Symposium C. Tumors in the Region of the Pituitary and the Third Ventricle

Chairman: Prof. Hajime Handa
Dept. of Neurosurgery, Kyoto University

S-C-1. Tumor in the Chiasma Region

—Recent Advance in Treatment—

Naoki KAGEYAMA

Department of Neurosurgery, Kyoto University Medical School

Statistic figures of the brain tumors arising from the hypophysis and its vicinity are shown in Table I, which we have treated at Kyoto University Hospital up to date.

Table I

1) Pituitary adenoma	180
2) Craniopharyngioma	107
3) Tuberculum sellae meningioma	11
4) Glioma of neurohypophysis and/or optic nerve	9
5) Pinealoma in the chisma region	7
6) Epidermoid (supra- or intrasellar)	6
7) Teratoma (supra- or intrasellar)	3
8) Dermoid (supra- or intrasellar)	1
Total	324

I) Pituitary adenoma :

Operative results of the pituitary adenomas have been remarkably improved recently, for examples;

1) Marked decrease in mortality;

Pre- and post-operative administration of cortisone has contributed a great deal to the decrease in operative mortality. Extrasellar extension of the pituitary adenoma, which was believed to be most difficult to operate in the past can now be extirpated without much danger if cortisone is adequately administrated.

2) Remarkable decrease in recurrence;

Advanced anesthetic technique and application of drugs reducing elevated

cerebrospinal fluid pressure and brain volume have contributed to permit improved intracranial exposure, manipulation and surgical correction in many conditions where such procedures were formerly regarded as contraindicated or technically impractical. In addition, rotating radiation of radioactive cobalt has made the postoperative localized massive irradiation possible.

II) Craniopharyngioma :

In a few cases patients have led useful lives for about 20 years with not any more than simple evacuation of the cyst. Craniopharyngiomas found in childhood are usually of cystic nature and most of their symptoms are caused by elevated CSF pressure. Whereas the tumors observed among adults are more of solid nature. They present less symptoms caused by elevated CSF pressure but local destruction signs of the hypothalamus such as diabetes insipidus, hypopituitarism, psychiatric changes, primary optic atrophy and so on, take the major part of the symptoms. Judging from the above described facts, it can be said that the tumors become cystic with early manifestation of symptoms if they secrete actively from the beginning, and if not, they become solid with late manifestation of symptoms. Therefore an attempt must be made so that cystic content can easily be evacuated if necessary. Based upon this idea, we have left a rubber tube in the cystic cavity with the other end buried subcutaneously so that the secrete in the cyst can be drained out easily if recurrence be suspected. Lately we have tried with success to inject $P^{32}Cr$ into the cyst through the tube in order to destroy the epithelium lining over the inner surface of the cyst. As the craniopharyngioma may sometimes invade into the brain tissue, radical extirpation must be avoided if any of the local signs of hypothalamus are positive or any evidence of cerebral invasion is suspected.

III) Pinealoma in the chiasma region :

We have previously reported of characteristic syndrome of this tumor. Recently we have experienced two more cases of this group, in either of which no operable tumors were found in the suprasellar area except for thickened optic nerve. Histological examination of the biopsied specimen taken from the thickened optic nerve revealed typical two-cell-pattern figure of pinealoma. Irradiation of CO^{60} was effective in both cases with radiographic disappearance of the tumors and marked improvement of the visual ability.