

symptoms of asphyxia by tracheotomy, we still find the patient rapidly sinking by the blood infection or septic poison, we should then see how futile was our effort and conclude our judgment was not well formed. But when either of these conditions is apparently acting alone in destroying the life, the case is comparatively clear. If it is general *blood poisoning*, operation is fruitless—if laryngeal stenosis, tracheotomy is full of promise.

We, therefore, confine our argument to those cases of laryngeal diphtheria, where the dyspnoea is threatening life, and the blood infection not strongly marked or absent.

For the purposes merely of my paper, I will divide laryngeal diphtheria into *three varieties*.

1st. When it originates in the larynx—true typical croup.

2nd. When it originates in the pharynx and extends to the larynx and downwards—“*descending croup*.”

3rd. When it originates in the bronchial tubes or trachea and ascends into the larynx—“*ascending croup*.”

This latter variety is so infrequent that it may practically be left out of the count. I have never seen a case of this kind, and this is probably the experience of most of those present. Here, again, I would assume that the symptom and condition present would indicate that opening the trachea would be useless, as the original obstruction and seat of disease lie below the point of operation and, therefore, no relief could be expected.

But in the first two varieties the case is quite different, and these are the varieties we meet with, and in the face of which we are called upon to decide for or against tracheotomy.

It matters little practically whether it be the first or the second variety. In either case the disease causes death by mechanically obstructing the passage of air into the lungs, and to avert such an issue is the object of our earliest and latest endeavors. Our earliest are spent in topical applications, sprays, steam inhalations, emetics, etc., etc., to detach and expel the obstructing membrane, and if these fail, and they will, as they have done in the past, in 90 per cent. of all cases, and just where they fail, our latest efforts to the rescue lie in tracheotomy,

“the object of which is to supply a provisional air passage in the place of the obstructed rima glottidis, so as to keep the patient alive, and to allow the disease to run its course, and gain time for the administration of remedies.”

*Winters*. That this end is gained to a considerable extent, even in the cases that terminate fatally, no one who has observed the results of tracheotomy can possibly question, and I hold it to be a good axiom in this disease, as in many others, “keep your patient alive long enough and he will get well.”

Tracheotomy, even under most adverse circumstances, does at least prolong the life of the patient by overcoming a positive mechanical obstruction in the larynx, which is the cause of death in nearly all the fatal cases of croup in which it is resorted to. It saves the patient from death by asphyxia, and will save the life, unless the original gravity of the disease, or some secondary complication intervening, causes a fatal termination.

What are some of these complications that so often follow tracheotomy? We may mention (1) Sudden collapse. (2) Cardiac syncope, or (3) Embolism. (4) Persistence and extension of the original disease causing death, (5) by asthenia in some, and by acute nephritis and uræmia in others. (6) Abscess in the mediastinum. (7) Ulceration of trachea from pressure of the tube. These go to swell the number of fatal cases, but none can be truly traced to the operation, except the last, and this should lie within the possibility of prevention. These instead of forming an argument against the operation are evidence of the need of greater care and research as to the details of the operation and subsequent treatment. But another class of secondary complications, (8) the bronchial and broncho-pneumonic are by far the most frequent cause of death after tracheotomy, and this complication is not induced, as has been asserted by some by the operation, but by its having been delayed too long.

A few facts are revealed by a long line of autopsies.

1. “That every case of laryngeal diphtheria that died asphyxiated without operation showed extensive bronchial and pneumonic changes.

2. “That those cases operated on that lived