CHAPTER IV.

SYPHILIS OF THE GENERAL NERVOUS SYSTEM.

In different places in our book, in the chapters on diseases of the brain as well as in those treating of affections of the spinal cord, we have had occasion to point out the *rôle* which syphilis plays as an ætiological factor in various diseases. We have also shown that tabes and the progressive paralysis of the insane are to be regarded as the main representatives of affections of the general nervous system depending upon syphilitic infection. It only remains, therefore, in the present chapter to add some general remarks to what has already been stated.

No part of the nervous system, whether of the brain or of the spinal cord, is exempt from the chance of becoming implicated in the syphilitic infection, and remembering how the blood-vessels are affected by syphilis this is easily understood. Clinically, it is especially interesting if we are able to recognize diseases of the cerebral cortex and symptoms—e. g., monoplegias—resulting therefrom, as syphilitic, but the corona radiata and the basal ganglia, the pons, the medulla oblongata, and the cerebellum, all may become the seat of syphilis, and syphilitic affections of the base of the brain are relatively common. In many cases it is difficult to make a certain diagnosis, especially if the patient denies the primary sore and no trace of it can be found, for the clinical symptoms, of course, are the same, whether the brain lesion depends upon syphilis or not.

Symptoms.—Among the manifold symptoms which occur in brain syphilis we may mention polyuria and polydipsia, which have been subjected to careful study (cf. lit.). If focal symptoms are present it is easier to make a diagnosis than in their absence. In the latter case it may sometimes be impossible to decide upon the diagnosis of brain syphilis; we may be dealing with a case of cerebral neurasthenia.

With reference to the spinal cord the matter is somewhat more simple, because syphilitic disease here, which does not implicate also the brain, as in tabes and general paralysis, is

rather rare. It is not a common thing to find disease of one system of fibres or disease of several systems combined depending upon syphilis, and the cases in which lateral sclerosis, for example, was attributed to this have been published as rarities. It is of pathological interest to note that the root bundles usually present a marked and extensive participation in the process. In a case reported by Siemerling (cf. lit.) there were gummatous growths of the pia, which, although they had extended into the substance of the cord, had not attacked any "system" in its whole extent, so that, as is often the case, the spinal symptoms here also were not at all prominent.

We can not assume that the spinal nerves, either motor or sensory, ever become diseased alone, but we must rather look upon their implication as a partial manifestation of a general affection. If in exceptional cases we find a neuritis of the sciatic or of the musculo-spiral nerve, etc., which we have to regard as of syphilitic origin, perhaps because it rapidly passes off under antisyphilitic treatment, the manifestations of cerebral and spinal syphilis have either existed previously and have not been recognized or their presence later has to be looked for.

Diagnosis.—The diagnosis is based first upon the history of the patient and the presence of signs of the primary sore. If these are established, it is relatively easy; if not, we must look for other signs to help us. Secondly, the other organs—for instance, the skin, the visible mucous membranes—all must be examined for the possible existence of syphilitic lesions. Repeated and careful search may sometimes clear up much that is obscure, although the patient's account may be imperfect. Thirdly, it must be remembered that the symptoms of cerebral syphilis are extremely changeable, and are rarely ever of long duration. To-day, matters may look as if the patient's life were in danger, while to-morrow he is apparently perfectly safe again. The rapidity with which the changes in the condition follow each other, just as in hysteria, the extraordinary circumstance that apoplectiform attacks occur in younger and epileptiform attacks in older persons, in doubtful cases are in favor of the diagnosis of syphilis of the nervous system. In every instance we shall do well to pay careful attention to the condition of the eye-muscles (Uhthoff, Arch. f. Ophthalm., 1893, 1) and the pupillary reaction; the latter may temporarily disappear and reappear; the same peculiarity may be found in the condition of the patellar reflexes, an anatomical explanation

for which has thus far not been arrived at. Finally, the therapeutic test is of some value, inasmuch as the successful antisyphilitic treatment makes the existence of syphilis almost certain, although a failure does not warrant the contrary conclusion.

Prognosis.—The prognosis must, above all, be influenced by the time which has elapsed since the primary infection and before the first appearance of the nervous symptoms. The longer this period of incubation the worse is the prognosis. According to my own experience, from five to nine years is the most common time. Occasionally the infection of the nervous system manifests itself earlier, and in quite exceptional instances two years, or even one year, after the primary lesion; but often the interval which elapses is longer than the time above given. Cases in which the spinal or cerebral symptoms did not appear till after twenty or twenty-five years I have never seen get well. The second question of importance is, how long the nervous symptoms have existed before energetic antisyphilitic treatment was commenced. Often as it remains without effect, a trial of it is still indicated if not more than two or four months have elapsed after their appearance. If they have existed for half a year or longer, nothing can be expected from any such treatment, and it need not, therefore, be begun. In such cases the prognosis, of course, is worse than in the others. Thirdly, a good deal depends upon the kind of symptoms by which the infection of the nervous system manifests itself. General symptoms, headache, vertigo, epileptiform attacks, allow, *cæteris paribus*, of a more favorable prognosis than focal symptoms, such as monoplegias, hemiplegias, and paralyses of certain nerves. The worst outlook is afforded by those instances in which the brain and the spinal cord are equally severely attacked, as in tabes and progressive paralysis of the insane.

Treatment.—The manner in which the treatment is to be conducted must be made to depend upon the individual case, the age, the nutrition of the patient, and so forth, and no rule applicable to all cases can be laid down. Only one remark, which has repeatedly been made before in this book, we wish here again to emphasize, namely, that if we have once decided upon adopting the antisyphilitic treatment we must do so energetically, giving iodide of potassium, one to six or eight grammes (grs. xv–℥ jss.–℥ ij) daily, in one or two doses in hot

milk, continued for from six to ten weeks, and inunctions of blue ointment, from three to five grammes (grs. xlv–lxxv) a day, continued for from four to six weeks. All necessary precautions are self-evident. Finally, we should not neglect to familiarize ourselves with the progress which has been made in the modern treatment of syphilis, and consider whether the subcutaneous use of mercury is advisable, and, if so, what the exact mode of its administration should be.

LITERATURE.

Oppenheim. Zur Kenntniss der syphilit. Erkrankungen des Centralnervensystems. Berliner klin. Wochenschr., 1889, 48.

Ziemssen. Syphilis des Nervensystems. Klin. Vortr., iv, November 3, 1888.

Warrer. British Med. Journ., September, 1888. (Two Cases of Brain-Syphilis in One Family.)

Jürgens. Berliner klin. Wochenschr., 1888, xxv, 22. (Syphilis of the Spinal Cord.)

Oppenheim. Berliner klin. Wochenschr., 1888, 53.

Siemerling. Arch. f. Psych. u. Nervenkh., 1888, xx, 1. (Congenital Syphilis of the Brain and Spinal Cord.)

Naunyn. Mittheilungen aus der medicinischen Klinik zu Königsberg. Leipzig, Vogel, 1888.

Siemerling. Arch. f. Psych., 1890, 1, 2.

Naunyn. Die Prognose der syphilit. Erkrankungen des Nervensystems, XIII. Wanderversammlung der südwestdeutschen Neurologen. Arch. f. Psych. u. Nervenkh., 1889, xx, 2.

Sänger. Zur Kenntniss der Nervenerkrankungen in der Frühperiode der Syphilis. Jahrb. d. Hamburger Staatskrankenanstalten, II. Jahrg., 1890.

Sachs, B. New York Med. Journ., Sept. 19, 1891.

Hutchinson, Jr. Syphilitic Disease of the Occipital Lobe with Perforation of Cranium. British Med. Journ., March 21, 1891.

Joffroy et Letienne. Contribution à l'étude de la syphilis cérébrale. Arch. de med. expérim. et d'anat. pathol., 1891, 3.

Schulz, R. Neurol. Centralbl., 1891, 19.

Goldflam. Rückenmarksyphilis. Wiener Klinik, 2, 93.

Gowers. Syphilis und Nervensystem. German by Lehfeldt, Berlin, Karger, 1893.

Cnopf (Nürnberg). Münch. med. Wochenschr., 1892, 11. (Case of Cerebral Syphilis.)

Pick. Zur Kenntniss der cerebro-spinalen Syphilis. Zeitschr. f. Heilkunde, 1892. 4, 5.

Nonne. Beiträge zur Kenntniss der syphilit. Erkrankungen des Rückenmarks. Hamburg, 1892.

Obermeier. Deutsche Zeitschr. f. Nervenhk., 1892, iii, 1–3. (Two Cases of Gummatous Meningitis.)

Gaykiewicz (Warsaw). Syphilis du système nerveux. Paris, Baillière, 1892.

Kowalewsky. Arch. f. Dermat. u. Syph., 1893.