tively, and often has been discovered inadvertently. Its differentiation, moreover, from hypothecal cysts may be quite difficult. The origin of mucoceles of the accessory sinuses has been the subject of much controversy and no presented theory has been received without logical criticism. A brief discussion of the pathology and treatment of the condition is given.

REFERENCES

A TECHNIQUE FOR CHARTING NEUROSURGICAL LESIONS

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At the present time there is no standard technique for charting neurosurgical lesions comparable, for example, to that for charting visual fields. An artist’s sketch or drawing of the operative field, the surgeon’s sketch, usually reconstructed from memory, and, in some instances, photography have variously been used to communicate the grosser details of
neurosurgical procedures. Still-photography usually provides no notion of the relative extent of the operative field, due to the presence of surgical wrappings, although it may yield an excellent degree of detail even as to color.

While working in close cooperation with neurosurgeons during the past ten years,* the writer has become impressed with the need for a simple, convenient, and accurate technique of charting neurosurgical lesions, preferably at the time of operation, for purposes of permanent record.3,4 It is believed that the technique described below supplies this need. Positive features of the technique include (a) a standard way of recording the neuro-anatomical results of brain operations as part of the medical history of the patient, (b) a convenient type of record for purposes of publication, and (c) an accurate method of charting for purposes of quantitative comparison with other types of data. To obviate possible objections that the technique is unduly consuming of the surgeon's time, brain diagrams have been prepared as standard charts on which the neurosurgical lesion is plotted directly in three dimensions during the terminal stage of the operation. This procedure requires about five minutes of operating-room time to yield the basis for a relatively accurate and permanent map which may be filed as part of the surgical history. No alteration in operating-room procedure is necessary since the charts are printed on all-rag paper stock which under test was found to stand up under one autoclaving without distortion. Many neurosurgeons routinely measure extirpated areas with a sterile brain-puncture needle or ruler. Such measurements can now be translated directly to a sterilized chart by the surgeon's assistant.

BRAIN-LESION CHARTS

A sample brain-lesion chart for left orientation, on which has been diagrammed a left prefrontal lobectomy, is shown in Fig. 1. The originals are printed on 9½ × 11 inch forms. The gray areas, indicating extirpated areas, were prepared by applying No. 64 Zip-a-tone† engraving screen material directly to each brain diagram.

The charts are available at cost from The University of Chicago Press, Chicago 37, Illinois, for either a right-sided or left-sided orientation. Each chart provides four basic diagrammatic views of the brain reduced to one-third of life size (a superior, a lateral, a ventral, and a median-sagittal view). These views, to which internal and external orienting landmarks have been added, are based upon the normal hemisphere of the brain studied in great histological detail by v. Economo and Koskinas.1 They were drawn approximately to life size in the studio of the well-known medical illustrator, Mr. Tom Jones, who worked in close consultation with Dr. Percival Bailey.

SCHEMATIC BRAIN MODEL

Where careful quantitative and qualitative studies of the behavior of neurosurgical patients are undertaken, it becomes desirable to specify accurately the location and the extent of each brain lesion in quantitative terms antemortem.4 To aid in this task, a schematic brain model has been constructed. A photograph of the model is shown in Fig. 2. The model is used in connection with the brain-lesion charts described above. In constructing the model, the original drawings supplied by Mr. Jones for the brain-lesion charts were copied photographically without reduction onto translite film, to which grid lines were added. The four views were then mounted under sheets of § inch thick plexiglass which were in turn mounted around the four edges of 7 × 7 × § inch sheets of black bakelite. The rectangular box, approximately 10 × 7 × 7 inches, thus formed, was then suspended on an 18-inch, 15-watt white fluorescent lamp, passed through the horizontal axis and about which the model may rotate freely. Any of the four diagrams may thus be brought into view by manual rotation of the model.

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† This material may be purchased at nominal cost from The Paratone Company, 343 South Dearborn Street, Chicago, Illinois.