The common denominator in the subjective reports of the experience of "floating" is a depression of sensory perception. Some identify the state by suddenly realizing that they have ceased to hear noises or that they have lost their awareness of the bed clothes or the position of their body. Others stress the appearance of visual fantasies or interruptions in the train of logical thought, but in all cases there is loss of awareness, particularly for immediate external stimuli. This transient depression of consciousness appears to be correlated with definite objective alterations in the electrical activity of the brain.

We may summarize the initial stages of sleep as follows:

A —*alpha:* at rest but awake.
B_1—*low voltage, alpha rhythm lost:* intermediate drowsy or "floating" state.
B_2—*low voltage, delta waves appearing:* intermediate, merging into sleep.
C —*spindles and moderate delta waves:* real sleep.

Two practical points are important for clinical electroencephalography. First, the drowsy state must be strictly avoided when determining the amount of alpha or of delta activity which is characteristic of a given subject. Second, the electrical patterns of early sleep strikingly resemble those which we have seen in some patients who are psychotic or otherwise abnormal. We must not be misled in diagnosis by an unsuspected dozing or "floating off" of the patient during a test. On the other hand, many abnormal conditions may prove to depend upon general modifications of function which are fundamentally similar to those of normal sleep. We are now investigating this possibility.

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TREATMENT OF THE R39 RAT SARCOMA

DURING the past year, a study has been made of some new methods of treating animal tumors. These experiments are not completed. However, they have led to another approach, the use of which has a definite influence on the growth of the tumors and which will be described in this communication. All the work was done with rats which had been inoculated with the R 39 sarcoma.

Iron, in various forms, had been employed in the other experiments. Because of the peculiar carbohydrate metabolizing qualities of malignant tumors, it was decided to administer a combination of iron with sugar. For this reason ferric gluconate was made. It was discovered that ferric gluconate alone had some power to impede the growth of tumors. However, only 12 of 36 animals so treated showed this response.

The principle of double injections which, as far as we know, has not been used before, was therefore tried. In view of the fact that some animal tumors take up injected dyes readily, it was planned to administer either neutral red or azo blue intraperitoneally, and to follow this injection with an intravenous one of ferric gluconate. The hypothesis was that the dye might make up a chemical bed in the tumor, by virtue of which the ferric gluconate might either be held in increased quantity, or be made more effective, in the tumor. Various dosages and changes in the intervals between the two injections were used. The results were striking. Of 64 animals so treated 47 (73 per cent.) showed that the growth of the tumor had been sharply influenced. In all 47 instances the tumor stopped growing; in roughly half of the cases it receded. Cessation of growth always occurred in close association with the administration of the ferric gluconate. For example, in 31 instances the dye was given daily for two or three days, the first ferric gluconate administration not being given until a day or two after the last dye injection. In the 23 cases of this group in which there was an effect, stoppage of growth occurred regularly within 24 hours of the giving of the ferric gluconate. Ferric gluconate has proved to be either non-toxic or only slightly so. There have been some deaths, but the facts indicate that these are not from the drug, which is ordinarily tolerated very well, but probably from the absorption of dead tissue products.

It should be emphasized that influence on growth, and not cure, is being discussed. In only a few instances did the tumor recede completely. Evidently, as indicated by histological study, most of the tumor cells were killed, but a few, especially around the large blood vessels, remained alive and grew again later. Microscopical sections showed profound and widespread changes in the tumors, with only occasional normal looking nests of cells. While histological changes in experimental tumors alone may not be very significant, it is felt that they have a decided significance in these experiments, not only because of the predictable and high frequency with which they occur massively in large tumors, but also because of their linkage with cessation of growth of the tumors.

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