Meeting of the Japan Neurosurgical Society. We added here another case. The patient was a 16-year-old male, who showed left spastic hemiparesis, optic nerve atrophy and mental retardation.

The simple roentgenograms revealed diffuse thinning and bulging of the skull in the right temporal region. The carotid angiographic studies presented the most pathognomonic picture. In the lateral view, the proximal portion of the right middle cerebral artery was shifted downwards and the right frontoparietal ascending arteries were absent. In the antero-posterior view, an avascular area existed just beneath the bulging of the skull.

Electroencephalogram showed only a high voltage focus in the right parieto-occipital region. The tentative diagnosis of subdural hygroma on the right side was made from these clinical findings, and craniotomy was performed.

A marked cerebral dysplasia was found in the right hemisphere. The diencephalon, the foramen of Monro and the choroid plexus could be easily visualized through cerebrospinal fluid accumulation on the floor of the cavity resulting from defect of the cortex.

17. An Experimental Study on the Surgical Treatment of Hydrocephalus

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Experiments were carried out for the purpose of preventing the obstruction of the distal end of the tube that is encountered in the ventriculo-peritoneal shunt.

1. Hydrocephalus was produced in dogs by means of injecting Kaolin into cisterna magna. A ventricular shunt tube was passed into the lumen of an intestinal loop or into a renal pelvis which was isolated and fixed to the abdominal wall.

2. The intestinal segment was isolated 3 to 5 centimeters in length with blood supply maintained. The isolated loop was fixed to the anterior abdominal wall, leaving the lumen open to the abdominal cavity at both cut ends, and a polyethylene tube was induced into the lumen.

In four out of five cases with shunts, the accumulated desquamation of mucosa obstructed the free end of the tube laid in the isolated intestinal loop. Obstruction occurred in only one case, at the proximal end in the ventricle.

3. A single kidney was removed, leaving the renal pelvis which had been dilated by ligation of the ureter. A polyethylene tube was induced into the ureter toward the pelvis which was kept open to other abdominal cavity. In this situation, the pelvis was also apt to be encapsulated within folds of the omentum or mesentery. Various trials were carried out in an attempt to prevent such adhesions. An-
astomosis by ordinary silk sutures failed except in one case in which the outflow of the fluid was noticed at the exploration on the fifth postoperative day. By reflecting the dissected pelvis around a polyethylene ring, a satisfactory result was obtained, preserving a patent opening into the abdominal cavity in half of the cases. However, obstruction was noted in the ventricular portion in all these instances.

These discouraging results were probably in large part due to technical difficulties involved in working with experimental animals. Small ventricular cavities and limited cerebrospinal fluid production seemed to be the important factors to overcome this type of experimental investigation.

18. Clinical Studies on the Ventriculoauriculostomy for the Treatment of Hydrocephalus

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Though there have been numerous methods for the treatment of hydrocephalus, the authors reported new experiences. They treated surgically, several patients of hydrocephalus and secondary one following inoperable brain tumor, performing the operation of ventriculo-auriculostomy using Pudenz-Heyer valve, and relatively good results were obtained.

They, furthermore, discussed this technic, comparing them with other treatments of this disease.

19. Surgical Treatment for Hydrocephalus

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Surgical treatments were performed on 28 cases of hydrocephalus (not due to tumors), i.e. 5 of choroidal plexectomy, 7 of salpingotheccal anastomosis, 5 of subcutaneous ventriculo-mastoidostomy, 1 of ventriculo-auriculostomy, 7 of third ventriculostomy, 3 of Torkildsen's ventriculo-cisternostomy and 4 of removal of membranous obstruction, including 4 cases who underwent two kinds of operations and 3 cases of death.