

complicated process requiring much practice and judgment, especially in the decolorization of nitric acid; it is not consequently adapted to the general practitioner's use, and will yield reliable results only in the hands of experts.

The belief that any technique which is simple and rapid, and reduces the staining of the tubercle bacilli to a mechanical basis, would be of use to the general practitioner is my reason for presenting the following method, which I have used for some time with uniformly satisfactory results.

While working with Professor Koch last spring, I found that in his personal examinations he made use of a solution of fuchsin known as Ziehl's solution, and hardly ever had recourse to a double staining.

To an expert, this gives without doubt the quickest staining possible, but because of the weakness of the solution, if made according to Ziehl's formula with the ordinary fuchsin purchased in this country, and of the lack of a contrast color, it does not yield satisfactory results to others. Making use of the principle which Ziehl has incorporated in his solution, viz., that carbolic acid can be substituted for aniline oil, I first stain the bacilli with a very strong solution of carbolic fuchsin, and then make the contrast staining by what is known as Fraenkel's solution, which combines the decolorizing and dyeing in one process.

This furnishes a specific staining for the tubercle bacilli—a deep-red color; the other elements in the sputum, the putrefactive bacteria, the pus-cells, the epithelium, taking the second color—blue.

The advantages of the method which I propose are these:

1. Simplicity; one solution is poured on the sputum and then the other, with no judgment necessary as to the amount of staining or to the decoloration; this makes the process simply a mechanical one.

2. Quickness and precision; the whole process occupying but two minutes.

3. The great intensity of color with which the tubercle bacilli are stained.

4. The solutions keep indefinitely, especially the carbolic solution, which cannot decompose like the aniline water solution of fuchsin; they are therefore always ready for use.

The Method of Preparing the Solutions.—First: The Fuchsin Solution. 1. Pour into a small bottle of alcohol, say a four ounce bottle, enough fuchsin to form a well-marked layer over the bottom of the bottle, or, in other words, more than enough for a saturated solution. 2. Let it stand for twenty-four hours, shaking the bottle from time to time. 3. Into a four-ounce bottle, containing a five per cent. aqueous solution of carbolic acid, pour enough of the first solution to produce a distinct precipitation of the fuchsin, say, about

ten or fifteen cubic centimetres—the exact amount is not important. 4. Shake a few times and set aside for twenty-four hours. This is the carbolic solution of fuchsin to be used.

Second: The Methylene-blue Solution. Put into a four-ounce bottle,

Alcohol 30 parts.

Distilled water 50 “

Nitric acid 20 “

and add methylene-blue until the solution is more than saturated.

The Method of Staining the Sputum.—1. Prepare two cover-glasses in the ordinary way, by placing a small portion of the suspected sputum on one cover-glass and, by means of the other, pressing it out between them into a thin layer; on sliding the cover-glasses apart, a thin film of sputum will be left on each cover-glass. Allow the cover-glass to dry, and then, holding them firmly with a pair of forceps, prepared side uppermost, pass them rapidly three times through the flame of a spirit-lamp. 2. Hold cover glass as before, and pour on it a few drops of the fuchsin solution. Then warm the cover-glass over a spirit-lamp until steam rises, being careful not to allow the fluid to boil; now let the solution on the cover-glass cool. 3. Pour off the fuchsin solution. 4. Pour on the cover-glass the methylene-blue solution, and after half a minute or so, the exact time is not important—5. Wash off the stain carefully with running water (a wash-bottle is convenient). 6. Dry the surface of the cover-glass which does not contain the sputum. 7. Mount on a slide in water and examine.

A little practice will enable one to carry out this simple technique with great rapidity; the only difficulty is in preparing the solution at first, but, as they will keep for months and are always ready for use, this is not of much moment. One great advantage to the practitioner will be the doing away with all dishes, acids, etc. The two bottles always stand ready, and when necessary the sputum can be examined while the patient is in your office. To emphasize the quickness of the process, the whole formula can be stated in four lines.

1. Pour your fuchsin solution on prepared cover-glass.

2. Heat and then allow to cool.

3. Pour off solution and pour on methylene-blue solution

4. Pour, wash this off, dry, and mount in water.

—H. P. Loomis, M.D., in *Med. Rec.*

THE CHIAN TURPENTINE TREATMENT OF CANCER.

Chian turpentine, the internal administration of which as a remedy for cancer has been recently recommended anew by Professor John Clay, obstetric surgeon to the Queen's Hospital, Birmingham