

# INDICATIONS FOR VARIATIONS IN TECHNIC IN TONSILLECTOMY OPERATION.\*

BY CHARLES L. ADAMS, M. D.,

KOKOMO, INDIANA.

By way of introduction, permit me to quote from a paper presented by the late Dr. J. R. Fletcher:<sup>1</sup>

"When we can agree upon a technic which completely removes the tonsil in its capsule, does not open the aponeurosis of the superior constrictor muscle, does not injure the aponeurosis of the palatoglossus or palatopharyngeus muscles, which conserves every bit of the membrane reflected over the tonsil, which prevents fusion of the three muscles named and leaves a linear scar in a rudimentary fossa, which does not injure the voice and lessens greatly the frequency of the secondary hemorrhage, we will have achieved the ideal, in the light of our present knowledge."

He states, "that it is not a dream but it is being done uniformly by many." However, I fear that when all tonsil operators have agreed upon one technic, the millennium will have arrived. I base this conclusion upon the fact that all tonsils are not alike as regards shape, size, or histologic condition; nor are they situated alike in all throats with regard to other adjacent structures.

I can heartily agree that the ideal result would necessarily have to comply with the above stated conditions; but I do not believe that one technic is applicable to all types of tonsils. Furthermore, it would be a waste of time and effort to use an elaborate technic for a very simple case.

Dr. Greenfield Sluder<sup>2</sup> states, "that his instrument gives 99.6 per cent perfect results and that the late Dr. Ballenger stated that his modification of the Sluder instrument was good for 70 per cent of all cases." But what is true of these two men and a few others, who declare that their methods pro-

---

\*Read before the Chicago Laryngological and Otological Society, February 19, 1918.

duce almost perfect results, does not prove, to me at any rate, that the great majority of tonsil operators can apply one instrument or one technic to all tonsillectomies. And for the purpose of presenting to you the conclusions I have reached from my own experience in tonsil surgery, I have made a classification of the different types of tonsils with regard to their anatomic and pathologic relationship to the adjacent structures in the pharynx. This is done for the purpose of practical and definite discussion of the subject and is not an attempt at originality. It is as follows:

- (a) The free tonsil.
- (b) Tonsils with firm lymphoid connection to tongue.
- (c) Tonsils with large upper lobe hidden in supratonsillar space.

(d) The submerged tonsil.

(a) The free tonsil apparently has not a definite attachment to the tongue and slight, if any, attachment to the pillars. There is a well defined fossa between it and the pillars, and it protrudes out into the throat, from its pedicle-like attachment to the constrictor, an unhindered free mass of tissue. The pedicle varies in size and may be much smaller than the body of the tonsil. The supratonsillar space is free and there are no occluded crypts.

Quoting Dr. Boot:<sup>3</sup> "It can be removed by any method with perfect satisfaction and is the kind that leads the occasional operator to think that he is capable of doing tonsillectomy." Because the pedicle is usually small and the tonsil itself is free, the above statement is undoubtedly correct. Almost any technic will serve in gaining a good result, provided that it is skillfully performed by a competent and experienced operator. There should be no damage to the adjacent structures. Usually the general practitioner, thinking the operation a minor one and not demanding special ability or experience, removes them himself. I have seen some very poor results due, I judge, to the lack of the very talents that he thinks unnecessary to successfully perform the operation.

A few years ago these were about the only tonsils removed, and usually the operator removed them because they were obstructing the oropharynx to such an extent that the patient demanded that it be done. Then he used a guillotine or a

McKenzie tonsillotome, placed the fanestra over the tonsil, shut his eyes and squeezed. It made very little difference to him whether he removed part or all of the tonsil or damaged the pillars or cut off the uvula. Unfortunately for the public, this method is still being used by some operators.

The Sluder instrument is now used by a great many men with very satisfactory results. In competent hands it is safe. Nevertheless, it has its shortcomings, and these are soon discovered after using it for a while. Makuen\* states that an ideal intracapsular tonsillectomy can be done with this instrument if used in conjunction with a snare. He grasps the tonsil with the instrument, using a dull blade and the Sluder dislocating technic, but makes no effort to crush its attachment. Instead he slips a snare wire around the tonsil and between the pillars and the instrument with which he squeezes out the tonsil. In deciding on this method of technic, I believe that he has definitely pointed out the particular weakness of the instrument.

Of all the instruments now used for this type of tonsil I believe the snare is the best, safest and most practical. Any snare will do, but the one that will place the wire snugly around the base of the tonsil and very slowly crush the attachment is certainly the one to use. My preference is the Beck instrument.

The free tonsil is not one which it is necessary to remove by dissection. When its removal is so easily and completely performed with one instrument, it surely is a waste of time and effort to operate by the former method. A deplorable result frequently happens when unskilled and inexperienced men attempt to apply a complicated technic to these cases.

(b) In this type the tonsil is attached to the tongue by a lymphoid tissue connection. It has been my experience, and I find the experience of other men, that if the tonsil and this lymphoid connection are not sheared off close to the base of the tongue you have what is apparently a return of the tonsil. What really happens, however, is that the lymphoid tissue proliferates and pushes up into the evacuated fossa, filling it with a lymphoid mass. I have had a case in which it was necessary to remove this lymphoid mass twice after a tonsillectomy. And other cases have occurred where it was neces-

sary for me to remove this mass once. This followed tonsillectomies where I used a Sluder or snare leaving a small pedicle of tissue in the infratonsillar space. So finally I decided that these cases could not be operated satisfactorily with one instrument.

I think that in these cases the tonsil should be carefully removed by dissection. No other method will do as well, because none of them will deliver the tonsil in toto. The method used by Dr. Justus Matthews comes nearer my ideal of a perfect tonsillectomy than any other, unless it be the methods used by Beck, Ballenger or Fletcher. The general idea of dissecting from the upper pole down to the tongue, where the snare is used to crush off this connection, is common with all four men. They differ only in their methods of dissection. This really makes little difference, if skillfully performed, whether it is sharp, dull or finger dissection. The ideal result is the removal of all the tonsil and lymphoid tissue up to the tongue without removing any of the pillars or adjacent tissues.

In my operations I use the following technic: Grasp the tonsil with the Ballenger fixation forceps and pull it out and down. Make an incision between the tonsil and upper part of the anterior pillar about an inch in length so that it is possible to introduce the index finger. It is now easy to free the upper part of the tonsil from the pillars and all of it from the fossa. Where the pillars still adhere to the tonsil they are gently separated, if this is thought necessary, and the operation finished with the snare.

(c) One may be easily deceived regarding the size of the third type, because of the fact that its mass is hidden up between the pillars in the supratonsillar space. This lobe may constitute as much as one-half of the entire tonsil mass and only during inflammation show any evidence of its presence. In many throats the meeting of the pillars is as low as the middle of the tonsil. The plica tonsillaris may assist the pillars in encysting the upper and anterior parts of the tonsil; covering the crypts and mucous glands, damming the drainage of the supratonsillar fossa and the space between the anterior pillar and the fossa. Very often its attachment to the tonsil is so intimate and firm that it seems to be part of it, and it is

difficult to distinguish just where the anterior pillar ends and the plica commences.

As a rule these are the cases that are prone to tonsillar abscess. However, you may find encysted pockets of pus giving no local evidence of their existence but causing pathologic conditions in distant parts of the body. G. E. Shambaugh<sup>5</sup> states "that it is also a very frequent experience to discover distinct evidence of chronic infection in tonsils; as, for example, the presence of pus which can be expressed from the tonsil, where there has been no history of acute attacks, of acute tonsillectomy or of sore throat."

Even when gargling, these tonsils do not show their true size, and it is only when they are grasped with a tenaculum and pulled out and down that the outline of the upper pole shows through the anterior pillar. Only then are you able to gain a definite idea of their size and location. It is the rule to find the crypts filled full of foul smelling, cheesy material.

Regarding their removal, I will venture my opinion that this also is not a one instrument operation. The hidden upper pole must be dissected from its attachment very carefully. In fact, whether it is removed by sharp or dull instruments or by finger method, it requires the best of surgical skill to do this work properly. Many a blunderer may get away with an amputation, or even a laparotomy, but it takes real surgical ability to remove this tonsil without damage to other parts of the throat.

(d) The submerged tonsil, as the term would imply, is buried in the tonsillar fossa, with only a small part of its surface exposed. This renders it very difficult to determine its true size. The crypts, mucous glands and the fossa anterior, superior and posterior, cannot drain freely, if at all. The result is that peritonsillar abscesses are frequent, as this condition is ideal for encapsulation of detritus with resulting infection and pus formation. As a focus for infection this tonsil has as a competitor only the "hidden upper lobe" type.

Allow me to state that no tonsil of this type is ever needlessly taken out, and even if no encysted pus or infected detritus is found, which is extremely rare, it will not be long until this condition will obtain. Any way, you will have removed only a bit of lymphoid tissue that sooner or later

will cause the patient trouble, and which, up to date, has not been proven definitely to have any function, either as a bactericidal agent, internal secretory organ or pulley for the pillars to glide over while performing their part of vocalization.

It can be taken out very nicely in one of the three ways: Dissection, Sluder method or with the Beck instrument. The Sluder method works very well in selected cases, although there is always the danger of removing parts of the anterior pillar or at least some of the mucous membrane covering it. I have used the instrument in a great many cases with good results, but I must admit that I injured the pillars in several of my earlier Sluder tonsillectomies. The edge of the blade is difficult to keep in the proper condition. If too sharp, you may injure the pillars; if too dull, you may be forced to lay aside the instrument and do a dissection. And I have found that when the opening in the instrument is not smaller than the tonsil you may get only part of the mass, necessitating the removal of the balance by some other method. This is no doubt due to bad technic as well as an unsuitable instrument, but I have seen this happen to the best operators.

It is especially important that the blade be just the proper sharpness and to be sure that you have engaged nothing but the tonsil when operating on children, as their tissues are extremely soft and pliable. Otherwise you may do irreparable damage.

I believe that the Beck snare is the best instrument for tonsillectomies of this type in all cases where a one instrument method is warranted. It has all the good qualities of the Sluder and none of its faults. The No. 8 snare wire, which is usually used, is neither too sharp nor too dull. It has that much desired quality of dissecting its way between the tonsillar capsule and the aponeurosis of the muscular tissue. Like electricity, it seeks the easiest way. And when the loop is slowly and carefully tightened there need be no fear that anything besides tonsil tissue will be removed.

One great advantage of the instrument is in being able to lock it after the tonsil is engaged for the purpose of investigating just how much tonsil and other tissues you have caught in it. Then you are able, by slowly turning the screw, to get the utmost of the dissecting ability from the snare wire as

well as a minimum of hemorrhage.

About twenty-five per cent of this type are so situated that it is next to impossible to get them out with either of the above mentioned instruments, and one is forced to dissection. The tonsil in these cases is long and broad, comparatively flat and with very little of the mass exposed. It is so securely bound down by the pillars and the plica that it is difficult to engage even with a tenaculum. So it is necessary in these cases to use the greatest possible care, as injuries to the adjacent structure can happen to the most skillful operator. Therefore rapid fire work should not be attempted and patience should be substituted for speed.

In conclusion, allow me to say that no one would welcome a one instrument operation for all types of tonsils more than myself, if it were possible. But I do not think it is. Each case has its own anatomic and pathologic peculiarities that make it necessary for different methods and different instruments to be used. These varying conditions found demand deliberative study, the selection of a rational method for each case, and perfect technic to gain a satisfactory result. That is what the patients are paying for, will expect to get, and is what they should have.

#### BIBLIOGRAPHY.

1. Fletcher, John Rice: The Standard Tonsillectomy. *Annals of Otology, Rhinology and Laryngology*, September, 1915.
2. Sluder, Greenfield: The Method of Tonsillectomy by Means of the Alveolar Eminence of the Mandible and a Guillotine. *Journal of the American Medical Association*, December 30, 1915.
3. Boot, G. W.: The Tonsil Question in Children. *Annals of Otology, Rhinology and Laryngology*, March, 1917.
4. Makuen, G. Hudson: Discussion of Greenfield Sluder's paper, "The Method of Tonsillectomy by Means of the Alveolar Eminence of the Mandible and a Guillotine." *Journal of the American Medical Association*, December 30, 1915.
5. Shambaugh, George E.: Clinical Problems Relating to the Faucial Tonsils in Adults. *Annals of Otology, Rhinology and Laryngology*, March, 1917.

Citizens' National Bank Building.