

NEUROSES AND THE PREVALENCE OF SPIROCHÆTÆ. ARE THEY CONNECTED?

Nervous affections of all classes and degrees are commoner to-day than they were, say, twenty years ago. And with the increased prevalence of this form of disease we quite naturally find an increasing amount of study and research devoted to this particular subject. It is in the bacteriological laboratory that some of the most interesting, and apparently significant, facts have been discovered. Research work on the general prevalence of spirochætic infections in patients who may not be obviously suffering from venereal disease has led certain workers in bacteriology to systematically examine the blood of all patients with a history of an unstable nervous system, or the origin of whose ill-health appears obscure. The results of these researches can only be described as astonishing. Spirochætes, differing in no way from the typical form known as "pallida" (which has hitherto been considered almost diagnostic of syphilis), are found in a very large percentage of cases. These spirochætes can be easily observed under the ultra-microscope in an actively motile condition.

Cultures are easily grown on elective-agar. Rabbits inoculated with these pure cultures develop a gummatous tumour with soft caseous contents; or, with cultures of greater virulence, a chancre, containing numerous spirochætæ pallidæ, as well as atypical forms, is formed. These spirochætæ are *invariably* found in all cases where the Wasserman Reaction is positive; and in cases where the W. R. is negative Carl Spengler's method of examination usually reveals spirochætæ. What Spengler calls *körner* (or granules) and *ovoidea* are also frequently observable in specimens of blood, sputum, cerebro-spinal fluid, &c., treated according to his methods.

In this country the researches of Dr. Mott, amongst others, must be mentioned as confirming the fact that syphilis is a very common cause of mental and nervous derangement. In his Cavendish Lecture Dr. Mott states that spirochætæ have been found in 66 per cent. of the brains of persons dying from general paralysis, and that in many of these brains the spirochætæ were more numerous than in the lesions of the primary sore. In cases of Tabes, Dr. Mott says the cerebro-spinal fluid gives a positive reaction in 75 per cent. of the cases. Between general paralysis of the insane and

"border line" cases of nervous origin is a wide gulf, but the predisposing cause appears the same—*i.e.*, spirochætic infection, hereditary or acquired. It is well known that children suffering from congenital syphilis are liable to have all kinds of nervous diseases; they suffer from nervous instability, in short. If in course of time such children themselves become parents, is it not highly probable that the toxins of the syphilitic infection will persist, and cause various neuroses of the offspring? That syphilis is one of the most persistent "race poisons" no one can deny, and it seems hardly a matter for surprise to find spirochætæ so frequently present in patients suffering from degenerate and unstable nervous systems. The fact that these cases improve under treatment with a spirochætic I.K. appears significant.

I.K., it may be noted, merely means *Immunkörper*, or Immune Substances. It is a highly diluted, slightly acidified preparation of blood, rich in the anti-bodies or immune substances of the particular disease which it is designed to treat.

Whether the presence of numerous spirochætæ in these nerve cases, and their subsequent improvement under treatment with spirochætic I.K., may be taken as diagnostic of latent syphilis, or as a mere coincidence, time alone can prove.

GLADYS TATHAM.

EPIDEMIC GONORRHOEA IN HOSPITALS.

In view of the seriousness of this problem, the department of health in New York City inaugurated several years ago bacteriological and clinical investigations to determine, as far as possible, the prevalence of gonorrhœa and to inaugurate measures to prevent its spread through the wards. The following routine is now observed in the hospitals of the department of health:—

Material for bacteriological examinations is taken from every female patient on admission to the hospital, and sent to the research laboratory of the department of health, from which a written report is made to the resident physician on the following day. Patients without clinical evidence of the disease are immediately sent to "clean" wards; others to "observation" wards, to await the result of the laboratory examination. If the latter shows the undoubted presence of the disease, the patients are immediately transferred to special wards for infected cases, to remain during their entire stay in the

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