

experience of those who are most familiar with their care. Within the past year this subject was discussed in two papers by prominent German alienists, both of whom stated that in their experience recent cases of insanity are best cared for in dormitories, and that their association together is an advantage, because it gives the patient something besides himself to think about. This has also been my personal experience. Any case of acute insanity can be treated successfully outside of an institution, but I agree with the statement made by Dr. Langdon that no insane person can be cared for so well nor cured so promptly while living under the conditions in which the mental disturbance developed. There should be not only an entire change in environment, but also the removal of every one connected with the life of the patient at the time of the outbreak of the mental disturbance. For these reasons, unless circumstances are exceptional, any given case of insanity will recover in an institution properly equipped for its care more quickly than the same patient will in a general hospital or a private house.

DR. JAMES G. KIERNAN, Chicago—I have had considerable experience in the treatment of acute psychoses, both as a hospital physician and as a neurologist outside of the hospital. In dealing with such a case, various elements, to some of which Dr. Moyer referred, must be taken into consideration. In a large number of cases of confusional insanity, it does not make much difference whether they are treated at home or in an institution, but it does make a difference whether or not a commitment should be made out. Commitment in most of the states is attended by disgraceful publicity and it leaves a certain stigma. The mental confusion states can be advantageously treated in sanitariums and in general hospitals. Home treatment of these cases, however, is exceedingly trying on relatives, and more than one member of the family may break down from the care of such cases. Neither neurasthenia nor hysteria can be properly cared for in the home environment, and such patients must be removed from home ere much can be done for them. This is true to an even greater extent of the psychoses. Melancholia, for example, should never be taken care of at home. The environment has a bad effect and suicide is always an imminent possibility. Wealth can not guard against this when they are taken care of at home. The home care of acute psychoses is harmful rather than beneficial, and is an important factor in the increase of the insane; under home conditions the insane but too frequently pass from an acute to a chronic state. The influence of the chronic insane on the acute insane has for decades been shown to be beneficial. In this, Krapelin but repeats the experience of alienists the world over, and this position has almost become a truism among alienists. The influence of the chronic insane upon the acutely insane of the explosive type is peculiarly beneficial. It conduces to an amount of self-control by them not otherwise attainable. The objections charged to the association of the acute and chronic insane arise from the disgraceful overcrowding of the insane hospitals for the benefit of the localities in which they are built. Such overcrowding prevents individual treatment and supervision, the absence of which has for decades proven very injurious.

DR. C. E. RIGGS, St. Paul, in reply—I believe that the distinction that has existed between the neurologist and the alienist is a thing of the past. As practicing physicians, we have to deal with both of these conditions, and as the result of my experience, I have formed definite conclusions on the subject, and these I have given you in my paper. I have had patients plead with me never to send them back to state institutions. I am not decrying the institutions themselves, but the disagreeable associations connected with them. We all know the effect of suggestion, whether upon the sane or insane, and I am firmly convinced that the suggestion of the chronic insane upon the acute cases is harmful and undoubtedly prolongs the condition which we are trying to correct. I use the term "home care" in a modified sense. I fully recognize the advantages which have been referred to, and in many instances we must accommodate ourselves to the particular circumstances of the case. The stigma that attaches to this

condition in the eyes of some people undoubtedly is one of the factors which induces the family or friends to try to keep the patient at home. One of the objects of my paper was to call attention to the incipient manifestations of the trouble, and its relations to the problems of internal medicine. The use of alcoholic stimulants in these cases is only advisable in certain instances. I have seen whiskey used with beneficial effect in these cases; if necessary, it should be given freely, practically *ad libitum*, until the desired result is attained, but not longer. I recognize the dangers referred to, but I have never seen any unfavorable results follow its use after the recovery of the patient.

## THE PSYCHOSES OF CHOREA.\*

HAROLD N. MOYER, M.D.

CHICAGO.

Our nosology fails to distinguish between chorea which occurs as a symptom in the course of an infection, which by some is regarded as a rheumatism, and that which is dependent upon organic disease. The acute chorea which has more or less involvement of the joints and pericardium, and sometimes without it, is commonly spoken of as the chorea of Sydenham. The agent is not the same in all of the cases. The choreas which are associated with mental disease in adults, generally have an organic basis; the secondary dementia accompanying post-hemiplegic chorea, and Huntington's chorea, are due to progressive degeneration of the cerebral cortex, associated with dementia. Many of the insane present choreic movements, which are simply the expression of organic changes in the cortex, occurring in the terminal states of the ordinary psychoses.

Excluding the choreas of advanced life usually associated with organic disease, the occurrence of a well-marked psychosis in the progress of the chorea of Sydenham is exceptional. The case which is reported in this paper is the only one that has come under my observation.

The mental condition of the choreic child is one on which there is no unanimity of opinion. Spitzka<sup>1</sup>, prompted by a sensational claim made in the New York Neurological Society that all choreic children are morally imbecile, says: "In mild cases of chorea the mind is no more seriously affected than in any other affection annoying to children and associated with insomnia. Even in severe cases, the mental faculties may be found to be quite intact. Such disturbance as is found in the majority of cases, is the result of the motor disturbances and of the ensuing restlessness, irritability and peevishness of the child. In protracted cases of chorea, the mind suffers in the direction of actual insanity; in that case, maniacal outbreaks, confused delirium, enfeeblement of the memory, rapid emotional change, and, in extreme cases, dementia may ensue." A psychosis with these symptoms is to be designated as choreic insanity.

Regis<sup>2</sup> gives a much better picture of the mental condition of choreics. He calls attention to their defects of memory and attention, the mobility of ideas, the lack of consistency in the recollections and the mental hebetude. The most characteristic symptom in these patients is the existence of special hallucinations to which Marce especially called attention. These almost always involve vision; very rarely, taste, hearing or common sensation. They are especially common in females and rarely appear before 14 years of age. They occur chiefly

\*Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Frederick Peterson, Hugh T. Patrick and H. A. Tomlinson.

in the evening, in the drowsy condition between waking and sleeping, and are very often continued in dreams. They are always of a painful nature, terrifying and fantastic, and abound in scenes of deaths, burials, obituaries and conflicts. They cause so much terror that the patient is in fear of going to sleep and will try to keep himself awake in consequence. When these hallucinations are continued into the sleep, they cause nightmares. This symptom is sometimes a premonitory sign, occurring many days prior to the convulsive movements. Sometimes, and more commonly, it appears at the time the choreic paroxysms show themselves. Its early disappearance is a favorable sign; sometimes it becomes continuous and deepens into an actual insanity. The majority of choreic patients are impressionable, emotional, disputative, and even violent.

This picture of Regis of the mental condition of the choreic accords with my own experience. Of the last ten cases which I have seen of the chorea of Sydenham, occurring after 10 years of age, four presented in well-marked degree, the changes which Regis describes. In four others the history was so imperfect that such mental phenomena might easily have escaped detection. The remaining two were surrounded by people who were sufficiently intelligent to describe such a condition had it existed; so its absence may be reasonably predicated.

My own judgment of the mental condition of choreics inclines more to that of Regis than of Spitzka, though it is to be remembered that the latter describes the peevishness and irritability which goes to show that he does not regard the mental condition of the choreic as quite normal. He does not, however, refer to the specific hallucinatory stage preceding or accompanying the choreic manifestations, which was pointed out by Marce, and which my observations show is frequently present.

Regis, in speaking of choreic insanity proper, says that it may be either maniacal or melancholic. Certainly the former is the most frequent, as I have not met with it in my own experience, nor have I seen a well-marked case of melancholia or seen a report of it described in the literature. Meyer<sup>3</sup> in discussing choreic insanity, says that no one can doubt that derangement of the mental functions in acute chorea is very common. He regards the maniacal form as the most frequent, but also recognizes the agitated melancholic type, and even an acute delirium, occurring in this disease. In chorea he recognizes two types; those in which the insanity precedes by some time the chorea and those in which it comes on some time after the chorea. He describes the case of a girl of 8 having marked mental depression, with a tendency to remain in the same position. Once or twice a day she became, without any external cause, suddenly excited; she scolded, broke what was within her reach, and struck at those who went near her. All hallucinations were denied, a statement which was repeated after her recovery. Three or four days after commencement of this state, choreic movements were noted, at first slight, but later becoming general. At the end of six weeks' treatment, the choreic symptoms had entirely subsided and with them the mental derangement.

My own patient was that of a fairly well-developed girl, 15 years of age, without neurotic heredity—at least so far as could be gathered from an imperfect family history. In the spring of 1900 she developed choreic movements fairly well marked in the upper extremities, which later became general. In the third week she became acutely maniacal, restless, sleepless, singing, constantly dancing about, knocking against the furniture and other objects until the skin became excoriated and

bruised in many places. Sleep was impaired and her nutrition rapidly failed. Under treatment, which included rest in bed, there was a gradual lessening in the choreic movements and a complete recovery from the chorea and with it a disappearance of the mental symptoms. In the spring of the present year the chorea returned and with it the acute maniacal conditions. The symptoms presented were identical with those of the preceding attack. A few cases of acute insanity in the course of the chorea of Sydenham have been reported of recent years.

Bode<sup>4</sup> described a case in a woman 24 years of age who, five weeks before coming under observation, had given birth to a child. The mental symptoms were melancholic in type. The chorea and insanity lasted a month and a half, and during its progress she developed an optic neuritis, which improved under treatment. In this case the symptoms point to organic disease, probably a luetic trouble.

Jastrowitz<sup>5</sup> reports the case of a girl 20 years of age who developed a mental trouble in which there was depression having the general appearance of a primary dementia. During the progress of this affection, chorea developed with the ordinary accompaniments of pain in the joints. Later, the chorea disappeared, but without very marked improvement in the mental condition. A second case reported by the same writer is much the same in its clinical history, excepting that there was improvement in the mental condition and the chorea, though there remained a loss of memory for the period of the illness and an impaired recollection of happenings prior to the illness.

Cowen<sup>6</sup> reports a case of maniacal chorea in a man 21 years of age in which the chorea developed some time after the onset of the psychosis. There was complete recovery from both the chorea and the mental disease, but with a loss of memory of occurrences during the period of the illness.

Reifensthal<sup>7</sup> describes two cases of chorea minor which were accompanied by marked mental symptoms, the character of which is not stated.

C. W. Burr<sup>8</sup> reports a mixed case in which chorea and acute delirium occurred in the course of scarlet fever.

It will be seen that the rarity of reference in the literature shows that insanity in the course of Sydenham's chorea is exceptional. My own case is one of the most typical so far described in the literature. Many of the cases reported are evidently associated with organic disease of the nervous system, acute febrile affections, or pregnancy, in such a way that the direct relation of the psychosis to the chorea is obscure.

The following conclusions are justified by our present knowledge of the subject:

1. A well-marked alteration of the character and mentality can be noted in the majority of cases of chorea, usually preceding by some weeks the onset of the choreic movements.
2. Distinct hallucinatory phenomena are present in a considerable number of cases, which are not, however, of sufficient severity to merit being classed as a distinct psychosis.
3. The mental disturbance in chorea usually comes on after choreic movements, but it may precede them.
4. The type is usually maniacal, though it may occasionally be melancholic or present the character of an acute delirium.
5. Mental disturbances are commoner in older children; they are rarely observed before the twelfth year.

6. Chorea which are accompanied by mental disturbance later in life, are almost always accompanied by organic changes in the central nervous system.

7. The prognosis is favorable when the mental disease complicates the simple, acute chorea of Sydenham. Insanity associated with chorea in middle and advanced life is almost invariably associated with organic disease of the central nervous system.

## BIBLIOGRAPHY.

1. Manual of Insanity, p. 372.
2. Practical Manual of Mental Medicine, p. 478.
3. Dictionary of Psychological Medicine, p. 206.
4. Inaugural Dissertation, Tübingen.
5. Deutsche Medicinische Wochenschrift, Nos. 33 and 34, 1899.
6. Journal of Nervous and Mental Science, p. 321, 1897.
7. Inaugural Dissertation, Göttingen.
8. Archives of Pediatrics, January, 1898.

## DISCUSSION.

DR. C. EUGENE RIGGS, St. Paul—I saw two cases of chorea associated with insanity last winter. I found the literature very barren upon this phase of chorea, and was interested in the phenomena these cases presented. In both of them the mental condition followed the chorea. One was a colored girl, about 15 years old; the other was a young man, about 17. The girl was apathetic; she would not talk, could be induced to take nourishment only with the greatest difficulty, and had spells of intense excitement, when she had to be restrained. The young man was rational at intervals, with periods of excitement, and he showed a suicidal tendency. He made a perfect recovery. The last time I saw the young woman her condition was unchanged, but I think she will recover.

DR. E. G. CARPENTER, Columbus—I have observed perhaps half a dozen cases of insanity combined with chorea in the adult. Two of the cases were Huntingdon's chorea. Four of the cases resulted fatally. It is safe to look upon insanity following Huntingdon's chorea in the adult as a grave condition. In the cases which I observed, the patients gradually grew worse and died within two or three years. The choreic movements became very active and led to exhaustion.

DR. EDWARD E. MAYER, Pittsburg—I have been interested during the past year in the psychoses of chorea on account of two cases which were under my care. One was a case of mania following childbirth, which had been preceded by choreic manifestations. The other case, which I saw recently, was a woman who is still under treatment. She suffers from chorea accompanied by mental depression. The chorea came on immediately after the menopause, which was about two years ago, and about six months later she developed symptoms of mental depression, which have resisted various methods of treatment and have steadily progressed, until now she presents the typical picture of hypochondriac melancholia. I can not entirely agree with the statement made by Dr. Moyer that we fail to differentiate the chorea which represents an infection and that which is a symptom of some known organic disease.

DR. JOHN PUNTON, KANSAS CITY—While the literature upon this subject is rather scanty, I do not think these cases are so very rare. About six years ago I had a case of acute mania, of a very violent form, coming on during the course of a chorea. The patient made a good recovery in four or five months. Since then she has remained entirely well, and has married.

**Foreign Bodies in the Rectum Among the Convicts in French Guiana.**—Clarac writes from the penal station in Guiana to the *Annales d'Hygiène et de Méd. Coloniale* that the convicts secrete money, saws, files, etc., in their rectum to conceal them until an opportunity for escape arrives. They put the articles in a small cylindrical metal box and manipulate the box close to the sigmoid flexure. The symptoms of proctitis, etc., which are induced by this foreign body attract attention to the patient, and the box can usually be palpated.

## MIRROR-WRITING AND THE INVERTED IMAGE.\*

ALBERT B. HALE, M.D.

Assistant Clinical Professor of Ophthalmology at Rush Medical College (University of Chicago).

AND

SYDNEY KUH, M.D.

Assistant Clinical Professor of Neurology at Rush Medical College (University of Chicago).

CHICAGO.

The retina receives an inverted image of objects as they are related in the outer world. That this is so is proven by all text-books of optics<sup>1</sup> and accepted by all text-books of physiology.<sup>2</sup> But the fact that we do perceive objects in their normal relations, although equally undisputed, has been the subject of many theories, both fanciful and serious, since the modern scientific world has been dominated by inductive philosophy. One of the earliest explanations was that of retinal function by which the retina itself projects in a certain direction only the image received upon it, and is connected by one particular nerve fiber with the brain in such a way that the brain connection of the upper retinal element lies below, that of the lower above, that of the right to the left and of the left to the right, so that the image is reinverted on the cortex of the brain. This theory can be received neither by the physiologist nor by the psychologist, for we know that the nerve connections are by no means so simple as this implies, and that the visual process itself is so complex that it must be developed by education before it becomes the perfected function which enables us to localize in space.

A second explanation is that of cerebral function, which to the metaphysical psychologist is an act complete in itself and not amenable to any further analysis. Physiological psychology, however, demands that the cerebral process be analyzed into its component factors. And in doing so we learn that the visual act is by no means so simple as it would appear. In fact, any similar psychic act is complicated. "We may," says Binet in his "Psychology of Reasoning,"<sup>3</sup> "consider external perception as a synthetic operation, since it results in the uniting of the information actually furnished by the senses to the information furnished by preceding experiences. Perception is a combination of the present with the past. To perceive a body which is actually in the field of vision, to recognize in it a certain form, size, position in space, certain qualities, etc., is to unite in a single act of consciousness actual elements (that is to say, the optical sensations of the eye) and past elements (that is to say, a crowd of images); it is to make a single body out of these unconnected elements. This is a phenomenon which completely escapes consciousness; by consulting that witness alone, the operation of perceiving an object appears to be an easy and natural act which demands no effort of reflection on our part; that is in reality an illusion. Experiment and reasoning prove to us that in all perception there is work." Meynert, in his essay entitled<sup>4</sup> "Zusammenwirken der Gehirnteile," gives expression to identical views. We must necessarily, therefore, consider the apperception of the image as a very complex process, into which perception, association and co-ordination enter.

It is not, however, within the province of this article to discuss in greater detail the phenomena of vision; they are at best nothing but a receptive psychic process. Be-

\* Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Frederick Peterson, Hugh T. Patrick and H. A. Tomlinson.