23. Preoperative and Potoperative RI-Cisternogram in Hydrocephalus

—Special Reference to Ventricular Reflux—

Yoshitaka NAKADA, Yutaka MAKI, Morimasa KONO,
Tadao NOSE and Susumu MINEI

24. Experimental Hydrocephalus Introduced by Laminaria

Akihiko HIRAYAMA, Katsuji TAOMOTO and Satoru MATSUMOTO
Department of Neurosurgery, Kitano Hospital

25. Surgical Approach to Microcephaly

Toshio BEPPU*, Mizuo KAGAWA, Shigeru SENTO,
Hiroshi KONO, Kuniaki MATSUMORI, Tamotsu OSUGI
Toyoaki SHINOHARA, Nobuko OGAWA, Koichi KITAMURA and Ryoho OKADA**

**Tokyo Women's Medical College Neurological Institute*

Department of Neurosurgery

***National Children's Hospital Department of Neurology*

In this paper, the authors investigated the possibility for surgical approach to the acquired microcephaly by a neuroradiological methods, especially by the cisternography. Our observations dealt with 22 cases of microcephalus (acquired type were obtained in 17 cases), aged from 0 to 7 years (about half of them, 1–2 years old), consisted of 10 males and 12 females.

Head circumference was measured below 2 standard deviation from mean length of normal head growth by Nellhaus. Plain X-ray examination, PEG, PVG and CAG were performed in all cases in order to check up closure of sutures, space occupying lesions, dilation of CSF system, and other pathological changes except for 3 chronic subdural hematomas. Furthermore, to the purpose of investigation of CSF hydrodynamic change, cisternography by ^{99m}Tc and ^{131}I HSA was also carried out in 8 cases of acquired microcephalus.

In the almost all cases of acquired types, demonstrable symmetrical dilatation

of the lateral ventricles were visualized moderately in contrast with little dilatation of the genetic types. On cisternogram, delayed RI distribution rate from the spinal subarachnoidal space to the parasagittal areas was appeared and also asymmetrical abnormal RI concentration was visualized on the intracranial cavities in 5 cases.

In another 7 cases of the acquired microcephalus, RI clearance were measured by means of the direct injection of ^{99m}Tc to the anterior horn of the lateral ventricle monitored by Dina Camera Scientigraph continuously.

Consequently, in 5 out of 7 cases, retention rate of CSF flow from the lateral ventricle to the basal cisterns revealed more than 43% which was exactly distinguishable from the normal level (less than 25%). Therefore, this fact seemed to be important and informative of us to understand the nature of the acquired microcephalus. The ventriculo-atrial shunt was done in 6 cases for the purpose of repair of CSF circulating disturbance.

The postoperative 3 cases resulted in disappearance of clinical convulsion and elimination of spastic paraplegia. Our experience was small but satisfactory. It is believed for us that this results in our observation suggested some possibility of operative indication for these microcephaly and cisternography might be much value as clinical diagnostic aid.

26. Lumbosacral Lipoma in Children

Kazuho ZINNAI* and Kazuo YAMAGUCHI**

**Division, Orthopedic Surgery, Kanagawa Children
Medical Center*

***Neurosurgical Department, Yokohama University
School of Medicine*

Total 46 cases of spina bifida who were examined at Kanagawa Children Medical Center from the period of May, 1970 to April, 1971, have been selected for those having lumbosacral lipoma into 7 cases and 3 out of these 7 have gone under the surgery.

The age span of these 7 children is from 3 months' old to 5 years' old and all children are male. All subcutaneous tumors consisted of elastic soft material were palpated on the midline of the lumbosacral region.

The skin over the tumor revealed a dimpling in 3 cases, and 3 cases showed portwine type of nevus, and cartilaginous material was felt in the tumor in two cases.

Five cases showed motor disturbance on lower extremity. Also bowel and bladder deficit were recognized in 5 cases. One case showed skin paresthesia in the dermatome region of S1 on both legs. One case revealed there was no remarkable neurological signs. X-ray studies in simple and laminography performed for all cases, disclosed were spina bifida and widening of bone canal. Myelography showed shadow