h-3. Biphasic Changes in Cerebral Blood Flow

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Serial changes in cerebral blood flow following traction of the middle cerebral artery, rupture of the posterior communicating artery and blood infusion into the subarachnoid space near the circle of Willis were observed in dogs.

Following rupture of the posterior communicating artery, CBF decreased and then returned to the baseline within 100 to 200 min. After this restoration, CBF measured by the krypton 85 clearance method revealed a tendency to decrease gradually with the elapse of time.

Such a biphasic change in CBF following rupture of the posterior communicating artery might mean that the mechanism lowering CBF in the acute phase of spasm differs from that in the chronic phase. In the acute phase the mechanical traction and fresh blood in the subarachnoid space might act as the factor producing the vasospasm which lasted for 100 to 200 min. In the chronic phase two etiologic factors should be considered. One is a substance requiring one day or more time to act as a vasoconstrictor, and the other is the degree and duration of the spasm in the acute phase which may cause the organic lesion in the arterial wall due to hypoxia.

Discussion to h-3.

Various Form of the Anterior Communicating Aneurysm (5 Types) and Its Relation to Intracranial Direct Management

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74 cases of cerebral aneurysms had operated in Department of Neurological Surgery, Sapporo Medical College & Hospital and the operative mortaliyt is 6.5% (71 cases out of 74 cases operated by Miyazaki by myself). The anterior communicating aneurysm is 16 cases and all these cases was operated by Miyazaki self.

The standard cerebral angiography and other angiography under special direction like oblique direction were done as routine preoperative angiography