presented a new type of ventricular catheter for its prevention. We also reported the collected cases of ventricular revision by ventricular catheter blockage in Japanese major clinics.

i-5. Complications in Ventriculo-atrial Shunt and Ventriculo-peritoneal Shunt

Satoru MATSUMOTO

Dept. of Neurosurgery, Kitano Hospital

A. J. RAIMONDI

Dept. of Neurosurgery, Cook County Hospital, Chicago

i-6. Brain Tumors in Children; Surgical Problem and its Solution

Yasuhio MATSUKADO

Department of Neurosurgery Neurological Institute Kyushu University

One hundred forty-two cases of central nervous system neoplasms were experienced in patients under 16 years of age during the past 7 years, among which 59% cases were located in the supratentorial space and 41% in the infratentorial. Forty cases of brain tumor were found in children under 6 years and also in this age group a slight dominance was noted in the supratentorial space. Brain tumors in infancy were not infrequently masked by hydrocephalus and therefore the congenital hydrocephalus, especially of non-communicating type, should be studied carefully. Because of possible gas embolisation, air study on hydrocephalic patient had been disfavoured if a ventriculo-atrial shunt was indicated as an immediate pressure relieving procedure. However, pneumo-encephalography utilizing nitrous oxide solved greatly the disadvantage, since the nitrous oxide is absorbed quickly into the blood stream and exhaled.

Neurosurgical examination for young children required specific cares, and the feasibility of ordinary type of diagnostic procedure was limited unless some modification was made. Cerebral angiography was safely carried out when Seldinger's catheterisation was utilized. Emulsified oil ventriculography was also another choice of examination and patients could be kept still in supine position during the whole procedure. Two dimensional echoencephalography and brain scanning were other procedures facilitating diagnosis of young children, although these tests were not yet applicable to posterior fossa tumors.

Twelve out of 21 cases of pinealoma received an extensive surgery of Crandall's approach, and it was indicated that no limitation of surgical accessibility