

tiating a papulosquamous from a tuberculosquamous lesion and so on; but as Neisser says, the whole subject had come to a standstill as regards modern scientific advances.¹⁵ In 1903, however, Metchnikoff transmitted the disease to apes and thus started a movement which eventually robbed the disease of its mystery and gave it its place among the infectious diseases and threw it open to work along modern lines. In rapid succession came the discovery of the cause in 1905, a means of serum diagnosis in 1906, and a method of specific treatment in 1910. All these contributions came from the laboratory and not from syphilographers, and they form interdependent parts in the modern conception of the disease, which is radically different from many of the older conceptions. There is no occasion for quarrel with the older methods unless the issue is forced, and while salvarsan has not fulfilled all expectations, the day of modern achievements is young and the future of syphilis belongs to those who follow the disease along the lines laid down by Metchnikoff, Schaudinn, Wassermann, Noguchi and Ehrlich.

SUBCUTANEOUS INJECTIONS OF SALVARSAN IN GENERAL PARESIS

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In selecting the following cases of general paresis for treatment with salvarsan, those patients were taken who, by physical and mental examination, showed as near as possible the earliest symptoms of mental and physical deterioration. As is the rule in state hospitals, the patients are those who in normal life have become, through the ravages of this much-dreaded and incurable disease, incapacitated and unable to keep the home together or provide for their own necessities.

CASE 1.—Patient.—F. W., a man aged 31, married, a bill-poster, was admitted to hospital, Aug. 9, 1911. Family history was negative. Previous health good up to about one year previously when he became nervous and slightly irrational at times. Patient gave a specific history of about six years' duration.

Physical Examination.—No physical defects; well-nourished. Alimentary and respiratory systems normal. Urinalysis negative. Heart normal; arteries slightly hardened. Pulse-rate 102, regular but weak. Eyes and ears normal. No Argyll-Robertson pupil; no aphasia or incoherence. Patellar reflex decreased; plantar normal. No ankle-clonus; gait steady and ataxia absent. Mental condition normal except for enfeebled memory; handwriting distinct and letters well formed.

Treatment and Results.—Aug. 16, 1911, the Wassermann reaction was made and found to be positive. August 19, 0.6 gm. salvarsan was given subcutaneously. Patient was confined to bed for two days following injection. September 6, tremor of the hands developed and he became irritable. October 4, the Wassermann reaction was made again and was positive. The patient had somewhat improved up to this time but began to fail again, tremor reappearing and paretic speech developing with appearance of slight aphasia. Salvarsan, 0.6 gm., was again given subcutaneously October 20 and the patient was confined to bed for two days following. From this time on he steadily failed mentally and physically, convulsions appearing on November 27. The Wassermann reaction was made on December 6 and found to be still positive. The patient failed steadily and died during convulsion, Dec. 10, 1911.

CASE 2.—Patient.—S. E. W., a man aged 40, married, painter, was admitted to hospital April 11, 1911. The family history was negative. Previous health had been good up to about

one year previously when he had financial losses and became greatly worried. March 25, 1911, he became suddenly violent for a few days. On admission to hospital he acknowledged syphilis of about eight years' duration.

Physical Examination.—No physical defects; patient well nourished. Alimentary, respiratory and circulatory systems were normal; urinalysis negative. Eyes and ears normal; no Argyll-Robertson pupil. No aphasia, but slight incoherence. Patellar reflex absent; plantar reflex and ankle-clonus absent; pupillary reflex reduced. Gait steady; no ataxia. Memory and logical powers somewhat enfeebled; handwriting distinct and letters well formed.

Treatment and Results.—May 12, 1911, the Wassermann reaction was positive. May 23, 1911, 0.6 gm. salvarsan was injected subcutaneously. The patient was slightly ill for two days. From this time on he began to decline mentally and physically. June 13, 1911, he lost control of the sphincter muscles. June 19 he had several convulsions. Failed steadily mentally and physically till September, when improvement set in physically. December 20, the Wassermann reaction was found to be positive, after which time he was confined to his bed, having numerous convulsions and failing rapidly mentally and physically, dying Feb. 2, 1912.

CASE 3.—Patient.—E. L., a man aged 38, single, laborer, was admitted to hospital Jan. 3, 1911. Family history was negative. Previous health had been fair up to ten days before admission when he became suddenly unbalanced mentally. Supposed cause of attack was given as alcohol and cigarettes.

Physical Examination.—No physical defects; patient in fair state of general health. Alimentary and respiratory systems normal; heart defective and arteries hardened. Urinalysis negative; eyes and ears normal. No Argyll-Robertson pupil; voice paretic. Slight incoherence; no aphasia. Patellar reflex exaggerated; plantar and pupillary reflexes normal; no ankle-clonus. Gait steady but slight ataxia present. Poor memory and logical powers; handwriting characteristic paretic type.

Treatment and Results.—Jan. 4, 1911, Wassermann reaction was positive. Feb. 3, 1911, salvarsan 0.6 gm. was injected subcutaneously. The patient improved slightly mentally following this. Wassermann reaction, repeated March 7, 1911, was positive. He was reinjected with salvarsan April 12, 1911, and improved physically after this second injection. June 3, Wassermann reaction was still positive. From this time on to the present (Dec. 28, 1911), his mental condition has remained unchanged and his health is good. He is in the second stage of paresis.

CASE 4.—Patient.—C. M. L., a man aged 42, single, clerk, was admitted to hospital Nov. 15, 1910. He has one brother in hospital under treatment. The patient's previous health had been good until March, 1910, when he became deranged mentally. Supposed cause of attack was given as alcohol.

Physical Examination.—No physical defects; patient well nourished. Alimentary, respiratory and circulatory systems normal, except slight tachycardia. Urinalysis negative. Eyes normal; ears ill-formed. No Argyll-Robertson pupil. Voice normal; no aphasia; slight incoherence. Patellar and plantar reflexes normal; ankle-clonus absent; pupillary reflex greatly reduced. Gait steady and no ataxia present. Poor memory and logical powers. Characteristic paretic type of handwriting.

Treatment and Results.—Wassermann reaction was positive on Dec. 16, 1910. On Jan. 27, 1911, salvarsan 0.6 gm. was injected subcutaneously. Slight improvement mentally and physically followed. Wassermann reaction was positive on February 11. The patient was rapidly improving and on June 3, 1911, Wassermann reaction was still found to be positive. The improvement continued until the first week in August, when the patient experienced a sudden change for the worse, becoming noisy and destructive. He declined rapidly mentally and physically until present time (Dec. 28, 1911). He is now quieter and seems to be again slightly improving mentally. His health is fairly good.

CASE 5.—Patient.—W. V. L., a man aged 40, married, a drug clerk, was admitted to hospital Nov. 10, 1910. He is a brother of patient in Case 4. Previous health was good except when

15. Neisser: Die experimentelle Syphilisforschung nach ihrem gegenwärtigen Stande, 1906.

28 years old when he was here in the hospital for six months. The cause of the present attack is unknown.

Physical Examination.—No physical defects; general health fair. Respiratory system normal; stomach in poor condition; heart weak. Urinalysis negative. Eyes and ears normal; no Argyll-Robertson pupil. Voice fair; slight incoherence but no aphasia. Patellar reflex slightly reduced; plantar normal, pupillary reduced. Ankle-clonus absent; gait unsteady and ataxia present. Poor memory and logical powers; parietic type of handwriting.

Treatment and Results.—The Wassermann reaction made Nov. 14, 1910, was positive. The patient was restless and erratic from the time of admittance till Jan. 17, 1911, when 0.6 gm. salvarsan was injected subcutaneously. He began to improve from this time, gaining in flesh and becoming more rational. Improvement continued until about the middle of February, when there was a sudden change for the worse and he failed rapidly. His condition at that time was about the same as it was before the injection. He has failed slowly but steadily since then and is at present (Dec. 28, 1911) in the third stage of paresis.

CASE 6.—Patient.—A. S. S., a man aged 37, single, merchant, was admitted to hospital Oct. 25, 1910. Family history was negative and patient's previous health had been good. The cause of the present trouble was given as syphilis.

Physical Examination.—No physical defects; general health fair. Alimentary, respiratory and circulatory systems normal. Urinalysis negative. Eyes normal; ears large and flat; no Argyll-Robertson pupil. Voice fair; slight incoherence; no aphasia. Patellar reflex slightly reduced; plantar and pupillary reflexes reduced. Ankle-clonus present in right. Gait slightly unsteady; slight ataxia. Poor memory and logical powers; handwriting clear and letters distinct.

Treatment and Results.—This patient was under treatment for a few months before admittance to the hospital. Wassermann reaction was positive in March, 1910. The patient was placed on mercurial treatment and on Oct. 15, 1910, the Wassermann reaction was negative. Dec. 6, 1910, after entering the hospital, the Wassermann reaction was made and found to be positive. The patient's condition remained unchanged; salvarsan was injected April 4, 1911. He improved somewhat physically following the injection and on June 3, 1911, the Wassermann was found to be still positive. June 20, he was reinjected with 0.6 gm. salvarsan. He slowly declined mentally and physically from this time on. Necrosis set in at the seat of the last injection and a discharge from it was present until the middle of November, 1911, when it finally ceased. The Wassermann reaction was again positive Dec. 11, 1911. At present (December, 1911) the patient is slowly failing mentally and physically.

CASE 7.—Patient.—R. C., a man aged 34, married, a farmer, was admitted to the hospital May 15, 1909. Family history shows one brother insane. Patient's habits had been good. Duration of attack was about one year. Cause of trouble was given as worry.

Physical Examination.—No physical defects; general health good. Alimentary, respiratory and circulatory systems were normal. Urinalysis negative. Eyes and ears normal; no Argyll-Robertson pupil. Voice good; slight aphasia and incoherence. Patellar reflex increased; plantar absent; no ankle-clonus; pupillary reflex greatly reduced. Gait steady; very slight ataxia. Poor memory and logical powers; depression.

Treatment and Results.—From time of admittance on, the patient was disturbed and confused mentally a greater portion of the time. His general health remained good. Dec. 20, 1910, the Wassermann reaction was positive and on April 27 the patient was injected with salvarsan. A mental improvement followed and he became brighter and more rational. His general health remained good. June 5, 1911, the Wassermann reaction was found to be negative. At present (December, 1911) the patient's health is good. His mind, however, is failing slowly and he is confused and talkative at times.

CASE 8.—Patient.—A. M., a man aged 43, widower, salesman, was admitted to hospital March 30, 1909. Family history was negative. Habits of patient were poor; he was dissipated and gave a specific history of twenty years' duration.

Physical Examination.—No physical defects. Syphilitic scars on chest. Health good. Alimentary, respiratory and circulatory systems were normal. Urinalysis negative. Eyes and ears normal; no Argyll-Robertson pupil. Voice fair; no aphasia; slight incoherence. Patellar reflex normal; plantar reduced; no ankle-clonus; pupillary reflex reduced. Gait steady; slight ataxia. Poor memory and logical powers; exalted.

Treatment and Results.—From the time of admittance the patient was very delusional, restless and erratic; exalted most of the time. General health remained fairly good. Oct. 21, 1910, the Wassermann reaction was positive. Feb. 14, 1911, salvarsan, 0.6 gm., was injected subcutaneously. Marked improvement followed, health becoming better and mental condition brighter. The Wassermann reaction, March 7, 1911, was found to be negative. Health remained good and mental condition somewhat better. The Wassermann reaction was again taken Dec. 11, 1911, and was positive. At present (December, 1911) the patient is slightly confused at times and somewhat exalted, and is slowly declining mentally and physically.

The results obtained as shown in the foregoing cases are far from encouraging any hope for benefit in this disease by the subcutaneous method of administration of salvarsan. In fact, if these few cases are to be taken as examples of its action on general paresis, it is far more humane and will grant the patient a longer lease on life to dispense with it as a mode of treatment. It seems to have a tendency, as in the iodid and mercurial treatment, to aggravate the symptoms and hasten the ultimate end. From past and present results obtained in the treatment of general paresis there is, as I see it, but one method to stamp out this disease, and that is by prophylaxis. The law should require that each and every case of active syphilis coming under a physician's care should be treated by the mercurial method or by salvarsan until the Wassermann reaction becomes negative and remains so for at least one year.

I wish to express my indebtedness to Dr. H. P. Mills, who, in performing the Wassermann reactions and administering the salvarsan in these cases, made this paper possible.

HEPATOPTOSIS AND HEPATOPEXY

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REPORT OF CASE AND OPERATIVE METHOD. TABULATION OF HEPATOPEXIES

The condition of liver prolapse (hepatoptosis, *Wanderleber*, *hepar mobile*, or *migrans*, *Hépatoptose totale*) was discovered by Heister,¹ in 1754, on the dissecting table; but not until 1886 was this interesting hepatic malposition brought to general attention, through its clinical description by Cantani.²

The priority of its operative remedy belongs to Billroth, who, in 1884, performed the first hepatopexy in a case of partial hepatoptosis. The first operation for complete prolapse was done by Michle, Nov. 17, 1887.

Since then, about sixty-six hepatopexies have been performed; of these only four in this country.

Ferrier and Auvray,³ and especially Boettcher,⁴ in splendid articles, describe the condition and report cases up to 1900. Boettcher collected forty-five cases, of which twenty-one were complete dislocations.

1. Heister: *Acta Phys. med. naturæ Curiosorum*, Nuremberg, 1754.

2. Cantani: *Caso di fegata ambulante*, Ann. Univ. di Med. Milano, 1886.

3. Ferrier and Auvray: *Rev. de Chir.*, 1897, Nos. 8 and 9.

4. Boettcher: *Deutsch. Ztschr. f. Chir.*, 1900, lvi, 252.