Some remarks on Delirium Vigilans; commonly called 'Delirium Tremens,' 'Mania à Potu' or 'Mania à Temulentia.'

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FROM the known causes of this disease and the frequency of its occurrence at the present day, there can I think be no doubt that it has long existed, and yet it has certainly never been distinctly and accurately described till within a very few years. It is probable that it has been most frequently mistaken for phrenitis or some other form of mental alienation, though one would think its diagnostic symptoms were sufficiently striking to enable an accurate observer to perceive the difference. Dr. Armstrong informs us that a pamphlet was published in England on this subject by a Dr. Pearson in 1801, which has never I believe reached this country, and this is probably the first publication on this disease that ever appeared. I know *some pretend that it was previously known and described in Germany under the name of *Delirium Tremens*, but I can find no authority for this opinion. On the contrary, Dr. Sutton who wrote in 1813, considers himself as the author of that name, and apologizes for its imperfection, and Dr. Armstrong speaks of Dr. Sutton as having been the first to propose it. Be that as it may, the name is far from being such a one as could be wished, as it refers to no symptom which is constant or peculiar to this form of insanity, for many cases of this disease occur without tremors, as has been noticed by Armstrong and others.

Two other names have been proposed in this country, viz. *Mania à Potu* and *Mania à Temulentia*. To these there appears to me to be two objections. 1st, *Mania* is usually considered as the chronic form of mental alienation, whereas this disease is of an acute character; and 2dly, neither of them will include every case of this species of delirium, as it sometimes arises from the immoderate use of opium as well as of ardent spirits, and besides, the specific name is derived from its supposed cause and not from any accompanying symptom.

It does not appear then that any of the names which have been proposed are so precise and significant as could be wished, and yet this disease seems to have more of a peculiar character than almost any other with which we are acquainted. *Delirium* and watchfulness united are its two characteristic

* Vide in Chapman's Journal, No. 6, Feb. 1822, an article by Dr. Staughton.

symptoms, and are sufficient to distinguish it from every other morbid affection. It has been remarked by the Editor of the Philadelphia Journal of Medical and Physical Sciences, 'that sleep is the *sine qua non*, in the cure of this species of mania, and when effected all difficulty is at an end.' Though this is perhaps speaking rather too strongly, as patients sometimes die, after sleep has been procured, yet it is no doubt true in most instances, and though sleep does not always effect a cure, no cure takes place without previous sleep. Why might not then some name be adopted, which would express this peculiar combination of watchfulness with delirium, which distinguishes it from every other species of insanity, and every other variety of disease, and which as far as I know always exists? Why might not the term *Delirium Vigilans* be substituted for those now in use? Would it not convey a more accurate idea of the disease, and be liable to fewer objections than any other that has been proposed?

It is not my intention however to enter fully into this subject, or give a detailed account of the symptoms, but confine myself to a few remarks upon the seat and treatment of the disease, upon both of which points there is considerable diversity of opinion. Among those who believe the brain to be the affected organ, there are some who consider it to be an inflammation, and others a venous congestion of this viscus. This latter opinion is favoured by the habits of those who are affected, as it is well known that the venous system becomes extremely debilitated in drunkards, and that they are liable to venous hemorrhages, particularly from the nose. This I have seen in more than one instance in those who have afterwards had this disease. Besides, there is never during the progress of it an intolerance of light, as there is in inflammation of the brain and its membranes, and the suffusion of the eyes which takes place is the effect only of irritation from the want of sleep, and does not come on in the commencement of the disease, as it would if it were from an inflammatory action extending along the membrane covering the optic nerve.

Some support also, I think, is given to this opinion by the circumstance that sleep most usually restores the patient to health, no doubt by restoring the equilibrium between the arterial and venous systems, though we know not how this is effected. But if active inflammation was going on in the brain, is it probable that it would be suspended or removed by sleep? Do we not know on the contrary that sleep may be procured in phrenitis, and the progress of the inflammatory action continue unchecked? And if this delirium arose from disease of the stomach, as

has been recently suggested, would not emetics, which certainly do sometimes cure it, do it without first producing sleep? Is not this a strong presumptive proof that the proximate cause is in the brain, and that the benefit derived from emetics is owing to the sympathetic action of the stomach upon the brain, rather than to any direct effect which they have upon the stomach itself? Dr. Armstrong informs us, that in the only two cases which he examined after death, 'slight congestions were found in the brain and liver, while the other viscera appeared natural.' I had an opportunity a short time since, of examining the brain of a person who died of this disease in four days from the attack. He was under the care of a medical friend, and I only saw him the day before his death. The examination was made in ten hours after his decease. The bloodvessels of the brain and its membranes were turgid with blood and the sinuses of the dura mater were loaded. Upon removing this membrane, a considerable quantity of serum was discovered over the whole surface of the brain between the tunica arachnoides and the pia mater, and after cutting into the ventricles, they were found to contain a large quantity of this fluid. It had probably been sometime effused, as the plexus choroides was almost white, as if it had been macerated in water. Some adhesions were noticed between the cranium and the dura mater, and between this membrane and the brain. But these were neither strong nor numerous. The attack commenced in this case with a fit, the symptoms were extremely violent till the fourth day, when the patient became comatose and died.

In some other dissections which have come to my knowledge, similar appearances have been noticed, the brain has in every instance been affected, and to an extent sufficient apparently to account for the symptoms.

The facts connected with this disease, as well as its symptoms and appearances after death, warrant us I think in believing, that a venous congestion in the brain is the cause of all the difficulty, and that if it is not removed in the early stages an effusion of serum takes place, which is usually in such a quantity as to produce coma or apoplexy, and destroy the patient. A slight degree of pressure upon the brain will very often destroy life, when it comes on suddenly, while this organ will bear a very considerable degree of it if gradually produced. This remark has frequently been made by those who have examined patients that have died of apoplexy, in whose brains oftentimes a very inconsiderable effusion only has been found. In those who die after sleep has been procured in the disease of which we are treating, the effusion has probably commenced and sleep cannot check it.

The coma that comes on in many cases at the latter end of this disease, and continues gradually increasing till it destroys life, is the result in all probability of the gradual effusion of serum, and death is the effect of that degree of accumulation of it which the brain is unable to bear.

It appears to be a very general opinion that this disease requires a peculiar mode of treatment, and one wholly different from that which the symptoms would naturally suggest. This belief is carried to a much greater extent in this country than in Great Britain, if we may judge from the writings of Drs. Sutton and Armstrong, who, though they were the first to introduce opium, did not rely solely upon it, but frequently employed even depletive remedies. In all cases they recommend cathartics and in some venesection previous to the exhibition of opium, particularly in the first attacks of young and robust patients. Though they consider opium of the highest importance, they do not employ it to the exclusion of every other remedy, but are guided in great measure in the treatment by the symptoms that are presented, and by the state and habits of the patient. The same course that is calculated to remove the low delirium of an old, habitual and enfeebled drunkard, is surely not likely to overcome the furious insanity of a young plethoric man, who is affected for the first time, after the intemperate use of ardent spirits to which he has not been long addicted. Yet many physicians are so well satisfied with the efficacy of opium, that they prescribe it alone in every stage and variety of this disease, without regard to the age or habits of the patient or the nature of the attack, and rely upon it with as much certainty as upon mercury in syphilis, considering it in fact as a specific remedy. Others have lately trusted entirely to emetics, and have felt nearly the same degree of confidence in them, that the others have in opium. The great object is to procure sleep, and it is obvious that neither of these remedies alone is always calculated to produce it. The stomach and bowels should in every case, I think, be evacuated in the commencement of the disease, and bloodletting employed to a moderate extent, if the state of the pulse, the period of the attack, and the age and habits of the patient will warrant it. That it may be in many instances safely resorted to, and that it is in some highly important and necessary can be inferred in my opinion from the following abstract of all the cases reported by Dr. Sutton, who is the great advocate of opium, and by no means friendly to bloodletting, to the extent which many others might probably think warrantable. It should be observed that in many of these cases Dr. Sutton was not called in the first instance, which accounts for so many of the patients having been bled.

1st Case. The patient was bled and did well. The blood was buffy.

2d Case. The patient was not bled and died.

3d Case. The patient's 'nose had bled freely' after the delirium commenced, and he recovered.

4th Case. 'The treatment on the two first days had been conducted on the antiphlogistic and depleting plan to some extent,' opium was afterwards administered and the patient recovered.

5th Case. The patient was bled by cupping on the second day, saline purgatives were administered during the disease and opium given freely, and the patient recovered.

6th Case. The patient 'had been bled largely' previous to Dr. Sutton's seeing him, then opium was given to a great extent and the patient recovered.

7th Case. The patient, aged sixty, was not bled, opium was administered and the cordial treatment pursued, he recovered, but 'about a year from this attack died suddenly.'

8th Case. The patient was a female, the disease came on the sixth day of scarlet fever, was treated with opium in large doses and she recovered.

9th Case. The patient 'had been confined for a fortnight with fever' when the disease commenced, was low and exhausted, took opium and recovered.

10th Case. The patient had received a wound on his head, not supposed to have had any connexion with his disease, treated with opium, but not bled and died. On opening his head, 'a considerable quantity of serous discharge' took place, when the dura mater was ruptured; 'on removing this membrane the bloodvessels were observed to be turgid with blood.'

11th Case. The patient had a fit at the commencement of the attack, twelve ounces of blood were taken, which was buffy, laudanum afterwards administered and he recovered.

12th Case. The patient was the same as in case 5th; the disease commenced with slight apoplexy, he 'was bled and the bowels were opened.' On the fourth day from the attack he had another fit, ten ounces of blood were taken, opium was administered and he recovered. In a note to this case Dr. S. speaks of a patient who had a slight fit of apoplexy and hemiplegia followed by delirium tremens, who was not bled, but was treated by opium and died.

13th Case. The patient was a female, who was very intemperate, her disease commenced with coma; she was twice bled, and cups and leeches were applied and opium was afterwards administered; from this treatment 'the patient became collect-

ed, passed her nights comfortably, and got into a state of convalescence. She lived many weeks after this period.'

14th Case. The same patient as in case 3d was bled, cupped and blistered and took opium, 'but continued some months in a deranged state and then recovered.

15th Case. The patient was relieved by opium without bleeding, though not entirely cured.

16th Case. The disease commenced with a fit, the patient was bled largely, afterwards treated with opium and recovered.

From this statement it appears that ten of this number were bled and treated after the antiphlogistic plan, and all of them recovered. And of the remaining seven including the one referred to in the note to case 12th, who were not bled, four died and three only recovered.

In confirmation of the correctness of the practice pursued in these cases, if any confirmation were necessary, I can say from my own experience, that in the worst cases that ever came under my care the patients were bled, and some of them to a considerable extent, and recovered. And I am fully persuaded that the benefit which has been derived from digitalis and colchicum has been by diminishing the vascular action, and of course preventing venous congestion and its consequences. A combination of calomel and opium in small and frequent doses I have found highly beneficial in all cases, and I believe that the first of these medicines, from its good effects in the congestion of other organs, is peculiarly well adapted to this disease. Opium appears to be most serviceable after depletion, when it should be immediately administered, and a small quantity then will frequently have more effect than a much larger one at another time. It is no doubt however oftentimes necessary to give it to great extent, and the danger of this practice is much lessened if evacuations have preceded its administration. Emetics are unquestionably useful in very many cases, particularly in those which seem to be most benefitted by the cordial plan of treatment. Their action is not confined to the evacuation of the stomach, but they often procure sleep by the influence they exert indirectly upon the brain. I have not found blisters to the head, neck or other parts of any use, and have not employed them of late in any instance. Their inutility has been noticed by almost every writer on the disease, and this fact is an additional proof that this morbid affection is not of an inflammatory nature. The patients usually require light, but nutritious food, which the stomach most generally bears very well. In some cases it is necessary to give wine and water, wine whey or some other gentle stimulant, particularly if the circulation is languid and feeble.

By thus varying the treatment according to circumstances, a large majority of cases do well, but when the patient has had repeated attacks, his chance of recovery under any mode of treatment is very much diminished. I shall conclude these remarks by relating a case, in which the method I have recommended was pursued with the best effects; it is selected from a number in which a similar course was adopted, but I have chosen it, as it was among the most severe. It will be seen that opium was administered to a great extent, but not until after depleting means had been employed.

CASE.

I was called to visit a mechanic on Friday the 19th of September, 1818. I found him labouring under the common symptoms of incipient fever; an emetic with calomel was administered which operated freely both on the stomach and bowels, and the patient felt himself the next day entirely relieved. He did not however appear to me to be so well as he thought himself; his heat to be sure was diminished, his tongue moist and cleaner and his appetite improved, still his pulse was extremely irregular, and he had not slept since the night of the 18th. He was directed to take a solution of the tartrate of antimony and confine himself to gruel through the day. On Sunday the following day, he was every way better, excepting that he had had no sleep. As his bowels were open, it did not appear necessary to give him any cathartic medicines. I therefore advised that he should be kept perfectly still, live upon light broth, and take one grain of opium at bed time. I did not see him on Monday, but was sent for at six o'clock on Tuesday morning. He had had no sleep since his attack; his pulse was full, hard and irregular, as to frequency, but rarely less than 120, often more, and sometimes they could not be counted. His whole system was agitated, he was attentive to every thing that was said, jealous if any one whispered, and extremely impatient of contradiction. Nothing vexed him more than the suspicion that he was delirious, and he constantly declared that he never felt better in his life. His skin was hot and dry, but his appetite was good. I took from him 16 ounces of blood, and gave him *xiv. grs.* of jalap and *vi.* of calomel. At 2 o'clock P. M. his delirium was more evident and his heat greater. I took from him 16 ounces more blood, applied a blister to the back of his neck and sinapisms to his feet. At 5 o'clock I found him more violent than before: he had pulled the bandage from his arm, and lost about a pint of blood as well as I could judge. His powder had operated once;

I then directed for him a pill composed of half a grain of calomel and a quarter of a grain of opium to be taken every two hours. Wednesday morning he was in no way relieved, he had had no sleep and his physic had not operated again. I then gave him a scruple of rhubarb and eight grains of calomel. During the day he was very wild, he seemed to be in constant fear, at one time of birds flying over his head, at another of fish hooks, with which he said every thing around him was covered. I saw him several times in the course of the day; he was easily managed by kind and gentle treatment, and mild and persuasive language; but all attempts at violent restraint, and sudden contradiction made him almost uncontrollable. As nothing had passed his bowels since the operation of the jalap, he began taking at 7 o'clock in the evening a tablespoonful of a decoction of senna, manna, soluble tartar and anise seeds. This was directed to be given every half hour till it operated; and as he had vomited several times after taking the pills, they were to be omitted until his bowels were opened. I then wrote for some pills consisting of half a gr. of opium and half a gr. of calomel to be given every half hour. On Thursday morning at 7 o'clock I found to my great disappointment, that though his bowels were open at 11 o'clock he had taken no pills, as the men who were with him were afraid of increasing his delirium. In their management of him during the night they had resorted wholly to force, and he was now more violent than at any time I had seen him. While I was there he had a copious evacuation from his bowels. I immediately gave him four grains of opium and two grains of calomel, and directed the pill to be given every half hour until I saw him again. In three hours I visited him, there was no alteration, and I gave him two grains of opium. He had now been seven days and nights without sleep, and to this circumstance it was in great measure owing no doubt, that his disease seemed to be constantly increasing. There was a great incoherence in his ideas, a peculiar zeal and earnestness in his manner as if engaged in business of the utmost importance; when roused from this state however he answered the questions that were put to him with great accuracy. At 1 o'clock P. M. he was put into a warm bath at 94° of Fahrenheit's Thermometer; he seemed pleased with it, and upon first coming out much refreshed, shortly after he had two or three copious evacuations from the bowels. At 3 o'clock P. M. he was more violent than he had been at any time, he ceased to know those around him, and complained of excessive thirst, the effect probably of the opium. At 5 o'clock two grs. of opium were given in addition to the pills, still he had not the slightest symptom of drowsiness. I gave him at 7 o'clock

100 drops of laudanum, and directed it to be repeated every two hours until I saw him again, if it did not produce sleep. Immediately after taking it he became excessively violent, but in three quarters of an hour sunk into a profound sleep, from which he was occasionally roused during the night to take small quantities of gruel and beef tea. When awake he was calm and rational, and slept quietly eleven hours. For several succeeding nights, however, he could not obtain sleep without the use of laudanum; and it was frequently necessary to give him as many as 300 drops before this could be procured. He has never had the disease since, but has continued to enjoy his health perfectly well to the present time.

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Case of Tetanus which terminated in recovery. By JOHN CHANDLER, M.D.

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AMONG the variety of diseases incident to mankind, few are involved in more obscurity as to their pathology, and perhaps no one has more generally baffled the skill of the physician and proved more fatal, than Tetanus. This fact must impress the mind of every student with the conviction that very much remains to be acquired in this department of Medicine.—To those who have never seen the complaint, the systems already written, and the methods of treatment proposed and described by medical authors, may be satisfactory; but to such as have watched the various changes in this disease at the bedside of the unfortunate sufferer, it is very obvious that we are not yet acquainted with any one medicine or application, upon which, from uniform experience, we can rely; nor are we possessed of any remedy that can be exhibited with confidence in its power to afford relief. The two varieties of the disease described by systematic writers, are those which arise from a puncture or *laesion* of a nerve, or that which takes place without any such exciting cause, but has arisen from exposure to violent cold, &c. The latter of these, which may be termed idiopathic Tetanus, has more generally yielded to *appropriate* remedies than the former.—That depending on local injury usually continues, notwithstanding the utmost efforts of medical skill, to increase its effects on the nervous system, until life is exhausted, and nature sinks. The happy issue of the following case, while it affords the highest satisfaction to the feelings of humanity, will I think, be deemed a sufficient apology for making the same public.