C. Neuropathology

c-1. Studies of the Ulcer Formation of the Central Nervous Origin

The First Report

On the Hypothalamic Lesions and Ulcer Formation

Miyoshi URABE, Makoto KIKUCHI and Rokube UCHINAMI

1st Department of Surgery, School of Medicine, Kanazawa University

As a series of the studies of the influence of the central nervous system on the various organs, we investigated the ulcer formation when lesions were made at the various parts of the brain, especially the hypothalamus, using about 200 albino rats.

In the albino rats, weighing 200–250 grams, electrodes were inserted into the hypothalamic regions and bilateral coagulations were done with the direct current of 2 milliamps for 15 seconds. This procedure produced lesions with 1.5–2.0 mm. in diameter.

The gastric changes were observed every week after making lesion. The gastric changes were classified into the slight, moderate and severe ones. The slight change showed a hyperemia or a single mucosal defect, the moderate change multiple mucosal defects, and the severe change multiple mucosal defects accompanied by an intensive hyperemia and edema.

The slight changes appeared in 23.3% of the cases of lesions of the septum, in 25.0% of the cases of the lesions of the preoptic area, in 32.4% of the cases of the lesions of the anterior region, in 15.8% of cases of the lesions of the middle region, and in 28.2% of the cases of the lesions of the posterior hypothalamus. On the other hand, the moderate and severe changes appeared with higher grade in the cases of lesions of the middle and posterior regions than in cases of lesions of the other hypothalamus.

c-2. Pathological Evaluation of the Hypophysis Following Pituitary Stalk Section

Sakae FUKUDA

Department of Neurosurgery, Shizuoka Red Cross Hospital

Pituitary stalk section for the palliation of recurrence breast cancer has been

performed on eighteen females since 1965, and ten of them died within one month or two years after surgery.

This report evaluates the pathological change of the hypophysis following stalk section in the four cases at the necropsy.

The diaphragm of the sella was drawn deeply into the sellar cavity by reduction in volume of the hypophysis, and there was no reestablishment of connection visible to the naked eye between the proximal end of the stalk and the hypophysis, nor revascularisation in the surround of them.

Pars distalis of the hypophysis was destroyed in the anterior and medial portion, but the normal or pycnotic parenchymal cella remained around the infarction of the pars distalis, near the capsule and pars intermedia.

Therefore, pituitary stalk section infarcted the large part of pars distalis of the hypophysis (about seventy to eighty percent), but did not cause its complete destruction.

c-3. Possibility of Application of Freeze-cleave Technique in the Electron microscopic Study of the Brain

Kuniyuki SOMEDA and W. H. SWEET

Neurosurgical Service, Massachusetts General Hospital

R. S. WEINSTEIN

Mixer Laboratory, Massachusetts General Hospital

c-4. A Case of Malignant Thymoma with Spinal Compression Symptom and Metastasis to the Skull

Ryotaro KURODA, Noriaki TANAKA, Yoshikazu IWATA, Ryohei YAMADA,

Nobuhiro KANAI, Toru HAYAKAWA, Takuya IKEDA, Kiyoo KAMIKAWA,

Heitaro MOGAMI and Dennenosuke JINNAI

2nd Department of Surgery, Osaka University Medical School

A girl, 10 years of age, was admitted to our hospital in March, 1967, complaining of sudden sensory and motor disturbance in the lower body and extremities. No findings could be obtained by X-ray films of the spine and chest, but epidural spinal tumor at T4 was diagnosed by lumbar myelography. Laminectomies of T4 to T1 were carried out and a gray, soft and ill circumscribed epidural tumor measuring about 5 by 1 by 0.5 cm. was extirpated. After the operation and irradiation therapy, the patient was discharged with improvement