

index as to the septic or aseptic state of the fluid. The reappearance of the reducing power or as Weil or Pignot would state, the presence of sugar, however, in the course of a purulent meningitis is a favorable prognostic sign indicative of diminished infection.

Stern, A. POLIOMYELITIS IN THE ARMY. [Deut. m. Woch., Jan. 9, 1919.]

The author reports five cases of acute poliomyelitis occurring in the German army, although there was no epidemic among the children in the region where these cases occurred. However, the writer remarks that the coexistence of influenza should be given attention, all the more so because the coexistence of these epidemic diseases has already been noted. One of the patients had had the grippe six weeks before he developed the poliomyelitis. Stern also learned that two other of his patients came from a region where there had been a high mortality among hens.

Amoss, Taylor and Witherbee. EFFECTS OF ROENTGEN RAYS ON POLIOMYELITIS. [Jour. Exp. Med., Jan., 1919, J. A. M. A.]

In two series of the experiments here recorded the monkeys which had been repeatedly exposed to roentgen rays responded with typical acute poliomyelitis to an intracerebral inoculation of poliomyelitic virus filtrate, whereas, the normal control receiving the same dose showed no symptoms. In another series the roentgen-rayed animal came down with typical poliomyelitis after inoculation with three fourths of the dose which was not infective for the control. It has been demonstrated that roentgen rays diminished both the number of circulating lymphocytes and the resistance of the animal to the weak poliomyelitic virus. Whether the lowered resistance of the animals as the result of the treatment with roentgen rays is due to the reduction of circulating lymphocytes in each of the roentgen-rayed monkeys is not determined in these experiments. However, the great reduction in lymphocytes in human cases and in monkeys during the acute stage of experimental poliomyelitis and the gradual return of the cells to their former numbers during recovery strongly suggest a definite relation between these cells and one factor of resistance in poliomyelitis. On the other hand, the reduction in resistance by roentgen rays, while definite, is not sufficiently great to warrant the conclusion that we are dealing with major factors governing infection or noninfection. Another experiment in this paper deals with the survival of a subinfective dose of the virus in the normal monkey brain. A monkey receiving the subinfective dose of the virus was exposed to roentgen rays at twenty-eight days, another at fifteen days after injection, but neither animal showed symptoms of poliomyelitis. It is concluded that within this period the virus did not remain unchanged in the normal monkey brain. An attempt to reduce the immu-

nity in a monkey acquired by an attack of experimental poliomyelitis was unsuccessful.

Taylor, H. D. BLOOD COUNTS IN EXPERIMENTAL POLIOMYELITIS IN THE MONKEY. [Journal of Experimental Medicine, Jan., 1919.]

The author studied the type of change in the white cell count of the blood in monkeys in the following stages of experimental poliomyelitis: the incubation period, the acute stage, the stage of prostration, and of recovery, and compared it with that of normal monkeys and with that of animals which were inoculated with the virus of poliomyelitis, but did not succumb to the disease. The counts made during the course of typical acute experimental poliomyelitis varied from the normal. After injection with the virus, the lymphocytes are diminished at first, but between the fourth and sixth day of the incubation period are actually increased. During the first three days after the onset the lymphocytes are markedly decreased, and there is a rise in polymorphonuclear neutrophilic leucocytes. During prostration the lymphocytes remain low, the total polymorphonuclear neutrophilic leucocyte count returns to normal, but there remains a relative increase. During recovery, the cell count and relation again become normal.

Kuhn and Steiner. ETIOLOGY OF MULTIPLE SCLEROSIS. [Med. Klin., 1917, 13, 1007, Neur. Ctblatt., 1917, 36, p. 844.]

Nonne was one of the first observers to note that in some patients with multiple sclerosis with negative syphilitic anamnesis, a positive Wassermann had been found. Kuhn and Steiner think they have found a specific spirochete in this disease, and the subject of the underlying causative factors of disseminated sclerosis has received a considerable amount of attention in Germany since the publication of the experimental findings of Kuhn and Steiner. These authors inoculated guinea pigs, rabbits and other experimental animals with material obtained from the blood and cerebrospinal fluid of a number of patients suffering from rapidly progressive disseminated sclerosis. They found that within periods varying from three days to twelve weeks, and averaging six to seven weeks, nervous manifestations often appeared in the inoculated animals. Positive results were obtained with greatest regularity if the inoculations were made intraperitoneally in the case of guinea pigs and intraocularly in the case of rabbits. The nervous manifestations which developed in the inoculated animals were drowsiness, excitability, difficulty in getting about, and later rapidly increasing weakness and localized paralyses. From the material obtained from one patient suffering from disseminated sclerosis a set of four successful passages through guinea pigs was obtained; after each passage the severity of the illness in the animal increased. In animals successfully inoculated a spirochete was found collected into foci inside certain blood vessels, capillaries