PRELIMINARY LARYNGOTOMY.

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For the past 15 years I have performed laryngotomy with plugging of the air passage above as a preliminary to larger operations about the upper air passages, with the intent: (1) To make such operations less dangerous to life; (2) to increase the number of cases which could be operated upon owing to the diminished danger; (3) to help surgically in the operation by getting rid of the respiration through the pharynx during the time of operation, and of the hindrance caused by perpetual sponging and coughing; (4) to give the chloroformist a clear field for his work away from the site of operation, so that he may do his work uninterruptedly without taking turns about with the surgeon; (5) to lessen the time needed to perform certain operations attended by bleeding difficult to control; (6) to get rid of tracheotomy as a preliminary operation in all suitable cases, and so again to assist in making the operations in question more easy, quick, and efficient in saving life.

With regard to tracheotomy—high or low—all who have seen much of it in hospitals must agree that it is often difficult to perform, that whether done hurriedly or slowly it is apt to be associated with the suction of blood into the trachea and lungs, and that the deep tissue of the neck is opened up in the operation, so that tracheotomy as a preliminary operation intended to facilitate the operation required may unhappily increase danger and even be the cause of death.

Laryngotomy, on the other hand, as a preliminary operation, can be done in a few seconds, without any haemorrhage of consequence, and with but slight opening up of the neck tissues. The wound can be healed in a few hours, and the whole operation is without danger, and easy to perform. In most cases the method of operating is as follows:

First, an assistant lifts up a vertical fold of skin, the centre of which should be at the level of the upper border of the cricoid cartilage when the head is extended.

Secondly, the centre of the uplifted fold is transfixed and cut through so as to make a transverse cut of 1 in. in length. It will be found that the veins running vertically in this region have not been cut, and are exposed at the bottom of the wound.

Thirdly, a pair of sharp closed scissors curved on the flat are plunged through the crico-thyroid membrane downwards and backwards in the mid-line, keeping close to the upper border of the cricoid, so as to avoid the little artery. The scissors are then widely opened.

Fourthly, the laryngotomy tube is inserted between the blades of the widely-opened scissors, or retractors can be used after withdrawing the scissors. In most cases it is quite easy to pass the tube with the left forefinger nail serving as a guide above, whilst an assistant holds the partly-opened scissors in position. The laryngotomy tube should be a little flatter than a tracheotomy tube; it should be fitted with a pilot with not too blunt a point, and the tube should project beyond the plate externally, so that the chloroformist can easily fix an indiarubber tube through which to give the anaesthetic. If need be, a small or medium Durham's tracheotomy tube will serve every purpose.

Lastly, the pharynx can be firmly packed with a large flat sponge, a series of which should be in readiness, and the preliminary operation preparations for some graver matter are therewith ended.

In a few cases where it is necessary to have more room in the middle pharynx, the plugging can be modified by plugging the top of the larynx. The eyed end of a long bent probe can be passed up through the wound into the mouth, and one end of a tape, to the middle of which a small sponge has been fixed, threaded through the eye of the probe and pulled down through the wound. The sponge can then be pulled down and firmly fixed into the top of the larynx by tying the lower end of the tape to the upper end, which has been carried through the mouth.

The operation of preliminary laryngotomy with plugging of the pharynx has now been extensively tried by myself and others, and can be commended to surgeons as a great aid in many difficult and dangerous operations. It is particularly of use when operations about the pharynx, mouth,

nose, and jaws are likely to be associated with severe haemorrhage under an anaesthetic, and especially as an aid in the removal of fibromas and fibro-sarcomas of the naso-pharynx.

PRELIMINARY LARYNGOTOMY.

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THE removal of the upper and lower jaw, of the whole or a portion of the tongue, of large tumours of the naso-pharynx (which are prone to bleed severely), of tumours of the pharynx, and indeed of any part above the larynx, is attended with such difficulty and danger on account of blood making its way into the trachea and bronchi, of imperfect anaesthesia, and the consequent struggles of the patient, that various means have been adopted with the view of meeting these disadvantages. Among these are tracheotomy and a certain posture of the patient, with the head hanging over the end of the table (Trendelenburg's posture), or lying on the side with the head forwards. The objections to tracheotomy are so strong that, although it has been recommended again and again by eminent surgeons, it has never been generally acceptable, and has never held its place for long.

Trendelenburg's posture is undesirable on account of the congestion of the vessels of the head and neck, and because it is inconvenient to the operator. The side posture is preferable, but, again, it is not convenient to the surgeon, and the anaesthetist and surgeon are both at work in the same space, so that it is almost impossible to maintain continuous and uninterrupted anaesthesia during the whole of the operation. Nevertheless, I used it for many of these operations, as I have been accustomed to do for the operation of adenoids, and I might have continued to do so to the present time had it not been for a suggestion made by Dr. James Bond during the course of a discussion at the Laryngological Society towards the end of the year 1899. We were discussing the safest method of removing a formidable naso-pharyngeal growth which had been shown to the members, and Dr. Bond's suggestion was that laryngotomy should first be performed, which could be done in the very shortest time and with the least danger. A sponge could then be thrust down into the lowest part of the pharynx, so that the removal of the tumour could be effected without the fear of blood entering the air passages, and with the same deliberation and thoroughness which are possible in operations on the more exposed parts of the body. I was very much struck with the idea, and determined to apply it to all those operations in which it might be useful. For the last seven years I have done so, and I have formed the opinion that, although it is not always as perfect as I could desire, it is, on the other hand, by far the most efficient method of protecting the patient, and of enabling the operator to perform his work with the least loss of blood, and with the greatest prospect of success. I do not know how many times I have employed this preliminary laryngotomy, but certainly more than a hundred times, so that I am now in a position to urge the importance of it on the profession, and to point out some of the difficulties which may be met with. They are not many.

In the first place, I have seen slight subcutaneous emphysema on two or three occasions. It has either ceased spontaneously or has been treated successfully by the introduction of a tiny strip of gutta-percha tissue into the wound in the skin.

On two or three occasions I was surprised to find some difficulty in passing the tube into the windpipe, even when it certainly had not passed into the soft tissues in front of the cricoid and trachea. On one of these occasions, when I was operating at the hospital, I determined to discover the reason of the difficulty. On opening the wound I found that the instrument I had used (a strong sharp director) had split the cricoid cartilage and thrust the upper margin, with the soft parts behind it, into the lumen of the trachea. I have never experienced this difficulty since, for I have first used a sharp curved needle on a handle to find my way through the crico-thyroid membrane, and have passed the director upon that as a guide.

Once or twice there has been a little bleeding a day or two after the operation from the subcutaneous tissue, but