

tional origin. Difficulty in the sexual sphere appears as a revealing index to a neurotic personality and can be looked upon in that light. Here again an indirect approach must be employed by the physician. A cautious attitude should be adopted with regard to marital maladjustments out of which situation symptoms often arise. Casual advice is unwarranted. Real psychotherapy is the opposite of simple reassurance; it tries to make the patient understand the meaning of his symptoms and the nature of his conflicts. It is a reeducational process and when properly done leads to sufficient emotional development so that the necessity for symptom formation is abolished. Every physician should be trained in psychological medicine so that he may be able to understand and manage the emotional problems that are presented to him daily, and to recognize when the problem is beyond him and requires major psychotherapy. Psychotherapy demands time and effort as well as expense, but is economical in the long run. (Hartford abstract.)

Goggio, A. F. THE MECHANISM OF CONTRE-COUP INJURY. [*J. Neurol. & Psychiat.*, 4: 11-22, Jan., 1941.]

The most common type of contre-coup injury is in the frontal and temporal poles following a blow to the occiput. Falls and vehicular accidents are particularly prone to this form of injury. The essential lesion is considered to be intracortical hemorrhage from ruptured small vessels. Various theories as to the causation of the injury are discussed and objections noted. The author presents his "pressure gradient" theory which treats the contre-coup as a problem in hydrodynamics. At the time of the actual injury there is set up a pressure gradient with the skull and with a maximum fall of pressure at the point of brain surface exactly opposite to the application of the blow, namely, in the contre-coup area. The pressure changes occur throughout all the intracranial contents coincidentally. But the blood vessels contain a fluid under pressure produced by the heart, an organ which is not affected by the changes occurring within the skull. As a result, it is possible that a pressure imbalance is produced momentarily and that the small blood vessels in the contre-coup area are distended and ruptured by a sudden release of external pressure without a compensatory fall in intravascular pressure. Another factor may be a rotary movement of the skull occurring often during a blow or fall and which may conceivably cause damage to the brain in areas where bony projections are present, as in the fronto-temporal region. (Schnap, Kings Park.)

Wallace, G. B., and Brodie, B. B. SOURCE OF CEREBROSPINAL FLUID. THE DISTRIBUTION OF BROMIDE AND IODIDE THROUGHOUT THE CENTRAL NERVOUS SYSTEM. [*J. Pharmacol.*, 70: 418-427, Dec., 1940.]

This paper shows that the anions pass first from the serum into the extracellular spaces in the brain and cord and thence into the cerebrospinal fluid, and that the choroid plexus, commonly considered the chief factor in determining cerebrospinal fluid composition, plays a minor role in this process. In experiments on dogs, under general anesthesia when operative pro-

cedures were necessary as in exposure of the cerebral subarachnoid membrane and ligation of the spinal cord, intravenous and cisternal injections of iodide were made. It was found that these anions, injected intravenously, distribute evenly in the extracellular fluid throughout all parts of the central nervous system. When injected into the cisterna magna, the distribution is uneven, being found in greater amounts in parts adjacent to the cistern, and in least amounts in parts most distant. When the spinal cord and its membranes are isolated by ligation separating them from the cistern, intravenous bromide enters the spinal fluid below the ligature. When iodide is injected intravenously it appears promptly and in equal concentrations in the extracellular brain fluid and the lateral ventricles, but takes longer to reach the same concentration in the cortical subarachnoid fluid, and still longer in the cisternal fluid. The authors conclude that anions enter the cerebrospinal fluid as readily from the capillaries in the brain substance as from the ventricular choroidea, passing from the plasma into a pericapillary and perineuronal space (the extracellular tissue space). They must first cross a barrier offering selective hindrance, then the perivascular spaces and into the subarachnoid fluid. As the passage of the anions may be identified with the origin of the cerebrospinal fluid, these experiments demonstrate the extra-ventricular source of this fluid.

Wechsler, I. S. THE TREATMENT OF AMYOTROPHIC LATERAL SCLEROSIS WITH VITAMIN E (TOCOPHEROLS). [*Am. Jl. M. Sc.*, 200: 765-778, Dec., 1940.]

The author's previous favorable impression of the therapeutic results of synthetic vitamin E in 2 cases of amyotrophic lateral sclerosis has been confirmed in a series of 30 cases treated subsequently with both synthetic and natural vitamin E. He presents a detailed report of 20 of these cases. His results are tabulated as follows: 2 recoveries, 4 marked improvements, 6 improved (of which 1 died from other causes and 1 relapsed), 3 cases arrested, 1 unchanged, 3 worse, and 1 death from bulbar involvement. The ages of the subjects ranged from 16 to over 50. Treatment consisted of administration of alpha-tocopherol acetate by mouth, at first 30, and later 50 mg. daily. In about one-half the cases, 50 mg. of tocopherol in oil were injected daily intramuscularly. All patients received vitamin-E-containing foods: lettuce, kale, and whole wheat bread (the richest), coarse cereals, butter, bananas, fresh corn, fresh peas, and beans, yolks of eggs, and fat beef. Since vitamin E is very fat soluble and the fat-soluble vitamin K is better absorbed if bile salts are added, two 5-gr. pills of bile salts were given daily. Iron (biliron) is recommended in case the bile causes diarrhea. Every patient received daily 2 teaspoonfuls of whole wheat germ oil (extracted). The whole vitamin B complex is also given. It is not clear whether intramuscular injection is superior to oral administration of vitamin E. In 2 instances stopping the administration of vitamin E was followed by a relapse, which was promptly reversed with readministration of vitamin E. These were the only 2 experiments in which the treatment was stopped purposely. The