OPHIDIOEFFECTSINACUTEEXPERIMENTALENCEBRALISCHEMIA:NUCLEARMAGNETICRESONANCE
(NMR)IMAGINGANDDEOXYHEMOGLOBIN(2-3)
AUTORADIOGRAPHICSTUDIES—Leyl,H.M.,Snyder,M.P.
andNelson,T.(DepartmentofNeurosurgery,UniversityofCalifornia,SanFrancisco,
California)
Usingunilateralcarotidarteryligationinthe
guinea pig as a model of acute experimental cerebral ischemia, NMR imaging and a new double-label autoradiographic technique have been employed to evaluate the effect of opioid agonists and antagonists on cerebral edema and glucose metabolism.
One hundred thirty-two guinea pigs were exposed for 3 to 24 hours after ligature of the right carotid artery and after pharmacological treatment.
While the ischemic lesion is clearly demonstrated on NMR imaging, neither 10 mgkg morphine sulfate nor 2 mgkg naloxone affected the abnormalities visualized on initial imaging.
A second group of animals was injected with 14C-2-OH before 5 to 24 hours after the administration of 2 mgkg saline.
Using autoradiographic and computerized imaging techniques, the effect of naloxone in symptomatic animals was evaluated.
The most profound effect was a marked focal increase in the glucose metabolism of several subcortical structures, including the substantia nigra, periaqueductal gray and the red nucleus.
Thus, while the effects of opioid antagonists in cerebral ischemia do not appear to be secondary to alteration in postischemic edema, they may be related to activation of subcortical nuclei distant to the ischemic cortex itself.

BRAIN TISSUE PRESSURE GRADIENTS IN FOCAL CEREBRAL ISCHEMIA AND WATER RETENTION. 42
KEMNA—Schelske,D.,Bunt,J.,Buell,J.T.
(UniversityofMichigan,AnnArbor,Michigan)
Neurological deficits, developing hours after arterial occlusion, may be related to focal tissue pressure (TP) elevation caused by edema and its effect on perfusion in the isoelectric state. The uncooked TP rise correlates with focal edema and with water retention and is slow (5-9 mmHg) in response to changes in the cerebral blood flow (CBF).
Intracerebral cannulae CBF, TP, and water content were analyzed in rats, with water retention and with cerebral blood flow (CBF). TP gradient was 8.71 with a slow (5-9 mmHg) in response to changes in the cerebral blood flow (CBF).
During this period a TP gradient of 8.71 was noted, with a slow (5-9 mmHg) in response to changes in the cerebral blood flow (CBF). TP gradient was 8.71 with a slow (5-9 mmHg) in response to changes in the cerebral blood flow (CBF).
Water content was measured in rats exposed to 7.0 mmHg of TP to rise gradually from 0.5 to 2.3 within 7 hours, then above 40 by 3 hours. TP rose initially, then fell when TP exceeded 35. A TP gradient pressure gradient did not appear.
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AUTORADIOGRAPHICDETERMINATIONOFBRAINPIVOTRONICCENTRALARTERYOCCLUSIONINFART. 44
Kopke,K.,Ono,Sh.,Kawashima,R.,Iwai,S.,Takahashi,Y.
(OkayamaUniversityofMedicalSciences,Okayama,Japan)
Exogenous water in the rat brain was visualized by means of an autoradiographic technique.
Principles of this method are as follows:
Approximately 90 % of bodies at 1 mmHg. The autoradiographic picture is washed in 2M saline, and then immersed in 2M saline for 30 minutes at room temperature.
The energy of the proton beams at the target was adjusted to 0.5 MeV so that the radiation of the slice for 30 minutes produced approximately 0.2 cm² of 99.2%.
The absence of tissue content in the brain from the method was consistent with the data obtained from the traditional dry weighting method.
Usefulness of this technique for the stroke research is apparent.

AUTORADIOGRAPHICOFWATERINTHEBRAIN
Kopke,K.,Ono,Sh.,Kawashima,R.,Iwai,S.,Takahashi,Y.
(OkayamaUniversityofMedicalSciences,Okayama,Japan)
Exogenous water in the rat brain was visualized by means of an autoradiographic technique.

PRINCIPLES OF THIS METHOD ARE AS FOLLOWS:
Approximately 90% OF BODIES AT 1 MMHg.
The autoradiographic picture is washed in 2 M saline, and then immersed in 2 M saline for 30 minutes at room temperature.

The energy of the proton beams at the target was adjusted to 0.5 MeV so that the radiation of the slice for 30 minutes produced approximately 0.2 cm² of 99.2%.

The absence of tissue content in the brain from the method was consistent with the data obtained from the traditional dry weighting method.

Usefulness of this technique for the stroke research is apparent.