

or a material resembling pus may be found collected in one or several cavities. Hypertrophied portions of connective tissue, in a state of fatty degeneration, have been encountered in the thymus by Lehmann.¹

Thus it would seem that the thymus, like most other internal organs, is subject to two forms of syphilitic attack: a diffuse parenchymatous inflammation with connective-tissue hyperplasia, going on, it would seem, to softening, and gummy tumor, also softening and forming a cavity full of puriform fluid, but not true pus.

SYPHILIS OF THE GENITO-URINARY SYSTEM.

Symptoms and lesions due to syphilis of the different portions of the genito-urinary system have been described, in connection with these organs, in the first part of this work. Attention need only be directed to the great frequency of syphilitic disease of the testicle (p. 432); to the liability of mistaking subcutaneous gummy tumor of the scrotum for disease of the testis; to the occasional occurrence of tubercular patches of eruption, or gummy tumor, upon the urethral mucous membrane, giving rise to a gleet discharge, and possibly symptoms of stricture, both removable by the iodide of potassium; and, finally, to the occasional appearance of renal symptoms, due to syphilis (p. 380), and to the rare occurrence of gummy tumor of the suprarenal capsules, as a possible cause of that peculiar bronzing of the skin known as Addison's disease.

CHAPTER XII.

SYPHILIS OF THE NERVOUS SYSTEM.

The Lesions: Symptoms, Prognosis, Treatment.—General Characteristics of Nervous Symptoms, in all Cases.—Syphilis of the Brain.—Syphilis of the Cord.—Syphilis of Special Nerves.

THAT syphilis may produce textural changes in the nervous centres is now universally admitted. Numerous and exhaustive essays and monographs have been written on the subject, and much is yet to be learned. Space allows only an outline of the subject to be given here.²

¹ *Wurzbürger Medicin. Zeitschrift*, 1863, vol. iv., p. 7.

² Among those who have written most ably on this subject, may be cited: Yvaren, "Métamorphoses de la Syphilis," Paris, 1854; Thomas Reade, *Dublin Quarterly*, 1857—later, London, 1867; Lagneau fils, "Maladies Syphilitiques du Système Nerveux," Paris, 1860; Gros et Lancereaux, "Maladies Nerveuses Syphilitiques," Paris, 1861; Zambaco, "Des Affections Nerveuses Syphilitiques," Paris, 1862; Wagner, "Archiv für Heilkunde," vol. iv., 1863; Virchow, "Die Krankhaften Geschwülste," vol. ii., Berlin, 1864-'65; Meyer, "Constitutionnelle Syphilis des Gehirns;" "Allgem. Zeitschrift für Psychiatrie," vol. xviii., p. 287; Ricord, Beaumés, Ladriette de la Chanière, Zeissl, Braus, and very many others.

In a short study of "Syphilis of the Nervous System," published by the authors of this treatise, in the *New York Medical Journal*, November, 1870, based upon an analysis

Syphilis occasions nervous symptoms in four ways:

1. By lesions of the bony envelopes, cranium, vertebral column.
2. By lesions of the enveloping membranes; dura mater, arachnoid, pia mater.
3. By lesions of the substance of the brain and cord; diffuse parenchymatous inflammation, or gummy tumor.
4. In some way not yet thoroughly explained, probably congestive, where no appreciable lesions are found after death. Syphilis of the brain or the cord, *sine materiâ*, as it is called.

1. LESIONS OF THE BONY ENVELOPES.—The bones of the cranium are particularly liable to disease in bad cases of tertiary syphilis, in the shape of dry caries, nodes, necrosis, etc. If these lesions affect only the outer table and the diploë, the functions of the brain are not disturbed; but, if the inner table be involved, as it not unfrequently is, an internal node—by pressure—or a gummy deposit, or caries, involving the dura mater in disease, is fully competent to occasion paralysis, convulsions, and disturbances of function of the most varied character. The same remarks hold true of the bony envelope of the spinal cord, though here bone-lesions are far less common than in the skull. Again, periosteal thickenings or disease of bone, about the narrow canals through which nerves emerge, are accompanied by loss of function of the nerve, as facial paralysis from pressure of the seventh nerve, neuralgia in any of the branches of the fifth pair.

2. LESIONS OF THE MEMBRANES OF THE BRAIN AND CORD.—These are of two kinds (both far more common for the brain than for the cord):

- (a.) Pachymeningitis.
- (b.) Gummy tumor.

(a.) *Pachymeningitis*.—Syphilitic pachymeningitis is found most commonly over the convex surfaces of the hemispheres, or at the anterior portion of their base, in the region of the sella turcica. It consists of a diffuse thickening of the dura mater, of the outer layer of the membrane (endocranitis), chiefly in connection with bony lesions; of the whole thickness of the membrane; or, mainly of the internal layer, usually coinciding with alternations of the pia mater and brain-substance. On the surface, or in the thickness of the dense, adherent, roughened, injected membrane are usually found yellow, cheesy, new formations, spread out in layers, or circumscribed as tumors, varying from the size of a small shot to that of a nut, slightly or not at all vascular, soft and gelatinous, or tough and consisting of gummy deposit, more or less altered by organization or fatty metamorphosis. Wagner has seen pachymeningitis of the falx cerebri. Occasionally, but less often, the pia

of thirty-four personal cases observed in private practice, most of the clinical views to be brought out in what follows were elucidated. A careful study of nearly fifty new cases met in private practice, during the last three and a half years, has served to extend and fully confirm the conclusion reached in 1870.

mater and arachnoid are alone affected; they often are so in connection with disease of the dura mater.

(b.) *Gummy Tumor*.—Gummy tumor of the meninges occurs in connection with pachymeningitis as the infiltration or tumor of yellow matter above described, the deposit occurring above, within, or beneath the dura mater, or under the arachnoid in the pia and brain. The changes due to syphilis occurring in the membranes of the cord are precisely similar to those described for the brain—a diffuse thickening with deposit of gummy material, infiltrated or in circumscribed masses.

3. LESIONS OF THE SUBSTANCE OF THE BRAIN AND CORD.—These occur in the brain in two forms:

(a.) Diffuse syphilitic encephalitis.

(b.) Gummy tumor.

(a.) *Syphilitic Encephalitis*.—This affection is a parenchymatous inflammation characterized by a diffuse new formation of cells in the connective tissue of the brain. A large extent of substance may be involved, or only a limited portion. Syphilitic encephalitis is often described as softening or as induration. Both forms occur separately, or combined. The newly-formed connective tissue contracts, occasioning sclérosis, and such a sclérosis may break down centrally, or soften in totality.

Local softenings of the brain may be occasioned in syphilis by the obliteration of the cavity of an artery by gummy deposit in its walls, and consequent cutting off of the supply of blood from a part, acting in the same way as an embolus; but, as a rule, as Lancereaux observes, softening of the brain due to syphilitic encephalitis may be distinguished from softening dependent on arterial obliteration, by the absence in the latter of any product of new formation. The softening in syphilitic encephalitis is due to the fatty metamorphosis of the newly-formed tissue.

(b.) *Gummy Tumor*.—Gummy tumors of the brain-substance are rare. They occur in the cerebrum and cerebellum, chiefly toward the periphery of the cerebrum, in the anterior and posterior lobes. They are found of varying sizes, single or grouped, nearly always surrounded, whether single or multiple, by a dense fibrous envelope. They are white, or yellow in color, of consistence either firm, cartilaginous, or fibrous, or soft, liquefied or cheesy, depending upon their age and greater or less degree of fatty degeneration. Little masses of proliferated connective tissue are sometimes found along the course of the vessels. Gummy tumors are subject to the same retrogressive metamorphosis in the brain as elsewhere. They soften, and may become totally absorbed, leaving dense fibrous cicatrices behind; they may calcify, or finally, as shown by Lancereaux, the tumor may be absorbed, leaving the fibrous envelope permanently patulous as a cyst, containing a serous fluid, the whole surrounded or not by softening. Such cysts are distinguishable

from cysts the result of apoplectic effusion, in that the walls of the latter are impregnated with the coloring-matter of the blood in an amorphous or crystalline state, and from the result of infarction, by the condition of the arteries. The lesions of the substance of the cord, far less frequent than those of the brain, are yet anatomically identical with them: sclérosis, softening, gummy tumor.

It must not be forgotten, in connection with the brain-lesions due to syphilis, that local effusions of blood from previously-diseased vessels in the brain, or in the cord, are often the immediate cause of the startling symptoms appearing suddenly during the course of the disease. The plugging up of an artery, from syphilitic disease of its coat, often also occasions the sudden appearance of symptoms.

4. SYPHILIS OF THE BRAIN AND CORD, *sine materia*.—Cases of nervous disease with the most various symptoms are found recorded in all the monographs on nervous syphilis where the symptoms, usually at one time yielding partially or entirely to anti-syphilitic treatment, have by aggravation or relapse gone on to the destruction of the patient. In many cases of this nature men of undoubted ability have failed absolutely to find any trace of disease, present or antecedent, either in the brain, its arteries, its membranes, or the bones surrounding it. In other words, the nervous centres seemed perfectly sound, and that, too, when the nervous symptoms preceding death had been of the most serious character, hemiplegia,¹ perhaps with paraplegia,² aphasia,³ dementia,⁴ mania,⁴ general paralysis,² symptoms of softening,⁵ etc., all and many others, which might be quoted, going on to a fatal termination. To express this variety of nerve-trouble, the term "*sine materia*" has been employed. It is a useful term, and a good one in lack of better. In just what the essence of this nervous syphilis *sine materia* consists is not known. Perhaps there are structural changes, but if so they must be very minute to escape so many skilled observers, and in any case they seem to be out of all proportion to the disastrous effects they cause. To allude to only one case: A woman of thirty-seven, five years after infection, has ringing in the ears, diplopia, paralysis of the third pair on the left side, enfeeblement of the left side amounting to hemiplegia, loss of memory, impairment of intelligence, insanity, during a month—all of which symptoms improve under the iodide of potassium, but the patient dies suddenly of cholera, and Ricord finds the brain, its envelopes, and bones, perfectly healthy ("Clinique Iconographique").

Virchow has expressed the opinion, toward which Ricord leans, that in these cases *sine materia* there has been "*materia*," but treatment has

¹ Rodet (two cases), *Gaz. Méd. de Lyon*, 1858; Ricord, obs. 86; Gros et Lancereaux. Follin, quoted by Rollet, p. 913; Zamboco, *op. cit.*, obs. 73.

² Gjö, obs. 60; Gros and Lancereaux.

³ Delaunay, quoted by Tamousky, "Aphasie Syphilitique," Paris, 1870.

⁴ Ricord, obs. 78, Gros and Lancereaux.

⁵ Ricord, Gros and Lancereaux, p. 13.

removed all trace of it before death; but Ricord himself had a case (obs. 86, Gros and Lancereaux), aged thirty-seven, where, during a pustular syphilide in the sixth month after infection, the patient had a sudden attack of right hemiplegia without loss of consciousness, and, after improving a little, died in a month, with sudden aggravation of the paralysis. Granting that the material lesion had been removed by treatment in this case, what became of the lesion causing relapse and leading to a fatal issue? A special poisonous action of the syphilitic virus upon the nerve-cells has been adduced to explain these cases. Another similar theory is that the blood, poisoned by the virus, fails to stimulate the nerve-cells, themselves structurally unmodified, to a proper performance of their function, hence paralysis, etc. The objection to these theories is, that, if the virus acts at all purely as a virus, it should *always (a priori)* act upon such delicate tissue as nerve-cells, and be more intense in severe than in mild cases of disease, which is not substantiated by experience. The ingenious theory of Knorre or that of Zeissl, that efflorescences on the pia mater may coincide with the earlier cutaneous lesions, and like them disappear after death, or that the pia mater is subject to an eruption like that which we see in syphilitic punctiform iritis—these theories are hardly tenable in connection with such cases as that of Ricord above quoted, where the brain-symptoms occurred five years after infection, for then the time for efflorescences had passed. The probable pathology of nervous syphilis *sine materiâ* is local congestion, more or less intense and of duration more or less long. This of course is only probable, but there are several strong reasons which make it plausible.

1. Other poisons are known to produce local congestions of the skin, internal organs and tissues, nerve and brain, with its membranes. Such are the gouty poison, and the poison of urea in the blood.

2. It is common in cases of nervous syphilis occurring within a few weeks or months after chancre, where death has ensued in consequence of the nervous malady, or been occasioned by intercurrent diseases, to fail to discover any material lesion (Van Buren and Keyes),¹ whereas death from nervous syphilis occurring late after general infection is almost uniformly on autopsy found to be connected with material lesions.

3. Many cases of nervous syphilis, occurring soon after chancre, recover without treatment and without showing any progressive tendency or endangering life, however much they may temporarily injure the function of the nerves involved. Were these due to textural alterations as a cause, their history and progress without treatment would probably be different.

4. At just this early period of syphilis congestion is one of its favorite modes of manifestation, as shown in the erythemata of skin and mucous membrane in the punctiform iritis, etc. Gubler admits a syphilitic con-

¹ *Loc. cit.*

gestion of the liver. But that cerebral congestion may occur in syphilis late in the disease, as it may in gout and uræmia, is evidenced by Ricord's case at five years, and other autopsies *sine materiâ* at late dates.

5. Tarnowsky¹ quotes a case of Engelstedt's, where, six months after chancre, left hemiplegia and aphasia due to syphilis came on and terminated fatally. At the autopsy the only lesions found were slight meningeal hyperæmia, and a little bloody serum in the ventricles.

6. We know that syphilis causes diffuse chronic inflammation, pachymeningitis, encephalitis: why may it not also occasion a chronic hyperæmia, capable of producing irregularity of function, or even death; or, subsiding, leave permanent functional disturbance behind, with no appreciable structural alteration?—for this latter we know does occur in many paralyzes occurring at a short interval from chancres which have not been recognized or treated.

Symptoms of Nervous Syphilis.—The nervous symptoms produced by syphilis are very varied. They must be considered under heads of the separate nervous maladies, and cannot be treated of separately under the different lesions, because any of the given forms of nervous disease, from paralysis through dementia to mania, may occur without a lesion appreciable on autopsy (*sine materiâ*), and because there is no *necessary* constancy of relation between the situation of the lesion when present and the character of the nervous symptoms to which it gives rise.² Most of the lesions about the nervous centres affect more or less the meninges, but do not on that account necessarily produce convulsions; on the contrary, a pachymeningitis, or an internal osteophyte, may just as well occasion hemiplegia, aphasia, mania, or other nervous phenomena. Deep-seated gummy tumors or softened spots more often produce paralytic lesions, but do also give rise to convulsions, mania, etc.

Finally, as a set-off to severe, even fatal symptoms *sine materiâ* there may occur fearful destruction, and very tangible tissue-changes due to syphilis, without there being any symptom of nervous derangement other than pain. There are many of these cases on record, such as Botal's³ case, Duhamel and Legrand,³ and most strikingly Gama's⁴ case, where, although the bones of the face and nose (including the ethmoid) had been destroyed by syphilis, yet pain in the head was the only nervous symptom, and the patient died, having "*preserved the use of all his movements, and of his intellectual faculties.*" At the autopsy the frontal bone was found to be carious in an areolar manner. The most altered points of the bone internally corresponded to little erosions of the dura mater from which pus flowed. An incision through the dura mater evacuated about four ounces of pus, which was covering the cerebral hemispheres. The arachnoid consisted of a black pulp on the dura mater, and a few black shreds over the cerebrum. The pia

¹ "Aphasie Syphilitique," Paris, 1870.
² Quoted by Van Buren and Keyes.

³ Van Buren and Keyes, *loc. cit.*
⁴ Obs. 87, Lagneau fils.

mater tore off in fragments, and the whole surface of the cerebral hemispheres was of a greenish black, for two or three lines in depth. A part of the front of the left hemisphere was putrid, and all the cerebral lobes softened. The cerebellum was similarly affected, but to a less extent, and yet in this person pain in the head was absolutely the only nervous symptom. After the above statements, he must be a good prophet who will with certainty predict the lesion to be found as occasioning a given nervous symptom.

As to what the symptoms of nervous syphilis are, however, it may be stated, judging from the vast number of symptoms already observed, that, like hysteria, it is proteiform: there is probably no symptom of any known nervous malady functional in character, or due to an organic cause, which may not be occasioned by syphilis. In describing the different paralyses, mania, etc., due to syphilis, it will be noticed, however, that they usually have certain characteristics which distinguish them from the same affection due to other causes. Brown-Séguard has justly remarked that the disorderly grouping of nervous phenomena should lead us to interrogate syphilis as a cause; as, paralysis of some muscle of the eye and paraplegia; or paralysis of one hand and the other foot, etc.

PROGNOSIS OF NERVOUS SYPHILIS.—It cannot be positively affirmed, of any given individual with syphilis, that he will never have nervous disease due to his acquired diathesis, yet the majority escape. A certain percentage suffer, and there does not seem to be any controlling diathesis which directs syphilis toward the brain, unless possibly the gouty. Severe cases of the disease, where ulcers destroy the tissues, and the bones decay, not unfrequently escape any, even the faintest, manifestations of nervous disease. Others, dying of syphilitic cachexia, with perhaps gummy tumors in most of their internal organs, may never lose power in a single muscular fibre, or fail in sensation, or falter in intelligence, consciousness, or speech, and yet either of these type cases may have nervous syphilis severely or lightly. On the other hand, the mildest case which may have been untreated, or have undergone a treatment for a while, may come down suddenly with any of the forms of nervous disease at a short (more commonly a long) period after his chancre.

CASE LV.—A young gentleman, of twenty-two, had syphilitic chancre in 1870, with indurated, non-suppurating, multiple bubo. He was put at once under treatment, and took his medicine regularly for a time. No symptoms whatever appeared, no eruption, or sore-throat, no falling of hair, in fact, nothing to mark the disease, except one unmistakable, characteristic, indolent, indurated post-cervical ganglion. Eighteen months after chancre, following a few days of headache (he had discontinued his treatment, and lived in a dissipated, irregular manner), he was seized with hemiplegia, hebetude, loss of memory, and difficult articulation, all without loss of consciousness, and of distinctly syphilitic type, and recovered entirely under resumption of his treatment in about ten days. This was undoubtedly a case *sine materiâ*; but, unrecognized and untreated, it might perhaps have left slight permanent functional disturbance behind.

In short, that syphilis attacks the brain in some, but lets others escape, we know; but, why it does so, we do not know. Irregular or injudicious treatment has undoubtedly something to do with the development of nervous disease, but does not necessarily occasion it. The prognosis, however, is good in proportion as the manifestation is near in point of time to the chancre, and in proportion as intelligent treatment is speedily brought to bear upon the case. The lightest cases, untreated or treated too late, may result in permanent functional disturbance.

In any case, and as a general rule, no symptom of nervous syphilis, however alarming, need necessitate a fatal prognosis, especially if treatment has not yet been pushed; some cases seem almost to rise out of the grave under the influence of the iodide of potassium. Always with a given symptom, the prognosis is better if syphilis can be made out as a cause, than if any other disease or lesion has occasioned it. Many cases of obscure brain-disease, which are benefited by the iodide of potassium, are undoubtedly unrecognized remains of old, perhaps forgotten, syphilitic poisoning.

The vast majority of cases occur late in the disease; others, appearing early, are manifestly and promptly benefited by mercury, as are probably all cases where the lesion is not gummy. These, it must be remembered, are very exceptional. Nervous symptoms, due to syphilis, are found in inherited (Keyes and Van Buren,¹ J. Hughlings Jackson,² and others) as well as in secondary and tertiary disease.

GENERAL TREATMENT OF NERVOUS SYPHILIS.—In the treatment of nervous syphilis, the delicate nature of the tissue involved must always be borne in mind. The greater the promptness of action, the more efficient the treatment. In the forms occurring early after chancre, mercury alone is indicated, but even in these cases it is better to stand ready with the iodide of potassium. Could we decide with certainty in a given case that the lesion was purely gummy, the iodide alone would be all-sufficient, but, as more or less pachymeningitis may be inferred to exist in most cases, it is better to adopt for nervous syphilis a mixed treatment, with the iodide largely in excess. It is the latter agent which most quickly controls the symptoms in desperate cases, not in mincing, therapeutic doses, but in specific doses of gr. x-xx, commencing at which the remedy should be run up as rapidly as the stomach will bear it, until the symptoms are stayed and forced into a retreat. This result may be confidently counted upon in all cases where the diagnosis is accurate, and treatment is not commenced too tardily, and pushed too indolently—if the stomach is sound. The effect of opium upon pain is not more wonderful or more striking than that of the iodide of potassium upon the nervous manifestations due to syphilis. Nerve-tissue

¹ *Loc. cit.*

² "Transactions of St. Andrew's Medical Graduate's Association," vol. i., 1868.

cannot be reproduced by treatment, and often irreparable damage is done to nerve cells and fibres by the lesions due to syphilis. Hence in many cases functional disorder, more or less pronounced, remains behind. In these cases treatment can only arrest the disease, and prevent progress; not replace nerve-tissue already destroyed.

GENERAL CHARACTERISTICS OF THE NERVOUS SYMPTOMS DUE TO SYPHILIS OFTEN ASSOCIATED WITH DIFFERENT NERVOUS AFFECTIONS; AND THEIR POSSIBLE CONFUSION WITH HYSTERIA, SUNSTROKE, GOUT, ETC.—To give the nervous symptoms of syphilis would be to detail nearly all the functional nervous aberrations which are witnessed in the most manifold disorders. Thus the symptoms may be purely paralytic, general, or localized (hemiplegia, squint), or functional (aphasia, boulimia—Fournier), or intellectual (insanity), or all may be combined. Then there may be merely an emotional disturbance, shown by a tendency to laugh and cry from insufficient cause, to become gloomy and despondent, occasionally exalted, to show great peevishness and irascibility in place of former sweetness of disposition, to get hypochondriacal and hysterical, to evince dullness of perception, to lose memory, talk slowly, accept ideas with unwonted deliberation and delay, and deliver them with still greater slowness and lack of vigor. There may be partial or total hebetude, and dementia. Some of the above mental peculiarities are almost certain to be found in all cases of physical disorder due to brain-syphilis, but it is chiefly where they occur alone that they are unheeded and their true cause overlooked. A feeling, for instance, of mental weariness, a giving out of the mind after any slight effort of the brain, such as reading the daily paper; inability to think long on any given subject without a "wretchedness" and "distress" in the head, "a misery," as some patients call it; symptoms of this order have been found by the authors to be very common with paralytic and other nervous manifestations due to syphilis, and occasionally to occur as the only evidence of disease. All these symptoms evince a lowered grade of nerve-power, due to the overshadowing influence of syphilis, and, as they may occur alone, their study is of vast importance. They often lighten up visibly, as treatment takes effect. Cases resembling in every respect true hypochondria (not syphilophobia—the patient may never suspect syphilis to be the cause of his distress), and occurring in syphilitic patients, frequently find relief only after an anti-syphilitic course. An instructive case is reported by R. W. Taylor,¹ of this city, of a young married woman whom he had treated for syphilis in 1870. Fourteen months after her chancre she began to have dull, supra-orbital pain (not worse at night). She was constantly troubled by dizziness. She walked unsteadily, and felt as if she must inevitably fall backward. These vertiginous feelings were prolonged and painful; they never went to loss of consciousness. She was treated in the country for hysteria, with no

Boston Medical and Surgical Journal, December 24, 1871, p. 395.

result. She became sad, despondent, emaciated. Her digestive functions were all normal. She was irascible and full of emotions and abstractions, dejected, despondent, and suspicious, imagining that her friends were making fun of her, easily frightened. Her memory had become very poor.

This picture is not a very uncommon one, although such positive emotional disturbances usually coincide with more evident and tangible physical symptoms, such as convulsions, paralyses, etc. This girl had never been hysterical before the attack above recounted. Treatment for hysteria in the country, where she was in good hygienic surroundings, was useless; two months of mixed anti-syphilitic treatment in the city effected a cure.

Another form under which nervous syphilis frequently goes undetected is that of sunstroke. Many an individual, seemingly overpowered by the heat on a summer's day, has in fact had an explosion of pent-up nervous syphilis, which goes unrecognized, and leaves him with impaired brain-power, high emotional excitability, some loss of memory, and perhaps some partial paralysis, for all of which the sun gets credit, and no effort is made to combat the syphilitic cause. Several cases of this class have fallen under the authors' notice. One peculiarity, often strikingly evident in patients suffering from nervous disease due to syphilis, is, that they are often shy, distrustful, slow to recognize that syphilis has any thing to do with their symptoms. It is hard to elicit facts from them, and patient tact may be required in their management to keep them up to treatment.

Great care also is necessary in the study of nervous syphilis, to avoid confounding some of the manifestations of severe nervous gout with those of syphilis. Between them there exists a wonderful resemblance. Thus cerebral congestion, dizziness, and vertigo, perhaps culminating in aphasia, irritability of temper, suspicious tendencies to the extent of mild illusions, tendency to an easy tiring of the brain, and the production of a vexed, distressed feeling in the head, local neuralgia as of the sciatic, numbness along the course of certain nerves, especially the radial and ulnar, etc.—all these, and many more nervous symptoms, are found in cases of well-marked nervous gout, as well as in syphilis, and, when, added to this, it is remembered that certain of the dry, papulo-squamous, gouty eruptions, which come chiefly in summer, are purple in appearance, and do not itch much, the chances for an error of diagnosis become greatly increased. As all of the above symptoms may be due also to syphilis, a careful study of the case, and weighing of all evidence cautiously, are necessary to establish a diagnosis. If the symptoms are due to the effects of the gouty poison, the alkaline and eliminative treatment is best adapted to overcome them; if to syphilis, anti-syphilitic remedies. The manifest improvement which follows a correct diagnosis in these cases amply rewards the surgeon for the time and trouble often required to establish it.