INTERMITTENT MENTAL STUPOR.

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Physicians who spend a number of years in an asylum for the insane are struck by occasional anomalous cases which do not fall readily into any of the systems of classifications which are in vogue, not only in institutions, but in societies whose object is the study of mental disease. Belonging to this class are undoubtedly the occasional cases of stupor, intermittent and otherwise.

In the spring issue of *Brain*, in 1895, there appeared a report of four cases of stupor by Dr. James R. Whitwell of the West Riding Asylum, from the study of which he deduced certain conclusions as to causation, which, however, may be said to be like the Scotch verdict, "not proven." He claims that a study of the cases of so-called mental stupor has shown that there is considerable weight of evidence in favor of the theory that certain of these cases may be due to a want of normal proportionate development in the circulatory and nervous systems; that the want of due ratio in time of development of the two systems leads to nerve cell mal-nutrition and consequent imperfect mental action; that, in fact, while the brain reaches the degree of development normal to the age, sex and physique, the blood-vessels, and frequently the heart, remain in a puerile condition, the aorta and other blood-vessels throughout the body, therefore showing a congenital narrowness, associated in some cases with a congenitally small heart. If this condition be only temporary, and under proper stimuli the normal vasculo-cerebral proportion is finally brought about, the patient eventually recovers from his stupor. If, however, this equilibrium is not established, the case sinks into dementia and is either carried off by some intercurrent acute disease, or, as is frequently the case, develops phthisis. Dr. Whitwell reports four cases of this condition of stupor, two

of which died and the third passed into dementia. These, so far as I know, are all the cases of which the literature of medicine affords any detailed account. In the first case the sphygmograph showed a high arterial tension, and the aortic second sound was accentuated. The second case was of twelve years' standing, and finally died of phthisis in a profoundly demented condition. It will be observed that, in the cases of stupor just mentioned, the interesting feature of intermittency is wanting. The same writer, however, reports in his article one other case of stupor in which intermittency was a marked feature, and which he likewise attributed to the same disproportion between the circulatory and cerebral systems. The salient points of the case are as follows:

He was a clerk, aged 23 years, when admitted. He first showed mental symptoms at the age of 17, and was confined in an asylum in Germany for about a year. Later he was committed to the Netley Hospital for a similar condition. The two previous attacks were said to be, in all essential particulars, the same as the third one for which he was under treatment when his case was reported. On admission he was in a condition of profound stupor, standing in one position with head bent down, and saliva dripping from his mouth; took no notice of anything going on around him, but with sufficient additional stimulus could be made to move a little. His limbs, when placed in peculiar attitudes, slowly changed their positions in accordance with the action of gravity, but not to the principle of comfort. This condition lasted for 30 hours, and then the patient became bright, intelligent, talkative, interested in his surroundings, and fairly keen in work, games and pleasure; this lucid period lasted 12 hours, the patient again lapsing into profound and typical stupor. This markedly intermittent condition was shown by an hourly chart which was kept nearly a year and a half, when dementia gradually came on, and the case ceased to be interesting. Physically, he was well-built and muscular, and upon admission his heart was found to be somewhat hypertrophied, and the aortic second sound accentuated the same as in the cases of stupor previously referred to. In this case, likewise, there was strong hereditary taint. In this latter case some light was thrown upon the relative condition of the vascular system in states of lucidity and stupor by sphygmographic examinations. Tracings were

taken during periods of stupor, during the awakening period, and during periods of lucidity. These tracings showed invariably, during the periods of stupor, a high tension, indicative of peripheral resistance, while during the lucid period this was completely relaxed, giving rise to distinct dicrotism. The tracing for the intervening period, of course, showed a character midway between the two. To speak a little more fully of the pulse tracings we may say that at first sight they would appear to indicate a very weak and feeble pulse. It was certainly small, but was only weak and feeble in that the fluctuations of the vessel were comparatively small, and the variations in its bulk and volume were only within narrow limits and gradual. The line of ascent was short and sometimes very oblique, the latter being masked by its shortness. The apical angle was wide and the line of descent gradual; the dicrotic wave and aortic notch were usually almost absent, and there was frequently a pre-dicrotic wave present which tended to blend with the apical angle to form a plateau, probably owing to the feebleness of the cardiac factor. In fact, the tracings indicated difficulty in the peripheral outflow and diminished vigor of ventricular contraction. In this case of Dr. Whitwell's the stage of stupor predominated over that of lucidity in the proportion of almost 3 to 1. With the exception of this case I am unable to find any others reported. It cannot be that they are numerous, as Dr. Whitwell goes to some length to establish mental stupor as a pathological entity.

Dr. Whitwell would, therefore, explain his case on the theory that it is an intermittent form of stupor caused by, or associated with, temporary spasm of the peripheral vessels during the period of mental stupor, this spasm relaxing during the period of lucidity. It seems to me, however, that the pathology of the condition is further back; that the same cause operates to produce both the stupor and the spasm of the peripheral vessels, and is probably of an emotional character. We know that under influence of certain emotions the capillary vessels are sometimes relaxed and sometimes in a state of spasm. For instance, under the emotion of fear the capillary vessels are strongly contracted and the blood being forced from them the person is said to be pale. Under the influence of shame the vessels are dilated and the individual blushes. May it not be that in cases of intermit-

tent stupor we have a powerful emotional factor which operates and ceases alternately, and thus produces the phenomena in question?

At the Connecticut Hospital for Insane we have had, during my service of about 15 years, one such case, that of I. M., admitted February 12, 1895. He was a Polish Jew, 26 years of age, a clerk, well educated, temperate, and recently married. His disease was reported to have been of six or seven weeks' duration, and to have come on as a result of domestic trouble. This was said to be his first attack. The history of his case given upon admission was in marked contrast to anything observed at any time during his residence at the hospital. Nothing could be learned of his family history. Up to the date of admission he was said to have been extremely destructive, and subject to sudden violent impulses during which he would seize anything which chanced to come within his reach and maintain his grasp as long as he was able. He would not speak, but was restless and noisy at night. His appetite was good, and he was neither suicidal nor filthy. He had recently been cared for at the almshouse, and had, therefore, been under pretty constant observation. Four days after admission his brother called and gave the following additional history. He stated that I. M. was married 18 months ago and found himself impotent, much to his horror. This led to domestic trouble, and he and his wife separated, and she soon after gave birth to a child. Some time during the previous summer the patient was taken ill, but the nature of his disease could not be ascertained, and in June he went to the Hartford hospital for treatment, and remained for several weeks, but mental symptoms having in the meantime supervened, he was transferred to the almshouse. His brother attributed his insanity to his domestic troubles. Since admission he had taken only one meal voluntarily, and it had therefore been necessary to feed him with the nasal tube in order to sustain life. Six days later he began eating voluntarily, but would converse with no one, not even to the extent of answering questions. He sat with head bowed and eyes closed the greater part of the time, and showed no interest in his surroundings. On March 25 he wrote a letter to his brother inquiring as to the health and whereabouts of his relatives, and announced that he had lost the power of

speech. On June 3, having abstained from eating for several days, recourse was again had to the nasal tube. During the month of July the peculiar condition of alternating stupor and lucidity developed for the first time in the history of his case. At first the stupor came on with great regularity every second day, so that his time was about equally divided between stupor and lucidity. On his lucid days he wrote intelligent letters to his relatives, conversed rationally and cheerfully, and the keenest scrutiny failed to discover anything abnormal in his mental processes. During the stupor he showed a cataleptoid condition, and maintained a constrained and unnatural attitude for hours, with his eyes closed, saliva dribbling from his mouth, and was totally oblivious to any ordinary external stimulus. Recourse was had to inhalations of ammonia and ether, and on one or two occasions the Faradic current was employed for the purpose of rousing him from stupor, but all to no avail. Urine and feces were passed in his clothing; and swarms of flies on his face and about his eyes, nose and mouth were wholly unnoticed. The transition from one state to the other was abrupt. At 10.30 in the morning, for instance, he was in a state of profound stupor as just described, while half an hour later he was bright, cheerful, active and intelligent. During the month of July the proportion of time spent in stupor gradually increased. As the case had assumed unusual and interesting features, a daily record was begun on July 30, 1895, in which were noted the hours spent in each state, his pulse, temperature and respiration, and what he ate, said and did.

Sphygmographic tracings, which were made and photographed by Dr. Coleburn during both states, form a valuable part of the record. I would remark in passing, however, that the tracings in this case bear little resemblance to those obtained by Dr. Whitwell, as they show a much more powerful cardiac action. After a period of two or three weeks, instead of the time spent in the two states being about equal, the stupor began to predominate, and he would often spend two days or two and a half in a stupor; moreover, the regular periodicity, which was at first a marked feature, was gradually lost. As what has already been said will serve to give an adequate idea of his behavior from the time the stupor began until August 1, we herewith subjoin some extracts

from the record beginning with August 1. I may remark that up to this date observations had shown during his stupor a varia-

tion in his pulse rate from 56 to 72, and in temperature from 96.6° to 98.4° , but respiration was always found to be normal.

August 1. He was in a stupor during the entire day.

August 2. He was lucid from 11 A. M. till 7.30 P. M. For dinner he ate fish, bread and potatoes, cucumbers and pie, and drank one pint of milk. For supper he took bread and butter, cake and dried beef, and one pint of milk. During the lucid interval he occupied the time in writing a letter and reading newspapers. When asked to explain why it was that he remained in a stupid state a longer time than formerly, he said it was because "he did not receive any encouragement that he would get well again." He also said that if he "could be convinced that he could be at home on the Jewish New Year's Day he would make an effort to do what he was told." He stated that he "got very hungry during the stupor, but some instinct told him not to eat, as food was not a necessity when he was not working." He did not regard milk as food, but stated that he had seen "typhoid cases go for weeks without taking anything but milk." He thought that whisky and wine would be a help to him. He claimed that when he is in the stupor he understands everything that is said to him, but something tells him not to answer; also that when any one comes near him he feels as though they would do him harm. On being asked if he ever took his wife and child into consideration, he said he did not, as they were well cared for. Temperature 97.6°, pulse 70, respiration 18.

August 3. He remained in stupor all day with no sign of awakening. Temperature 98.6°, pulse 64, respiration 18.

August 4. He was lucid from 7.30 A. M. till 7.30 P. M. The first symptom of awakening was putting his hands over his eyes, and then occasionally opening them. When urged to drink some milk he opened his eyes widely, drank the milk, and was then entirely lucid. For dinner he ate bread and butter, meat, peas, pie, and drank one pint of milk. For supper ate bread and butter, cake, prunes, and drank one pint of milk. During the day wrote a letter, read the papers, and walked about the ward. He said very little to any one, except to express a desire to be at home, believing a change of surroundings and work would bring about a speedy cure. Temperature 98.6°; pulse, A. M., 60; P. M., 84; respiration 18.

August 5. He was in a stupor all day. Twice he stood on

his feet and remained so until placed in a chair. Temperature, pulse and respiration same as the day before.

August 6. He had a lucid period from 7 A. M. till 7.30 P. M. He awakened at the breakfast table when asked to eat. He took for breakfast hash, bread and butter, drank coffee and one pint of milk; for dinner, ham (although a Jew), potatoes, pudding, bread and butter; for supper, oatmeal, cookies, bread and butter, and drank tea and one pint of milk. He spent four hours in the open air, part of the time in reading, and a part of the time in idleness. He had little to say and seemed somewhat depressed.

August 7. He was in a state of profound stupor all day. He wet his clothing frequently.

August 8. He had a lucid interval from 7 A. M. to 7.30 P. M. His first sign of awakening was by placing his hands over his eyes. When taken to the breakfast table he opened his eyes and ate heartily of ham, potatoes, bread and butter, and drank coffee and one pint of milk. At dinner he ate soup, beans, bread and butter, and milk as usual. He spent four hours in the open air, and was active in moving about. While in the ward he wrote and read papers, but had little to say.

August 9. He was in a stupor all day. About noon a peculiarity was noticed in his pulse. For 30 beats it would be full and strong, but for the next 30 beats it would be small and feeble, the rate remaining unaltered.

August 10. He arose this morning with his eyes open, but would not speak for an hour or more. After this he was lucid, and spent two hours in the open air. He spent the remainder of the day reading and conversing upon current topics, which he was able to do intelligently. At 6.30 P. M. he closed his eyes, placed his hand over them and went into a state of stupor.

There is little variation in the record from this date until September 19. During his lucid intervals on some days he was cheerful, animated, and talkative, while on others he was taciturn, depressed, and inclined to avoid the society of others.

September 19. He was lucid and active from 5.30 A. M. till 7.30 P. M. To-day he was asked if he was aware of, or could recollect, what took place during his periods of stupor, and he admitted that he could not. This had been my own belief during the entire course of the disease, because when urged to do so

on a previous occasion when he claimed to be aware of what transpired during his stupor, he was unable to recall anything, and an incident which occurred later in the history of the case confirmed that belief beyond all question.

September 20. He was in a stupor all day. He fell from his seat twice, and each time remained on the floor until lifted into a seat.

September 27. During the forenoon he opened his eyes twice, but again relapsed into stupor and did not become lucid until 2 P. M.

September 30. During his stupor, which was profound and lasted all day, he dropped out of his seat and fell on the floor five times, and threw himself out of bed twice, remaining on the floor each time until lifted back by the attendants.

From this time until December 1, his record shows little variation. He would often be put to bed in a stupor, and in the morning get up and dress himself as if it was the habitual thing for him to do. Again, he would be about the hall bright and active, and an hour later would be found standing behind a door or lying on the floor in a profound stupor. Many times he was carried into the dining-room in an unconscious state and seated at the table, and after a short time he would place his hands over his eyes, open them, regain intelligence, and commence eating. Attendants sometimes found it hard to believe that his periodical stupor was not voluntary.

December 5. He passed into stupor and remained in that state until the morning of the 13th, when he arose and dressed himself as if he had gone to bed as usual the night before. During this time, the first prolonged period of stupor which occurred without interruption, he was fed regularly with the tube.

On January 13, 1896, he was taken home by his friends at his earnest solicitation in the hope that the change might benefit him. He gained nothing, however, by the change of surroundings, and was returned to the hospital April 27. His friends were able to keep him at home but a few days, he was such an intolerable nuisance, and they therefore soon committed him to the Hartford Retreat. Upon his return to this hospital the alternating periods of stupor and lucidity continued the same as before.

July 11, while out in a grove near the North Hospital, he attempted to escape when unobserved, and slipped away into the underbrush. His absence was soon discovered and search made for him. He was found about 200 yards away in a condition of stupor, which had overtaken him during his effort to escape. This would seem to dispose of the theory that his states of stupor were assumed or voluntary.

On August 10, it was noticed that he seemed to be able to postpone his stuporous attacks if promised for his next meal some dish of which he was particularly fond. He was extremely indolent and soiled his bedding rather than rise during the night. He received warm baths every morning with cold douches along the spine and objected to this therapeutic measure.

September 23. During the past fortnight there has been no recurrence of stupor during the day, and he has eaten all his meals. From this time until December 10, his progress was not interrupted by anything like stupor. He gained flesh until he weighed 186 pounds, and was uniformly bright, cheerful, intelligent and industrious.

December 14 he was discharged from the hospital apparently well. I had a letter from him a short time after his return home which is as follows:

"DEAR SIR:

"As Dr. Coleburn, of the North Hospital, has told me, when I left same place, that you would like to have me write you about myself, how I am getting along in health, so I have the pleasure of informing you, dear doctor, that I am improving gradually in health and strength, and I hope that in the course of time I shall become as healthy and as strong as I was before. I have been told that I need to have a good deal of out-of-door exercise, although I do not feel like it; the least exercise makes me tired, and I get easily tired after walking a good long distance. My sleep is not very good, that is, I generally do not feel well during my sleep, and have bad dreams, of that kind as though I have got to get to some destination and cannot on account of feeling tired and not having strength enough to get there. I am working in a dry goods and clothing store as a book-keeper, and I am getting along fair.

"Very respectfully yours,

I. M."

I wrote the young man on April 25, 1898, regarding his health, and received the following reply:

"DEAR DOCTOR:

"Your favor I duly received, and was delighted to find such high-esteemed man like you taking an interest in me. I am pleased to inform you, dear doctor, that I have been in good health ever since I left the hospital, thanks to your kind and successful treatment and the other doctors. I am working at present as book-keeper and cashier for a wholesale produce concern, and am getting along fairly well, although my wages are small. I am all right and my wages are sufficient to keep me in good order. I have continued entirely free from that trouble for which I was under treatment at the hospital. I thank you very much, doctor, for your taking an interest in my welfare now, as well as at the time of my stay at the hospital, and I duly appreciate the honor of same. Hoping this finds you, doctor, in the best of health, I remain,

"Very sincerely yours,

I. M."

This closes the history of a case which to me was one of the most interesting I ever encountered, not only on account of its uniqueness, but on account of its happy termination. The points of difference between this case and that of Dr. Whitwell have been suggested. The sphygmographic tracings are totally unlike, except in one instance. In my own case there is little indication of cardiac weakness, although the tracings in different periods of stupor varied widely. In none of them, however, was there to be observed that widening or plateau-like appearance of the apices mentioned by Dr. Whitwell.

Dicrotism was not usually present, but the line of ascent was always abrupt. One of my tracings bears quite a resemblance to those obtained by Dr. Whitwell, but even in this there is no broadening of the apical angles. I cannot, therefore, concur in the opinion that intermittent stupor is due to a disproportion between the vascular and cerebral apparatus. To what particular pathological condition this peculiar phrase of mental disease owes its origin I will not undertake to say, as it does not seem to me that a sufficient number of cases have yet been observed and studied on which to base a theory.