was in excess of 5 days after surgery, CSF fibrinolytic showed no sharp overall increases, and autopsies revealed comparatively small masses of intracerebral paraffin (0–220 mg: average 65 mg). There was no clear distinction in ventricular paraffin between the two groups, the figures being as follows: 0–2,045 mg (average 360 mg) in dogs dying rapidly, and 0–1,260 mg (average 570 mg) in dogs living more than 5 days. Furthermore, in the case of sub-dural paraffin, a similar lack of distinction was apparent: 0–1,640 mg paraffin (average 330 mg) in dogs dying rapidly, and 0–1,282 mg (average 310 mg) in dogs living more than 5 days. The fibrinolytic activities of peripheral blood in general showed irregular changes with no overall trend, except that in the single dog dying within 1 hour there was a rapid increase until death.

On the basis of these results, it is concluded that the volume of paraffin actually injected intracerebrally (as opposed to intraventricularly or sub-durally) is probably the most important deciding factor in the initiation of increased CSF fibrinolytic activity and rapid death. The limiting amount for a high rate of rapid deaths would appear to be about 120 mg (0.17 c.c.). (This figure compares with a total approximate volume of brain tissue of 80 c.c.). Concerning the mechanisms to changes induced in the brain tissue, it is thought that the injection of paraffin (intracerebrally) may lead to local disturbance of circulation and have a close relationship to the release of brain tissue activator into the CSF, along with damage of the tissue itself.

References
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b-3. The Control of Antidiuretic Hormon (ADH) by Anterior Hypothalamus:

1. Unit Activity of the Supraoptic and Paraventricular Nuclei

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That there are many areas of the brain controlling the output of ADH is attested to by disturbances in appropriated ADH release with many diseases of the nervous system. Verney introduced one concept of the “osmoreceptor” in 1947 which had been supported by anatomical studies, and it is concerned that
the osmoreceptors are in the region of the supraoptic and paraventricular nuclei which are also the area where the ADH is formed.

Recently, the electrical activities of the supraoptic and adjacent brain areas have been studied. Changes in the electrical activity of slow potentials and electroencephalographic activity have been induced by changes in the osmorality of the blood. The most recent method has been the recording of unit activity in the region of the supraoptic nucleus. Changes in activity have been induced by changing osmorality of the blood, stimulation of peripheral and central structures, various drugs, and ablation of certain nervous tissue. It has been proposed that many factors releasing ADH also have an effect of increasing the activity in units situated in the supraoptic nucleus of the anterior hypothalamus.

The transoral approach for recording was performed in Flaxedil immobilized cats. The 3 M Kcl-filled micropipettes are introduced through the optic tracts after suitable exposure. The region of the supraoptic nucleus was reached after the disappearance of optic tract potential induced by photic stimulation. Osmo-sensitivities of the units is ascertained by the instillation of 1.5 ml of 4.5% or 9.0% saline into the ipsilateral carotid artery. 60 units out of 72 were checked for hypertonic saline, showing 14 nonresponsive units to hypertonic saline and 46 responsive (41 units: increased, 5 units: decreased).

The influence of stimulation of lateral hypothalamic nucleus on the anterior hypothalamic units was observed, showing the inhibitory effect during stimulation and slight rebound phenomena after stimulation. The injection of pitressin showed decreased unit discharges on supraoptic nucleus which indicate the decrease of ADH, on the other hand urine content decreased in spite of low ADH release.

The above findings indicate the feedback effect of ADH on the anterior hypothalamic units and the close correlation between supraoptic nucleus and lateral hypothalamus (drinking center). potentials had a positive-negative phase with a short latency. Then, stimulation

b-4. Evoked Potentials following Single Stimulation of the Ventrolateral Nucleus of the Thalamus in Man

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Single stimulation (1 c/sec.) of the ventrolateral nucleus of the thalamus has been performed on 41 cases of parkinsonism and technically satisfactory scalp records were obtained in 38 cases.

With lower voltage stimulation (usually 5–6 volts), the evoked potential appeared over the ipsilateral scalp, predominant in central area in 10 cases. The