THE PIKRIN METHOD OF STAINING TUBERCLE BACILLI.

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THE pikrin method of staining tubercle bacilli, as set forth by Spengler,¹ is worthy of more frequent employment in clinical work in this country. In simplicity it is not inferior to the Ziehl-Neelsen method, and, when carefully applied, it has a more far-reaching range of utility. I have found it far superior to the Ziehl-Neelsen method when applied to the examination of urinary sediments.

It is claimed for it that bacilli deprived of their waxy coating can be detected by this means, and also that degenerate, "splitter," or spore forms may be recognized when unstained by the Ziehl-Neelsen method. As these spore formations under suitable conditions may develop into active virulent tubercle bacilli, it is of the utmost importance to recognize them in sputum from the point of view of infectiveness of a patient. This the pikrin method enables us to do. In support of this contention I would cite a few details of a case in point.

In 1910 Mr. X., who in 1908 had suffered from pneumonia with seven months convalescence, and who had expectorated ever since, noticed his sputum tinged with blood and a slight morning cough. He consulted Dr. T. N. Kelynack, who, suspecting a tuberculous focus, sent him to Crooksbury Sanatorium for observation. He remained a fortnight, during which time I examined his sputum carefully ten times. By the Ziehl-Neelsen method a negative result was obtained eight times. The ninth and tenth times, by the pikrin method, degenerate tubercle bacilli and "splitter" forms were found in fair numbers. Von Pirquet's reaction was extremely well marked, and finally the diagnosis was clinched by a marked reaction to Koch's O.T.

In ordinary clinical work, had the Ziehl-Neelsen method of staining alone been employed, the result would have been negative, whereas the pikrin method would have demonstrated tubercle bacilli.

Regarding the pikrin method in genito-urinary tuberculosis, I have found the yellow counterstain with the ordinary yellowish film shows up the bacilli far more readily than if any method is used which employs methylene blue as a counterstain, and degenerate and splitter forms, which are commoner in urinary sediments than well-developed bacilli, are more easily differentiated.

The centrifuged deposit, being pipetted on to a slide, is dried in a current of warm air some distance from the flame; and the film, which must be thin, then fixed by passing it a few times through the flame of the spirit lamp, taking care that it does not char. It is then stained carefully, without much heat, by the pikrin method. The bacilli appear bright red on a lemon-coloured ground, and, if present, are more perceptible than by any other method. In my opinion, it is the best stain for urinary residues in which the tubercle bacillus is suspected.

Spengler's method is simple, and is conducted as follows:

Having made a suitable film as above—

1. Stain with carbol fuchsin, warm, but without too much heat.
2. Pour off the stain without washing.
3. Pour on picric acid alcohol (consisting of equal parts of saturated solution of picric acid and absolute alcohol); after three seconds—
4. Wash with 60 per cent. alcohol.
5. Treat with 15 per cent. nitric acid till yellow (thirty seconds).
6. Wash again with 60 per cent. alcohol.
7. Counterstain with picric acid alcohol till lemon-coloured.
8. Wash with distilled water and dry gently at a low heat.

With a little practice this will be found an easy and quick method, and the extra time involved in the staining will be more than compensated by the ease with which the bacilli are found if present, and the consequent less time spent at the microscope. This applies particularly to urinary sediments.

¹ *Deut. med. Woch.*, February 28th, 1907, No. 9.

THE Belgian company which maintains a line of steamers to the Congo has arranged in future to pay its medical officers on a sliding scale; during the first year of service the rate will be 300 francs a month, during the second 350 francs, and during the third 400 francs. An engagement may, however, be made for six months only, such period covering three voyages.

EIGHTIETH ANNUAL MEETING

OF THE

British Medical Association.

Held in Liverpool on July 19th, 20th, 22nd, 23rd, 24th,
25th, and 26th.

PROCEEDINGS OF SECTIONS.

COMBINED SECTIONS OF LARYNGOLOGY AND RHINOLOGY AND OTOTOLOGY.

Mr. MIDDLEMASS HUNT, President of the Section of
Laryngology, in the Chair.

DISCUSSION ON THE EDUCATION OF THE SPECIALIST IN LARYNGOLOGY AND OTOTOLOGY.

OPENING PAPERS.

I.—HOLGER MYGIND, M.D.,
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THE EDUCATION OF THE SPECIALIST ON THE CONTINENT.

I INTEND to deal with the matter by giving first a short survey of the education of the specialist in our two branches of the medical profession as it is at present on the Continent. I shall then point out the defects which I think exist, and suggest their remedies, concluding by touching on the questions of qualification for these two specialities, and of their combination or separation.

There is, of course, no uniform education for the whole Continent, the difference between the various countries being great.

The Continental countries may be divided into three groups according to the extent in which the two specialities are officially taught:

1. Those in which oto-laryngology is officially taught at all, or nearly all the universities of each country;
2. Those in which this is only the case in some of the universities; and
3. Those in which there is no official teaching at all.

I speak of oto-laryngology, and not of otology and laryngology as two separated specialities, for they are united at most Continental universities, and also practised in combination by most Continental specialists. There were, for instance, in Germany in 1909, altogether 463 specialists who practised both otology and laryngology; 50 were otologists only; 68 practised laryngology alone; and 21 practised otology and ophthalmology combined.

But when dividing the Continental countries in these three groups we must remember that the number of universities in a country teaching oto-laryngology is not the sole expression of the development of the education in our branch of the healing art. In France and Italy, for instance, the standard of teaching is high at some universities, to the benefit of the whole country.

There are in Europe, altogether, a little over 100 universities, if we include the *Écoles Préparatoires de Médecine* of France.

The table on p. 414 shows that Germany is far ahead of any other country as to the number of professorships in oto-laryngology, there being altogether nineteen universities with twenty-four chairs, five universities having each one chair for otology and one for laryngology—Berlin, Freiburg, Königsberg, Munich, and Würzburg. At all the other German universities the two specialities are taught together. This is also the case at nearly all the other Continental universities. The exceptions are the following: In Austria-Hungary there are three universities—Budapest, Prague, and Vienna—and in Italy one—Naples—where the two specialities are separated. In