

for this purpose only when the temperature remained high after the initial stage had passed. For the high temperature, sometimes present early in the disease, a single dose of calomel was recommended. The doctor also maintained that the great majority of cases required no medication except the disinfectant measures, to which allusion had been made. Taking all the cases, probably 60 per cent. would recover spontaneously. Stimulants should not be used indiscriminately. The patients might have ice freely when they would take it; should be sustained by cold milk, perhaps eggs; and the juices of fruits, and the fruits themselves were regarded as beneficial.

Dr. Billington reported astonishing results, which he had obtained by following out this plan of treatment. Membranous exudation was present in every one of the cases referred to in the paper.

Out of one hundred and twenty-four dispensary cases, there were ninety recoveries. Of these, one hundred and two were under his own care, and eighty-eight recovered. The largest number in a single month occurred in the month of August, 1875. In his private practice, the doctor had had seventeen cases, and all recovered, with but a single exception. Of these, seven were of the severe tendency; the others were mild. The average duration of the doctor's cases was from four to six days. These cases, added to those treated by Drs. Darkin and Bullard, in accordance with the same plan, raised the number to fifty-one, and with but a single death, already mentioned. The inhalation of steam was regarded unfavorably. Dr. Billington believed that he could prevent systemic infection, and also subsequent serious laryngeal complication, by early, thorough, and faithful resort to and continuance of the measures for local disinfection which he had recommended.

The paper was listened to with marked attention.

Dr. Barry, in discussing the paper, remarked that the success obtained by Dr. Billington in the treatment of diphtheria had been wonderful, and that he had not been able to obtain any such results by any plan of treatment he had ever adopted. Dr. Barry was of the opinion that diphtheria was strictly a constitutional disease, and the local manifestation was simply an indicator. His treatment, therefore, was local and general. He discarded the promiscuous use of irritating substances in the throat. Where the amount of exudation was small, he used tincture of iron or muriatic acid with glycerine; and if the patient was of sufficient age, an astringent gargle: alum, chlorate of potash, etc. If the patient was young, the vapor of hot water or vapor of iodine was recommended. In those cases in which the tonsils were pretty well covered, he had been accustomed to use a powder composed of sulphate of iron, chlorate of potash, and muriate of ammonia. This was blown through a quill into the throat every two hours.

His general treatment was supporting in its fullest sense, for the tendency to death was by asthenia. Iron with quinine, chlorate of potash, carbonate of

ammonia, milk, beef essence, milk-punch, should be employed. The surroundings of the patient should be cheerful and pleasant; the unaffected children removed, if possible, from the house; the room continuously disinfected; and the sick quarantined. In his cases the ordinary duration had been about two weeks if the patient was to recover. The more acute symptoms passed away in from four to six days; and if the case were to prove fatal, it usually did so about the fifth or sixth day. He had not met with a single fatal case in an adult patient in his own practice.

Dr. Burke was also of the opinion that diphtheria was a constitutional disease with a local manifestation. He also regarded local applications by means of brushes and sponges as harmful. "The mild cases," said the doctor, "would get well of themselves, but perhaps they had better have given them a little cubebs mixed with mucilage." "The malignant cases," continued the doctor, "would die in spite of all treatment."

There was a class of patients between these extremes that could be saved, a certain portion of them, by the use of constitutional remedies, such as quinine, iron, etc., etc.

Dr. Burke mentioned the use of bromine with bromide of potassium, as recommended by Prof. Thomson; and in some cases it had evidently done good, but in many cases it had done no good whatever. He also recommended inhalation of the vapor of lime-water, especially where croupy symptoms became developed.

Dr. Hanks remarked that Dr. Billington's paper was exceedingly interesting to him, for two reasons: first, because of the remarkable success which had attended his mode of treatment; and second, because it was the expression in words of convictions which had been slowly but surely maturing in his own mind during the past fourteen years.

Dr. Billington's success was truly remarkable, for he well knew the type of the disease as it had appeared in the twenty-first ward; having had in his private practice, during the last five years in that district, from twenty to thirty cases, every year. He knew that many of these cases attended by Dr. Billington had been severe, not a few malignant. Therefore, when the large per cent. of recoveries was considered, a cause must be looked for, and he believed two excellent reasons could be found for this satisfactory result. One was the kind of medicaments used locally and internally, and the other was the great care he bestowed in teaching the parents or nurses the *proper manner* of administering the remedies presented. This carrying out to the letter every little detail has had much to do, more than many had been led to suppose, in the cure of diphtheria.

He wished he could sufficiently emphasize the vast importance, in treating diphtheria, of careful attention to the minutiae. Many had been, and still were in the habit of looking at the patient's throat, writing a prescription to be taken, ordering a gargle every few hours, and the nose to be syringe