

the carotid siphon bilaterally, but abnormalities were not detected in the vertebral system and the extracranial portion of the carotid artery.

Based on these findings, it was considered that the cause of the arterial stenosis which brought about vascular dilatation in its distal part at the base of the brain is perhaps of inflammatory process, though its etiology could not be decided.

D-20. A Pathological Study of an Abnormal Vascular Network in the Cerebral Basal Region

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This case is of a 9 years 5 months old girl. The patient first developed symptom at the age of 2 years and one month, and died after the total course of 7 years and 4 months.

Autopsy was permitted by the family for the brain only. The brain weighted 1100 gm. It was discovered that the subdural haematoma covered the whole right hemisphere. The haematoma had no capsule. The leptomeninges appeared slightly turbid. Small blood vessels were found in abundance on the brain surface. On the base of the brain, around the circle of Willis and in the bilateral sulcus of Sylvii, we found a great many small elaborated blood vessels. Atrophy of the whole brain was prominent, especially in the bilateral temporal lobes. The atrophy of the right temporal lobe was so remarkable that it almost disappeared. The atrophy of the occipital lobe was more prominent on its right side.

On the cut-surface of the brain we found; 1) Many large calivered vessels in the caudate nucl., the internal capsule and the thalamus. They were more prominent on the right side. 2) An abnormal abundance of small vessels in the leptomeninges were seen packed in the sulcus of Sylvii. 3) The atrophy of the undersurface of the bilateral temporal lobes was remarkable, especially on the right side; lesions of encephalomalacia and tissue destruction were also found.

Major arteries of the base of the brain appeared white and harder than usual in their consistency. The basillar artery was larger in its diameter than the internal carotid art. On gross examination the basilar art. was within normal limits. The branching arteries from the major arteries of the base of the brain were as follows: Three branches from the proximal portion of the ant. cereb. art., eight from the mid. cereb. art. and four from the post. comm. art. bilaterally. All these branches looked white and tortuous.

A brief comment on the microscopic findings is as follows: 1) The narrow-

ing of the lumen was prominent at the distal portion of the int. carotid art. and the proximal portion of the mid. cereb. art., and moderate in the ant. cereb. art., the post. comm. art., and the branching portion of the post. comm. art. and the int. carotid art. No narrowing was found in the basilar art. 2) The tissue destruction, such as the disappearance of the lamina elastica interna and/or the lamina muscularis, was observed only at the proximal portion of the mid. cereb. art. 3) The round cell infiltration to the adventitia of the vessels was seen at the distal portion of the int. carotid art. and at the proximal portion of the mid. cereb. art. 4) Elastosis was noticed in the lamina interna. 5) The vessels of the thalamus were rich in number and their internal diameter was large and their walls were thin. 6) The vessels of the leptomeninges of the vertex were abundant and their nature was same as 5). 7) On the base of the brain, many tortuous small vessels were seen. Their internal diameter was large, their walls thin, and most of the lamina elastica interna was existing in almost all of the tortuous small vessels, but in some it was obscure. The lamina muscularis was thin and in some cases very obscure.

D-21. Juvenile Bilateral Carotid Artery Thrombosis

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An autopsy case of spontaneous occlusion of bilateral internal carotid artery in a 12 years old girl with angiographically abnormal vascular networks in the basal region of the brain was described. On postmortem examination widespread occlusion or marked stenosis of the circle of Willis and the distal segments of the bilateral internal carotid artery was demonstrated. (Fig. 1) Detailed description of clinical history with brief necropsy findings of the case presented here has been reported elsewhere previously by Yukio Kawakita, one of the authors (See *Folia Psych. Neurol. Jap.* 19: 245-255, 1965).

Examination of the affected arteries showed that the principal pathologic process was massive thickening of the intima, characterized by fibro-cellular or fibrous thickening with edematous and mucoid swelling. Neither atheromatous deposits nor inflammatory changes were found there; the intimal elastic membrane was usually well-preserved; the media and adventitia displayed no significant changes, except that the media often was atrophic and slightly fibrotic. This