Investigación Clínica
Apartado Postal Nº 1151 — Maracaibo - Venezuela

Summaries

Investigación Clínica. Nº 29. 1969.

SERRANO, H., RODRIGUEZ ITURBE, B. **"Immunologic studies as an aid to detect human renal homograft rejection".** Invest. Clín. Nº 29: 9-27. 1969.

Determinations of the serum values for the three classes of immunoglobulins and serum complement were done in 8 cases of renal homografts during the post-transplantation period. Significant falls were observed to occur in the IgM fraction and serum complement during the rejection period; these serum fractions returned to normal when clinically there was an improvement of the picture. Pathogenic considerations of the findings were made and the advantages and disadvantages of the methods used were discussed.

CASTEJON, O. J. **"The ultrastructure of the granular layer of the human cerebellar cortex. 1. Organization of the granule cells".** Invest. Clín. Nº 29: 29-46. 1969.

Four specimens of the cerebellar cortex of patients operated on for different pathological alterations of the posterior fossa and the cerebral stem were studied under the electron microscope. The cerebellar cortex was primarily fixed in glutaraldehyde, refixed in osmium tetroxide and embedded in Epon. The granule cells form groups separated by the cerebellar glomeruli. Their diameter is from 3.7 - 4.8 micra. A lesser proportion of smaller cells, 2.5 - 3 micra is observed. The cytoplasm forms a narrow band araund the nucleus and shows poor development of the rough endoplasmic reticulum as well as a moderate quantity of free ribosomes. It contains mitochondria, Golgi complex, lysosomes and lipofucsin granules. The mitochondria shows a clear and swollen matrix and the Golgi complex vacuoles are moderately dilated. Furthermore, dense cored microvesicles 420 - 470 A and microtubules 200 A in diameter are also observed.

The bulky nucleus shows thick karyosomes, nucleoplasmic granules and fibrils, also perichromatinic granules, 55 milimicra in diameter, dispersed in the cytoplasm. The nucleolus shows poor development of the nucleolonema and abundant nucleolar associated chromatin. The membranes of the closely packed granule cells appear separated by a space 40 - 110 A in width. The role exercised by surgical manipulations as well as the fixation process and the perifocal edema are discussed in relation to the aspect of mitochondria, Golgi complex, and the dimensions of the extracellular space.

VILORIA de CASTEJON, H. **"Histochemical identification of the nerve cell acid glycosaminoglycans"**. Invest. Clín. Nº 29: 47-75, 1969.

The cytoplasmic acid glycosaminoglycans present in the neurons of the CNS of adult swiss albino mice are studied by means of histochemical procedures. The CNS is fixed by immersion or by vascular perfusion with 1% glutaraldehyde solution in sodium phosphate 0.1M, pH 7.4 and osmolarity as 330 mOsm/litre, dehydrated through graded ethanol and included in paraffin or tissuemat. In sections of 6 to 8 micra, staining was carried out with alcian blue at pH 2.5, pH 1.0 and at pH 5.8 with the addition of increasing concentrations of magnesium chloride, as well as the staining of methyl green-pyronin Y for the demonstration of nucleic acid. Simultaneously, sections were subjected to enzymatic digestion with testicular hyaluronidase, ribonuclease and pepsin. The sequence of these reactions permited the localization of a material sensitive to the testicular hyaluronidase and resistant to the ribonuclease, present in the cytoplasm of a great number of neurons, and which corresponds because of its tinctorial characteristics to the hyaluronic acid, visible in the majority of neurons; and to the chondroitin -4 or 6- sulphate, or both, present in a minor number of neurons. Moreover, a material resistant to the testicular hyaluronidase was observed in a reduced number of pyramidal cells, displayed in the form of a narrow band in the region adjacent to the cell membrane and because of its tinctorial characteristics seems to correspond to the dermatansulphate. Emphasis is placed on the fact that the acid glycosaminoglycans are not present in all nerve cells. Comments are made upon the basis of the mecha-

nism of staining of the alcian-blue. The possible physiologic role of the demonstrated compounds is discussed, especially in relation with the miclogenesis and the conduction of the nervous impulse.