

two incisions were made: one commencing within the angle of the jaw, and directed downward on a line parallel with the sterno-cleido-mastoideus; the second forward, along the base of the jaw. The dissection in this case revealed, first, an enlarged lymphatic gland, which was removed: second, the digastric, stylo-hyoid, and stylo-glossus muscles, these being cut and pushed aside; and, third, the superior pharyngeal constrictor, the fibres of which were disparted, thus allowing the finger to reach and retract the gland. Twelve ligatures controlled the hemorrhage of the operation, and the patient is reported as having recovered completely in a month. Extirpation of the gland from within the mouth has been successfully accomplished by both European and American surgeons. In a gland well solidified by the scirrhous expression, and possessed of a well-defined base, a catgut or wire *écraseur* might be used with satisfaction.

Cystic Disease.—The formation of a cyst or cysts within the gland is of rare occurrence. In his own immediate practice the author has as yet never seen a case. Virchow, in his volume on tumors, mentions them, however, as being of not infrequent occurrence. The treatment demanded is of such simple nature as applies to abscess or ranula. Should a cyst prove of malignant character, little harm results from mistaking it for, and treating it as, one of simple form: it will prove necessarily fatal. The diagnosis of a cystic tonsil is to be made by touch.

Abscess.—Abscess of strumous signification is frequently met with in the tonsil glands. These abscesses belong to the cold or chronic variety, being oftentimes two or three months in maturing, seldom attended with pain, and imparting to the overlying structure a dull white appearance, very characteristic. Such abscesses are to be treated from a constitutional as well as from a local stand-point. As a gargle, to be used several times a day, no medicament seems to equal the compound tincture of capsicum; ℥ij to ℥viij of water being employed.* Internally, cod-liver oil, combined with a chalybeate, is found of the greatest service, and may be prescribed with great freedom.

An anomalous case of tonsillar abscess having the following history was treated and cured by the author some few years back. The patient, a young married woman, was troubled by a swelling that made its appearance on the side of her neck just below the ear. After some three months, the enlargement extending down her neck, an abscess formed and discharged itself just above the clavicle. This abscess was under treatment by her medical adviser over two years, injections of different kinds being used daily. Examination for diagnosis was commenced by the use of a long and very soft silver probe, which, after repeated attempts to trace the track of the fistula, was finally brought in contact with a tonsil gland. Cure was immediate on the removal of the body, this being effected by an *écraseur*-like operation. No hemorrhage of consequence attended the ablation.

* Tinctura capsici et myrrhae.

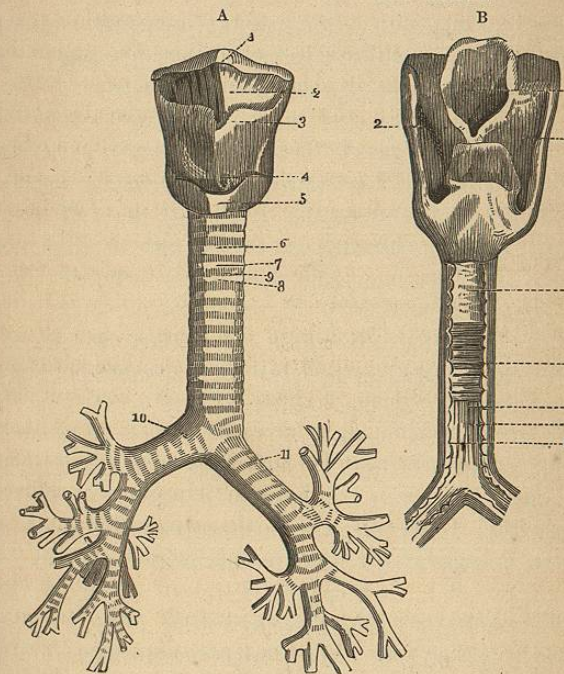
Serofulous abscess related with the body of a tonsil gland commonly approaches the surface in the shape of a yellowish bulb; if not breaking readily the pus is to be voided by employment of a tenotome or a guarded bistoury.

As a gargle to be used for correction of offensiveness attending tonsillar abscess *phénol sodique*, much diluted, may be used.

Laryngotomy.—Occasions are found to offer, where, in acute tonsillar disease, as in other throat affections, the surgeon, called in an emergency, is compelled quickly to decide on means which involve life. For such emergencies a judicious practitioner fully prepares himself.

When convinced that a patient is not otherwise to be relieved, suffocation being imminent, the surgeon may, without hesitation, thrust a bistoury or

FIG. 384.—VIEW OF THE AIR-TUBES.



A. Larynx, trachea, and bronchial tubes, viewed in front. 1, hyoid bone; 2, thyro-hyoid membrane; 3, thyroid cartilage; 4, crico-thyroid membrane; 5, cricoid cartilage; 6, trachea; 7, 8, two cartilaginous rings; 9, membrane which separates them; 10, right bronchus and its divisions; 11, left bronchus.

B. Larynx, trachea, and commencement of bronchial tubes, viewed from behind. 1, upper opening of larynx; 2, 3, lateral grooves of larynx; 4, fibrous membrane of trachea, interspersed with small glands, beneath which are seen, 5, muscular fibres; beneath this last are, 6, 7, small fibrous bands; 8, mucous membrane seen between them.

scalpel directly through the crico-thyroid membrane. This operation, if no middle thyroid artery run over the part, is one of simple character; and if the membrane be separated after the puncture and kept so, either by the

introduction of a tube, or by hooks of wire, which pass around the neck, the patient will experience the greatest relief. When the artery crosses the membrane, and has been cut, blood is to be prevented from entering the lungs by leaning the person forward, the face downward; the vessel is then to be secured in the most convenient manner, with ligature if possible.

Tracheotomy.—Tracheotomy, an operation often found compulsory in such connection, while seemingly complex, is yet not difficult of accomplishment: at least the author has found himself able to perform it upon the living subject without assistance. Having the patient upon his back, with the neck extended, an incision is made directly in the middle line: this incision may be quite short, and is to be commenced immediately below the cricoid cartilage. Dividing skin, superficial fascia, and the delicate layer of the deep fascia, the muscles running from the sternum to the os hyoides and thyroid cartilage are met with. Seeking the interspace separating these, they are thrust and held to either side,—easily done by using the handle of the knife and retractors. The thyroid plexus of veins is now brought into view, and this is to be carried aside or ligated, as seems most convenient. The isthmus of the thyroid gland if found in the way is pulled upward, or, if necessity exist by reason of a very short neck, a double ligature may be passed, and being secured on either side, the bridge can be divided between. These manipulations bring into view the trachea with its rings. Steadying the tube by use of a tenaculum, pulling it at the same time upward, one, two, or three rings are to be incised.

The operation thus accomplished, keep the incision open by use of wire loops, or, what is much to be preferred, introduce a canula and maintain it in place by a strap of tape. (Subfig. 6, Plate I.)

In performing the operation, it is necessary to bear in mind that occasionally the inferior thyroid artery is found lying upon the trachea, directly in its middle line. When this vessel is seen, it becomes necessary to throw a ligature around it. Observations in the dissecting-room would lead to the inference of the presence of the artery in this position in about one out of six cases.

A superior thyroid artery may be out of exact place, or an anomalous distribution might be met with. In an instance occurring at the Hospital of Oral Surgery, much anxiety was induced by reason of hemorrhage arising out of an anomalous position supposed to be related with the vessel just named. The patient in this case was a man seventy years of age, where an operation was made necessary by a rapidly-growing tumor enveloping the larynx.

A complication occasionally met with in tracheotomy exists in the intrusion of a prominent thymus gland. In one particular operation done by the writer on the person of a child that body swelled with such prominence into the wound as to convey a momentary impression that the tissue to be dealt with was the lung. After some manipulation the gland was gotten rid of by

being crowded beneath the manubrium of the sternum. In the subsequent treatment of the case it gave no trouble.

With a view to convenient reference Plate I. is inserted. The anatomy of the parts involved, together with the several features of a tracheal operation, are so perfectly displayed as to render the hints afforded invaluable. Regarding the tube, seen in place, with its retaining tape bands (Fig. 6), it requires to be remarked, that, as furnished by the manufacturer, this is a double canula, the object of the inner tube being to permit of easy cleansing. The author being possessed of considerable experience in the direction of these operations, advances it as his opinion that this inner tube is seldom a convenience but often an obstruction. By reason of occupying a space within the outer tube it will readily be recognized as interfering to an extent with free breathing. By reason of this same interference it invites the clogging it is intended to correct. In removing it, in cases where secretions are tenacious, the first tube is occasionally withdrawn; a matter, this last, of little consequence in the later treatment of a case, but demoralizing to a patient when occurring immediately after an operation. To remove the secretions a mechanical plan suggested originally to the author by Dr. Cohen will not soon be superseded; this consists in the use of a common wire brush such as is employed by smokers to clean their pipes; thrusting this into the canula a single turn catches among the bristles the sticky glutinous mass, bringing it cleanly away. These little brushes, made on the end of a long strand of wire, are to be bought in tobacco stores. The brush applies only when the secretions are fresh.

A canula is to correspond in diameter with the trachea into which it is to be introduced: a common length is one and one-half inches. The windpipe opened, a tube is most conveniently introduced by means of a rubber bougie, the point of this leading the way, the tube following on the principle of a trocar and canula. The tube in the trachea, the bougie is quickly to be withdrawn, it being recognized that while in, the patient is unable to breathe.

A point of practical importance in operations of this kind pertains to absolute exposure of the trachea before incision. Covering the tube is a sheath of cellular tissue; if this sheath be simply incised, without being scraped fully and completely away from the circumference of the canula, a result sure to follow is, emphysema. From neglect of so simply an accomplished matter the earlier experiences of the writer confounded him more than once with windy expansions puffing out the integuments of the whole breast region.

A source of inexpressible comfort to a patient who has undergone the operation of tracheotomy, is found in relieving the bronchial dryness, and irritability arising out of the new manner of respiration, by means of frequent atomizing of water or other grateful fluids. The practice is deemed a necessity by the writer to the successful carrying through of his cases. To this end a steam atomizer is to be kept quite continuously at work, the

vapor being directed to the neighborhood of the patient, care being taken not to wet him. In the absence of the steam apparatus an ordinary cologne sprayer is made to take its place. Fluids found grateful are tincture of hamamelis, tar-water and glycerine, phénol sodique much diluted, and very weak chlorine-water. Steam applied by the spout of a kettle of boiling water affords great relief to a patient; the application at first to be repeated every hour or two. Close attention is to be paid to clogging of the tube, sure to occur where not combated by moisture. The writer has been hurriedly called from his bed at midnight to find a patient running frantically about a room gasping for breath, examination revealing a tube so clogged with tenacious mucus as to almost entirely obliterate its calibre. Such a case is relieved by supporting the canula in place by means of a finger placed against either wing, in using steam freely, and in picking away the glutinous mass by means of an ordinary hoe-form dental excavator. A tube, after having been in place two or three weeks, is to be taken out and replaced without difficulty or risk. Here it is cleaned without trouble.

Plate I.

