ORGANIZATION OF A PHOTOGRAPHIC DEPARTMENT*

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ON June 1, 1948, Professor Jorge L. Malbran entrusted me with the task of organizing a photographic department for the Instituto Oftalmologico Pedro Lagleyze. Some of the foundations had already been laid and, therefore, my scope was somewhat limited.

Provision had to be made for the following types of work :—

- (1) Photography of the optic fundus.
- (2) Photography of external conditions of the eye (including whole face or larger areas).
- (3) Recording of small specimens.
- (4) Document copy work, etc.

At the outset, photography in both colour and monochrome was visualised, though it was realised that infra-red photography could not be undertaken on account of the complete lack of suitable plates or film in South America.

Equipment.—We employ miniature camera technique, having two Leicas (III B and C). One is kept loaded with monochromatic stock and the other with colour; thus an interchange can be effected quickly. The range of lenses at our disposal includes the 5 cm. Elmar and Summitar, the 9 cm. Elmar, and 13.5 cm. Hektor. In addition the Leitz "Nooky" close-focusing attachment and the reflex-housing are available.

To provide a working table we have replaced the usual slit-lamp table-top by a larger one (45 x 100 cm.). This enables us to undertake photography of the anterior segment or of the whole face with the same set-up. The patient is comfortably fixed with the conventional head-rest. The general disposition of apparatus is indicated in Figs. 1 and 2.

Illumination.—For much of the work we are able to use two ordinary 500-watt Nitra-type bulbs mounted in reflectors and adjustable supports. During focusing the lamps are switched in series, a foot-switch enabling them to be brought up to full brilliance when required (Halberg, *Argentine Soc. Ophth.*, September, 1948). The usual photo-electric meters are used for estimating exposure.

A short time ago we obtained an electronic discharge tube outfit (electronic flash). This has an emission of about 40,000,000 candle-power per flash, the duration being about 1/7,000th of a

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FIG. 1.

Leica camera with reflex-housing and long focus lens, on Zeiss optical support. Note also electronic flash tube equipment.

FIG. 2.

Leica camera fitted with "Nooky" near-focusing attachment. Note also power-pack for electronic flash tube.

second. This intense light is constant and facilitates the standardization of exposures; an additional advantage is the great depth of focus which is obtained by virtue of the small apertures employed. The ordinary lamps mentioned above are used for setting up and focusing. It should be mentioned that the light emitted by the electronic flash tube is predominantly blue and, therefore, daylight colour film is the one of choice to use with this light unless correction filters are to be considered.

To obviate errors and reflections, the walls and furniture of the studios are painted a dark grey and the photographic staff are provided with black coats.

Fundus Photography.—For photography of the fundus we use the Zeiss-Nordenson camera. It is the new model fitted with a Nitra lamp, though use of the electronic flash tube is contemplated in this connection.

We have modified the camera slightly in that a Leica body is used for transporting the film. This has necessitated cutting off about 30 mm. of the main tube of the Nordenson camera and inserting an intermediate plaque (Figs. 3 and 4). It will be obvious that the tube of the inspection eyepiece has to be similarly modified in order that it may remain par-focal with the film plane.

The remainder of the equipment is standard, and the Wessely fixation device is used with good effect. The only other modification is that the hand-control has been replaced by a foot-switch.

Film stock of the usual types may be used, but we favour the fine-grain materials, and for colour work we have found Kodachrome A and Anscoolor Tungsten both yield good results.

To avoid technical errors and to preserve a high standard of work, it is important to standardize both materials and processing. It is also useful to photograph serial numbers or other identification marks on the first frame of each film used.

Filing and Processing.—Films are stored in strips of six pictures which are contained in numbered transparent envelopes; these are held under slight pressure to obviate curl.

A modern photographic laboratory is at our disposal for the processing of films and production of enlargements. Since this side of the work is strictly conventional, details are not considered relevant.

Administration.—The medical staff is free to use the facilities of the photographic department, and all patients are sent with a "Request for Photography". This is in the form of a card on which appears all the necessary information, which is later transcribed into a day-book. In this are recorded such details as

FIG. 3.

Intermediate plaque (side view) for fitting Leica body to Zeiss-Nordenson camera.

FIG. 4.

Leica body in position near film plane of Zeiss-Nordenson camera. Note the extended tube of the observing eye-piece.

date, name, diagnosis, physician, type of record and registration number. In the near future it is hoped to establish a cross-index between patients' names and disease processes.

SUMMARY

The establishment of a photographic department within an Ophthalmic Institute in South America is described. Particular mention is made of electronic flash as a source of illumination, and reference is made to some modifications of the Zeiss-Nordenson fundus camera.

 BOOK NOTICE

Biomicroscopy of the Eye (Vols. 1 and 2). By M. L. BERLINER, M.D. 1512 pages, 1233 illustrations (503 in colour). Cassell and Co., London, 1949. Price, £18.

Berliner's text-book on the biomicroscopy of the eye must undoubtedly rank as one of the most important books in American ophthalmological literature. The first volume appeared some years ago: it has now been revised and brought up to date and is published with the second, the two together comprising a detailed and authoritative treatise on the biomicroscopy of the eye which stands comparison only with the Atlas of Vogt. Biomicroscopy is viewed in its widest sense and includes not only the examination of the eye with the slit-lamp (called the biomicroscope, a term with more dignity than the usual direct translation of *Spaltelampe* into English) but also such techniques as gonioscopy and the examination of the posterior region of the vitreous and the central area of the fundus with a —50 D. lens. The development of these clinical methods is detailed, their optical principles and clinical application discussed in detail, and the biomicroscopical appearances of each tissue in the eye from lid-margins to retina described both in the normal state and in the multitude of pathological conditions from which they may suffer.

Berliner has accomplished his considerable task with undoubted credit; both the written matter, which is detailed, authoritative and very readable, and the numerous illustrations, both coloured and uncoloured, which form so important a part of a book of this kind, are excellent. The chapter on gonioscopy (of 72 pages) has been written by Dr. H. Saul Sugar and is equally good. Each chapter is up-to-date, the biomicroscopical appearances of aqueous veins, for example, or the appearances of macular holes and oedemas receiving the same attention as the clinical appearances of the cornea or lens which have become established in knowledge for more than a generation. Not the least useful parts of the book are the exhaustive