METASTATIC HYPERNEPHROMA OF THE BRAIN
FROM A NEUROSURGICAL POINT OF VIEW
A REPORT OF 19 CASES
TORE PATRICK STÖRTEBECCKER, M.D.
Neurosurgical Clinic, Serafimerlasarettet, Stockholm, Sweden*
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In neurosurgery the question arises from time to time as to the advisability of operating upon a patient with cerebral metastasis. To take an example: a patient with a history of having been operated upon for hypernephroma shows clinical manifestations of brain tumor. The tumor being in all probability a metastasis, the efficacy of surgical intervention is questioned.

In the present report some aspects of this theme, illustrated by earlier reports from the literature and the material collected from the Neurosurgical Clinic of Serafimerlasarettet, will be given.

Frequency of Brain Metastasis. The problems of metastatic lesions in the brain have been referred to by many authors. Opinions regarding the frequency of brain metastasis differ widely. Statistical analyses of large general autopsy materials have been published (Krasting, Rau, Rudershausen, Gutting). The relation of brain metastasis to the total number of intracranial tumors was estimated by Rudershausen to be 18 per cent and by Gutting to be 25 per cent. In a total of 28,831 autopsies Gutting found 243 primary brain tumors and 85 brain metastases.

On the other hand, in a neurosurgical material the frequency of brain metastasis is low, approximately 5 per cent, ranging from 3.4 in some series to 7 per cent in others (Cushing, Christensen, Davis and others).

Cushing stated, with regard to metastatic intracranial tumors, that "their relative scarcity in the series of brain tumors as a whole, viz. 4.2 per cent, by no means represents their true clinical incidence, for we refrain when possible from accepting patients with obvious intracranial metastasis since so little can be done for them by surgical procedures."

Metastatic brain tumors have been discussed from a neurosurgical point of view by Grant, Meagher and Eisenhardt, Cushing, Bailey, Christensen, Dandy, Davis, Elvidge, Oldberg, and others.

Grant, inter alia, expresses the general opinion as regards the hopelessness of surgical treatment in these cases in his statement: "Surgery, whether radical or palliative, is of no ultimate benefit to these patients insofar as prolongation of life is concerned. But surgical intervention for the relief of intracranial pressure is frequently indicated and may go far toward relieving suffering in the last few months of life."

* Director: Professor Herbert Olivecrona.
This pessimistic attitude is also presented in recent monographs on intracranial tumors (Dandy,7 Bailey). 

**Frequency of Metastatic Hypernephroma of Brain.** A review of the literature on the occurrence of metastatic hypernephroma of the brain shows that mostly isolated cases have been reported (Gerwer,12 Chukry,5 Foerster,11 Elmer,9 Valdes21).

Augstein1 collected from the works of 30 different authors a total of 9 cases of cerebral metastasis from 141 cases of verified hypernephroma. Even Cushing6 in his material of 2000 cases of intracranial tumors had only 85 metastatic brain lesions: 56 carcinomas, 20 sarcomas, and 5 hypernephromas. Christensen,4 in a series of 2023 operations for intracranial tumors, found metastasis in 82 cases (3.9 per cent), of which 6 were metastatic hypernephromas. Davis9 reported a total of 805 intracranial tumors of which 57 (7 per cent) were metastatic and among them were 6 hypernephromas. Elvidge and Baldwin10 found 3 cases of metastatic hypernephromas in 88 cases of metastatic involvement of the central nervous system. Gutting,14 in his large autopsy material, had 85 cases of brain metastases, of which 8 were hypernephromas.

Thus the frequency of metastatic hypernephroma in a material of intracranial metastatic lesions appears to range from 3 to 10 per cent; the latter figure is probably the more reliable.

**Frequency of Metastasis from Primary Hypernephroma to Intracranial Cavity.** Exact figures are difficult to obtain. Gutting14 reports 77 cases of hypernephroma, of which 8 (10 per cent) metastasized to the brain. Brunner8 found metastasis to the brain to be as frequent as 16 per cent. Hannemann’s35 figure was somewhat lower.

**Survival Period in Cases of Metastatic Hypernephroma of Brain.** Information concerning the survival period is sparse. Reference to this will be made later but, as already mentioned, the general view appears to be pessimistic. The survival period after clinical manifestations of brain tumor was considered to be on an average only a few months, with a maximum of 6 months, regardless of surgical intervention (Grant,13 Meagher and Eisenhardt,17 Davis,8 Elvidge and Baldwin10).

A more positive neurosurgical treatment, however, with removal of the metastatic lesions, has been advocated; Oldberg18 points out that “there are naturally certain criteria which are not to be disregarded in deciding an active surgical course. The most important of these is the question of multiplicity of metastases.” He reports cases of metastatic carcinoma of the brain in which the survival period following intracranial operation is longer than in previously reported cases; 2 years in 1 case after extirpation of a parieto-occipital tumor arising from carcinoma of the breast; in another, alleviation of symptoms for almost 3 years after extirpation of a tumor from a carcinoma of the lung.

Concerning the hypernephromas Cushing6 had the impression that metastases of this nature are more favourable than those from a primary sarcoma