ONE HUNDRED CONSECUTIVE CASES OF GENERAL PARESIS.

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Notwithstanding the fact that general paresis is a much studied disease we have found our ideas continually being modified and broadened, and are led to hope that the deductions from such a considerable number of cases as are here presented will be useful. To make the cases more conclusive, we have omitted from the consecutive list five names, because they designated persons who have drifted out of observation, and the diagnosis of their cases might possibly be questioned. The number of those who have proven their diagnoses by progression through the different steps to death is eighty-three, nine being still under observation, eight having left us for various reasons.

As being the most prominent subject, we would commence by some comments upon the subject of "*diagnosis*." While a typical case "*diagnoses itself*" at sight, we must confess our doubts as to the candor or ability of the man who says the diagnosis is always easy or always possible at the first examination. It seems more difficult to us now than it did at the beginning of this series. Using extreme candor myself, I will say that of the one hundred cases, only ninety were diagnosed at the time of admission; ten were not so recognized, and a study of the latter cases, it seems to us, is the more valuable of the two. We will briefly sketch some of these:

Case No. 1.—Woman, admitted March 18, 1892, age thirty-five. Vague history of loose habits and drinking. On admission she showed a quiet, symmetrical dementia with no defined delusions, though considerable feeble-mindedness. Knee-jerk exaggerated; speech a trifle slow; facial expression, perhaps, a little impaired; some motor sluggishness; pupils unequal. The motor symptoms in this case were very pronounced, yet by settling into a quiet, chronic, non-progressive state, and by a history given in a letter from a daughter of a duration of about eighteen years, with "*queer spells ever since*," the preference was given to a diagnosis of alcoholic dementia.

The patient apparently settled into the quiet, stationary dementia

designated by the diagnosis, quietly living along, even improving some for about three and a half years, when it was noticed that there was coming on a progression in the motor symptoms, and six months later several convulsions occurred, bringing out an extreme and quite typical paretic state. The error in this case was probably the most preventable of any in the list, yet in the meantime I have seen probably a dozen cases of alcoholic dementia, with approximately as marked paretic symptoms, who have *not* developed general paresis.

Case No. 2.—Man, age fifty-four, admitted July 6, 1894. No noticeable incoördination; knee-jerk normal; no motor symptoms except slight slowness frequent in old age; no pupillary or like symptoms; mental state a quiet, symmetrical, slight feebleness of mind. History states that six years before he was “attacked by general paralysis” and had “not been well since”; was rather melancholic, read the Bible a good deal, and was not distinguishable from a good many on the wards of a mild senile decline with slight melancholia. Yet about one year later he rather suddenly developed a marked paretic face, a much more thorough dementia, unequal pupils, great incoördination, unequal knee-jerk, and a very sluggish speech, the diagnosis being quite clear. In this case it even now seems to me that on admission the probabilities were rather against the development of general paresis, though of course it might have been hazarded at a guess.

There are other cases in which the errors in diagnosis were, it seems to me, more excusable. In one case (case No. 3), a man, admitted January 5, 1892, of evident fair previous intelligence, designated as a tramp, was found, on admission, erratic, extremely restless, slightly exalted, and remained so after admission. His ideas rambled along too incoherently to designate definite delusions; his age was twenty-six; single; coördination fair; reflexes moderately exaggerated; no motor or paretic symptoms. He continued thus, restless, active, chronic maniac, with, perhaps, a slight decline, for seventeen months, when he had a convulsion. There was no resulting paralysis, but unequal pupils, confusional state, and the other paretic signs appeared. He died one year later, only moderate amount of paresis showing at any time. He had many convulsions, although none just at the last.

Case No. 4.—Man, admitted July 14, 1890; found wandering about the country, supposably a dement from some other asylum. No other motor symptoms found except a slight inequality of

pupils. He seemed somewhat lame at times. About a year after admission he gradually became paretic, dying two years and eight months after admission, of erysipelas.

In the case of several women, also, diagnosis has been delayed. In one (case No. 5), a woman was admitted at the same time with her husband, both quite fairly intelligent, and both with a present seeming neurasthenic confusional state; no motor symptoms were found at all in the case of the wife. The husband, diagnosed general paresis, rapidly went into an active maniacal state, which grew extreme and delirious, had a persistent diarrhoea, and three months later died of exhaustion, a few hours after having a convulsion; died before being extremely paretic. The woman later, although showing somewhat of feeble-mindedness, went home; was returned inside of a year, and it was only some time after this return that she began to show a marked dementia; then motor signs appeared, followed later by slight cerebral attacks, a steady decline and death. We hardly think that the diagnosis on the first admission could have been guessed unless a history of syphilis had been given, of which there was obtained no history.

Case No. 6.—Woman, age 33, admitted September 12, 1892; was an ordinarily violent, maniacal patient, somewhat hysterical in form; duration of insanity given as two years. Very little history accompanied her; insanity said to have commenced two years before by hysterical crying and agitation. Motor signs consisted only in exaggerated reflexes and a seemingly hysterical shaking upon examination. A note was made of "no motor trouble." She was in a maniacal condition, gradually quieting down with considerable of dementia. Some months, however, elapsed before any paretic symptoms were noted as growing. During her decline and death, however, they were typical to the extreme. She died after one year and ten months.

Case No. 7.—Woman, age unknown, history unknown, admitted October 10, 1893; seemed a quiet, demented case, chronic in character. Pupils were sluggish to the light; was quite deaf; reflexes somewhat unequal; had been in a poorhouse for two years; was put down as suicidal. This case showing some motor signs, was still considered as chronic dementia for a little while, until some cerebral spells of vague character made the diagnosis more conclusive.

Case No. 8.—Woman, age 28; admitted June 8, 1893; history of three years' duration; seemed a very intelligent woman, with a kind of childish manner; no delusions noted nor incoherence; had head-

aches very frequently, some incoördination. A letter states that she was never very bright; that for three years she had been somewhat demented; that she was separated from her husband four years before, and was nymphomaniac in her tendencies. In this case some motor symptoms existed, but the diagnosis was made of a case of adolescent or congenital defectiveness, with later exacerbations or growth of the trouble. One year later motor symptoms were noted as growing, a certain amount of probability of syphilis was obtained, and the diagnosis was changed. For two years more, however, she remained almost stationary, with no delusions and nothing prominent except the headaches and childish state of mind. At present is in the last stages of silly well-being and bed-ridden helplessness.

Case No. 9.—Woman, age unknown; found wandering about the streets; sent to the poorhouse, and from there here February 16, 1888. There was evident dementia of a very quiet form; no motor signs were observable. As the years passed by a cyclical variation was noticed. About 1893 her health began failing and her face became slightly paretic; had several vague spells of a hysterical form, followed by some difficulty in walking. Later a somewhat one-sided incoördination was developed. She died in 1894, of an accident entirely disconnected from the disease.

Case No. 10.—Woman, age 39; admitted as a typical case of acute melancholia (agitated), yet had pupils somewhat unequal and unresponsive; gave a history of one year's duration of mild mental trouble, and had just recovered from an ovariectomy, after which was somewhat worse mentally. She died four months later, melancholy to the last, having slight cerebral attacks and a gradual decline. Albumen was found in the urine; the paretic symptoms were rather vague. The suggestion of Bright's disease and uræmic influences was considered, and they were adjudged incidental.

As opposed to these cases just mentioned, some have been diagnosed as general paresis, and later have been *taken off* the list. We could enumerate eleven of such cases, most of them having been considered as having insufficient diagnostic symptoms, yet the diagnosis made on the basis of *probabilities*.

Case No. 11.—Man; admitted July 8, 1891; age, 45; mentally, quiet dementia with extreme forgetfulness. Insanity said to have commenced preceding New Year's night by sudden confusion, forgetfulness, and tipsy state, suggesting cerebral attack. Was in bed for three weeks thereafter; has been about the same up to the time

of admission. Physical health is fair; pupils unequal, with sluggish response; coördination moderately poor; knee-jerk exaggerated; handwriting uncertain, and tremors. It was also learned that a year before the attack he complained of his head, and showed forgetfulness. After some debate his name was placed on the list, but in the quiet life here the case has never progressed beyond that stage. He was a cigarmaker, smoked excessively, claims he only drank moderately.

Case No. 12.—Man, age 44, admitted December 4, 1890; a physician, admitted upon warrant as inebriate, not as insane. Mentally showed a quiet, pronounced dementia without excitement, with quite a sense of well-being, muscular tremors, quivering of facial muscles and tongue, slight sluggishness of speech, very considerable incoördination, exaggerated knee-jerk, handwriting poor, has a mitral, regurgitant murmur, a trace of albumen, and some astigmatism. Yet this patient's name was soon taken off the list, and he has made no progress in the five years since. As a case of alcoholic dementia, it will be noticed that this case balances the opposite error in case No. 1.

Case No. 13.—Man, admitted December 28, 1893; the history almost none. Has a blindness which came on gradually; history of slight cerebral hemorrhage, with other slighter attacks, with delusions of grandeur, extremely exaggerated reflexes, tremors, tongue deviated to the left. Is gradually declining in health. The diagnosis was here between gross lesion, or apoplexy, and general paresis. With the idea that general paresis was justified, perhaps, even if there had been an apoplexy, he was placed on the list tentatively, but has not developed more true paretic signs. Is here yet.

Of the others, Case No. 14, woman, age 50, had an extreme incoördination; history of one year's duration, confused mental state, sluggish speech, tremors, face slightly paretic, and case seemed progressive. Diagnosis of general paresis was noted, but later she improved mentally, and gave us a history of most extreme *tea drinking*, with a coincident growing nervousness and mental confusion.

Another (Case 15), a man, age 33, admitted September 27, 1890; history two years' duration; syphilis suspected; many tremors; pupils slightly unequal; considerable incoördination, reflexes exaggerated. Trouble commenced two years ago by headache, vomiting, loss of control of tongue; has sense of well being. This case lingered along without progression; commenced working as

carpenter, and finally was taken home on trial. A couple of years later was seen, practically about the same.

Finally, besides those in which we have charged ourselves with errors in diagnosis, there are some atypical cases of considerable interest. One of these, Case No. 16, man, age thirty-two, admitted October 8, 1891; history stated that he had typhoid fever at the age of eight. Sister writes he had trouble in studying because of headaches, but not until nearly twenty did they realize a mental defect. Lately the defect has increased; he has been grossly intemperate, and had vague delusions; will not talk much; sense of well-being very prominent. The patellar reflex is absent; pupils unequal; incoördination quite extreme; all movements tremulous; speech, drawling and blurred; facial sluggishness enough alone to make diagnosis. The theory, without special facts to sustain it, was that, in his intemperance and feeble-mindedness, he had perhaps acquired syphilis.

At the end of a year there had been considerable increase of motor condition, although he was always quiet and dull. Since that time the progression has been rather slight, and now, at the end of nearly five years, he still stands or sits about in statue-like pose, and although the character of motor symptoms is most complete, the well-being is always present, yet he has vague delusions more or less persistent like those of a chronic mania. In this case the need of fighting in behalf of my diagnosis is the most necessary of any, yet the lack of progression is the main drawback. Acute alcoholic dementia, progressing suddenly to a stationary parietic state (of which we have two other clear examples), would be evidently the alternate diagnosis.

Another case is one which had suggested epilepsy and ended with meningitis — a man, admitted January 6, 1894, age thirty-five. He was a book agent. Probably minor attacks preceded this; was very violent when arrested, full of hallucinations, excitable disposition before; had two or three attacks recently, supposably petit mal. Motor symptoms were very vague. After coming here had occasional spells of unconsciousness, in which he would not cry out or have general convulsions; these came about two or three a week during January and February. During February he had become very confused mentally and the parietic symptoms were marked. He grew quarrelsome and grew worse, both mentally and physically, until at the 11th he had become very violent and ugly. He passed from this condition into one of motor restlessness and lack of attention, and died the 22d, of meningitis or acute delirium.

The most direct comments on the character of the whole one hundred cases is their varied character, there being more atypical than typical cases, at least in their onset. The lesson enforced by the above is that no one of the elements is quite pathognomonic, even when present, and as about all of them are frequently absent, surety of judgment is occasionally difficult if not impossible.

"Incoördination" is most extreme in four cases now under observation, who have no general paresis, nor ataxia, nor other defined motor disease. "Knee-jerk" is often extremely exaggerated, more rarely is absent in cases assuredly not paresis nor ataxia. "Progressiveness" is present in adult chorea, in athetosis, in some alcoholic cases, in many senile dementias, in atheroma and brain atrophy at times. "Syphilitic history" is, seemingly, excluded at times. The normal "duration of onset" is occasionally exceeded and "previous attacks" are at times designated. Troubles in "articulation" and "gait" are occasionally simulated in other diseases. Curiously enough the most nearly pathognomonic symptom is the "sense of well being," whether in exaltation or in a quiet, stolid content; but this comes at times late. "Delusions of grandeur" are very frequently absent, "cerebral attacks" may be epilepsy or apoplexy, or may belong to cases senile in type; "unequal pupils" are quite significant of something, yet possibly not of general paresis; "unequal knee-jerk" also.

Concerning the diseases from which it is to be diagnosed we have space to say but little. We may name them approximately in order of their frequency as syphilitic brain disease, alcoholic dementia, vague post-apoplectic state, tumors, abscesses, subdural hemorrhages, gross atheroma and senile atrophy, multiple sclerosis, and perhaps more rarely Bright's disease and some others.

The typical historic case of general paresis does not blend with any of these very much, but almost the majority are not typical. They will grade out to perhaps some of these types, and they will in turn grade in to meet them. "Syphilitic brain disease" and "general paresis caused by syphilis" would meet and mix most easily, and one may in some case wonder over the most appropriate term for such a case until he finally concludes that in border cases the name makes little difference. Of course, in a typical syphilitic trouble the symptoms would be more gross and asymmetrical, corresponding with more gross and asymmetrical lesions. The name general paresis generally suggests a fairly symmetrical, fine-grained cortical impairment.

Alcoholic dementia *may* exhibit gross paretic symptoms, almost always shows mild ones. On the other hand paretics are frequently alcoholic, and that usually antedating the specific paresis. Post-apoplectic cases are usually clear, but occasionally the history will be vague, there will be no account of any convulsion, or it will be vague in its character. If then the sequelæ show a paretic state, especially after time for subsequent softening has elapsed, even if a true apoplexy, the final symptoms may be so symmetrical and paretic as to suggest a secondary cortical impairment general in character.

In the reception of nearly 100 inebriates a year we have met two cases of acute gross alcoholic dementia caused by a prolonged spree. These were left with nearly all the paretic signs in strong force, yet the onset and the subsequent lack of progression marked them into another type. No doubt a diffuse lesion was produced.

The multiple sclerosis of the books I have never yet met to recognize, and on account of its rarity it is not often considered.

Senile states with arterial sclerosis, or atheroma with vague paretic signs and perhaps cerebral attacks, with progressive decline and death in about the same way and with about the same duration as paresis, furnish somewhat confusing cases. During the approximately six years which these cases cover, along with the cases designated general paresis, we would number about twenty-five cases designated senile with paretic symptoms not due to tumor or other known gross changes as above. Many of these are quite closely allied to a true paretic state.

A case of locomotor ataxia admitted as an inebriate died after a duration of about twelve years, and during the last few months of his life showed many paretic signs, almost enough to be called typical. It is probable that it was a true paresis, though but a terminal state, the ataxia being the main disease. Moreover, several times old cases of epilepsy have become paretic; several have become grossly or typically so for a few months before death; occasionally one is quite typically so after a series of convulsions. Of course, in almost all epilepsies with dementia there comes a somewhat peculiar motor as well as mental impairment, but this is not like the typical paresis above mentioned. In the above cases it seems probable that there was a true paresis terminal in character.

Two years ago, having been strongly impressed by the questions of diagnosis against paresis as a definite entity, we outlined several types with which it mingled. The next year Farrar most power-

erfully enforced the same views in an article in the *Journal of Mental Science*. These ideas we would again assert as the keynote which harmonizes the differences. We would think of general paresis as designating conveniently the group of most common symptoms coincident with a *progressive general cortical trouble*. Any of these symptoms could be absent, while symptoms of other types, such as senile dementia or alcoholic dementia, can come freely in. This being assumed, the difficulty about diagnosis is explained and becomes quite unimportant, because concerned more with the name than with the facts. It would seemingly at times be of little significance if one called a case syphilitic brain disease or general paresis caused by syphilis. However, we must not go too far and thus add confusion instead of clearness. General paresis, as a type, is quite clear, though not in its outlying borders. The discussion of the differing views of the pathology by Mickle, recently, shows these to be no less variable than the clinical ones.

Leaving diagnosis, let us consider a few of the current questions. The most prominent is *causation* and in this the most stress is placed upon the exciting cause. Inasmuch as syphilis and intemperance are commonly admitted the most common and powerful causes, it would seem that the predisposing causes would rise to equal value, for of all cases that have syphilis, a very slight percentage have general paresis. As to that most commonly named predisposing cause, "heredity," paresis seems to claim a less proportion than other forms of insanity. Only six of the 100 cases gave a history of insanity in near relatives, though probably there are more unascertained. A defective constitution is, however, found in many, though not constant enough to deserve any type.

In rather few of our cases can a history of syphilis be obtained. In a multitude of cases it can be suspected; in almost none can it, with great probability, be excluded. In twenty-one cases, only, out of the 100 was a definite history obtained, but nearly all of the rest were of such habits of life, by reason of intemperance, etc., that it could be justly suspected possible. Then, too, the proportion of female cases is about the proportion that might be so infected, and in only one of the fourteen cases is the evidence strongly against this. One came in at the same time with her husband; both died of general paresis. One man came with a history of blindness of long years' duration, was parietic, and died of meningitis. His wife died of paralysis about the same time he came here. Several of the women were known to have had dissipated habits,

while of the others, all except one were married; all were from the lower walks of life, although immoral habits could not be proven, of course, in many of the cases. Simply as a strong personal opinion, it would seem possible that syphilis might claim to be almost the only cause. Of course if only one case be proven free from such taint it breaks the logical sequence.

As to the old cause assigned "brain strain," we would find it most completely set aside in these cases. Of the 100 cases there are no severely active brain-workers. We would number one teacher, one bookkeeper, one librarian, seven clerks, five physicians, one veterinary surgeon, and six business men. These are twenty-two in all, but the teacher had not been teaching recently, nor the bookkeeper recently at work. The clerks were mainly not at brain work, being chiefly salesmen. The librarian was a man of close application; the five physicians were not any of them especially active, and syphilis was practically sure in three of them. Of the business men, none of them was in heavy or trying business. Of the rest we give the enumeration simply to show how, almost exactly by chance, the occupations are selected: One contractor, two engineers, one civil engineer, twenty laborers, one liquor dealer, four carpenters, two blacksmiths, one cook, one merchant, two traveling men, one tramp, one janitor, two railroad men, one gardener, two printers, one painter, one policeman, two no occupation, four unknown, and fourteen women.

Another interesting phase not often dwelt on is the different mental complexity of the diseases among the intelligent and among the ignorant. This is perhaps no more true of paresis than of any other form of insanity, yet vaguely true; the quiet, stupid dementias, without excited stage, are almost always among the ignorant classes. A highly cultivated man has the more complicated delusions, more active and sharper changes.

SEX.—The proportion of female cases — 14 to 100 — is fairly near the average reported. We have detected no other reason for the proportion than the chances for syphilitic infection. Of the fourteen only three had any active, excited stage, and in them the excited stage was not the second, but in the third and last stage, a note of which we have not seen elsewhere. The cases are usually more quiet and insidious in their approach, particularly so as in other insanities the female cases are more active.

The frequency of general paresis has been a debatable question, different hospitals reporting widely differing proportions. Undoubt-

edly many cases have been overlooked by observers, yet by running back by years here, the past eight years show widely varying results in this same hospital, and as all come from the same population, and under the same personal diagnosis, we can approximately eliminate the personal equation.

OFFICIAL YEAR.	No. Insane Admitted.	No. Paretics Admitted.	Whole No. Deaths.	No. Paretics Died.	Paretics to Ratio Admissions.	Ratio Paretics Died to Deaths.
1888-89.....	276	10	71	10	1-27.6	1- 7.1
1889-90.....	312	10	55	5	1-31.2	1-11
1890-91.....	286	15	85	6	1-19	1-14.1
1891-92.....	254	21	85	18	1-12	1- 7.6
1892-93.....	307	18	75	24	1-16	1- 3.1
1893-94.....	328	12	96	16	1-26	1- 6.0
1894-95.....	276	6	84	8	1-46	1-10.5

The knee-jerk phenomenon has been variously commented on in relation to this disease. We find twenty-three to have absent reflex, five to have very slight reflex, sixteen to be approximately normal, twenty-four to be moderately exaggerated, twenty-six to be excessively exaggerated, of four the report is lost, and in two cases reflexes were unequal. Of these, the absence of reflex is the most important, the extreme exaggeration being only a minor helping symptom. Unequal reflexes are very suggestive.

The study of the convulsive attacks in general paresis has never been very thoroughly exhaustive; perhaps, from the nature of the subject, can not be. Convulsions are sufficiently numerous, however, to designate it rightly as a gross organic disease. Of the eighty-three cases died, we found fifty-two cases in which distinct cerebral attacks occurred; of these, thirty-nine had extreme and decided convulsions, most of which were only late in the disease. In two cases convulsions were only found early in the disease; eleven cases had cerebral attacks not amounting, so far as known, to actual convulsions—ordinarily the convulsions came on some months or a year before death and usually, also, were absent during the last few days. Two cases, however, died at the end of a series of convulsions exactly as in status epilepticus, while five more had convulsions during the last days of life, leading up to and causing their death. Of the more atypical cases, one man had a convulsion five years before admission, was able to work and considered sane up to a few months before admission. Another had cerebral attacks four or five years before admission; one twenty-four years before;

one three years before; one six years before; two were called epileptics on their admission.

The subject of remissions of the disease would seemingly be appropriate here, and yet we do not know of a single case that fully deserves the name, though one does approximately so. Not only have they not recovered during their stay here, but I do not know that any other had previous to their coming. A good many delayed much at different stages of their progress, some have made a few retrograde steps, but in general there is nothing of much note.

The average age of admission to the hospital was forty and five-tenths years, the youngest twenty-seven years, the oldest sixty-eight. Five cases were below thirty years of age, four cases were sixty or over, thirteen cases were between fifty and sixty. Although some of the most typical cases were between fifty and sixty, yet the four over sixty rather lean away from the type. One of these, after some quiet failure, had convulsions with very slight, if any, paralysis, degenerating through three years of quite steady failure to death, with occasional convulsions and quite typical mental and motor states. Another progressed quite steadily in a pure dull dementia. The fourth was diagnosed paresis in another hospital, had there a good many convulsions, and continued at times to have them in different series, finally dying at the end of one of these series. He had most extreme radial atheroma, suggesting an impairment of the brain arteries with atrophic changes. He is the most atypical case. There are very active cases among the older cases, and quiet, dull ones among the young.

Finally, as an opinion simply, we trend toward the theory as a possible one that syphilis is the chief central element, and that many of the varieties and symptoms are due to the distance from the syphilitic infection. The age limit would be thus accounted for. As the man becomes older, he is less apt to be infected, or, from like cause, farther away from the date of infection. In youth the converse will hold. There must seemingly elapse some years after the infection to develop the disease. All the dates of syphilitic infection that were established indicate this incubatory period to vary from six to fifteen years. In this same line of evidence also is the general paresis in children, commonly assigned as a quite purely syphilitic infection. These evidences, together with the proportion of the cases, the personal character of the patients received, their habits and the habits of the walks of life from which they come, make up a presumptive evidence. Presumptive evidence,

if strong enough, is, as we would claim, against Mickle's criticism, scientific, though not conclusive. In this case it is far from conclusive, but hardly any theory about the disease is fully established.

RECENT LITERATURE PERTINENT TO THE DISCUSSION.

L. Pierce Clark—*Journal Nervous and Mental Diseases*, May, 1895. Report of Two Cases Tumor Mistaken for Paresis.

Alzheimer—(Abstracted *Journal of Insanity*, 1895, p. 383). Juvenile Paresis.

Theo. Diller—*Journal Nervous and Mental Diseases*, 1895. Association of General Paresis and Tabes.

R. S. Stewart—*Journal Mental Science*, April, 1895. The Spastic and Tabetie Form of General Paresis.

Hubert Bristowe—*Journal Mental Science*, April, 1895, and July, 1895. Relationship between General Paralysis and Chronic Renal Disease.

Reginald Farrar—*Journal Mental Science*, July, 1895. On the Clinical and Pathological Relation of General Paresis of the Insane.

Ernest Christian Carter—*Brain*, autumn, 1893. The Relative Importance of the Minute Histological Features of the Brain Cortex in General Paresis.

W. Julius Mickle—*Brain*, spring, 1894. Critical Digest on General Paresis.

W. Julius Mickle—*Brain*, spring, 1895 (also summer and autumn, 1895). On Syphilis of the Nervous System.

H. M. Bannister—*Journal of Insanity*, April, 1894. General Paresis a Toxine Disease.