

# PROGRESS OF MEDICAL SCIENCE.

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## THERAPEUTICS.

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UNDER THE CHARGE OF

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### DIPHTHERIA ANTITOXIN.

DR. O. HEUBNER believes that the serum now furnished for the treatment of diphtheria can be measured as to its strength, and so its proper dosage can be arrived at. It has also been demonstrated to be harmless both as to local as well as to general manifestations. The strength of the serum is such that one part of serum by subcutaneous injection will surely kill twenty-five hundred times its weight of guinea-pig. In the treatment of these cases a syringe which can be made aseptic, for instance the Koch bulb-syringe, is employed. The glass cylinder and the needles are boiled in a 10 per cent. soda solution. The site chosen for the injection is either between the clavicles, under the ribs, in the flanks, or on the inner side of the thigh. The skin is washed with soap, cleansed with ether, and the physician sterilizes his hands. Before the syringe is filled directly from the bottle, it and the canula are again cleansed with ether and alcohol. After the injection the puncture is covered by a bit of rubber adhesive plaster.—*Deutsche medicinische Wochenschrift*, 1894, No. 36, S. 701.

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### ANTITOXIN IN THE TREATMENT OF TETANUS.

DR. VON HACKER has successfully treated two cases. The first had received chloral and morphine without success. The antitoxin was begun on the fourth day, and cure resulted in eighteen days. The second case received treatment six weeks after the injury, and it was continued for sixteen days. The prognosis in the first case was gloomy, and in the second hopeless. The cost of the treatment is almost beyond the reach of the ordinary prescriber, as the cost of the drug alone, for the two cases cited, was ninety dollars.—*Medical Press and Circular*, 1894, No. 2879, p. 31.

DRS. G. TIZZONI and G. CATTANI, report a successful case, the treatment being commenced twenty-four days after the injury. They give full instruc-

tions for its administration. The anti-tetanic serum is prepared in a dry state and in an absolutely aseptic mode, and it will keep a long time without change if preserved from damp. It is to be opened only at the moment of preparing the injection. As a solvent, distilled water is to be used, boiled for several minutes and then cooled, in the proportion of one part by weight of desiccated serum to ten parts of water. A hypodermatic syringe of from one to two drachms capacity is employed. The instruments must be sterilized by heat, but not by chemicals, and allowed to cool before using. The quantity to be used varies according to the gravity of the case and the time at which the treatment is commenced. If the case is not of exceptional gravity, for the first injection, one-half of the contents of the glass tube [capacity not stated] is necessary for the first injection. The remainder is divided into four doses, to be used during the following four days, the proper interval to be determined according to the effect produced upon the course of the tetanic phenomena. If the case is one of great gravity it may be necessary to use the entire contents of the tube for the first injection.—*Medical Press and Circular*, 1894, No. 2884, p. 155.

DR. W. HÜBENER, from laboratory experiments, concludes that the serum of Tizzoni is not ten times stronger, but more likely three or four times weaker, than that of Behring. The tetanus antitoxin as furnished by Merck does not meet, upon animals the subject of experiment, the expected efficiency. It is not likely to cure severe cases of tetanus in man or those that come late under treatment.—*Deutsche medicinische Wochenschrift*, 1894, No. 33, S. 656.

#### THE TREATMENT OF DIPHTHERITIC ANGINA BY SUBLIMATE.

DR. MOIZARD recommends the use of sublimate in glycerin in the proportion of one to twenty or to thirty, which forms a syrupy, transparent liquid, which is not caustic. The affected parts are cleansed, the solution applied on cotton from which the excess of liquid has been removed, and the surrounding tissue being protected from the action of the solution by absorbent cotton held in forceps; this also prevents the swallowing of the solution. Of 261 cases treated, the proportion of cases cured varied from 95 to 81 per cent.—*Journal de Médecine et de Chirurgie Pratiques*, 1894, 14e cahier, p. 561.

#### THE INFLUENCE OF ATROPINE UPON THE RESPIRATION.

DR. ALFRED LEVISON, after a careful experimental study, concludes that atropine in large doses is of value in cases of morphine poisoning, in that it stimulates the respiration. This stimulation appears to be through the central organ in the brain. The stimulation of the heart is also of therapeutic value. The stimulating action of large doses of atropine can easily go on to a paralyzing effect, especially if they are carried directly into the blood current.—*Berliner klinische Wochenschrift*, 1894, No. 39, S. 891.

#### THE TREATMENT OF CROUPOUS PNEUMONIA.

DR. PERCY KIDD refers to two remedies only. Opium is contraindicated when symptoms arise which indicate impending exhaustion of the respiratory