Techniques

Mounting and storage of gastrocamera films

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The various models of the Olympus gastrocamera use film of either 4 or 5 mm size, with 32 exposures per roll of film. The developed film is returned from the processing laboratory, therefore, as a film strip, 4 or 5 mm in width, and approximately 34 cm in length. The Olympus Camera Company supply a viewer with a magnifying power of $\times 10$ with each instrument, and this is of some value in examining the returned film, although not suitable for demonstration purposes. They also produce, as an accessory, a projector, complete with a small screen 14.5×23.7 cm in size, which can be used for studying films, and for demonstrating them to a small group of people. The lens and lighting system of this projector are not, however, equal to the task of projecting on a large screen, such as in a lecture room, and only a few exposures can be seen at any given time. A further disadvantage of both these instruments is that they involve repeated handling of the film strips which become defaced very easily by finger marks and dust. In addition, in our experience, the film is readily scratched, particularly with the use of the projector. Gastrocamera film is usually stored and filed by using a special filing book obtainable from the Olympus Company, in which each film strip is filed in a slotted plastic envelope. Each page of envelopes is interleaved with a ruled page (with Japanese headings) in which details of each film may be recorded opposite the slot in which the film strip is filed.

There is, therefore, a great need for a means of easy projection for demonstrating and teaching, and for a method of filing and handling which avoids damage to these small film strips. Griffiths (1967) described a method whereby the films were cut into five small pieces, each containing five or six exposures, and mounted in a paper mask as a composite lantern slide between 2×2 in. cover glasses. This technique fulfils the requirements as regards easy projection using a standard 2×2 in. slide projector, and storage, safe from dust and scratches. Its disadvantage lies in the use of 2×2 in. cover glasses. The films are returned from the processing laboratory as a roll, and consequently when cut up for mounting the segments are still curled in their long axis. They are difficult to handle on this account, and to mount them neatly in parallel strips by Griffiths' method requires considerable patience, dexterity, and time. It is necessary for the clinician conducting the gastric photography to select personally those exposures which can be expended in the course of cutting the film for mounting. He must, therefore, either be present to supervise the process, or do

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FIG. 1. *Cutting and mounting.*

FIG. 2. *Mounting completed.*

FIG. 3. *The completed slide.*

FIG. 4. Method of filing showing various numbers of mounted film strips.

it himself, a method satisfactory for small numbers of films, but for routine use with large numbers it is far too time-consuming.

With these factors in mind, our attention was drawn to a plastic mount for 35 mm film manufactured by Messrs A. B. Bewex of Sweden, and marketed under the name Gepe Slide Binder by Gordon Cameras Ltd., 35 Portland Place, London, W.1. This mount is designed for mounting 35 mm transparencies for projection in a standard 2×2 in. projector. It is supplied in two halves, each consisting of a plastic frame, 5×5 cm, with a glass window centrally. The glass is held in place by a thin alloy mask which is fixed to the plastic frame at its corners, but whose sides, though in contact with the glass, are not attached to it. The aperture for projection is 35×23 mm. By cutting the gastrocamera film strip into small pieces, each 4 cm in length, the ends of each piece can be slipped under the alloy mask (Fig. 1) which holds it firmly in position until the subsequent pieces are mounted (Fig. 2). The two halves of the mount are then pressed together and the films thus compressed between two sheets of glass, effectively preventing subsequent slipping. Five pieces of film can be mounted in this way in a single mount, allowing between 20 and 25 exposures to be projected as a single slide. If fewer than five are available, four may be mounted with a small gap between each (Fig. 3), or, if fewer still, the remaining area of glass can be simply

blacked out with a strip of gummed tape, or some other suitable masking material.

While accepting that this method involves the sacrifice of upwards of seven exposures per film, it is our experience that this is rarely, if ever, a problem. It has almost always proved possible so to edit the film that those exposures sacrificed are ones which are either spoiled, duplicated, or show no specific features of importance. Cutting and mounting takes no longer than five minutes per film, and can be done conveniently after a preview with the viewer, at the time of reporting. The slides are then labelled with the patient's name and reference number, and can be filed either in a slide box, or filing cabinet slide holder (Fig. 4). They are then available for projection, a whole film at a time, using a standard 2×2 in. projector, permanently protected in their mounts.

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- Griffiths, D. A. (1967). Preservation and presentation of Gastro-camera films. *Med. Biol.* **III**, 1, 209.