

Clinical Notes and Cases.

Methods of Photographing the Spirochæta pallida in General Paralysis. By R. M. CLARK, M.B., Medical Superintendent, County Mental Hospital, Whittingham, Preston.

THE great improvement in the staining of spirochætes devised by Jahnel and others so simplified their photography that ordinary flat-print microphotographs of these organisms became familiar to most of us years ago.

Good microphotographs, demonstrating spirochætes in general paralysis, were published by Jahnel⁽¹⁾ and by Warthin⁽²⁾, but a limit to the excellence of flat-print microphotographs of spirochætes was apparently reached and in consequence their popularity declined, and workers turned their attention to lantern-slides, transparencies and colour photographs.

Colour photographs of microscopic specimens have established their usefulness both as records and for teaching purposes. Quite satisfactory colour transparencies of spirochætes are produced by the Lumière method. One arranges the microphotographic bench in the usual way, using apochromatic lenses, a 100 c.p. pointolite lamp, the special Lumière colour-screen and autochrome plates. Correct exposure is all-important, and this is got either by using one of the automatic calculators—the posograph is the one in use here—or the correct exposure for special rapid antiscreen plates is determined and sixty times this exposure is given for the autochromes. For the rest the directions sent out with the plates should be followed. Sections of brain cortex showing spirochætes, stained by Jahnel's method, photographed in this way give exceptionally bright and clear colour transparencies—the chocolate-black stained spirochætes stand out beautifully against the clear uranium yellow stained background of brain-tissue.

Before leaving flat prints of spirochætes altogether, mention should be made of those taken by the "Davon" supermicroscope. I have no experience whatever of this instrument, but think the prints of spirochætes taken by this method are in advance of those taken by the ordinary microscope.

More recently interest has been aroused by methods which have perfected and simplified the production of stereoscopic microphotographs—those shown are taken by the new method devised by Pfeiffer von Wellheim and elaborated by Erwin Christeller, M.D., Pathological Institute of the Rudolph Virchow-Krankenhaus,

Berlin. This method is especially useful with high-power dry and immersion systems, and is the best for photographing spirochætes.

Transparencies, either plain or coloured, give even better results than the prints here reproduced. A true stereoscopic effect of depth is got and the record is without a rival, for no other photographic method gives the same depth, relief and perspective, with the result that better information of form and structure is got.

The displacement necessary for stereoscopic effect is got, not by moving the object or objective, but by shifting the illumination cone by turning up and down the reflecting mirror of the microscope. No difficulty is likely to be encountered, and first attempts should give satisfactory results.

These are the first stereoscopic microphotographs of spirochætes taken here, and the sections photographed were neither specially cut nor specially stained.

All the work connected with the production of these photographs, from and including the selection of the tissues for section to the finished photographs, has been done by Mr. A. H. Fann, Chief Laboratory Assistant.

(¹) *Ztschr. f. d. ges. neurol. u. Psychiat.*, lxxiii, 1921, p. 310.—(²) *Arch. of Derm. and Syph.*, October, 1923.

Further Experience of Luminal in the Treatment of Epilepsy.

By GERALD W. T. H. FLEMING, M.R.C.S., L.R.C.P., D.P.M.,
Deputy Medical Superintendent, Sunderland Mental Hospital.

FOR many years the treatment of epilepsy has been a grave problem, and it may truthfully be said that, until the pathology of the so-called idiopathic cases has been worked out, we are a long way from treating this condition in anything like a satisfactory manner.

In epilepsy we have to consider both the actual seizures and the manifestations of mental impairment. Our present concern is solely with the seizures, and the possibility of controlling them, or abolishing them altogether. During the past few years almost every conceivable remedy has been tried. The changes have been rung on bromides, borax, zinc lactate, digitalis, belladonna, hyoscyamus, chloral, extracts of the thyroid, thymus and pituitary glands, a salt-free diet, protein-free diet and even starvation. More recently the surgeons have come along and extirpated the adrenal (or a part of it) on the left side without giving relief. The psychoanalysts have analysed epileptic patients, but even Pierce-Clark (¹)