A STUDY OF 182 PATIENTS WITH VERIFIED ASTROCYTOMA, ASTROBLASTOMA AND OLIGODENDROGLIOMA OF THE BRAIN

LOYAL DAVIS, M.D., JOHN MARTIN, M.D., FRANK PADBERG, M.D., AND ROBERT K. ANDERSON, M.D.

Department of Surgery, Northwestern University Medical School, Chicago, Illinois*

(Received for publication November 7, 1949)

Statistics are dreary matters but it is periodically incumbent upon us to assemble our cases not only for our own instruction lest we bury in obscurity our mistaken and bad results, but also to acquaint others with the standing of operative measures.—Harvey Cushing

From July 1, 1924 to January 1, 1949, 972 intracranial tumors have been verified microscopically. Of this number, 523 (53.8 per cent) were classified as gliomas; of these, 160 (16.6 per cent) were astrocytomas, 24 (2.5 per cent) were oligodendrogliomas and 5 (0.51 per cent) were astroblastomas. In each case the diagnosis has been verified and the classification made by microscopic sections according to established histopathologic criteria. Comparable studies of the glioblastomas and the medulloblastomas have previously been published.7,8

ASTROCYTOMAS

Employing the classification outlined by Bailey and Cushing,3 we have subdivided the astrocytomas into fibrillary and protoplasmic types according to the predominating cellular structure (Figs. 1 and 2). In a few instances tumors with a structure intermediary between these types have been designated as mixed (Fig. 3). Some of the tumors were solid, others were cystic, and still others were situated on one wall of a large cystic cavity. There were 25 astrocytomas located in the cerebellum; the remaining 153 were in the cerebrum. Of the total 160 patients, 153 have been followed and form the basis of this study (Table 1).

Cerebral Fibrillary Astrocytomas

The survival time following surgical treatment of the cerebral fibrillary astrocytomas, 114 in number, cannot be correlated with the age, sex or duration of symptoms. The longest survival record of 243 months is held by a female patient who was 27 years of age at the time of her operation and who had had symptoms for 3 weeks previously. Thirteen patients (6 males and 7 females) have survived 61 months after operation and their average age was 33 years at the time of operation. Six of the 13 patients had experienced preoperative symptoms for 2 months or less, 12 for less than 4 months. Of the patients who lived less than 60 months after operation 101 had a

* Aided by the Grunow Surgical Fund.
FIG. 1. Fibrillary astrocytoma. (Hematoxylin-eosin, ×220.)

FIG. 2. Protoplasmic astrocytoma. (Hematoxylin-eosin, ×220.)

FIG. 3. Mixed astrocytoma. (Hematoxylin-eosin, ×220.)