159. Results of GABOB Therapy on Human Epileptics

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In 1956, Hayashi and Nagai showed that γ-amino-β-hydroxybutyric acid (GABOB), when introduced into cerebrospinal fluid, inhibited seizures which were produced by electrical stimulation of the motor cortex in dogs.

We tried to apply GABOB to the epileptic patients by means of lumbar puncture and obtained the following results; complete inhibition of seizure 13 (59%), improved 6 (27%), and unchanged 3 (14%) among 22 patients.


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Serum proteins, glycoproteins and lipoproteins in epilepsy and progressive paralysis had already been reported in the 19th general meeting of this society.

This time, similar studies have been carried out concerning cerebrospinal fluid. Native waves, denaturation waves, filtrate-test waves and post-filtrate-test denaturation waves were studied by polarography, and protein and glycoprotein fractions by paper electrophoresis.

In 30 cases of epilepsy, attention was paid to a relationship between a convulsion fit and a minor seizure, and 2 cases were studied in a state of superimposed convulsions. Normal, progressive paralysis and schizophrenic groups were chosen as controls.

With polarographical techniques, there were no other marked changes than a tendency of the amplitude of the denaturation wave to lower slightly in the intermittent stage of convolution. Mucoprotein activity of denaturation type III was observed more greatly than before convolution, and this was perceived until
after the convulsion.

In cases of superimposed convulsions, the amplitude of denaturation an native waves was high. The SH group activity on the surface of protein and de
naturation type III was also great. Particularly the SH group activity of muc
protein was high in one case and low in one case. The latter case died later.

In paper electrophoresis, albumin showed a greater value before convulsio
than in the intermittent stage of the convulsion, and the values of \( \alpha_1 \), \( \beta \) an
\( \gamma \)-globulins had a tendency to be great both before and after convulsion.

161. Clinicopathological Studies of Cerebral Hemispherectomy

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Since 1955 we have performed cerebral hemispherectomy in ten cases of in
fantile hemiplegia and followed up eight survived cases with an average of fiv
years. Two cases died after the operation.

According to the pathological picture found in the removed hemisphere w
have been able to divide these ten cases into two groups: a) eight cases with diffuse
changes and b) two cases exhibiting localized changes. In most cases of the
group a) the microscopic changes were not remarkable which made us suspect so
called “sub-anatomic” changes. As to the group a) five cases had the favourabl
results, one case improved slightly and two cases were in vain postoperatively
Group b) which consists of one case of porencephaly and another case of sclerosis
around the Sylvian fissure due to postdiphtheric infarction had the marked im
provement postoperatively.

After the operation motor and sensory impairment was encountered in non
of the cases, but spasticity has tended to increase as time passes, so that the im
portance of rehabilitation after the operation should be emphasized. Epilepti
seizures were well controlled and their personality also became socially adaptabl
following the operation. In most cases temporary autonomic dysfunction was en
countered and one patient died after many episodes of autonomic nervous dys
function postoperatively. In six cases pubertas precox and obesity were seen
Dilatation of the lateral ventricle of the residual brain was seen in all five case
which were examined.

The marked change of the residual brain at autopsy in a patient who die