THE SURGERY OF THE CRANIOPHARYNGIOMAS*

PHILIP D. GORDY, M.D., MAX M. PEET, M.D., AND
EDGAR A. KAHN, M.D.

Department of Neurosurgery, University Hospital, Ann Arbor, Michigan

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There continues to be justifiable pessimism among neurosurgeons as to the surgery of the craniopharyngiomas. This has been occasioned by the high operative mortality and the large number of cases in which total removal is manifestly impossible. It is the purpose of this paper to analyze the results in 51 consecutive cases of patients operated upon for craniopharyngioma at the University Hospital following the publication of Peet in 1937 from the same source.

The operation at this particular institution has invariably been approached with the object in mind of total extirpation. This was believed to have been accomplished in 35 of the 51 cases. The fact that 6 of the 17 who survived what was thought to have been total excision have died of recurrence is disconcerting. It means that one cannot be as certain of total removal in this inaccessible type of brain tumor as one can be with others such as the psammomatous meningioma.

One thing, however, is certain. Where firm adhesions have not formed between the tumor and adjacent vital structures, such as the optic nerves, the carotid arteries and the floor of the third ventricle, complete removal is possible and is sometimes surprisingly simple. This means then, that if the results of the surgery of the craniopharyngiomas are to be improved the diagnosis must be made earlier.

It is not the purpose of this presentation to discuss again the embryology, pathology and all of the clinical manifestations of this particular tumor. Rather, we should like to present various aspects of these cases in relation to their surgical end results.

AGE INCIDENCE

The youngest patient in this series was 21 ½ years, the oldest 65. The largest number of patients were in the first and second decades (Table 1).

SEX INCIDENCE

No specific sex incidence was demonstrated, there being 27 males and 24 females.

CLINICAL MANIFESTATIONS

The manifestations of increased intracranial pressure were a predominant part of the picture presented by the younger patients, especially those in group I. Headaches, vomiting and papilledema were seen frequently, either

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separately or in association with each other. In addition, there were other
evidences of disturbed or altered function such as listlessness, drowsiness,
irritability and generalized weakness. With increase in age and the approach
of puberty, localized neurological disturbances, and defects in growth and
metabolism and sexual maturation became a more prominent part of the
picture than increase in intracranial pressure. Decrease in visual acuity and
field defects occurred in a high percentage of cases after the first decade. It

<table>
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<th>Group</th>
<th>Age (Years)</th>
<th>Number</th>
<th>Fundus</th>
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| I     | 1-10        | 17     | 8 normal  
|       |             |        | 5 primary optic atrophy  
|       |             |        | 8 papilledema  
|       |             |        | 1 secondary optic atrophy  |
| IIa   | 11-15       | 8      | 1 normal  
|       |             |        | 4 primary optic atrophy  
|       |             |        | 1 secondary optic atrophy  
|       |             |        | 1 Foster-Kennedy  
|       |             |        | 1 papilledema  |
| IIb   | 16-20       | 4      | 1 normal  
|       |             |        | 2 primary optic atrophy  
|       |             |        | 1 papilledema  |
| III   | 21-30       | 5      | 3 papilledema  
|       |             |        | 2 secondary optic atrophy  |
| IV    | 31-40       | 8      | 4 normal  
|       |             |        | 3 papilledema  
|       |             |        | 1 secondary optic atrophy  |
| V     | 41-50       | 6      | 5 normal  
|       |             |        | 1 primary optic atrophy  |
| VI    | 51-60       | 2      | 1 normal  
|       |             |        | 1 primary optic atrophy  |
| VII   | 61-70       | 1      | normal  |

has been pointed out by previous authors\(^3\) that the symptomatology in the
first decade tends to be predominantly that of increased intracranial pres-
sure. Often, of course, the first thing that is noted is that the child appears
to have difficulty in seeing. The child may also be small for his age. With
increasing age, localized pressure on the optic nerves results in demonstrable
field defects.

Of the 17 patients 10 years or under, only 6 were believed by the exami-
ner to be normal in regard to bodily habitus. Seven patients were variously