

the axoplasm of trigeminal ganglion cell nerve roots in two human cases. Viral factories in human gasserian ganglion cells showed tubular structures measuring 100 nm in diameter. Similar structures were observed within the areas of reticulogranular material in bovine neurons. The lysosomes of bovine nerve cells were frequently found at the periphery of viral factories: the role of these lysosomes during viral infection of cultures cells have been described previously (Allison, A.C. and Mallucci, L.J. *exp. Med.*, 1965, 121,463). Increased acid phosphatase activity in the neurons of newborn mice inoculated with VEE virus was recently demonstrated in the authors' laboratory (Garcia-Tamayo, J., *J. Virol.*, 1971, 8, 232). Grouping of lysosomes around areas of viroplasm observed in bovine cases of paralytic rabies is believed to be a defensive mechanism of the neurons occurring during replication of the rabies virus.

433. Treatment of dystonia with carbamazepine (Tegretol)

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Six children, ages 4 through 14 years, with dystonic syndromes were treated with carbamazepine. Two of the children had complete cessation of disabling dystonic spasms. A third child with Down's syndrome and a familial form of torsion dystonia had, after treatment, a marked decrease in tone, regained use of her hands and the ability to walk with assistance. Another 2 patients, who were sisters, also showed impressive improvement in hand function and gait. A completely helpless boy with dystonic and athetotic movements consequent to a birth injury had some reduction of involuntary movements. All patients were subjected to a double-blind study. The 5 children who improved on carbamazepine had a return of symptoms when on placebo. Dosages ranged from 300 to 1200 mg per day without any serious side effects. Cinematic recordings of the patients before and after treatment will be shown.

434. Periarticular ossification in the apallic syndrome

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In 10% of patients with an apallic syndrome of different origin, foci of periarticular ossification are to be found. The development of bone tissue around the big joints (elbow, hip, knee, shoulder) is well known in cases of traumatic spinal cord lesion, but relatively infrequently reported in apallic patients.

Periarticular ossifications develop for the first time during the full stage of an apallic syndrome, i.e. between the 10th and 20th days after the acute incident. However, the changes seldom become apparent radiologically before the fourth week. The extent of the new bone formation varies greatly, extending from small osteophytes to bone bridges causing complete immobility of the joint. The ossifying process first takes place in the periarticular tissue, later in the neighboring muscles, leaving the joint capsule unaltered for some time. In the later course all joint structures are involved in the process, and a highly differentiated bone tissue develops. Surgical measures with radical excision of the bone bridges are necessary; only in rare cases will physiotherapy suffice. However, measures have to be taken in the first stage of an apallic syndrome to prevent an ossifying process, especially the use of tonic regulating reflexes and stabilizing nutrition. As a cause of periarticular ossification, hypertonus of the postural muscles and disorders in electrolyte and protein balance are discussed.

435. The use of a psychomotor test battery in evaluation of the therapeutic results in the Parkinsonian syndrome

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The effects of treatment in the Parkinsonian syndrome were studied by a psychological testing. A battery of 6 different tests was used to quantify the improvement profile. The advantage of this battery in contrast to examinations such as the electroencephalogram and the tremorgram is the little effort required through comparable objectivation and validation. In contrast to the different scored rating scales, e.g. Webster, the subjective judgment of the investigator is unimportant.

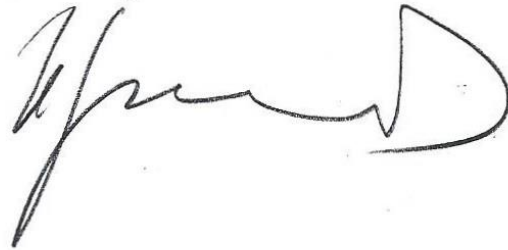
The 6 tests used were: (1) test of fine motor function (Grünberger); (2) number symbol test (a modification of the Hamburg-Wechsler test); (3) cross out test (d^2 test by Brickenkamp); (4) number symbol test (Arnold-Kohlmann); (5) cross out letter test (Grünberger); (6) alphabetical cross-out test (AD-test, Bourdons).

This battery has to be practiced 3 times, i.e. before treatment, at the climax of therapeutic effort, and 6 weeks later. Conclusions can be reached about the therapeutic effect on the 3 main symptoms of the Parkinsonian syndrome, e.g. akinesia, rigidity and tremor as well as on the general improvement of the disease.

The described test battery was used in Parkinson syndrome treated with l-dopa and also with amantadine, however in patients with a frontal lobe lesion treated with psychostimulantia.

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