

Effects of adrenalectomy on local traumatic lesion of the brain

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1. The effects on brain weight and histological appearance of adrenalectomy, of a stereotactic cerebral lesion and of sodium chloride in drinking water were studied in 120 rats. 2. Brain edema is measured by means of Huxley's formula of simple allometric growth. 3. Ten days after adrenalectomy there was no significant variation of the weight of the brain, nor any appreciable histological change. 4. Local cerebral trauma only caused, within 24 hours, a circumscribed edema too small to affect the weight of the brain significantly, with PAS-positive astrocytes in the immediate vicinity. 5. Adrenalectomy associated to local cerebral trauma caused considerable neuronal edema, greater in rats that drank saline solution than in rats that drank distilled water. The neurons were swollen; PAS-positive material seemed to travel along the white pathways and filled astrocytes situated near and far from the lesion. 6. Oligodendroglia was unaffected or very slightly affected by adrenalectomy, by the