**A discussion of some questions relating to tonsillotomy ; Clinical remarks upon deflections of the nasal septum, with a presentation of two cases made before the Allegheny County Medical Society, at its meeting, November, 1883 / by W.H. Daly.**

# A DISCUSSION OF SOME QUESTIONS RELATING TO TONSILLOTOMY.

By W. H. Daly, M. D.

A discussion, from a practical standpoint, of some of the questions involved in the operations for the removal of the tonsils, will be the aim of what I have to say to you, and in order to arrive at rational conclusions, I will give some views, based upon a personal experience with a large number of cases, as well as some of those arising from consultation, with authorities, who by their observation and experience are competent to give intelligent opinions upon the questions as follows:

I. The question of the operation itself.

II. The question of hemorrhage after tonsillotomy.

III. The question of the operation affecting the physical growth.

IV. The question of virility being affected by tonsillotomy.

And, briefly:

V. The question of the voice as affected by the operation.

VI. That of faucial utility.

VII. The question of sleep.

VIII. The question of the tonsils becoming again hypertrophied after their removal.

I. Without entering into anatomical details as to the structure of these glands, I will deal more particularly with those phases of the first question which most concern the utility and propriety of the operation itself. As regards its antiquity, there is none more honored than tonsillotomy,* and as to the methods, there is scarcely an operation spoken of in the annals of surgery that has excited more human ingenuity with a view of increasing the practicability of its performance,†

*Mackenzie: Diseases of the Larynx, Pharynx, and Trachea, p. 52.
†Op. cit., p. 53.

and hence there are a diversity of methods. However, the busy practitioner or specialist is most concerned with what is the best mode of operation, the indications for its performance, and a knowledge of some of the dangers to be avoided. Of one thousand cases collated at the London Hospital for Diseases of the Throat all but thirty-one were observed in persons under forty years of age, and the period between ten and twenty years is the one in which more than one third of the cases* were seen and operated upon.

In patients suffering from enlarged tonsils the bodily powers are often feeble, some of them congenitally so. Others have derived cachectic constitutions from scarlatina, with throat complications, or from repeated attacks of quinsy, or have inherited a tendency to scrofula or tuberculosis.

It has also been thought by modern observers that patients with enlarged tonsils are not altogether free from the rheumatic diathesis. Be the causes whatsoever they may, we cannot but assert that the child which presents the peculiar stupid countenance, with the open mouth, drooping eyelids, dull expression, thick voice, and the profound impress of constitutional impairment, as well as intellectual dullness and morbidity of disposition—so generally seen in those suffering from hypertrophied tonsils—be the differences of professional opinion ever so varied as to the several questions noted, at least there is an urgent demand for operative interference, in order that the life of the patient, both waking and sleeping, may be more comfortable, and that the organs of deglutition, respiration and vocalization may do their work unimpeded, and that the vitality of the growing child may assert itself, as it is sure to do after being freed from the constantly impending danger and distress of follicular tonsillitis and congestive pharyngitis, with all the other attendant obstructive discomforts, which are so apt to follow the slightest exposure to atmospheric changes.

The presence of enlarged tonsils ought to be sufficient reason to demand their removal, but there are other considerations that increase the need for interference with them.

The breathing is often obstructed to such a degree as to become noisy during waking hours, and little children so afflicted snore during sleep like strong grown men, owing to the posterior nares and pharyngeal cavity being blocked up by the mass of tonsillar tissue on either side.

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* Mackenzie: Diseases of the Larynx, Pharynx, and Trachea, p. 46.

Interference with the sense of hearing is a rather common result of enlarged tonsils, but is not so much due to the mechanical obstruction of the Eustachian orifice by the tonsillar growths, as to a general thickened condition of the pharyngeal mucous membrane, the result of inflammatory hyperplasia. Michel * has shown that this form of deafness is often due to the pressure of Luschka's tonsil upon the posterior lip of the Eustachian orifice.

The obstruction to free nasal respiration from enlarged tonsils, exposes the patient to all the influences which tend to bring on inflamation of the air-passages.

In 1828 Dupuytren called attention to the frequency with which deformity of the chest was found with enlarged tonsils, and the so-called pigeon breast is often associated with the same condition.

Chassaignac† well observed, "that although increased effort of the diaphragm to a certain extent neutralizes the impediment to respiration from enlarged tonsils, there are frequent intervals when the powers of the muscles become temporarily exhausted, and the oxygenation of the blood is very incompletely performed. The vital forces are in consequence very much lowered and the patient lives in a state of permanent ill health and easily succumbs to any acute attack of disease particularly affecting the respiratory organs." This writer also mentions several cases to illustrate the evil effects of the disease on the brain, the digestive organs, and on the senses of sight, taste and smell. He thinks the pressure of the enlarged glands obstructs the flow of blood to the brain, and impedes its return, whilst the digestive organs suffer when there is difficulty of swallowing.

Morrell Mackenzie‡ has often observed that the senses of smell and taste are defective in the subjects of enlarged tonsils if the disease has existed for any length of time. This I have also observed in a few well-marked cases.

As this paper is not intended to treat of the medical applications recommended for enlarged tonsils, though there are many used, however, in my own hands most of them have proved very tedious and unsatisfactory, we will, therefore, speak of some of the most approved operative procedures, and among these ought to be mentioned the various caustics, viz., the ni-

*Krankheiten der Nasenhöhle, Berlin, 1876.
†Bulletin Generale de Therapie Medicale, 1843.
‡Op. cit., p. 49.

trate of silver, chromic acid, nitric acid, the acid nitrate of mercury, and the galvano-cautery. Most of these are regarded in some respects as safe remedies, but some of the caustics are liable to do unlooked-for mischief by dropping into the larynx, or they may do injury to the eyes of the operator, as I have once known to occur from the patient coughing some of the caustic application into the operator's eyes. The galvano-cautery has lately been used to destroy the enlarged tonsils, and few specialists there are who are familiar with the use of this battery who have not used it to a greater or less extent for this purpose.

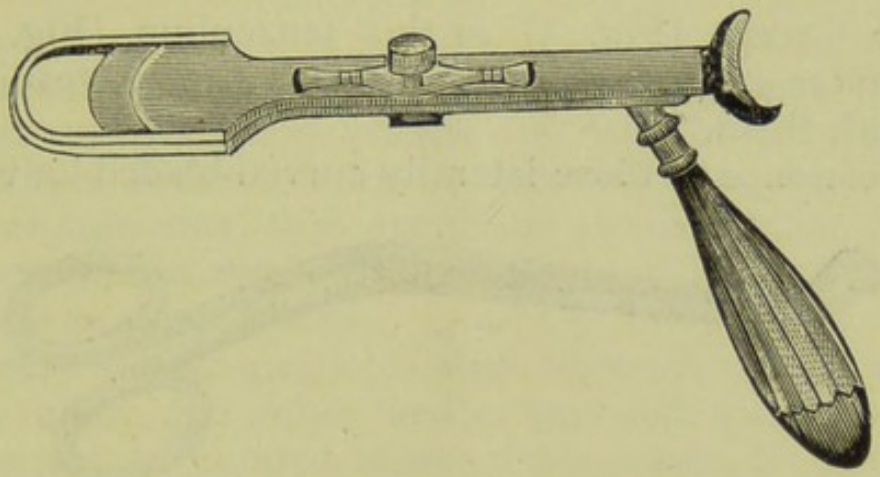
Dr. Cohen, of Philadelphia, has used this method of removing them, and seems to be favorable to its employment in certain cases. The advantages regarding its use, are safety from hemorrhage, but the disadvantages attending it are several. The inflammation following its employment is often severe. The slough is never just what is expected. It is either more or less than desired, and during the operation there is the disagreeable odor of burning flesh that few patients will tolerate more than once, aud still fewer will permit longer than a few moments. The stump left after this method is often unsightly, and too often hard and of the nature of the cicatrices of burns.

Having tried this method, [*vide* by the author "The Value of the Galvano-Cautery in Treatment of Diseases and Growths of the Naso-Pharynx." Trans. Amer. Med. Assoc., Vol. 32, 1880,] as well as that by means of electrolysis, I am of the opinion that they will never become popular with practitioners, and the same methods are destined to be decidedly unpopular with patients; at least this view is in accordance with my own experience. Hence I have a very decided preference for the cutting operation; and to perform it with ease, one assistant should always be present, and if he has had experience, all the better.

The patient being placed in a good light, either artificial, which I prefer, or the sunlight, which is quite as good, if not better, the assistant should support the head of the patient against his breast or abdomen, and with the ends of the fingers make compression steadily and carefully beneath the angle of the jaw on each side to steady the head of the patient, and press the tonsils into the throat. The operator takes his place in front of the patient.

The guillotine is the best instrument for the operation if the growths are not too large to enter the fenestrum. The one I prefer is that of Professor Physick, of Philadelphia, as modified by Morell Mackenzie, of London (Fig. 1). With this instru-

Fig. 1.



ment a firm grasp can be had upon its handle, with which to hold it in place while operating.

The guillotine of Dr. Wm. B. Fahnestock, of Lancaster, Pa., is perhaps better known throughout the world, and more modifications have been made upon its original pattern than any other guillotine.

Guersant, Velpeau, Chassaignac, and Maissonneuve all made important modifications of it, and it is probably the instrument most used by surgeons everywhere.

The Physick guillotine being ready for use, the hilt is grasped in the left hand, and with the index finger of the right hand the right tonsil of the patient is sought, and surrounded by the fenestrum. Some pressure is made by the guillotine as well as by the assistant, that the growth may be well encircled to its base. Then the knife is with the thumb of either hand pushed quickly home. The tonsil is usually brought away in the instrument, having caught by some shreds in the sulcus or slit which receives the knife.

I prefer to operate with the left hand first, as in case of any unruly behavior on the part of the patient, the dexter hand remains to do the operation on the other tonsil quickly. The entire operation can be done in a minute, and is usually painless.

When the growths are either too large to be easily removed by the guillotine, or when they are like a narrow flap projecting into the throat, I then use these laterally curved knives

with long handles, which I devised (Fig. 2), and have found them efficient. The part to be removed being seized by these

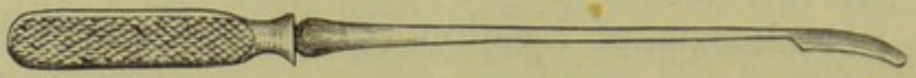


Fig. 2.

vulsellum forceps (Fig. 3) or this tenaculum (Fig. 4), any other nodular growth about the tonsils can as readily be removed with them.

With reference to these laterally curved-bladed knives which

Fig. 3.

have probe points, as you see, and long slender handles, I may say that they are probably only a modification of knives used before by others; but in my search after something to suit my purpose in these operations, I was unable to find anything in the many illustrated catalogues of instruments that met my own ideas of what I desired. These I have found to answer the purpose admirably. I can safely assure any one who de-

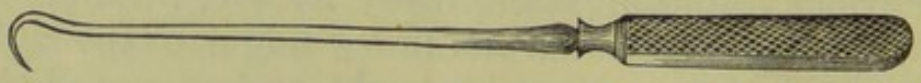


Fig 4.

sires to use them, that they will do the work neatly and satisfactorily. They were made for me by Otto Helmold, instrument maker, Pittsburgh, as modifications of one I had made by Tiemann, of New York, which is, as you see, rather large for the purpose for which it was designed.

Dr. Pollock, of Pittsburgh, years ago used a curved-bladed knife in these operations, such as I show you, and while either instrument will do the work there is yet a vast difference in the construction of the two knives.

II. The occurrence of hemorrhage after tonsillotomy is one that every operator should be fully prepared to meet at once. I am lately in the habit of having beside me a pair of torsion forceps (Fig. 5), such as these, to twist any artery that may

emit too much blood. I also like to have a galvano-cautery battery ready for use, with a pharyngeal knife attached to the

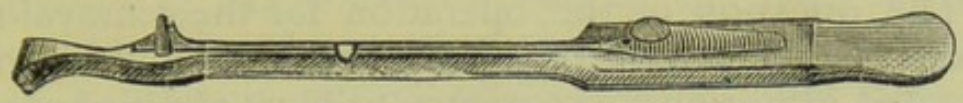


Fig. 5.

handle, in order to arrest hemorrhage, which may be copious and persistent from blood vessels too minute to be seen with the naked eye. Indeed, the most alarming case of hemorrhage I have ever seen after this operation was in such a case; the patient became so weak from the loss of blood that he was neither able to stand nor sit.

It is true, a simple gargle of alum-water or tannin will most generally suffice, and either iced or very hot water as a gargle is quite equal to control most of the cases of hemorrhage that will occur, but to be prepared for emergencies is only to be guided by good judgment.

A case of hemorrhage after tonsillotomy was related to me by a medical man that contains such a valuable lesson that it is worthy of repeating here. He had an appointment to remove the enlarged tonsils of a farmer's boy, but when he punctually arrived, ready to operate, the boy had reconsidered the matter, and thought it wise to be away after the cows. The doctor, not to be outwitted by the boy, drove after him, and at length found him with the cows some distance from the house on an out-of-the-way roadside. After some persuasion the boy finally assented to the operation being done on the spot. One of the tonsils was seized and removed by the guillotine, but the hemorrhage which immediately followed was so copious and alarming as to compel the operator to keep his fingers on the stump of the gland for several hours before any one happened along, in order to get assistance and save the patient's life. This operation was not performed soon again by my friend, and when he did so a more auspicious occasion and surroundings were wisely secured for the work.

Dr. Morell Mackenzie says he has "only known of one case where hemorrhage actually seemed to endanger life out of the one thousand cases reported." Velpeau reported four cases of laying open the internal carotid artery in operations for the removal of tonsils.

I once had a case of serious tonsillar hemorrhage recurring

two days after the operation, from the patient having attempted to eat solids, contrary to instructions.

III. The question of the operation for the removal of enlarged tonsils affecting the physical growth of children, may be briefly stated in my own experience to have always been most positive and flattering in the highest degree; so much so that I have no hesitation in assuring the friends of the patient that they may look for improvement in the physical status of the child, and I have never yet been disappointed, especially so if proper treatment is carried out with reference to the cure of concomitant catarrhal disease of the naso-pharynx.

IV. Now as to the fourth question, viz., that of the virility of the individual being affected by tonsillotomy,* I have a very firmly fixed opinion that there is no more intimate or special relationship existing between the tonsils and the testicles and their functions, than there is between the hair on the scalp of the patient or the teeth and the testicle.

The recent revival of this question is chiefly due to a lecture delivered some months ago by Professor R. A. F. Penrose, of the University of Pennsylvania, in which his words, as quoted, were somewhat in this wise: "I some time ago asked a professional friend of mine, who was in my office," said the professor, "if his experience and observation would lead him to believe that the excision of tonsils had the effect of destroying the virile power in the male? He assured me it had no such effect. 'Why,' said he, 'I had my own tonsils excised when I was young.' Now, gentlemen," said Prof. Penrose to his audience, "that man's wife had no children." Will my audience not allow me also to mildly indulge in sophistry by saying that a man may have lost a toe, or a finger, or a nose, and his wife have also failed to bear him any children; it does not follow, however, that had some other woman been his wife that he would have been similarly childless, neither is this illogical assertion proof that the medical friend of Dr. Penrose was childless, although his wife bore him no children. In answer to a communication to Dr. Penrose, a few days ago, I received a reply which contained the following. "The lecture (meaning the one above referred to) was published unknown to me in some obscure New York journal. Since then I have received several communications from medical men of cases where removal of the tonsils did *not* prevent procreation."

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*British and Foreign Medico-Chirurgical Review for 1860.

It is to be inferred from this that Dr. Penrose is not altogether prepared to say his position has been strengthened by the testimony of the profession, and as the most striking example cited by the doctor was the one case of his medical friend, it is scarcely neeessary to pursue this side of the question further; but as to the opposite view, I will state that Dr. G. T. McC——, of Pittsburgh, informs me that he had tonsillotomy performed when a child. He is now the father of two healthful children, and he, as well as his wife, are still young. Dr. Wm. Wallace, of Pittsburgh, informs me of a friend of his, G. W. H——, who was operated upon for enlarged tonsils when a child, who is now the father of three children.

Dr. John Dickson, of Pittsburgh, whose name as an able and experienced surgeon was a household word in Western Pennsylvania even before many of us were born, expressed to me his opinion that the "excision of the tonsils had as little to do with the power of procreation as the excision of the toe nails," and he cited the instance of A. B——, now of Allegheny City, whose tonsils he excised many years ago when the present man was a child, and who is now the father of a large family of healthful children. As to the effect of the operation on the female, he also spoke of the wife of Dr. Wm. M——, of Beaver, upon whom he operated, and who has since been the mother of several children, as also one of the present daughters-in-law of the doctor, whose tonsils he excised when she was a child but twelve years old, who has since been the mother of three children.

Morell Mackenzie, one of the closest and most careful observers, as well as one who has had probably greater opportunities for observation than any other man who has practiced as a specialist of throat diseases in any period of time, says: "The disease (hypertrophy of tonsils) not unfrequently becomes developed for the first time about the age of puberty, owing, as some suppose, to a sympathetic connection between the sexual organs and the tonsils,"* and he says further, "Probably many of the cases in the earliest period were either congenital, or made their appearance soon after birth." In a conversation some time ago on this subject with the accomplished laryngologist, Dr. Elsberg, he expressed to me the opinion that there was no relation whatever between the operation of tonsillotomy and any subsequent loss of virile power.

*Crisp and Headland, Dublin Med. Press, vol. xx., p. 229, 1849.

V. And now, briefly, as to the voice being affected by the operation. It cannot be denied that the muffled or thick voice disappears sooner or later after the parts have healed and becomes clear and natural.

VI. The faucial utility is much enhanced as the sense of the presence of a foreign body is no longer a source of annoyance, and the act of deglutition is performed with ease and comfort.

VII. The question of sleep. That repose is no longer disturbed by obstructive suffocation which patients complain of, is a matter of fact, and refreshing natural sleep, unaccompanied by noise or snoring, is productive of rest and recuperation.

VIII. As to the question of the liability of the tonsils to grow again, the answer can be included in the remark, that with every badly treated or neglected cold affecting the throat, there will be some tendency for them to increase in size again, but the tendency is not marked by any means, and may be prevented altogether with ordinary care and proper treatment by local applications.

It is a matter of observation that enlarged tonsils have a tendency to subside after the age of thirty years has been attained.

# CLINICAL REMARKS

## UPON DEFLECTIONS OF THE NASAL SEPTUM, WITH A PRESENTATION OF TWO CASES MADE BEFORE THE ALLEGHENY COUNTY MEDICAL SOCIETY, AT ITS MEETING, NOVEMBER, 1883.

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BY W. H. DALY, M. D.

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MR. PRESIDENT—GENTLEMEN: The cases which I have the pleasure of here presenting to your attention, are of a class common enough as regards their existence, but rare in so far as they are the subject of any surgical procedure for their permanent restoration and cure.

They were cases of extreme deflection of the nasal septum. In both of these the malformation was so marked as to cause complete stenosis of the left naris; the bending being in both towards the left side. On the apices of the convex surface of the deflections in both there was, as the result probably of perichondritis, a mass of cartilaginous tissue which pressed the alæ nasi outward, thus making the nasal occlusion complete.

The origin of the young lady's deformity was from an accident occurring in some rather rude childish play, twelve years ago, wherein some of her companions attempted to throw her over a stone wall. In accomplishing this feat, she unhappily lit upon her nose, causing a fracture of the organ, resulting in the bending of the septum or columna to the left side, while the dorsum was depressed, and its mesial line carried considerably to the right, making also the unsightly external deformity of a "crooked nose."

The complications in this case were intractable auro-naso-pharyngeal catarrh, with diminished hearing power, and anosmia, or loss of sense of smell, and a deadness of articulate voice,

not to speak of the facial deformity, which is so naturally a matter of personal solicitude to young ladies.

My advice was sought by the patient, not for the relief of the external deformity, but in the hope that I could enable her to breathe through the left nostril, very justly believing that such relief would bring with it a better articulate voice, and possibly a return of the sense of smell.

You will observe, however, as, a result of the operation, that the external appearance of the organ is now excellent. You will notice, also, that the volume of air ejected from the left naris is now quite ample, the patient being, as you see, able to blow out the flame of a blazing match, through either nostril alike. The sense of smell is returning, and the natural facial expression is restored.

Now, as to the mode of treatment in this case; I might premise by saying this patient had, in common with many others of a similar kind, undergone much treatment for catarrh and deafness. Yet, in order to not only put the mucous membrane in a healthier condition, but to have her become accustomed to the tolerance of instrumental contact with the parts involved, I also gave her further treatment, and made a preliminary operation by removing the cartilaginous mass from the convex surface, and reducing the septum to a proper thickness.

Three weeks later, with the assistance of Dr. V. Kersey, of Pittsburgh, and Dr. X. C. Scott, of Cleveland, the patient was placed under the influence of an anæsthetic, in a sitting posture, before a proper light, and the final operation done by introducing the cutting blade of this instrument into the right naris, and the flat blade into the narrowed left one. This latter was accomplished by using moderate force.

The blades were then locked, and a number of stellate incisions made until I was enabled to force the septum over to its place, by introducing my little finger into the previously occluded nasal fossa.

After hemorrhage was controlled by hot water douches, one of these ivory plugs was introduced in order to keep the columna in as direct an antero-posterior line as possible.

Considerable constitutional disturbance followed the operation, and on the third day there was a slight erysipelatous blush upon the nose, which was subdued by the administration of iron and quinine.

The plug was carefully removed once a day, and the parts cleansed of mucous and blood.

The favorable results in this case were otherwise seriously threatened by the pressure of the ivory plug, causing ulceration of the mucous membrane of the septum.

The healing ulcer can here be plainly seen upon the left side of the septum.

The instrument which, you observe, I have applied externally, to aid us in reducing the external deformity, consists of a strong spectacle frame, fastened securely behind the head, and in front, rests firmly yet comfortably upon the root of the nose, in the inter-ocular space.

From this point, a free arm projects downward and forward, on the left side of the nose; from the end of this arm extends a cross-bar, to a similar arm on the opposite side, which lies, as you see, close to the nose, and through which works a thumb-screw, ending in a swiveled pad, making the needed pressure in the direction desired.

The counter force is obtained by this larger pad upon the left side, which is well up to the base of the nose, and the free arm standing out from the organ on the left side. This is essentially the instrument devised by Spencer Watson, of London, somewhat modified to suit the exigencies of this particular case.

The second case is this lad, whom, I regret to say, has been quite ill these past ten days; partly as a result of the operation, and partly from catching cold, which resulted in a severe attack of quinsy. The operation was done on the deflected septum, in the same manner as detailed in the first case; however, the mucous membrane in this boy's nares is soft, and severe ulceration necessitated the early substitution of soft rubber tubing for the hard ivory plugs.

You observe that he has now an ample passage for respiration, and his obstinate naso-pharyngeal catarrh will now get well, and his constitution, which has always been delicate, will develop rapidly. At least, this prophecy is in accordance with my experience in similar cases.

I have brought these patients before you, gentlemen, for the reason that they are highly successful in the objects aimed at, and they are of a character in rhinal surgery that have not received, until more recently, the attention, even at the hands of specialists, that they merit.

In point of fact, this department of rhinal surgery has really been to a large extent a much neglected one.

I need not say to you that the largest measure of success is obtainable only by judicious care of the parts, before, and especially *after*, the operation. And this can only be fully attained in private practice by entire co-operation on the part of the patient and the friends or nurse.

Hospital care and attention would, in my opinion, ensure the best results in all operative measures involving the intranasal structures, and should be resorted to whenever practicable.

# BY THE SAME AUTHOR:

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