

passenger and the company," and I think we ought to confine ourselves exclusively to that, and not make ourselves, any further than we can help, fifth wheels of the claim department.

DR. GARDNER—I take exceptions to those remarks. In my instructions in my department, I will not allow a surgeon in my service to appear as an expert under any circumstances but purely to testify as to facts. It is a procedure I have adopted in my service and I insist upon it. I shall never compromise, and a man in my employ who goes up as an expert loses his job.

DR. DALBY—I do not see very much relevancy between the remarks of Dr. Gardner and our friend from Cheyenne, so I expect we are all in line. I think Dr. Kibler's paper is a good paper. The question as to the merit or demerit of its publication in our proceedings is one for the Association itself to determine. I think that our relationship with the various attorneys and railway organizations is a very close one. No railway organization can go into court with a suit without depending and relying more or less upon the officers of that company. I do not believe that they look upon us as the fifth wheel or the seventeenth wheel of the claim department, but they certainly do look upon us as being able to give them some information which we do have and which I think it is proper for us to give. Speaking on the question of getting damages on perjured testimony, it is something that those connected with a railway have often seen. It is brought about by various conditions. In Salt Lake City, invariably every man, woman and child bring suit against a railroad company, it makes no difference whether they have any visible mark or not, the suit is brought and the jury will invariably find for them in various amounts. I recall now, among several instances, a case involving an examination of the injuries. Six or seven months ago we had a suit brought against the Union Pacific Railway on the part of a mother and daughter. The mother was a lady of middle age, and the daughter somewhere in the vicinity of 20. The mother claimed damages for injury to the spine, the daughter brought suit for a fracture of the nose. Neither of these cases had been treated at any time by any surgeon who had any connection with the company proper at all. They were each suing for \$5,000 damages. The solicitors of our road asked permission of the court to grant me the privilege of examining them, as the company itself had no evidence or no idea as to the extent of these alleged damages. The court finally permitted me to examine the daughter for a fractured nose, in company with her attending physician, but denied me the privilege of examining the mother. Where the distinction came in I do not know. But in carrying out the ideas of the paper that the doctor just read, obtaining verdicts on perjured testimony, there was a girl who had been enticed to go into court for a claim of \$5,000 for a fractured nose. Her attendant physician claims he examined her nose and found some irregularity in the nasal passage; in other words, the nasal passages were not alike. He described very graphically during the trial of the case the condition of the girl. As a matter of fact, and as he agreed with me in the examination I made with him, there was a turbinated bone, which merely loosened up the one muscle. That was where he found his fracture, and that was all that existed. At any rate the jury returned a verdict for her mother for \$5,000 and the daughter for \$2,500, and I got the reputation of being a railway hireling for my own testimony.

Otherwise All Right!—Doctor: "Well, madam, how are you to-day?" Madam: "Oh, doctor, I have frightful pains all over my whole body, and it seems impossible to breathe; of course I can't sleep, and I have no appetite at all." Doctor: "Um—er—well, otherwise you're all right, aren't you?" — *Medical Press.*

CEREBRAL SYPHILIS, WITH REPORT OF CASES.

Read before the Chicago Pathological Society, April 13, 1896.

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CHICAGO.

I need offer no apology for the introduction of a subject such as this, as it is well deserving of our attention by virtue of its high degree of importance in diagnosis and treatment. The frequency of syphilis of the nervous system is becoming more and more appreciated, thus securing for it an earlier recognition and the establishment of a more definite train of clinical phenomena than formerly. Gray, writing only four years ago, would make no more than a tentative diagnosis of cerebral syphilis, unless there were present, 1, undoubted specific infection; 2, convulsions or hemiplegia, or 3, marked success of specific treatment. Gowers, in his great work, allots to nervous syphilis no special chapter, referring to it among causative agents in the production of endarteritis, cerebral softening, hemorrhage, insanity, etc. I need not dwell upon the widespread prevalence of syphilis, which is one of the most important diseases with which we have to deal. Additions are made daily to the already enormous literature. How many of these cases of syphilis have undergone treatment which can be called approximately curative? Those that submit to the proper régime are certainly in the minority. Only too many of them are lulled into a state of false security by the rapid disappearance of tangible evidence of the disease, and discontinue treatment despite the admonition of the medical attendant.

A chancre of doubtful nature heals under indifferent treatment, or perchance is cauterized; no "secondaries" follow, leaving the individual in doubt whether he is syphilitic, until a subsequent nervous affection is undeniable evidence thereof. Fournier says that just those cases in which the manifestations on the skin and mucus membranes are scanty or absent, are prone to be followed by nervous lesions later on. Especially does this seem to obtain in women, who also are often infected unknowingly, a circumstance which provokes distressing errors in diagnosis, especially among the better classes.

On the other hand, a conscientious course of treatment for one and one-half to two years or more does not necessarily insure immunity from further trouble. Recognizing, then, the ubiquitous nature of syphilis, we should ever be on the alert in cases of nervous, especially cerebral, disease, to establish a possible etiologic connection. It will appear that an early diagnosis of these cases of cerebral syphilis, before irreparable secondary changes have been wrought, is of incalculable importance. After secondary degeneration and softening have become manifest, treatment will avail but little, and can not be compared to the success achieved in cases where the alterations are limited mostly to the membranes and arteries. It is for us to heed the warning note that is sounded by the appearance of prodromal headaches, irregular palsies of cranial nerves or slight aphasia, and not wait until a greater calamity overtakes the patient.

A maxim to which I heard Max Joseph, of Berlin, allude is a good one, *ubi dubio, suppone luem*, and safely applicable in medicine generally, as it can do no harm and may be the key to the solution of a perplex-

ing problem in diagnosis. Various well defined types of nervous disease, foremost locomotor ataxia and dementia paralytica, are said to occur with relative frequency following syphilis. Storbeck, of Leyden's clinic, has recently published a table showing the percentage of syphilitic cases in tabes according to forty-eight authors, from the 0 per cent. of Mayer to the 97 per cent. of Déjerme. In his own cases (108) about 30.6 per cent. had syphilis, which he thinks is not higher than might be expected from the frequency of the disease. Leyden is loth to admit any causative relation between syphilis and tabes. The relation of cause and effect in these cases has thus far been only statistical and not based upon pathology, nor supported by the results of treatment.

The cases to which I will refer are due to a direct involvement of the brain and its investments by the specific proliferative changes. These changes are the same in the brain and cord and cause outward symptoms in so far as they produce local anemias with their sequelæ or interfere with nerve conduction by pressure. The nervous involvement of syphilis is usually classed among the late manifestations, yet it has been known to follow infection from a few months to thirty years thereafter. According to Naunyn, nervous syphilis occurs most frequently during the first year following infection, and decreases year by year thereafter. Many cases have been reported of late, occurring within the first year and during the period of efflorescence (J. Hutchinson and G. F. Lydston). Most cases, however, develop after the lapse of several years. I will say that the tendency now is such as to disregard the arbitrary division of syphilis into "secondary" and "tertiary" periods, since the manifestations thereof are found to intermingle to a degree not consistent with any such classification.

Age is variable, averaging 30 to 35, youthful individuals being more often stricken, and males preponderate. To Sternberg (1860) and Heubner (1874) belong the honor of having first identified certain cerebro-spinal meningitic and arterial changes with syphilis. Save minor details their works still enjoy acceptance. Rumpf also asserts that syphilitic disease of the nervous system originates primarily in the blood vessels.

Syphilitic lepto-meningitis, like the tubercular, is prone to affect the base of the brain, about and posterior to the optic chiasm, whence it spreads to the convexity. Separate foci in different stages of development may coexist. The pia and arachnoid are primarily involved; as they span the interpeduncular space they appear thickened, opaque and pultaceous. The mass is granulation tissue, which becomes fibrous, sometimes cheesy. The membranes adhere to the cortex, which suffers to a variable degree. The new growth fills out the sulci, thereby smoothing the markings of the convolutions. The cranial nerves and cerebral arteries traversing these masses can not escape involvement, but they are often independently affected. The nerves are infiltrated with round cells producing nodular gummatus thickenings; eventually nerve atrophy occurs. Owing to their situation the optic, third and sixth nerves are first to be attacked, the others escaping more or less.

The arterial changes are those of an endarteritis obliterans; the intima becomes enormously thickened by the growth and organization of round cells, which invade to a lesser extent the other coats. There results progressive narrowing of the lumen and even-

tually complete occlusion of the same by the cell growth or by thrombosis. As in the nerves, small gummities occur in the vessel walls. Aneurysms and hemorrhage are uncommon, thrombosis being the most frequent event. Section of the brain sometimes reveals no changes save the arterial. There is never any pus formation and gummata in the interior are infrequent. The effects, secondary and remote, produced in the central ganglia and internal capsule are of vital importance. The arteria fossa sylvii, which supplies motor regions of vital function, is commonly involved by endarteritis. By the narrowing of the lumen, aided by the varying degree of blood pressure, there are produced vacillating states of anemia, until finally occlusion by a clot produces ischemia in areas of variable size with resultant monoplegia, hemiplegia or aphasia. These latter, rarely hemiplegia, are also evoked by pressure of meningitis overlying motor centers; convulsions may then precede paralysis. If the deprivation of blood be not soon relieved by collateral supply or perviousness of the thrombus, softening with its sequelæ is inevitable.

All writers agree upon certain factors which enhance the tendency to nervous involvement. These are inebriety, venereal excesses, emotional disturbances, worry and overwork; sometimes trauma to the skull.

The character of the pathologic lesions, manifest by their insidious, vacillating and irregular growth and regression—the simultaneous involvement of widely separated areas—the far-reaching influence of impeded blood supply—all these elements obtain in determining a clinical picture of varying aspect. This irregularity, however, is one of the points of identification, together with phenomena which are uniformly constant. Headache is among the first forerunners, often nocturnal and periodic and frequently localized. Its severity may reach an agonizing degree, accompanied by great sensitiveness to percussion of the skull. The cephalalgia may be accompanied by nausea, vomiting or vertigo. This may be the only complaint for weeks and months, even years, until superseded by the first signs of paralysis. There is usually an early psychic involvement, evinced by a change of character, the individual becoming moody, morose, sullen and hypochondriacal. He is, too, drowsy by day and wears a stupid sleepy look, but is restless and wakeful at night. The keen intelligence is blunted and the memory fails; he shuns society suspiciously. Sooner or later an inability to read and write is noticed and finally the first signs of paralysis appear. It is claimed that with the onset of paralysis headache and vertigo subside.

The palsies are very various, from a paresis of an ocular muscle to complete hemiplegia. Aphasia is frequent and may be the only motor disturbance. The speech, at first irresolute and halting, resembling paralytic dementia, finally becomes inarticulate and the function is completely suspended. The meaning of words is understood, as the aphasia is of the motor type.

I have already referred to the early affection of the optic, oculomotor and sixth nerves, less frequently the fifth, seventh and others. The optic disk reveals neuritis varying from a reddening and blurring of the contour with venous engorgement and swelling of the papilla, to complete atrophy, with a tendon like aspect of the nerve. Vision may be much reduced, and hemianopsia bitemporal or bilateral and

diplopia also occur. Oppenheim calls attention to the fleeting and transient nature of the subjective eye symptoms, especially the hemianopsia and contraction of the field of vision. The pupils may be sluggish and unequal and not react to light nor accommodation. Ptosis and strabismus are very common, more so than facial paralysis. The tongue is protruded to the side and the uvula is drawn from the perpendicular. Deafness is rare. These paralyses are often so disposed as to defy localization at one focus. The graver forms of paralysis, monoplegia and hemiplegia, may be of sudden apoplectiform onset or may develop after hours or days. Consciousness is usually retained, the patient experiencing the more or less rapid loss of power in his limbs. Death during such an attack is not the common outcome, but convulsions and coma are usually fatal. Polydipsia and polyuria occur in some cases, also atony of the bladder and rectum, generally transient. Paresthesias and anesthetics occur where sensory tracts are implicated. Fever is usually absent, although there may be some rise in temperature sometimes.

The course of the disease depends largely upon the gravity of secondary changes at the time of commencing treatment. Some cases continue for months or years with only headache or slight mental alteration, perchance paresis in the distribution of some cranial nerve. Others progress rapidly to convulsions, dementia and coma. Some are stricken with hemiplegia, terminating in contractures and atrophy. There may be periods of quiescence, but relapses are possible.

I can not too much emphasize the enormous importance of an early diagnosis, upon which the whole future of the case hinges. If recognized and treated early, the outlook is generally good but becomes progressively worse the later treatment is begun. According to Naunyn the prognosis is favorable during the first four weeks, and after the commencement of treatment, the bulk of improvement will have occurred by the end of the second week thereof. These are two valuable points to bear in mind when rendering prognoses.

The success of treatment is entirely dependent upon the amount of damage done to nervous substance secondary to the development of specific changes in membranes and arteries. If limited to these latter complete recovery can be assured. If the granulations be by treatment brought to absorption before the secondary alterations are of long standing and permanent, restitution is probable. Buzzard tells of an artery that had been almost occluded, tested by the sphygmograph, and yet it was again made patulous by proper treatment. Irreparable degenerative processes in brain and nerves, with muscular degeneration and atrophy can not be much improved.

We should be suspicious of the presence of brain syphilis under the following conditions:

1. Headache, periodic, nocturnal or localized, accompanied by nausea and vertigo, or the development of mental symptoms described above.
2. Isolated irregular paresis of cranial nerves, especially the third, preceded or not by the above or accompanied by aphasia, alexia and agraphia.
3. Hemiplegia, in youthful individuals occurring slowly or sudden, with no loss of consciousness.
4. Coma and convulsions—excluding opium, epilepsy, alcohol, diabetes, uremia and trauma—extending over days.

Naturally, our suspicions are confirmed by a clear specific history or the simultaneous appearance on skin or mucous membranes of typical lesions.

Is complete recovery possible? Mills says "it is possible to remedy some of the effects of nervous syphilis or to remove some of its symptoms; it is even possible that a cure may be effected; but this, as Gowers asserts, has never been proved." The fallacy of this statement is evident and shown by cases reported by Gray, Althaus, Lydston, Diller, Hutchinson and others. Three of my cases recovered completely; one was greatly improved when last seen; one, seen late in the disease, died; one is still under treatment, much improved. I believe that if the proper conditions before mentioned are present, that a speedy and absolute recovery can be secured in a large majority of the cases but that a relapse, as Fournier says, is possible, unless treatment be continued at least two years.

The treatment is that of a syphilis in general, but should be vigorous and the remedies should, when necessary, be pushed to the limit. The "schools" are divided on the relative merits of mercurials and iodids. Gowers claims that on the whole the iodids are the most useful and certain of the two. This opinion is upheld in America generally, and enormous doses of iodids are given, an ounce or more of iodid of potash in the twenty-four hours. Germans rely more on inunctions of mercury, but all use the "mixed treatment." I agree with Lydston as to mercury "first, last and all the time." His suggestion, however, as to its mode of application is as unique as it is impracticable, viz., to rub the patient's scalp and neck with blue ointment so that the seat of trouble may be sooner reached and more directly! This suggestion is totally at variance with the teachings relative to the absorption of mercurial ointment. The opinion has spread, based on experiments of Lewin, Müller, Joseph and others, that most of the mercury applied to the skin is in reality absorbed by the lungs, the lesser portion finding access directly through the skin. It is sufficient to apply the ointment without any rubbing, avoiding the hairy regions of the body. Spread upon cloths and hung up in syphilitic wards, patients therein recovered from milder symptoms without any other treatment, meanwhile excreting abundant mercury with the urine.

The cases to follow were treated with one drachm of unguentum hydrargyri and a drachm more or less of iodid of potash daily. In all of the cases, except the female, the question of syphilis is positive. Collectively they illustrate most of the variations of the subject under discussion and are typical cases of their kind.

Case 1.—Male, age 28, chancre eight years ago. Aphasia, slight dementia, agraphia, alexia, unequal pupils, paresis of lower facial; recovery in four weeks.

The chancre, eight years since healed under indifferent treatment and had no characteristics of syphilis. No eruption nor sore throat followed. Five years later had a periostitis of sternal end of left clavicle. The present illness began with change in character; he became sullen and morose, walked the floor nights on account of headache and insomnia, whereas by day he was sleepy and would doze during conversation. After a few weeks an alteration of speech became apparent, it was slow and halting, finally becoming inarticulate. It was then found that he could not read nor write. Pupils reacted sluggish, right dilated; slight paresis of right lower facial branches; uvula deviated to left; tongue in median line. No sensory disturbances. Treatment was at once instituted, after three days its effects were apparent, and at the end of four weeks all signs had disappeared except an impairment of the mental

faculties, which remained somewhat dull and lethargic. For six months he used inunctions and ever since he has taken iodids off and on. At present, after nearly three years he is apparently perfectly well, does office work but is still eccentric. At no time during his disease were there any palpable signs of syphilis other than the nervous. In this case the meningitis affected chiefly the speech center, to less extent the base.

Case 2.—Female, married, age 43. No specific history; nocturnal headache and vertigo very severe for four weeks; then left hemiplegia and optic neuritis; recovery almost complete in three weeks.

This patient had five healthy children, two still births; youngest child about eight months old and healthy. Denies infection. No previous illnesses. Began four weeks ago with severe headache, worse at night, located in vertex and right temporal region; vertigo, vomiting and general malaise. Then she developed a left-sided hemiparesis, coming on in the course of a few hours with consciousness retained. Unable to walk, left hand grasp feeble, face somewhat drawn to right, sensation on left side impaired. No convulsions; speech unimpaired; pupils equal and react. Had complained of dimness of vision for few days previous; neuro-retinitis right side. Great sensitiveness to percussion over right temporal region. Treatment begun immediately after onset of paresis. Headache gone on third day and great improvement after one week. In three weeks muscular power almost restored, sensation returned; no headache; neuro-retinitis abating. She was feeling very well and passed from observation. Subsequent history not known. She also, when seen, had no signs of syphilis, but the character of the illness was highly suspicious of syphilis and was corroborated by the brilliant results of anti-syphilitic treatment.

Case 3.—Infection seven years ago. Complete right hemiplegia and aphasia without loss of consciousness; polydipsia and polyuria; complete recovery.

Patient was a male, age 42; acquired syphilis seven years ago; had slight eruption and sore throat. Was treated for eighteen months with inunctions and pills of protoiodid of mercury with iodids. He considered himself cured and took no treatment since. Patient is addicted to excesses in alcohol, tobacco and venery and owing to the speculative character of his business his nerves are continually on a high tension; he is of a violent and excitable temper. Returning home late one night after a turbulent celebration in honor of an important business transaction, he suddenly felt a sense of weakness in right side of body and tottered to the nearest support. He had had no headaches recently and was feeling as well as usual. He did not fall to the floor nor did he lose consciousness. After regaining his composure he found that he was not completely paralyzed, and a physician who saw him soon after was able to get a history from him. He also complained then of a headache on the left side. Next morning paralysis and speech worse, and in the afternoon, about eighteen hours from time of onset the condition was as follows: Complete motor aphasia; right pupil larger than left, reaction sluggish; tongue protruded to right; complete right hemiplegia and impairment of sensation. Atony of the bladder and rectum. Sensorium in a somewhat dazed condition. Knowing absolutely his previous history, he was immediately put on anti-syphilitic treatment and improvement progressed after the second day. After two weeks speech was normal; he could walk with support, sensation slightly blunted, flexes fingers and moves arm slightly. Sensorium clear, sleeps well, no headache; has great appetite and thirst, and voids large quantities of urine, which contains no albumin nor sugar. After four weeks, walks about and moves right arm freely, but not with former power yet; face symmetrical, tongue in middle line, pupils equal. Sensation and speech restored. After this, recovery was steady and uneventful and at the present time, nine months after the onset, patient is conducting a large business concern and says he never felt better in his life. He still takes mercurial pills. This case illustrates how after a fair initial course of treatment cerebral syphilis may follow later; that absolute recovery is possible.

Case 4.—Chancre eleven years ago; headache for last year; aphasia getting worse for two months with agraphia and alexia; improved.

Patient is a male, age 33, clerk, acquired syphilis eleven years ago. Habits regular and moderate. For the last year or so has suffered periodically with headaches, sometimes worse at night; no vertigo. Eight weeks ago while traveling on business he became aware of a heaviness of speech with defective memory. He would forget his destination, neglected his business and lost his former sharpness in business dealings. He gave up and returned home and sought relief in various quarters, but his condition became worse. None whom he

consulted treated him for syphilis, as he, like the preceding cases showed no palpable signs; one advised him to marry. After eight weeks his condition was the following: Patient could utter scarcely intelligible words; the foregoing history was obtained from his father. His expression was stupid and dull in contrast to his former brightness. All movements were slow and languid. Marked tremor of face and hands. Pupils equal and react. No paralysis anywhere save the speech; can not read nor write. Physical examination negative except very slight general adenopathy. Was at once put on specific treatment, but after a few days developed iodism and the drug was stopped, but the inunction continued. After about four weeks' treatment he is back at work, talks, reads and writes as usual; memory as before; tremor entirely disappeared; no headaches—in fact, he feels as well as he ever did, but is still using inunctions. He was apparently quite well for about ten days and then according to the family, he changed again. He became forgetful again, said many foolish and untrue things, was restless at night, squandered money carelessly; in fact, his character quite changed. He is using inunctions and increasing doses of iodids.

Case 5.—Papulo-pustular syphilid; headache, paresis of left arm and leg with no loss of consciousness; optic neuritis; in four weeks almost complete recovery excepting the optic neuritis.

Patient is a male, age 43. No previous illness; uses alcohol moderately; denies a chancre. For nine weeks he has suffered with headaches, worst at night; vertigo at times recurring in paroxysms and becoming worse. A few days ago he first noticed a weakness in his left arm and leg accompanied by a tingling sensation and numbness. This loss of power came on gradually and he was at all times conscious. Speech unimpaired, mental condition as usual. He says the paresis and the skin eruption appeared about the same time. On examination pupils were equal and react; face symmetrical; tongue protruded somewhat to left. Marked weakness of left arm and leg, but some motion is retained, as he can walk dragging his left leg. Knee reflex equal but pronounced; ankle clonus on left side. Hyperesthesia, especially of left arm. General macular, papular and pustular syphilid and mucous patches in mouth. General adenopathy; internal examination was negative. He complained of dimness of vision. Ophthalmoscopic examination showed on the right side venous engorgement, papilla reddened and blurred, slightly swollen. On left side the changes were less marked. Treatment was then begun and its effects were very evident by the end of a week in the cessation of headache and returning power on left side. In four weeks eruption had disappeared; both sides about equal in strength, reflexes equal, no clonus, sensation normal. The optic neuritis had abated considerably, but vision was still impaired. At this time he passed from observation and the further course is not obtainable.

Case 6.—Evidence of syphilis; headache and dizziness; change in temperament; drowsiness deepening into coma; optic neuritis; paresis right facial and left arm and leg; ptosis slight on left side; death in coma on tenth day; autopsy, no gross lesions disseminated endarteritis.

Patient, a male, cook, age 38, was already semi-stuporous when first seen, so that a good previous history was not to be had. He had some kind of skin eruption one year ago. For some weeks preceding present illness he is said to have had headache and vertigo, and his mild temper changed to a violent and irritable one with emotional outbreaks. His drowsiness deepened rapidly of late. Examination reveals patient semi-comatose, but he can be aroused sufficiently to answer some questions. Slight ptosis on left side; movements of eyes free. Pupils irregular and immobile; under atropin they dilated irregularly, tearing up iritic adhesions to lens. Interstitial keratitis on left side preventing examination of fundus. Optic neuritis on right side of moderate degree. Paresis in distribution of right lower facial. Tongue dry and protruded irregularly. Slight paresis of left arm and leg with hyperesthesia. General adenopathy. Reflexes normal. Involuntary defecation and urination. Temperature normal, pulse 95 to 90. The urine contained albumin with hyalin and granular casts and abundant leucin crystals, but no tyrosin; the amount could not be estimated. On the usual treatment he improved for the first five days—he became brighter, the paresis of left arm and leg disappeared, but the ptosis and right facial palsy remained. He can give a few simple answers, but is still very dull and sleeps a great deal. No tenderness on percussing skull. Urine contains less tyrosin. Occasional projectile vomiting. No convulsive twitchings were noticed. On the eighth day the drowsiness again deepened and patient died on the tenth day in deep coma. Autopsy: Slight meningeal thickening at base of brain; no fresh inflammation. Cranial nerves apparently nor-

mal. Endarteritis obliterans of anterior and middle cerebral arteries, but no complete occlusion nor thrombosis was found. No aneurysms nor hemorrhage. No gross macroscopic lesions of brain. Of the other organs of interest the kidneys showed a condition of subacute parenchymatous nephritis.

I believe that we have sufficient proof of syphilis in the keratitis, iritis, adenopathy and clinical course of the disease, although the post-mortem findings are not conclusive, being limited in the brain mostly to the arteries. I will not deny that there may also have been a uremic element in the case. I will offer no explanation for the presence of leucin in the urine, occurring as it does most commonly in acute yellow atrophy of the liver, phosphorus poisoning, leukemia and various infectious diseases.

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DISCUSSION.

DR. MOYER—It needs no emphasis at this time to point out the immense importance of syphilis as a causative factor in disease of the brain and spinal cord. There is, however, a trifling misconception growing out of the mere use of terms. I see the doctor has labeled his paper, cerebral syphilis with report of cases, and he referred to the fact that Gowers had no chapter in his work on this subject. He would probably not find one upon syphilis of the spinal cord, and yet most of our German confrères have a chapter devoted to these subjects. It is not, however, that the English and American neurologists and the practitioner of general medicine do not recognize the importance of syphilis in the etiology of these disorders. The term cerebral syphilis and syphilis of the spinal cord, as used by our German confrères, is incorrect, as it puts into the nomenclature a new pathologic entity, like chorea, tabes, etc., a something which is caused by syphilis. We do not think it is possible to distinguish clinically the cases of tabes and parietic dementia having their origin in syphilis from those caused by other conditions. There is no doubt that most of the cases occurring in the meninges along the base of the brain, involving one or more of the cranial nerves, or a cerebral peduncle, or perhaps a single branch of the third nerve, or those which occur with a comparatively abrupt onset of symptoms, those cases are almost without exception syphilitic, but I do not think this justifies the term cerebral syphilis; I should say rather they were such and such conditions, affecting certain portions of the brain as the case might be, which were caused by syphilis. There was one case described in the paper which to my mind might justify the term cerebral syphilis. It was the one in which a diffuse endarteritis was found, but no local lesions. I believe that makes a clinical type that perhaps ought to have a chapter in works upon practice labeled cerebral syphilis. I have seen several such cases in which there was a rather abrupt onset with scarcely any local paralysis, early interference with speech and sluggishness of the pupils; some exaltation of the mental functions, rapidly passing on into mild delirium, stupor and death. At the post-mortem, the findings are not different from those described by the doctor; but, as I say, this discussion really relates to terms and not to facts. The great importance of the doctor's paper is in directing our attention very pointedly to the influence of syphilis in these affections, and particularly in the cases that he describes, those presenting irregular manifestations and those with a comparatively abrupt onset, but this has been recognized for the last twenty years. Within the last eight or ten years, there has been an increasing importance attached to syphilis in the slow progressive degenerations, the ordinary cases of parietic dementia and tabes, and we must now admit, although

still denied by a few, that syphilis causes 80 or 90 per cent., or even more of these cases. There is, too, a striking difference in regard to treatment in this class of cases. Those with an abrupt onset are usually quite amenable to treatment; those in which the symptoms come on slowly and insidiously are most rebellious to treatment, no matter how energetically pursued, and I think the reason is found in the fact that the changes in these other conditions are really secondary. Take, for instance, an endarteritis that leads to a rupture of an artery or thrombosis. The secondary conditions are not amenable to anti-syphilitic treatment. The same applies to cases of insidious onset, in which specific treatment does so little and yet it is undoubtedly true that they are of syphilitic origin. The reason of it is that this slow, progressive syphilitic endarteritis has set up the secondary changes, sclerotic in character, and when those changes are once set up, it makes no difference what the cause is, the treatment is practically *nil*, no matter how energetically pursued. But coming to the practical point; the evidence is now so strong that in all these cases it is the duty of the practitioner, even in the absence of a history of syphilis and even where it is denied, to give an energetic anti-syphilitic treatment. I prefer the mixed treatment, but give the iodids in relatively very large doses.

DR. WM. HESSERT—I think that Dr. Moyer and I agree, only that we express our views in different ways. I meant to say that the subject of cerebral involvement by syphilis has been described as an entity under a special heading of late by German authors; especially Oppenheim in his last work gives a classic description of cerebral syphilis, meningitis and inflammation of the cerebral cortex. I admit certainly that the subject of cerebral syphilis is as old as the subject of syphilis itself, and thousands of years ago we may say that mankind was affected with the cerebral involvement just as they are now; but the point is that it was not recognized as of late years.

PNEUMONIA; THE NON-ALCOHOLIC TREATMENT.

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Contrary to all that has been written showing the pernicious effect of alcohol on the system in health and disease, and contrary to the admonitions of some of the greatest lights of the medical profession, past and present (a few of whom I may mention, viz., Sir Astley Cooper, Prof. Willard Parker, Dr. Benjamin Ward Richardson, Dr. Wm. B. Carpenter, Dr. N. S. Davis and numerous others equally as well known), as to its deleterious effects in disease, and notwithstanding the fact that the mortality rate from pneumonia is higher than fifty years ago, still we persist in using alcohol in pneumonia crouposa.

You can scarcely pick up a text-book or journal for reference as to the treatment of pneumonia, without being confronted with the fact that you must stimulate your patient with alcohol.

We boast of the great advancements made in surgery and medicine, and contrast our knowledge of to-day with that of fifty years ago. The contrast is certainly very great; our knowledge of materia medica and therapeutics is certainly very extensive; in diagnosis we have become very proficient, and we differentiate one disease from another with that degree of certainty that if some of the lights of the medical profession who lived fifty, or even twenty years ago, were to come to life, they would be amazed at the advancement made in diagnosis alone.

In treatment of disease their surprise might not be so great, because of the fact that we do not differ materially from the various ideas entertained in the past.

In pathology we have made the greatest advancements, and inasmuch as this article has to do only with pneumonia crouposa, we shall dwell on it more or less from a pathologic standpoint in order to show