8. Observation of the Microcirculatory System in Brain Tumor

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In 15 autopsied cases, the pattern of the microcirculatory system of Meningioma, Meningeal sarcoma, Astrocytoma, Glioblastoma, Medulloblastoma, Ependymoma, Oligodendrogioma and Hemangioma were observed histologically with Hematoxylin and Eosin preparation, Silver impregnation technique (Hasegawa-Ravens) and Cajal' gold sublimate procedure.

The following results were obtained;
1. The capillaries were extremely irregular, and formed coarse network with abnormal pattern in the brain tumor without fibrosis. On the Oligodendrogioma and Ependymoma, the capillaries were formed regular dense network. And a characteristic relationship between the capillary abnormalities and the malignancy of brain tumor was observed.
2. The proliferation of abnormal vascularities in microcirculatory system was also observed with malignant findings in the tumor and the differentiation between arteriole and venule was somewhat difficult in a few areas of these tumors. Such abnormal vessels in the malignant tumors were diffusely penetrated into normal tissue.
3. The A-V shunts and throughfare channels with abnormality were observed clearly in our cases of Astroblastoma, Glioblastoma and Hemangioma. Some of them were ruptured and hemorrhaged into tumor or peripheral zone.

9. Diffuse Meningeal Tumor

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Diffuse meningeal tumors are much different from usual intracranial space taking lesions from either pathological or clinical view point.

We have experienced 2 cases of primary and 20 cases of secondary diffuse meningeal tumors since 1958. The former cases were melanoma and sarcoma, both of which are very rare among literatures. The latter cases are meningeal metastases from 12 cases of carcinoma and one case of retroperitoneal lymph-