

CHAPTER XXXV.

THE TONSIL GLANDS.

THE tonsil glands, situated on either side of the oro-pharyngeal space, between the half arches, are readily exposed by depressing the tongue through the medium of any convenient means. An instrument made especially for the purpose, called a "depressor," is found well adapted to the purpose.*

The tonsils, glandular organs, described by Virchow as analogue of the lymphatic glands, are made up of many lobules, congeries of mucous follicles, with intervening sulci lined by involutions of the common mucous membrane. Inflammation, simple or acute, and chronic or morbid, is the disease of these bodies. With the first are associated the various features of vascular perversion, passing from the most transient of congestions to the most threatening of abscesses.

Simple tonsillitis—angina tonsillaris—amygdalitis—is an inflammation of the substance of the gland. Looking into the mouth, the bodies, one or both, are discovered unduly colored and swollen. If the inflammation be of any severity as to grade, the patient experiences pain and difficulty in swallowing, together with a sense of dryness, heat, and fever in the mouth and pharynx; and these discomforts, influenced by the character of the attack, may progress until it becomes impossible to swallow, and in many cases exceedingly difficult to breathe.

As a gargle, found useful in such cases,—or rather as an application to hold in contact with the parts, for the act of gargling may be impossible,—the following will be employed with satisfaction:

R.—Plumbi acetatis, ℥j;
Tincturæ opii, ℥j;
Aquæ, Ojss. M.

A second medicament, highly esteemed by many, consists in a combination of tannin and glycerine, the application being made to the parts with a brush.

In the cases in which congestion is associated with passivity, resolution is found oftentimes quickly effected by a gargle compounded as follows:

R.—Sodæ biberatis, ℥iij;
Potassii chloratis, ℥j;
Tincturæ capsici, ℥ij;
Tincturæ myrrhæ, ℥j;
Aquæ, ℥viiij. M.

* It is a singular fact that depression of the tongue is commonly most easily secured by simply laying the depressor upon it. When force is employed, the organ, in many cases, resists, spasmodically crowding against the roof of the mouth. Directing a patient to inspire exposes the tonsils.

Another practice, which the author has found happily applicable to these latter conditions, consists in first brushing the parts with a solution of nitrate of silver, four grains to the ounce of water, and afterward using a compound iodine and carbolic acid gargle.

R.—Tincturæ iodinii compositæ, gtt. xl;
Acidi carbolicæ fluidi, gtt. vj;
Glycerinæ, ℥j;
Aquæ, ℥vij. M.

An application for the treatment of acute tonsillitis, recommended by I. H. Peabody, M.D., as a specific is as follows: Take of oil of turpentine ℥ij, of pulverized chlorate potash a like quantity, of white sugar and gum arabic ℥ss each, of water ℥v. These are to be mixed, and being well shaken and united, the patient is to slowly swallow a teaspoonful each hour or two until relieved. The writer's experience has not been satisfactory with it.

Phénol sodique diluted with water, in proportion of a tablespoonful of the former to a gobletful of the latter, affords a grateful gargle in acute tonsillitis. In very many cases the use of this combination is all-sufficient to a cure. In ulcerative conditions its employment is to be advised.

Tincture of belladonna has lately received much commendation as a remedy in acute tonsillitis,—being administered in from two- to fifteen-drop doses, repeated every two hours until the patient is relieved, or until contraindicated, either as dryness in the throat is induced, or as the pupils exhibit enlargement. Local applications are also highly endorsed, the medicine, it being affirmed, having the same action whether applied directly or given internally,—that is, diminishing the calibre of capillaries by its action on the vaso-motor system of nerves. Still another means, one described as specific, consists in the use of aconite tincture; five drops first to be administered, to adult, to be succeeded by two drops each two or three hours, if found necessary.*

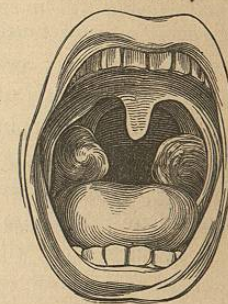
Sympathetic inflammation of the tonsil glands is not infrequent. Among the most common of such relations, and where a treatment must of necessity consider the influencing lesion, are croup, scarlet fever, measles, diphtheria, typhoid fever, and syphilis.

Glancing at the diagram, Fig. 379, which exhibits the glands in a state of partial engorgement, it is plainly seen that the isthmus, the oro-pharyngeal space, would be closed in proportion to an enlargement: hence difficulty experienced in deglutition and respiration. Tonsillitis ends in either resolution or suppuration.

When the inflammation is met with in its incipency, attempts are at

* The tincture of the leaves is one-half the strength of the tincture of the root; the medicine is to be used with caution.—See Dispensatory.

FIG. 379.



The Tonsil Glands.

once made to resolve it by use of antiphlogistic remedies. Free scarification has occasionally been resorted to with the best results. Dry cups to the neck are invaluable; used in time these will abort almost every attack.* Leeches applied externally between the angle of the jaw and the sterno-cleido-mastoid muscle,—to be used only, however, with the vigorous and plethoric, and blisters, directed to the nape of the neck, will be found of the greatest service. Hot footbaths, continued until the veins of the legs are engorged, or until diaphoresis results, or the patient grows faint, constitute a satisfactory and reliable means of relief. If the inflammation have advanced to a point where the system at large sympathizes, as exhibited by the presence of fever, hope is still to be entertained of recovery by resolution. In these cases it is found good practice to place the patient over a basin of steaming water, and, with the form enveloped up to the very mouth in blankets, secure diaphoresis by a plentiful exhibition of the spiritus Mindereri,—a tablespoonful every ten minutes until free perspiration is produced. This performance, if the patient be robust, may be succeeded by a saline cathartic. As a local treatment, much satisfaction is to be derived from lemonade, made by crushing ice in a towel or napkin; the small particles thus acidulated are to be taken little by little into the mouth, and allowed gradually to dissolve. Another application is found in a gargle of flaxseed tea, in which chlorate of potash has been dissolved. Tartar emetic, or the tincture of veratrum viride, administered internally, is of much use in controlling the circulation. A very useful combination, where vascular disturbance runs high and the system is irritable, is as follows:

R.—Liquoris potassii citratis, ℥iij;
 Spiritus ætheris nitrosi, ℥ss;
 Tincturæ veratri viridis, gtt. xxv;
 Antimonii et potassii tartratis, gr. ss. M.

Sig.—From ℥j to ℥ss, according to age and requirements.

In most cases of tonsillitis where inflammation is excessive, the uvula is found participating; swelling of this organ occurring, through serous effusions, not infrequently to such extent as to threaten suffocation, the bulbous tip of the organ dropping into the chink of the glottis. In these cases it may be proper first to try an application of the tincture of iodine; but should this fail,—which, in the experience of the author, will be found most likely,—immediate resort is to be had to section of the mucous sac holding the effusion; such a cut will quickly cause the swelling to disappear through drainage. Circumstances sometimes arise where an opening into the larynx or the trachea affords the only chance to a patient for his life. (See *Uvula and its diseases.*)

* Dry cupping is conveniently done by using a small wine-glass; applying this by means of a lighted wisp of paper, which paper has been touched to alcohol. The wisp lying in the bottom of the glass is fired by a match, and while blazing the rim of the vessel is quickly put to the skin.

Where, in defiance of all treatment, a tonsillitis, whatever its signification, determines toward suppuration, the best that can be done is to hasten the process as rapidly as possible, providing always, that the attendant swelling be not formidably extensive. The latter condition supervening nothing better is to be done than make incisions. Where the swelling is not extensive or threatening, a gargle of flaxseed tea will be found soothing to the parts and encouraging to the formation of pus, and may be used with all freedom.

Where pus has formed in a gland, it is a proper practice to void it with the knife as soon as recognized. This is to be done with most safety by using an ordinary tenotome.

In inflammation of the tonsil glands occurring in the weak and depressed, the abstraction of blood is seldom, if ever, advisable; too much care cannot be exercised in this direction.

Acute tonsillitis is accompanied by increase of temperature, the change being not infrequently as much as six degrees Fahrenheit. The tongue is coated, the bowels constipated, occasionally there is delirium, often much wandering of thought, the urine is diminished in quantity and is of increased specific gravity, the chlorides are deficient.

In a true appreciation of inflammatory disturbance of the region studied, it requires not to be overlooked that the arches themselves—namely, the palato-glossal and palato-pharyngeal folds—may be the seats of lesion; swellings occasionally occurring as the result of submucous effusion to an extent that throws these parts as an envelope over the gland. Remembrance not being borne of this fact, much confusion would exist when such condition is met with. Diagnosis is secured, first, by recognition of the smooth mucous face of the swelling; second, through means of a probe exposing the line of separation between the folds.

Another expression relates to inflammation associated with a number of glandular bodies situated between the tonsils and base of the tongue,—infra-tonsillar glands, as it has been proposed to call them. While not very subject to perversion, the writer has yet met with them in an inflamed state where great discomfort was produced in deglutition. Treatment is the same as for common tonsillitis.

An infrequent, yet not sufficiently uncommon disease of the tonsil to deny it mention, is known as herpes. This is a vesicular affection very familiar to the dermatologist, as it shows itself upon the skin surface of the body. Herpes makes its appearance in the form of little vesicles studding the surface of the gland, the body being of a scarlet-red color, and swelled to an extent that throws it well out into the oro-pharyngeal space. Maceration of the epithelium quickly converts the vesicles into open abrasions, which, in turn, cover themselves with an exudate that gives to them the expression of aphthæ. Characteristic symptoms are burning sensations in the throat, combined with sharp pain darting towards the ear. Care is to be taken that the condition considered be not confused with diphtheria. The treatment of herpes relates

with the use of gentle laxatives, together with the employment of gargles, as directed in follicular pharyngitis. If febrile expression be marked, strong lemonade is found of service. Where the regions of the spinal column, the breast, and the abdomen are found with elevated temperature, the parts are to be laved with alcohol until cool. No specific treatment is demanded.

Hypertrophy.—Hypertrophy, or chronic enlargement, of the tonsils, is a condition most common to scrofulous children, and pertains, consequently, to early life, being, indeed, rare after puberty and never perhaps seen in old age: of the multitude of patients operated upon for the relief of this affection, few have been over thirteen years of age. The enlarged or hypertrophied tonsil differs very much in consistence and character in different cases, being in one patient indurated and smooth, in another spongy and lobulated. In color equal variety is presented, varying in appearance from the scarlet of an arterial injection to the dull blue of a passive venous stagnation. One of the inconveniences associated with enlarged tonsils is the effort required in respiration, particularly during sleep. Another is interference with hearing, pressure upon the Eustachian tube frequently occluding that passage, particularly when the patient takes cold. Speech is interfered with: to sing softly and finely with the tonsils enlarged is impossible.

Tonsillar hypertrophy being a systemic expression rather than a strictly local disease, very little true benefit has been derived from the employment

FIG. 380.



Hypertrophied Tonsil.

of the great variety of direct remedies which from time to time are recommended. A patient so afflicted is to be treated from the constitutional stand-point; and to this end nothing is found more conducive to good than cold salt-water bathing: indeed, as a rule, more attention will be found required in the direction of diet, clothing, exercise, and general mode of life than to the administration of medicine. Where, however, medication seems demanded, it is to be directed to the correction of any observable constitutional defect or irregularity. Iodine and its preparations are not always, by any means, indicated; and not infrequently their exhibition, by a further debasement of the vital powers, does more harm than good. It does not seem possible to lay down rules that shall apply to the constitutional treatment of such cases, except so far as to suggest attention to all the functions, and to the general tonic medication mostly, if not always, demanded.

Among remedies professed to be possessed of specific signification, used for enlarged tonsils, sulphate of potassa holds the most prominent position. This preparation, given in doses of from five to fifteen grains, continued for a month or six weeks, will, without doubt, in some cases, cause the hypertrophy to disappear. It is usual to combine with it rhubarb and some of the aromatics, sufficient to insure laxity of the bowels.

Where enlargement of the tonsils associates with the rheumatic or gouty diathesis, colchicum is to be prescribed: to be taken internally, and applied externally as an alterative in combination with the linimentum saponis. The use of colchicum in such direction was originally introduced into English practice by a Mr. Harvey, he being led to his conclusions by observing the relationship of the contents of the tonsillar follicles with the concretions found in the joints of the rheumatic and gouty.*

Another remedy, having the commendation which associates with frequent successful response, and particularly applicable where the condition is coincident with scarlatina, is found in the acetate of zinc: it is prescribed from ℥j to ʒj in from ʒvj to ʒviii of water and glycerine, given in tablespoonful doses every four hours, or in the acute, severe cases, oftener. It is well to retain it for a moment in contact with the tonsils before swallowing.

The local treatment of hypertrophied tonsil glands resolves itself into the threefold direction of the use of alteratives, destruction by cauterization, and amputation. Of the first of these means

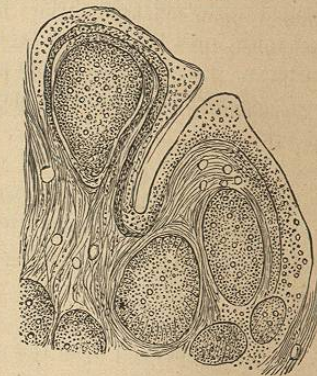
the iodide of zinc holds, perhaps, the most prominent position. It is used in solution of from ten to thirty grains, being applied with a brush two or three times in the twenty-four hours; or, as the treatment advances, it may be applied pure, that is, as it deliquesces when exposed to the atmosphere.

Pressure by the finger, frequently repeated, punctures with the point of a bistoury, gargles of capsicum,—means of such character may be tried, as judgment shall make preference for one or the other. It is to be regretted, however, that the promise by such mode of treatment is not the most satisfactory; and it is always to be borne in mind that if such agents are found to do good even by controlling the enlargement, it may be prudent to rest satisfied, as advancing age will generally be found to afford correction of the trouble.

The second mode of treatment—that by cauterant destruction—may be said to have been made practical by A. Ruppenar, M.D., of New York. A practice introduced by that gentleman, and whose successes have been verified in a large number of cases by the author in his own practice, consists in the use of the London paste recommended by Dr. Morrell Mackenzie.

* Foul breath, so frequently associated with the soft variety of tonsillar hypertrophy, arises from the degeneration of the sebaceous secretion retained within the crypts, and from the inspissated mucus enveloping the glands. The phenate of soda, chlorine-water, or a solution of the permanganate of potash, either of these being combined with diluted tincture of capsicum, will be found satisfactory for the purpose of temporary relief.

FIG. 381.



Hypertrophied Tonsil laid open.

The following are the directions given for the preparation and use of this paste:

A quantity of equal parts of finely-pulverized and well-mixed *caustic soda* and *unslacked lime* is kept on hand. When an application is to be made to the tonsils, a little of the powder is put into a small porcelain cup; a few drops of absolute alcohol, which is kept near at hand, are added; the two are carefully mixed with a glass rod, when the paste is ready for use. Care must, however, be taken that it be of the proper consistency. If too thin, it is apt to find its way to parts which ought not to be touched; if too thick or lumpy, the paste will not readily stick, and little pieces might be swallowed. To apply the paste, a glass rod of sufficient length may be used. One end of it, which must be smooth and slightly funnel-shaped, is dipped into the paste, and a greater or lesser portion of the surface touched, as occasion may require.

To apply the paste, the patient is to be placed in the position for laryngoscopy. The tongue is then to be depressed with the spatula, and the paste applied to the enlarged surface for two or three seconds. The action of the escharotic upon the tonsil is rapid. The mucous membrane almost instantly assumes a deep flesh color, and presently a dark, blackish spot is seen streaked with blood. The following day the tonsil is covered with a whitish-yellow eschar.

The inconsiderable amount of suffering produced by this cauterant is noticeable. Children pay scarcely any attention to the pain, or make light of it. At the longest, the discomfort lasts only two or three minutes. Subsequent applications are accompanied with less, if any discomfort at all.

The operation is repeated each six days. The number of touchings required will depend upon the nature of the case.

Our author reports one hundred and twenty-three cases treated in this manner: the minimum number of applications of the paste, in any case, was six; the maximum, fourteen.

The good results obtained from the use of this paste are not exaggerated by Dr. Rupper. Still, the experience of the author makes him unwilling to agree that such mode of cure is to dispense entirely with the use of the knife. Over-commendation, however, is not to be given the process, it is above praise. It will disappoint nobody who properly practises the manipulation. In place of the glass rod the author employs the cup of an ordinary director. The practitioner, experienced or inexperienced in the use of the knife, may put full confidence in the London paste.

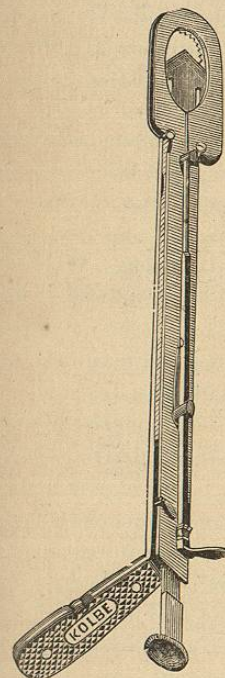
It is not out of place, perhaps, to refer to the possibilities of this London paste. Applied to a seed wart, the body drops away almost instantly. It is so little provocative of vascular response that the writer has made frequent use of it in the treatment of endometritic vegetations, using it freely over the whole inner face of the womb. Sloughs of the uterine os are quickly

and safely made with it. In the treatment of chancres, familiarity with its virtues will quickly accord it the first place.*

Dr. Rumbold, of St. Louis, Missouri (*Medical Archives*), claims to have treated successfully a number of cases of enlarged tonsils by means of hypodermic injections, using an iodine combination (R.—Iodinii, gr. ij; potassii iodidi, ℥ij; aquæ, ℥j). A slight inflammation—one, however, which soon subsides—is reported as following the injection. From twelve to seventeen applications—ordinarily two a week—were found sufficient to reduce the gland to its normal condition. An advantage claimed for this mode of treatment is that it saves the substance and function of the gland.

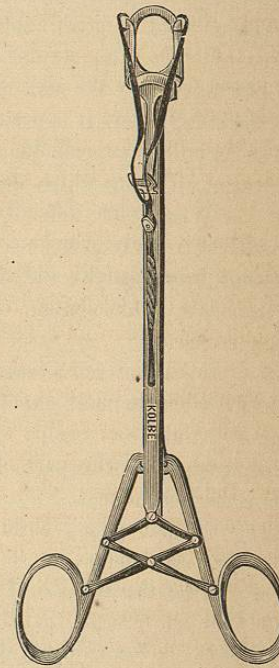
Amputation of an enlarged tonsil is to be effected either with a bistoury or the tonsillotome, the latter instrument being that which most recommends itself. Figs. 382, 383 exhibit forms of such instrument. The principle of

FIG. 382.



Tonsillotome—Physick.

FIG. 383.



Kolbe's Tonsillotome.

a tonsillotome is that of the guillotine. Of these instruments there are a variety, a single mode of operation being common, however, to all of them. The construction embraces, first, a fenestra, to encircle the gland; second, a slide-

* In a conversation held by the author with Dr. Morrell Mackenzie, he learned with surprise of the substitution by that gentleman of the galvano-cauterant for the London paste.

pin, to catch and hold the organ; and, third, a triangular blade, for the excision. Of these instruments, some cut by having the knife drawn forward; this is the manner of that known as the Fahnestock blade. Others, as the Physick, have the motion forward. An improvement lately made on the Physick instrument, by Mr. Kolbe, consists in an addition of automatic fingers and ringed lever-handles. To use this instrument it is only necessary to carry the fenestra over the gland, when, by the simple closure of the handles, the fingers grasp and pull the gland under the blade, which, in a synchronous movement, cuts it off. Another valuable instrument in this direction is known as the Billings tonsillotome. Mr. Kolbe gives this device preference over his own, pronouncing it indisputably the very best of the class.

To apply the tonsillotome to the gland of the right side, the surgeon finds his greatest convenience in leaning over the thrown-back head of the patient. In using it for the left side, there is no better manner than to rest in front of the patient upon the right knee, thus placing the fenestra with facility, and, if the Kolbe instrument be used, holding it, while the handles are manipulated by an assistant. In using any of the slide-pin instruments, both pin and blade are best worked by the assistant, the surgeon both fixing and retaining the fenestra exactly where it is desired that the section shall be made.

In using the ordinary tonsillotome, occasion is not infrequently found for the employment of means which shall allow of the gland being enveloped by the fenestra. When such difficulty is met, it complicates the operation to some extent, yet is easily overcome through the use of a vulsellum, the gland by this means being caught and dragged within the ring. Where hemorrhage is anticipated, a tonsillotome is well replaced by an *écraseur*; better still by the London paste.

The use of the bistoury as a means for amputation of a tonsil gland is only to be indorsed when in most experienced and skilful hands; results of the gravest nature might very readily arise through some unexpected and unanticipated movement on the part of a patient,—risk entirely avoided in the use of the other instrument.

In operations upon young children with the tonsillotome, it is found best to employ ether, restlessness interfering with the proper introduction of the instrument. After the excision of one tonsil the child is to have its head immediately thrown forward, that the blood may not pass into the throat. As soon as hemorrhage has stopped, the anæsthetic is to be readministered, and the section repeated upon the opposite side.

Questions, however, will arise as to the advisability of the double operation at the same sitting,—questions of shock, of hemorrhage, of inflammatory sequelæ, of idiosyncrasy. The experience of the author favors decidedly two operations, the first to be in every respect recovered from before the second is attempted,—not, however, that it is meant to imply that such care and caution are always necessary, or that indeed the single operation is his own constant practice: it is suggested as that attended with least risk.

Many surgeons, immediately after this operation, and in many instances before it, administer, in anticipation of inflammatory trouble, a full dose of sulphate of magnesia. It is also thought well by many to protect the incised parts against the irritating influence of atmospheric changes by a confinement of several days in an even temperature. It may be accepted, however, that if the weather be moderately mild, it will be found sufficient to keep the parts lubricated by a coating of gum acacia, or of marsh-mallow confection, secured by simply holding the agent in the mouth until it dissolves.

Hemorrhage of marked character, after the operation, is not common; instances occur, however, where the tonsillar artery has to be compressed, twisted, or tied; but, as a rule, there is no trouble from this source which a simple gargle of alum-water is not quite sufficient to overcome.

Of other surgical conditions associated with the amygdalæ, ulceration is, without doubt, the most common. Of the non-specific ulcers, all will be recognized to have the expression as described under the head of "the Aphthæ" (which see). Specific ulcers are of two kinds, the venereal and the cancerous. A diagnosis of the former is readily to be made from the expressions found associated in other parts of the mouth.* The cancerous ulcer, being of the epithelial variety, is to be recognized in the papilliform character of the granulation, with which its surface is always found studded. The treatment of the first is to be that directed to the cure of the influencing disease. (See *Ulcers*.) That of the second may only be founded on the most careful weighing of the circumstances of each case. Should such disease be recognized in its true character, when very circumscribed and non-infiltrated, it is justifiable to extirpate the gland. If not appreciated until the neighboring mucous membrane manifests its sympathy, an operation would be worse than useless. It has happened to the author to be consulted in several cases of epithelioma of the tonsil glands, but he has not seen one which warranted operation.

Complete extirpation of the gland, when indicated for a cancerous manifestation, is best practised by a procedure directed from the external parts. An operation so performed is recorded by Dr. Cheever, of Boston. In this case

* "The syphilitic affections of the tonsils are difficult to diagnose, since even in relative good health considerable swelling, fissuring, partial loss, excoriations, follicular abscesses, and cicatrices may frequently affect these organs and yet remain unnoticed. The crypts of the tonsils sometimes form extensive fistulous passages, thus constituting a persistent cause of altered secretion and of increased sensibility. If the hypertrophied tonsils are not removed, the surgeon should at least slit up these fistulous canals or cauterize them to a sufficient depth. Of the ordinary caustics, Professor Sigmund prefers to nitrate of silver or bichloride of mercury the Vienna paste, immediately after the application of which the cauterized spot is to be washed with vinegar and water. Concentrated tincture of iodine may also be applied to ulcers with good results. Tannin is used principally as a wash after the use of caustics, or as a retaining agent after brushing over the parts with tincture of iodine. All these applications, however, may be spared if the surgeon at once removes the hypertrophied tonsils, the most certain means of alleviating and cutting short the course of syphilis in these organs."—*Schmidt's Jahrbücher*.