

or little) that she would be predisposed to trouble of this kind and that the danger of a second attack would be great. I have been unable to find anything in the text-books that I possess (and they are some of the best) bearing upon this subject. About one year after Mrs. A.'s first illness her husband consulted me, wishing to know what the chances were for his wife to again suffer from convulsions, if she should again become pregnant. I told him that the chances were *very* great, and that a second attack might prove fatal, but it seems that I was mistaken.

The above case is convincing to me that puerperal eclampsia is not caused primarily by a diseased condition of the kidneys, but as before stated, I believe the poisons, or toxic substances, whatever they may be, accumulate in the bloody, and if not eliminated through the natural channels, will produce inflammation of the kidneys, hence the origin of albuminuria. In some cases the great nerve center first becomes affected, causing the convulsion, the kidneys being only secondarily impaired; but if the toxins are eliminated through the natural channels the kidneys and nerve centers remain unimpaired. I believe it is the duty of every physician engaged to attend a case of confinement, two or three months in advance of the expected time (as they sometimes are), should in every case of swelling of the feet, especially if accompanied with some headache and stomach symptoms, give special attention to the kidneys and bowels, and in bad cases the skin and diet. By so doing, much or all of the "toxins" that accumulate to excess in the blood, could be largely eliminated, thereby preventing a possible attack of puerperal eclampsia.

A RATIONAL TREATMENT OF DIPHTHERIA WITH OR WITHOUT ANTITOXIN.

BY EMERSON M. SUTTON, M.D.

PEORIA, ILL.

Recognizing the doubts of all treatments, I submit four cases taken from my case book which were true diphtheria occurring in an epidemic, and which show a positive result:

Case 1.—July 18, 1891. Patient, a female, aged 15. Two brothers had just died of diphtheria when she contracted sore throat and fever with constitutional symptoms. The membrane formed over the posterior fauces, extended anteriorly and to the sides of the throat. Treatment, spray 2 per cent. cocain sol. very carefully and small amount, followed by second spray of Condyl's fluid. Ordered to be repeated each hour till all soreness was relieved. Internal treatment, zinc sulpho carb. 1 gr. each hour. Quinia and iron tonic every three hours. Food every fourth hour, taken after spraying. Result, second day membrane disappearing from anterior pillars and only patches left on sides. No fever. Good appetite. Third day, no patches remaining, inflammation subsiding. Fourth day, throat not the least sore. Fifth day, discharged recovered.

Case 2.—July 11, first symptoms developed in boy aged 6. Membrane formed on sides and back of throat. Constitutional symptoms profound on the 13th, when first seen. Treatment: Cocain spray three times a day (at each visit). Permang. potash sol. spray each hour; gargle of solution every fifteen minutes or one-half hour. Internally iron and quinin. Pepsin cordial after food, which was always following cocain spray. July 14, throat not so sore; membrane disintegrating; general condition good. July 15, membrane only in patches. July 18, discharged well.

Case 3.—October 28. Boy aged 8 sent home from school with fever and sore throat, treated by family physician for tonsillitis. October 29, no better under sprays, antipyretics, etc. October 30 and 31, patches coalesced, forming membrane, constitutional symptoms became alarming. Treatment inaugurated for diphtheria October 31, spray 2 per cent. cocain sol. followed by Condyl's fluid. Spray every two hours. Internally, milk every three or four hours; 5 drops each, digitalis and nux

vomica tinctures in spirits of mindererus at same intervals as food. November 1, constitutional symptoms less profound, membrane disintegrating. Additional treatment, 1 gr. mild chlorid followed in six hours by magnesia. November 2, much better. Nov. 3 and 4, membrane disappeared, sleep undisturbed after 8 o'clock evening spray. November 5, eats, feels well. Tonic given of quinia and ferrum. November 6, discharged well.

Case 4.—B. N. aged 11, December 3 contracted diphtheria from association. Constitutional symptoms severe, great prostration, membrane extensive, extending to anterior nares. Treatment: Carbolic acid gr. 1, cocain 2 per cent. sol. 3ii, use spray cautiously every two hours, gargle every fifteen minutes with Condyl's fluid. Internally, tonic, calisaya. December 4, soreness disappeared, membrane disintegrating, less inflammation. December 5, patches only remaining. December 6, patches disappeared. December 7, discharged well.

Not going farther into the pathology than to state that either preceding membrane formation an intense hyperemia may exist and form a local affection at first, the disease becoming constitutional as well at a later period, or the constitutional may precede the local symptoms, but at the point of infection passive hyperemia first takes place and exudate follows. A treatment that will relieve this hyperemia will prevent the exudate and subsequent systemic poisoning. Such a remedy is a 1 or 2 per cent. cocain solution acting on the capillaries, used in the form of spray. I first tried this in 1891, after noticing the continuance and even increase of the primary congestion following the use of the usual spray, especially observed after hydrogen peroxid, and I found that the immediate relief from the soreness was so manifest that it required no coaxing to gain consent for repeated treatments. The patient could take nourishment at once following the spray, which is itself a great desideratum, and recovery has taken place rapidly in every case, more of which I have to report. A word as to spraying. In some cases it was necessary, at first, to have the patient inhale the spray, as the deeper parts of the throat were affected, and in none of the cases were untoward effects observed.

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TUBERCULIN IN OBSCURE MANIFESTATIONS OF TUBERCULOSIS.

BY W. H. WEAVER, M.D.

CHICAGO, ILL.

If the earliest symptoms and signs of consumption were as easily definable and as pathognomonic of the disease as those manifested in the later stages, it might be easily diagnosed in its incipency. But, unfortunately, this has not been the fact. In a great many cases the onset is sudden or occurs during the progress of a severe cold or bronchial catarrh, or following in the wake of some other acute disease. Frequently, however, it is ushered in by symptoms which point to no particular form of disease, and it is this class of cases that is the most puzzling until we find pronounced symptoms pointing to lung infection. There are often certain symptoms of a general constitutional impairment, insufficient in themselves to render a diagnosis possible, but which do point to a definite disease if properly studied. There are many cases occurring in active practice in which a positive method of diagnosis would be of the greatest advantage. It is often easy to find out what a disease is not, but to tell what it is, is quite another matter.

The patient calls upon his medical adviser frequently, with the consciousness that there is some-

thing wrong. He is told that he has a little malaria or biliousness, and probably the diagnosis is changed frequently at the appearance of new symptoms. Restrictions of diet and some other measures directed toward the improvement of digestion improves his condition for a while. These measures soon fail and the case has advanced another step. There is now a thicker coating on the tongue, a general feeling of malaise with loss of appetite and possibly diarrhea, intestinal indigestion or constipation. There is anemia, insomnia, rheumatic pains or intercostal neuralgia, and possibly the heart's action is accelerated, fatigue toward evening with elevated temperature, chilly sensations and symptoms due to combined poisoning from the ptomains of intestinal fermentation and tubercle bacilli, which resembles malarial toxemia. The blood may be surcharged, or at least infected with tubercle bacilli and their products, long before any local inflammatory action is discoverable in the lung tissue, a sort of prolonged incubative period. Now to make a positive diagnosis of this condition would be to gain much time. There is but one recognized test which may be applied and that is tuberculin.¹ If there is reaction after a test dose of this agent the case is one of tuberculosis, and if afterward treated on that line rapid recover is certain. I have recently had under my care four cases which illustrate this use of tuberculin.

Case 1.—W. G., age 23, had typhoid fever one and a half years ago, from which he made a good recovery. During the past six months he had been steadily declining, continuously complaining of some new symptoms as soon as he had recovered from an old one; diarrhea, headache, loss of appetite, pain in the back, now and then a severe cold. In February he had afternoon fever, temperature 101 degrees F., pulse rapid, losing weight and constant fatigue, examination of lungs entirely negative. A small test dose of tuberculin was given and was followed in about ten hours by a characteristic reaction. About six weeks of treatment restored him to his former good health, which has continued to the present time.

Case 2.—Mr. W. H., age 38, for more than a year has been very susceptible to colds, followed by rheumatic pains in the back, indigestion, rapid pulse, increasing weakness, constant afternoon fever. During the fall of 1895 a severe cold was followed by a descending bronchitis, but no lung infiltration was discoverable, and no bacilli could be found in the sputum. However, a test dose of tuberculin was given and followed by a considerable reaction. Treatment consisted in the use of tuberculin and other measures indicated by his condition and removed every symptom of the previous trouble.

Case 3.—Mr. F. S., age 23, for several years has been subject to a mild form of asthma, seldom coughing but always wheezing and suffering from partial dyspnea. He came to me complaining of weakness, insomnia and indigestion; pulse 95, temperature 99.5 degrees F. Examination of the lungs showed sibilant râles heard over both lungs, no moist râles or other signs of localized infection were found.

This patient was found to be very sensitive to the action of tuberculin, but under its influence recovered from all the symptoms complained of as well as recovering his weight and lost strength.

Case 4.—Mr. F. M., age 22, came to me complaining of a protracted cold, pain in the chest and at times in the throat, cough and expectoration of mucus, loss of strength and weight. Examination of the chest and sputum both negative. Tuberculin gave the reaction and today the patient has entirely recovered from his symptoms.

In a recent article by Dr. Taylor of Minneapolis on "Tuberculin in Pulmonary Consumption" it is shown that 84 per cent. of first stage cases were greatly improved by his use of tuberculin. And as the cases are more advanced the percentage of improvement or recovery grows less. It is also true that a great many cases in the later stages may and do recover reasonably good health.

Now, if we can get the cases in the incubative or first stages a very much larger percentage ought to recover. There is no other method by which this test can be made. Inoculation of rabbits or guinea pigs with blood taken from the patient would hardly be reliable, because the particular specimen of blood obtained might contain no bacilli, and other sources of error would enter into the case, which would involve uncertainties. Tuberculin is used in detecting bovine tuberculosis and has probably never failed as a crucial test. It is undoubtedly just as reliable in the human subject.

Of course where there is expectoration containing bacilli no other test is needed than the microscope. If there is no sputum or no bacilli to be found, the test will be decisive.

It might be objected that as consumption is such a very fatal disease, unless there is some positive cure to be promised the fact of an early and positive diagnosis would be a source of great worry to the patient and sorrow to his friends which would only hasten the rapid progress of the disease. This objection is born of ignorance of both the disease and its treatment and should have no weight with one who has in his mind the welfare of his patient. That consumption is curable, especially in the stage under consideration—the first stage—should be firmly impressed on his mind so that he may not leave any stone unturned which will aid in his recovery. Next to the disease itself this general conviction that the disease "can not be cured" is the greatest obstacle the physician has to encounter in his efforts to enlist the energies of the patient. That physicians as well as others have encouraged a patient to "sin away his day of grace" by calling his disease bronchitis, malaria or something else, can not be denied. Ambition to do something in the right direction should have been instilled into him early, before he became too weak to help himself. By far the greater majority of patients seen by lung specialists are already far advanced in the second and third stages of the disease, and then we are requested not to let the patient know that he has consumption. Who is responsible for this immense loss of time and life?

Professor Jaccoud says in his work on phthisis that "pulmonary phthisis is curable in all its stages and in its two forms—the ordinary and the pneumonic." Tyndale says "consumption is curable." It has been the belief of the great physicians of Europe that consumption is curable—Celsus and Galen, Willis, Laennec, Rokitsansky, Schuller and Koch. In this country Lindsay, C. T. Williams, Professor Flint in Pepper's System of Medicine, and Professor Loomis (in Practical Medicine) says that chronic pulmonary phthisis is not necessarily a fatal disease. And it is well known by every physician that cases in all stages recover every day. Now if it is curable in all stages it is certainly most easily curable in the first stage.

Let the profession educate the laity in this direction so that it may be regarded as a curable disease, and this great and general dread of the disease will gradually give way to the desire to know the truth, and a determination to coöperate in the efforts put forth to eradicate the disease. An early diagnosis and successful treatment will be demanded, and it will be counted criminal carelessness or a great misfortune for a patient to advance beyond the first stage of the disorder.

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¹ Recently it has been proposed by Dr. Alfred Worcester of Waltham, Mass., as a test for human tuberculosis.