

with mucus and require frequent cleaning. There is probably less irritation from an intubation tube than from a tracheotomy canula, and the larynx recovers much more rapidly afterwards. Then there is never the same difficulty in obtaining the consent of the parents, which is often impossible for tracheotomy. And lastly, and of greatest importance, the results after intubation are undoubtedly better.

Of a large number of cases of tracheotomy—over one thousand—collected by Prof. Jacobi from different parts of the world the percentage of recoveries was twenty-one and a half per cent., while the recoveries from intubation are stated by many United States authorities to average between twenty-six to thirty per cent.

After the introduction of the tube into the larynx, the relief from dyspnoea is complete, unless, indeed, the membrane has already extended down the trachea, when relief will be only partial. Partial relief is as rare after intubation as after tracheotomy. There is usually some coughing, caused by the mucus and the presence of the tube, but this soon subsides, respiration becomes quiet, and the child generally goes to sleep, especially if there has been much previous exhaustion. Everything progresses well after the operation for a time, but if the case is going to turn out badly, then we shall observe symptoms of danger within twelve, twenty-four, or thirty-six hours, the most important of which is increased frequency of the respirations. From eighteen to twenty immediately after the operation, they will increase up to forty, fifty, or sixty in a minute, the pulse and temperature generally going up at the same time. The symptoms almost certainly indicate either extension of the membrane downwards into the bronchi, or pneumonia, and in either case the prognosis is exceedingly grave. The physician should give no encouragement until forty-eight hours, at least, have passed, when, if the general condition is favorable, the prospects are good.

The most common termination after both intubation and after tracheotomy is extension of the membrane downwards, and the result in that event is usually fatal. After intubation the same treatment should be carried out as if the tube were not in the larynx. There should be no change, on account of the tube, of the atmosphere of the room. Indeed, I think

the air should only be moderately warm and moist, say about sixty-five or seventy degrees Fahrenheit, and especially should it be fresh and pure. According to my experience, the greatest difficulty to contend with after intubation is the feeding. The tendency of the food, especially fluids, is to run into the tube and cause coughing. The epiglottis, it is generally admitted, is not the means by which food is prevented from going into the larynx; patients can swallow perfectly well without an epiglottis. The sphincter action of the muscles of the upper opening of the larynx is, I think, almost the only means of preventing food from passing into the air passages, and this action is prevented by the tube almost, although not quite entirely. The best kind of food, therefore, for patients with an intubation tube in the larynx, is semi-solids—firm jellies, custards, ice cream, sago, tapioca, etc. Fluids are best swallowed, in the majority of cases, if taken while the child is lying on its chest with the face directed towards the floor. The increased effort at swallowing thus seems to suffice to carry the fluids over the larynx. Some children can swallow fairly well; but with others, at every attempt the fluid runs down the tube and sets up a coughing spell. If this is the case, I would recommend that the child be fed either by enemata, or, better still I think, by passing a catheter into the oesophagus at regular intervals and feeding through it. The great danger of the food passing into the trachea is that it may set up septic pneumonia, as well as favor the extension of the membrane by irritation; and as that danger is very considerable, every means in the way of feeding should be taken to avoid it. Then again, sometimes in a violent fit of coughing the tube may be coughed out. If such a fit of coughing occurs, the nurse should be instructed to raise the child to a sitting posture, where it can cough easier, and if the tube is ejected it is less likely to be swallowed. Then, if there should occur a choking spell from a piece of membrane getting into the tube, and the child seems about to suffocate, the nurse should take it by the feet and shake it with the head downwards, giving it at the same time a sharp blow on the chest, which will help it to eject the tube.

With regard to the ultimate removal of the