

Two died of heart failure; and three died of sepsis.

In presenting such a record of deaths and so small a saving of life, I am prepared to agree with you that the results in numbers generally are not brilliant; but I must ask you to accept my statement, corroborated as it will be by every medical gentleman present at the operations, that the results in the individual cases that recovered were most brilliant; and in every case that proved fatal most satisfactory in accomplishing the purpose for which it was adopted, viz., in preventing *death by strangulation*.

In favor of this showing, I must ask you to mark—

1. Not being ambitious merely to show a good record, but solely to save life, I have been conservative in every instance, and operated only in those cases where I thought life would be sacrificed without it, supported in this view by the attending physician.

2. I operated in three of these cases to relieve the distressing dyspnoea, where the malignancy and sepsis were so manifest as to forbid hope.

3. I have been called to seven other cases where I thought the urgency did not demand immediate interference, and the hope that they might recover without the tube was realized.

A discussion of the subject under consideration would be incomplete if the matter of tracheotomy were omitted.

Some time ago I read a paper before this association which proved myself an ardent advocate of tracheotomy in certain cases of laryngeal diphtheria. I support the same argument still. And so long as I believe it possible for a patient to die from obstructive exudation in the *larynx alone*, without its extension, and before it has had time to extend, to the bronchi, just so long will I feel that even so important and dangerous an operation as tracheotomy is not only advisable but imperatively demanded, unless a simpler, quicker, safer, and equally effective measure can be substituted. Such measure I think we have reason to hope we shall find in intubation.

The sources of danger which I have heard ascribed to intubation are—

1. Apnoea and laceration of tissue by prolonged efforts at introduction.

2. Forcing down the tube in efforts at removal and injury to the parts. [All of which, I say, should *never* happen in the hands of an expert.]

3. Interference with deglutition and nourishment. [This may be overcome with jellied foods, soft eggs, custards, etc., or stomach tube.]

4. Occlusion of the tube and trachea by pushing down the membrane before it.

[Four times I have had this occur, but by immediately withdrawing the tube the false membrane followed it; and once an entire cast of trachea and bronchi and quiet breathing, resulted. I have, therefore, no reason to fear such a complication.]

5. Ulceration of trachea by pressure of the tube, and consequent sepsis or necrosis. [Such a result must be very rare, and may be avoided with due care. One of my cases that recovered wore the tube ten days without any such complication.]

6. Inflammation of lungs from passage of food into the respiratory tract. [This may be avoided by using food in semi-solid form, as suggested above.]

7. Coughing up the tube and swallowing it. [The only objection to this is the loss of the tube temporarily, and it only costs about \$3.]

The sources of danger of tracheotomy are—

1. Hemorrhage. [Which an adynamic disease is intolerant of.]

2. Erysipelas. [Which I have seen in one case.]

3. Gangrene. 4. Necrosis of cartilage.

5. Sepsis through the wounds.

6. Ulceration of trachea and sepsis therefrom.

7. Plugging of desiccated mucous about the lower inner end of the outer canula, and sudden asphyxia and death.

All of these are grave conditions, possible, and liable to occur at any time, and quite beyond the control of the surgeon in charge.

Their gravity, the frequency of their occurrence, and the dread the friends of a patient always have of a cutting operation, compared with the sources of danger in intubation, so few and insignificant, with results not inferior, lead me with our present experience to advise intubation in diphtheritic croup as generally preferable to tracheotomy.