67. Shunting Procedure for Poor Risk Patients with Intracranial Aneurysm

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Despite of technique of microsurgical procedures the postoperative course of intracranial aneurysms has not been necessarily improved. Because it should be considered that prognoses of intracranial aneurysms are closely related to the level of consciousness of the patient at the time of surgery. As far as factors affecting consciousness are concerned, the following can be pointed out; hydrocephalus secondary to subarachnoid hemorrhage, intracerebral hematoma, brain edema, cerebral vasospasm and cerebral ischemia. Therefore, it would be expected to improve the conditions of these patients by eliminating these factors as early as possible. Hydrocephalus, one of the most important factors above mentioned, was investigated in relation to the level of consciousness of critical patients with aneurysm and the result of shunting operation on it was examined.

First of all, we actively carried out the direct attack to aneurysm as neck clipping irrespective of the condition of patients. When the postoperative consciousness failed to improve and moreover hydrocephalus was revealed on cerebral angiograms, we performed shunting procedure such as external ventricular drainage, ventriculo-peritoneal or ventriculo-atrial shunt.

The results of 17 cases with shunting operation to date were as follows; five excellent, three good, three fair and six poor. Especially, four of 5 excellent cases were Hunt and Hess's Grade IV patients. Cerebrospinal fluid pressures in excellent and good cases preoperatively revealed much higher than those in fair and poor cases. This fact implies that shunting procedure improves the level of the consciousness with hydrocephalus secondary to subarachnoid hemorrhage.

Furthermore, the relationship of the consciousness to hydrocephalus and vasospasm was studied in 25 poor risk patients. Hydrocephalus was observed in 18 cases of them (72%), whereas vasospasm was recognized in 10 cases (40%). Consequently, it might be suggested that hydrocephalus significantly influences upon the level of the consciousness.