrhage. My objections to the cautery are that it is slow, that it is excessively painful, that it does not control hemorrhage and that it is wholly unnecessary. Of all the methods of removing tonsils, I consider this the most barbarous and the least scientific. I am satisfied no operator would have it used on himself.

5. Ballenger removes the entire gland, doing a complete tonsillectomy by dissecting with an ordinary distoury around the sides and base of the tonsil. This is undoubtedly a good plan in many cases and Ballenger claims that it gives more complete relief to symptoms than any other method, besides no possibility of a return of the enlargement.

For the removal of the third tonsil the Delstanché curet leaves little to be desired. This curet has a hood and a couple of tenacula, so that it not only cuts the adenoid off at the base, but also hooks it and brings it out. They are made in three sizes, to correspond to the size of the throat.

The question of anesthesia has been differently settled by different operators. Some prefer cocaine, or better still, cocaine dissolved in a solution of adrenalin chloride 1-1000. For the removal of faucial tonsils only, where there is no adenoid, cocaine anesthesia is sufficient, except in the case of refractory children.

For the removal of the third tonsil cocaine anesthesia, as every one knows, is a failure. I have often wondered why cocaine would not anesthetize the third tonsil. In my opinion it is due to three facts, as follows: First, the broad, diffused surface, so that the cocaine solution cannot be accurately confined to it. Second, the shape and position of the pharyngeal dome as a result of which gravity takes the cocaine solution away from it. Third, the great vascularity of the adenoid, so that the cocaine is removed from the adenoid as fast as absorbed, so that it does not remain in quantities sufficient to produce anesthesia.

Practically, therefore, there is no local

anæsthetic for the removal of the third tonsil. We are thus compelled to operate under a general anæsthetic or to use no anæsthetic at all. Now, the nasopharynx is quite sensitive; if you doubt it, put a probe in your own. General anæsthesia is, therefore, necessary, unless one is willing to do an operation which to most people looks brutal. To avoid this brutality, which has the double disadvantage of being both apparent and real, general anæsthesia should be used. There is another strong reason for general anæsthesia, and that is that the operation can be better done with anæsthesia than without.

To my mind the only question, in this connection, is not whether we shall use a general anæsthetic, but which anæsthetic shall we use. This question I have settled, so far as my own work is concerned, in favor of the chloride of ethyl. With ethyl chloride, anæsthesia is produced in about one minute; it is a perfect surgical anæsthesia, and it passes off rapidly. It is perhaps as safe as any general anæsthetic can well be. During the past three years I have employed it in perhaps 150 tonsillotomies and always with satisfaction.

Hemorrhage following tonsillotomy is a bug-bear to the family and at times troublesome to the surgeon. As above stated, ordinarily the hemorrhage is insignificant, but in "bleeders" and in adults with large fibrous tonsils hemorrhage may occur. To prevent this hemorrhage the operation should be done, in such cases, with the cold wire snare.

If the hemorrhage actually occurs, the best method of controlling it of which I know, is a method which in an extremity I devised and used several years ago, and have since several times employed, always with perfect success. The plan is as follows: Tannic and gallic

acids, equal parts, are added to water until it has the consistency of thin gruel. This mixture is drawn into a syringe connected with a long, blunt-pointed cannula. Without disturbing the clot over the bleeding surface, the cannula is passed through the clot until it reaches the surface of the wound, and then fifteen or twenty drops of the above mixture are injected into the bleeding wound. By this method the clot retains the astringent mixture in situ, and the effect, in my experience, has been an immediate and permanent arrest of hemorrhage.

Among the complications occurring during the after-treatment, I have observed but two—fever and infection of the tonsil wound. A certain amount of transient fever following tonsillotomies under general anæsthesia is, in my experience, the rule rather than the exception. This fever is due to the fact that the blood passing into the stomach undergoes fermentation. The best preventive and cure for this fever is a dose of castor oil given a couple of hours after the operation.

Infection of the tonsil wound with delayed healing, ulceration, sloughing, etc., may occur, but is rare. Personally, I have had only one case which, after considerable time and free cauterization with the nitrate of silver, finally healed.

In conclusion, I wish to call attention to the important fact that when one of the tonsils is enlarged or diseased, all three generally are, though not necessarily to the same extent. This statement is more true, the younger the patients are. From this it follows that when one tonsil needs removal all three should usually be removed. Unless this is done the symptoms are incompletely relieved and a subsequent operation needs to be done.