D-23. A Case Having Symmetrical Abnormal Vascular Network at the Base on Brain

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Case: 31 years old man.

Past History: Body weight 2.2kg at the birth, normal growth but lower intelligence.

Chief Complaint: Mild headache.

Present History: On August 15, 1963, he was suffered from a sudden headache with vomiting and followed by unconsciousness continued three days. He was diagnosed and treated as a subarachnoidal bleeding by a practioner.

Findings at Hospitalization: Neurological examination was normal but intelligence test was lower (Wais' method I.Q. 46). A lumber puncture showed an initial pressure of 120mm H2O column and an appearance was transparent like water. An E.E.G. was in normal limits. Other routin labolatory studies were normal.

Cerebral Angiogram: Bilateral carotid angiogram showed the same findings as follows: the internal carotid artery was pictured to supraoptic portion of anterior cerebral artery (AI) but beyond this portion anterior and middle cerebral arteries were not admenstrated. And then it showed the back circulation as next findings, i.e. CI—Posterior communicating artery—Poster cerebral artery—Rami splenium (A. corporis callosi dorsalis)—Pericallosal artery. The circumscribed capillary network, which is the most problematical finding, was seen on the portion adjacent upper part of AI and CI. The vertebral angiogram showed same figure of back flow seen in the corotid angiogram, but the capillary network was not seen. From these results it is considered that the capillary network has relation to the internal carotid artery. On the serial angiography on August 8, 1966, the communicating branches to venous system of the capillary network was not distinct. Neither alterations and enlargement of its structure, nor new formation of collaterals were observed.

Comment: Regarding this case, the first possible conclusion is that the entity of capillary network is collateral circulation due to dysplasia of Willis' ring, and the second possible conclusion is that it is congenital anomaly coincided with dysplasia of Willis' ring.