Notes on Eight Cases of Neuro-Syphilis.

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The following are notes on the salient features of eight cases of neuro-syphilis, from the records of this hospital for the last six months. They exhibit no particular feature in common, but illustrate rather the variety of the clinical picture due to a syphilitic infection of the brain, cord, or meninges. Special reference is made to the laboratory findings as regards both blood and cerebrospinal fluid. The notes on treatment, so far as they are available to date, indicate that certain of these cases are strikingly amenable to anti-syphilitic measures; this applies to the meningeal and meningo-vascular lesions, but not to the cases of frank tabes or general paresis, in which degeneration of nervous tissue has occurred.

The classification adopted is as follows:—

(1) *Syphilitic meningitis*.—A chronic inflammation of the meninges, having its origin in the small blood vessels. It is usually basal, and the symptoms are entirely referable to the meningitis.

(2) *Meningo-vascular syphilis*.—A syphilitic meningitis together with a syphilitic arteritis affecting the larger vessels, and causing vascular paralysis (thrombosis, etc.). (3) *The so-called "parasyphilitic infections"*: (a) Tabes dorsalis; (b) general paralysis.—In these the syphilitic virus has chiefly attacked the nerve tissue itself, in the cord or the brain; an associated meningitis is often present.

CASE I.—J. W. S., male, æt. 38. Admitted 21st January, 1924, complaining of headache and difficulty of speech. Primary infection denied. Tertiary symptoms began eight to ten months ago with occipital headache, difficulty in articulation, intermittent motor aphasia and some tremor of hands. These were all attributed to an injury—a blow on the back of the head.

Present condition.—He shows considerable mental vagueness, his memory is imperfect and he says that "sometimes he can think and sometimes he can't." His speech is slow, laboured and indistinct, and often wandering and irrelevant. He has delusions of poisoning and castration, and also to the effect that someone is interfering with his wife. He resists the attendants violently. Physical examination shows tremor of lips and tongue, with slow, hesitant, indistinct speech; dullness of hearing on the left side. Eyes react to light and his fundi are normal. Deep reflexes are normal.

Laboratory findings.—Wasserman reaction blood serum, strongly positive. Spinal fluid, pleocytosis—28 cells per cm.m. Pandy's test for globulin strongly positive. Wassermann reaction, strongly positive.

Diagnosis.—Early general paresis.

The diagnosis of this case, from a purely clinical point of view, was complicated by the history of injury, for which compensation had been claimed, and by the fact that the knee jerks and eye reflexes were normal. It was not established until the serological and cytological findings were obtained. The case was one of early G.P.I., and since his transfer to the mental hospital, the typical physical and mental signs have developed.

CASE II.—J. R., male, æt. 49.—Admitted 12th May, 1924, for observation of his mental condition. Primary infection in Egypt in 1915. Treatment was commenced one week afterwards and since then he has had several courses of N.A.B. and mercury. During the two years he has been under treatment at the Outpatients' Department here, his Wassermann reaction has remained persistently positive. He had been told that he had valvular disease of the heart, and has suffered from occasional attacks of giddiness, shortness of breath and precordial pain. Since December his friends had noticed marked mental changes in the patient. He was profane in the presence of women, forgot things, readily, and called at the Post Office for £200 which was not there.

Present condition.—The patient is garrulous and in a state of exaltation, he talks freely about financial arrangements and says he is going for a motor tour of the South Island. He is careless in his physical habits and exposes himself in the ward. On physical examination there is no Rombergism, his pupils are equal and react to light. Knee jerks present and not exaggerated. Tongue shows no tremor. The other systems appear normal.

Laboratory findings.—Wassermann reaction

in the blood serum is strongly positive, (44444) on Kolmer's quantitative scale. Spinal fluid shows a marked pleocytosis—53 cells per cm.m. Pandy's test for globulin double plus. W.R. double plus.

Diagnosis.—Early general paresis.

The mental change in this patient is typical of early G.P.I., but as yet no physical signs have appeared. It is interesting to note that he received intensive anti-syphilitic treatment one week after the primary lesion appeared, and since then has received several further courses of arsenic and mercury. Cases in which in spite of treatment, the Wassermann reaction remains consistently and strongly positive, appear to be more likely than others to develop neuro-syphilis.

CASE III.—R. D., male, æt. 32. Admitted 8th April 1924, complaining of sleeplessness and absent-mindedness. Primary infection is denied. For the past six months the patient's friends have noticed some mental change in him. He is "queer" and inattentive at times. He forgets with undue readiness, and has fits of absent-mindedness.

Present condition.—The patient has a somewhat helpless, vacant look, and in manner and speech appears rather simple, but shows no very definite abnormal symptom. On physical examination no signs can be elicited which suggest any lesion of the nervous system.

Laboratory findings.—Wassermann reaction in the blood serum is strongly positive. Spinal fluid shows a considerable pleocytosis, 58 cells per cm.m. Pandy double plus. Wassermann reaction strongly positive.

Diagnosis.—Cerebral syphilis.

This patient shows only a slight degree of mental change, in the direction of forgetfulness and absent-mindedness, and no physical signs whatever. The discovery on routine examination of a positive blood Wassermann, suggested a serological examination of his spinal fluid, with the above findings. These mark the case as one of cerebral syphilis, a meningitis is undoubtedly present, but it is uncertain as yet how far the nerve cells are involved.

CASE IV.—R. H., male, æt. 40. Admitted 18th September, 1923, complaining of giddiness, nausea and vomiting, and headache. Primary infection unknown. The above symptoms appeared suddenly six months ago and have recurred fortnightly or more frequently since. He has also noticed failing eyesight and drowsiness.

Present condition.—While in hospital patient had an attack of mental derangement with hallucinations of sight and hearing, and a strongly expressed desire to commit suicide. Physical examination shows impaired function of V. and VII. on the left side. There is slight nystagmus on looking to the left. He is slightly deaf on the left side. His pupils react normally. Deep reflexes are exaggerated. Jaw jerk marked. Plantar response markedly extensor on both sides. Rombergism present.

Laboratory findings.—Wassermann reaction blood strongly positive. Spinal fluid, Wassermann reaction strongly positive.

Diagnosis.—Syphilitic meningitis.