mortality from diphtheria by at least one-half. This is a great advance in therapeutics. Moreover, no ill effects follow the hypodermic injection, save only in some cases a transient urticaria and slight œdema at the site of puncture, disappearing in less than half an hour. Now, just a word as to the events which led to the adoption of this plan of treating diphtheria. The first attempt to protect patients against diphtheria was set on foot in Italy in 1868; fifteen children were inoculated with the diphtheritic virus, but one died. Bogola (Sienna) shortly afterwards inoculated twenty-nine children with this same "materies morbi," but did not lose any of his patients. So much for remote history. The discovery of the true bacillus diphtheriæ by Klebs and Lœffler, 1883-84, placed the matter on a scientific basis. The next stage of the proceedings was that Roux, and Yersin, and others, by cultivating the virulent bacilli in broth for some time, found that they gave rise to one or more toxines or ptomaines. Behring and Kitasato proved experimentally by injecting cultivations of the bacillus into guinea-pigs. Behring succeeded in immunising animals, as also have Kitasato and Frænkel, but what is more noteworthy as the crowning touch of the discovery, Behring found that he could cure animals of diphtheria, however produced, by injecting a blood serum obtained from the jugular veins of animals rendered immune by repeated previous injections of the diphtheritic toxine. Behring's researches in every particular are corroborated by Roux, who found, moreover, that by mixing a certain proportion of anti-diphtheritic serum with the solution containing the toxine and hypodermically injecting the mixture into animals, no effect was produced (*Medical Press and Circular*, September 26th, 1894). Aronson began to immunise horses in 1893, when he demonstrated that the "serum" obtained from these protected animals was a valuable prophylactic against diphtheria. Behring, Aronson, Ehrlich, and Roux agree that the horse should be selected as the source of the curative serum, as it can safely be inoculated with larger quantities of toxine, and is more speedily rendered immune.

Dr. Roux states the results of the injection of anti-diphtheritic serum which he obtained in conjunction with Drs. Martin and Chaillon at Hospital for Sick Children, Paris, between the dates of February 1st to July 24th, 1894: 448 cases, 109 deaths, mortality 24.33 per cent.; under old treatment, 1890-94, 3,971 cases, mortality 51.7 per cent.

Behring comes to some remarkable conclusions, published *in extenso* (*Berlin. Klin. Wochenscrift*, October, 1894): (1) That many poisons (snake venom, etc.,) can be antagonised by blood serum treatment; (2) that the only blood antitoxine that can antagonise disease is anti-diphtheritic serum; (3) that 100 cases of diphtheria treated within the first forty-eight hours of attack by the injection of a 10 cc. dose of the serum, not five will perish from diphtheria; (4) that this serum is a specific in an eminent degree; (5) that each blood antitoxine has a curative effect on one morbid product only; (6) that it is formed when the diphtheria toxine meets the reactionable albumen of the body, *i.e.*, the blood; (7) that the antitoxine or antidote after