

and inhaled by the patient through a mouth-piece prepared for the purpose.

In regard to the effect which the treatment has upon the bacilli: In some cases the bacilli disappear entirely from the sputa while the patients are under treatment; in others they change their shape, the right lines of the rods becoming rounded near their ends; while in others they become innocuous, accompanied by little if any change in form.

In conclusion, I will briefly quote from my note book the history of two cases at present under treatment.

Dec. 29, 1890. Case 1. Mr. N., æt. 22, a school teacher; parents are farmers; no tuberculosis among near relatives; had locomotor ataxia at age of 14 years; recovered within a year; has been poorly for $2\frac{1}{2}$ years. At first had severe stitches in left side; these extended to right, followed by pains generally through the chest; for more than a year he had no cough; then he took more cold with aggravated pains, and has had cough and expectoration ever since; has had several slight attacks of hemorrhage.

Examination: pulse 100; respiration 25; temperature $99\frac{1}{2}$; percussion negative; prolonged expiratory murmur marked during deep breathing; posteriorly on right side; anteriorly on left side; roughened respiratory sounds in both axillæ. Mucous rales over left supra-mammary region, and also over right intra-scapular region. Coughs a good deal, particularly in the morning, expectorating dark heavy matter.

Dr. Acheson kindly examined the sputum and found it loaded with tubercle bacilli. I gave Mr. N. the usual inhalations which I had formerly administered, adding the chlorine spray according to Dr. Shurly's formula; and on two successive mornings, hypodermic injections of m. x of solution of iodine. These were given, as directed, in the gluteal region.

Temporary soreness was produced, but in neither case was there increased pyrexia as a result of the injection.

On the third morning, owing to the soreness produced by the iodine, I substituted m. vi. of the chloride of gold and sodium sal.; the tenderness from it was much less; consequently on the fourth, and for nine successive mornings, I gave him m. x of the auric solution. After

this, as you will see by the chart, the intervals were usually longer.

For the first six days, it will be noticed, there was a steady but very gradual decline in temperature, dropping from a steady $99\frac{3}{4}$ to $97\frac{1}{2}$. Then for another ten days the morning temperature before treatment was always away down below normal, followed immediately after treatment by a rise of one, two, three, or even four, degrees; and I always noticed in his case, the lower the temperature before treatment, the greater the rise after. The second temperature was always taken in my office upwards of half an hour subsequent to the first. The maximum would be soon reached, and in an hour or two the pyrexia would be over. Several times I noticed that it would commence to fall again, even before he would leave the office. The last week, from the nineteenth to the twenty-seventh day, the temperature was more even, only rising above the normal on one half the occasions on which the injections were given.

On the twenty-seventh day of treatment he went home; his chest pains were very much less, likewise the cough and expectoration; his pulse was about 90; respiration 20; temperature, at 8 p.m. $97\frac{1}{2}$; he felt stronger and more hopeful than he had done since commencing treatment, while the respiratory murmur was more natural in the axillæ and over the chest generally; mucous rales were still present in left supra-mammary and right post intra-scapular regions.

Jan. 12th, 1891. Case 2. Miss M., æt. 23. Mother died of phthisis; has had naso-pharyngeal catarrh for three years; is very subject to chest colds; thinks she must have had slight fever since August, as she has been subject to chilliness, together with dry, burning throat; her home is in the country, in a high elevated region, without malarial surroundings; she has had cough now for more than a month: in day-time it is loud and harsh, in the morning accompanied by expectoration of heavy yellow matter; has pain in upper part of chest, chiefly over right apex; latterly has been troubled with odynphagia.

Her case was referred to me by her physician on account of continued high temperature, pointing to lung trouble.

Examination: slight dullness over right apex,