

immediate care, and about a dozen under the care of my colleagues in the hospital. Of my own cases the results were not satisfactory. In two there was a temporary improvement.

Dr. S. Botkin, (9) of St. Petersburg, has recently reported the result of his observations on the blood of patients who were being treated by tuberculin. He noticed (1) acute leucocytosis; (2) rapidly diminishing number of white corpuscles after the fever has subsided; changes analogous to those found in pneumonia and some septic conditions.

Tuberculin is no doubt a virulent poison which ought not to be used under the present circumstances. That it possesses curative properties is well shown in some cases of lupus and incipient pulmonary tuberculosis.

It is probable that after further investigations, tuberculin may be so modified as to be given with safety in incipient cases.

Dr. Carl Spengler, (10) of Davos, reports cases treated with a mixture of Koch's and Kleb's modified lymph. Good results were obtained without the production of the reactionary fever. Some favourable reports of cases treated by Hunter's modification have also been published.

Whatever may be the future of tuberculin, it is safe to say that it will never have a curative effect on advanced cases of disease.

The bacilli being the chief cause of irritation, and existing so deep in the tissues, no remedy can be introduced to destroy them which will not be dangerous to life.

In this respect tuberculosis differs from such diseases as tetanus in which the symptoms are produced by a toxic agent, the result of the local growth of bacteria.

A mere enumeration of the internal remedies is the strongest evidence of the obstinate and fatal character of pulmonary tuberculosis.

The following agents have been recommended for use by inhalation: Sulphurous acid, sulphuric acid, carbolic acid, hydrofluoric acid, oxygen, ozone, calomel in fairly divided powder, creasote, iodine, etc. The administration of sulphuretted hydrogen by the rectum, Weigert's system of the inhalation of dry heated air, Krull's treatment by heated vapour, have all had their day. Hypodermic injections of cantharidate of potass, iodide of gold, serum of dog's blood, goat's blood, with Brown-Sequard's fluid of

the testicles, also cabinets, with rarefied air and with condensed air, have been tried and found wanting. The internal administration of cod liver oil, creasote, guaiacol carbolic acid, carbonic acid iodoform anem, hypophosphites; the surgical treatment, disinfection of cavities, local injection of iodine, have all to a large extent failed.

In glancing over the literature of the therapeutics of tuberculosis, one is struck with the fact that, under every new plan of treatment, no matter how unreasonable cases are reported at first in which good results have been procured, such as increase in weight and melioration of chest symptom. This is no doubt largely due to the effect made on the mind of the patient. Some years ago I treated several cases in the hospital by Bergeon's method, rectal injection of sulphuretted hydrogen. All the patients expressed themselves as feeling better.

The treatment by Weigert's method of having the patient respire heated dry air was instituted on the ground that bacilli cannot exist above a certain temperature, and he hoped to destroy them by heating the tissue in which they were imbedded. Koch has shown that bacilli grow best at 37.5 C., are weakened at 38.5, cease to grow at 42° and cannot exist above that temperature. It has, however, been found impossible to raise the temperature of the lung tissue in this way to any appreciable extent, and that during exercise or forced breathing the temperature can be varied to a greater degree than by such form of inhalation.

More can be accomplished by Krull's method of inhaling steam heated to a certain degree. It is extremely doubtful if the temperature of the lung tissue can be sufficiently raised, or maintained long enough to have any effect upon the life of the bacilli.

Cod liver oil has no doubt been too often prescribed without reference to the condition of the stomach, and has then in many cases done more harm than good. I cannot, however, agree with those who say that it is of no use except as a food, and that other fatty foods much more pleasant to the taste may be substituted for it. When it can be readily taken and digested, it exerts a beneficial influence in phthisis much greater than can be accounted for on the ground that it is simply a food, and notwithstanding all the measures which have of late years been recommended, it still in my