

period. He was lethargic. The differential diagnosis was fully considered even that of hysteria though this condition seemed reasonably unlikely.

There is also a typical case of multiple sclerosis showing nystagmus, intention tremor, measured speech, absent abdominals, increased deep reflexes and retentive sphincters, the whole picture of sudden onset with lethargy, 71 cells in the spinal fluid and negative Wassermann. He made a partial recovery.

The last three cases, one showing complete internal and partial external ophthalmoplegia, following mumps. The other two showed ophthalmoplegia and facioplegia, one following a broncho-pneumonia and the other a mild fever of unknown origin. All were lethargic and recovery was slow and incomplete.

In summing up the clinical features, one finds that all the cases were unmistakably lethargic. The wide range of anatomical distribution showed that no distinct part of the central nervous system was spared. Cases of the polyneuritic form were observed but the writer preferred at this time not to include them in the present study. The laboratory studies though limited showed that in the majority of cases there was a mild leucocytosis with eosinophilia in the blood and a mild lymphocytic pleocytosis in the spinal fluid. In all the cases the Wassermann was negative in both blood and spinal fluids. What bacteriological studies were made proved negative. In nine out of the ten cases described there was a definite febrile period either preceding or concomittant, including "bad colds," mumps, broncho-pneumonia and a possible para-typhoid B. There were no deaths, and recovery was slow and incomplete in the majority of instances.

In conclusion, the writer states that encephalitis may occur as a complication or sequel to any infection. With encephalitis, an elastic term, diffuse brain involvement is expected and with it the naturally outstanding feature of lethargy. This much is true, he admits, that while the majority of cases which he studied resembled other well known diseases of the central nervous system they were atypical in some form, either in onset, clinical course, or outcome, but, clinically, they were encephalitis with lethargy. The writer concludes that while bearing in mind the possibility of there being distinct infectious diseases of the nervous system which escape detection because of the general similarity in their clinical manifestations to well recognized entities, the study of these cases does not aid in establishing lethargic encephalitis as a new clinical entity. [Author's abstract.]

Bassoe, P. EPIDEMIC ENCEPHALITIS. [Jour. A. M. A., Ap. 10, 1920.]

Since his last report of a number of cases of epidemic encephalitis, Bassoe has become convinced that the same unknown virus produces clinical forms in which lethargy and other common symptoms of the

characteristic "lethargic" form may be lacking. That it is the same disease is shown by the similarity in pathologic anatomy, the existence of transitional forms, and the occurrence of all these forms in the same community at the same time. Among the cases observed during the past winter, several presented severe symptoms of a general infection suggestive of typhoid fever, acute miliary tuberculosis or other acute infectious disease. The resemblance to severe, acute chorea was marked in other cases, verified by necropsy. Among new symptoms Bassoe, too, has observed the twitching of the abdominal muscles to which Thomas F. Reilly recently has called attention. Six detailed cases are given.

6. BRAIN.

Spielemeyer, W. THE CENTRAL CHANGES IN TYPHUS AND THEIR SIGNIFICANCE FOR THE HISTOPATHOLOGY OF THE BRAIN CORTEX. [*Zeitschr. f. d. ges. Neur. u. Psych.*, June, 1919, No. 1 and 2, Vol. 47.]

The author examined twelve cases of typhus and in the present article restricts himself to his findings in the central nervous system. Foci were scattered throughout the whole brain but seemed to have greater predilection for the gray substance. Beside the typical nodule like foci of Fraenkel there were other structures which the author calls atypical, rosette-like foci, bush-like interlacings, principally of the rod cells and the so-called glia stars, and glia cell rings around the vessels. The bush-like glia proliferations were confined wholly to the molecular zone of the cerebellum. In his histological examinations the author found no evidence confirmatory of the generally prevalent view that the formation of the foci in typhus is due to a primary disease of the walls of the vessels. He is not able to ascribe any rôle to the degeneration of the vessels in the pathogenesis of the disease. Even in the most fully developed foci the vessels were not perceptibly altered. The foci in the central organ are composed principally of proliferations of neuroglia and in most instances exclusively of this substance, although in some places there were elements of which the glial nature cannot be determined and these may possibly be of mesenchymal derivation. In the early stages of the formation of the foci leucocytes were observed and later lymphocytic elements. There were further diffuse changes in the nervous system in the form of plasma-cell infiltration of the vessels of the central tissue, deposits of cells in the pia mater and signs of decay in the nervous parenchyma. The accumulation of cells in the meninges seemed to have no relation, either in localization or character, with the foci in the nervous tissue; the most striking elements in the meninges were the macrophagi. The author calls attention to the significance of his findings for the general pathology of the nervous system. Typhus is only of interest to brain pathology because general histopathological symptoms manifest themselves in a very pronounced manner. The histo-