

means absorption of a fatal dose of poison. Hydrogen peroxide and pyrozone do excellent work in these cases, not only by disinfecting, but by keeping the passages open by their solvent action on the deposits.

Simple washing by saline solutions is often successful, but not having the solvent power of the peroxide on the deposits the passages can not be kept as free. If antitoxine stops the formation of toxins we will be able, in these nasal cases, to accomplish a great deal of good by the early and energetic use of solvents and washes.

Calomel fumigation requires more than a passing notice. Those who have used it speak very highly of it especially in laryngeal cases. The child is covered by a tent and from 15 to 60 grs. of pure calomel is heated over a spirit lamp or some convenient contrivance, so as to vaporize it slowly and so that the child can readily breathe it in. This is done every two or three hours, using the large and oft-repeated doses in the worse cases. Sometimes these large doses are used hourly for a few hours and from 2000 to 5000 grs. of calomel are used in a single case. The child's skin should be covered as much as possible to prevent settling of calomel on it, as it is a local action on the respiratory tract which is desired. His mouth and teeth must be cleansed after each fumigation and if the gums become spongy use a wash of pot. chlor. with astringents. Stimulants should be administered before each fumigation, and iron given to counteract the anæmia caused by the calomel treatment, as well as the asthenic tendency of the disease. The calomel must be absolutely pure to avoid irritation and the attendants must be careful to avoid inhaling the vapor, for although it seems to affect the patient very little it is often very troublesome to others.

The reports of recoveries by fumigation in laryngeal cases without intubation or tracheotomy have been very encouraging and where these operations have been done the results have been much better with than without the fumigations. To quote the statistics of Doctors McNaughton and Madden: out of 2417 tracheotomies there were 286 recoveries, or 24.2%; out of 5546 intubations, 1691 recoveries or 30.5%; 505 fumigations in laryngeal diphtheria, 275 recoveries or 54.5%; 85 of these 505 were subjected to operation after

fumigation failed, and of these 29 recovered, leaving 48.7% of recoveries for the fumigations alone. Where calomel fumigations were used and operation later 34.1% of recoveries were recorded, against 24.2% for tracheotomy and 30.5% for intubation without fumigations.

These statistics show a decided benefit from the fumigations, but while such is the case, it is not advisable to trust to it too long where there is much stenosis, else the heart will become dilated and the vital powers so reduced as to render operative procedures useless. There is no question but early operation, be it intubation or tracheotomy, will give much better results in laryngeal stenosis than where it is delayed. It is also not a matter of indifference which operation is selected. Intubation has the advantage of making no wound, of being more readily consented to by parents, and if not successful, of not militating against any further operative measures. Closure of the nasopharyngeal space, great œdema of the glottis or extensive deposit in the trachea, would contraindicate intubation and point to a primary tracheotomy.

Among very young and weakly children, especially if the nursing is poor, intubation is preferable to tracheotomy. If the antitoxine treatment comes up to our expectations it will render results much better from both these operations by loosening membrane early and lessening the duration of the disease. There will be a certain class of cases with so much deposit in the trachea that it can not come through the glottis. In these cases, with antitoxine and calomel fumigations to hasten separation of the membranes, tracheotomy could be performed and the membrane removed by a curette through the tracheal wound, and thus, otherwise hopeless cases rendered curable. Where the amount of deposit is not excessive intubation is the ideal operation, and, where calomel fumigations fail to give prompt relief, should always be resorted to.

Whatever the antitoxine treatment may ultimately do for us, at present it can only take a place in our general treatment. It is not right to trust the treatment of diphtheria either to antitoxine or any other single remedy. No matter how efficacious antitoxine may prove in killing the Klebs-Lœffler bacillus, we must remember there are at the same time other pathogenic germs