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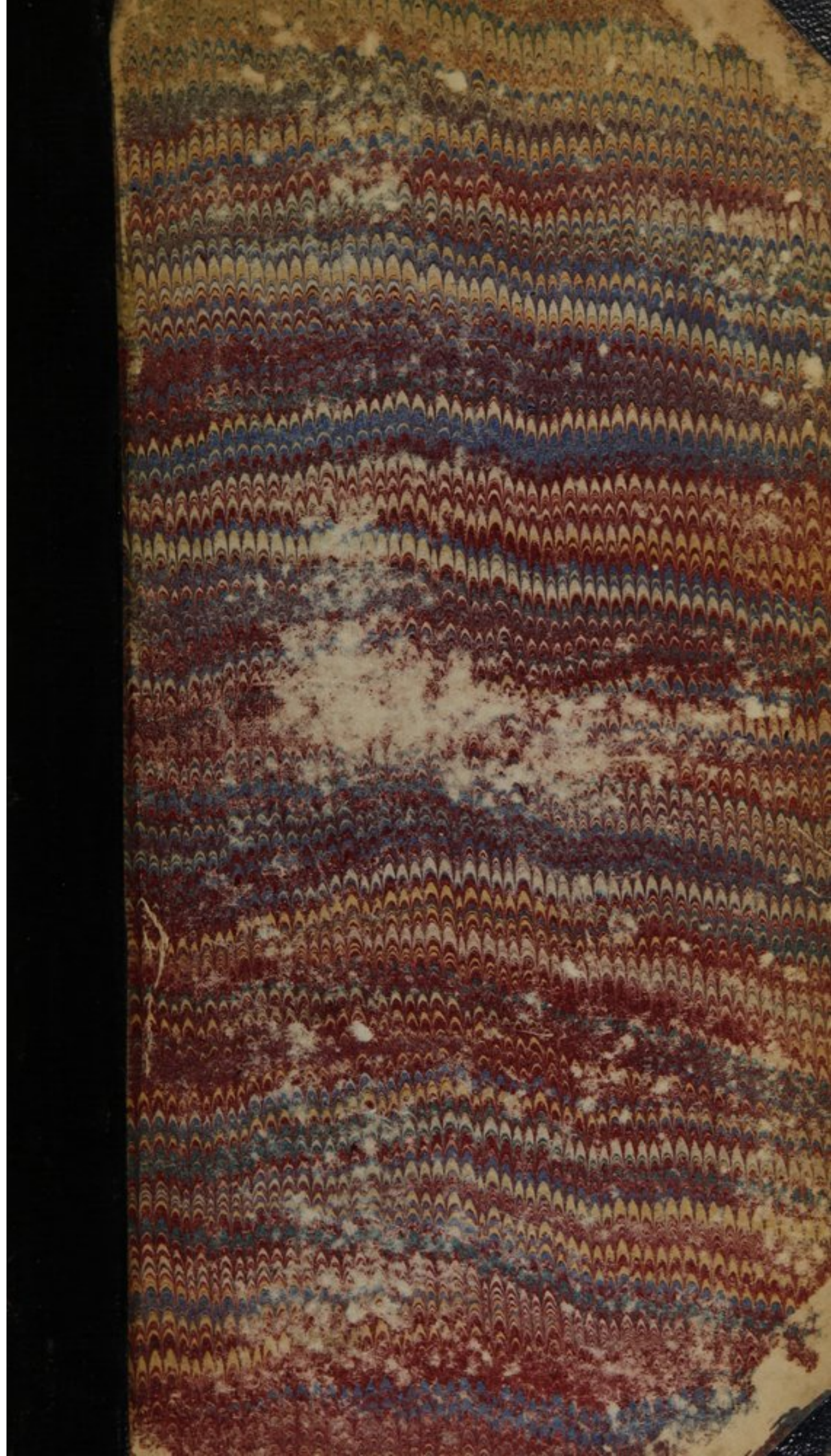
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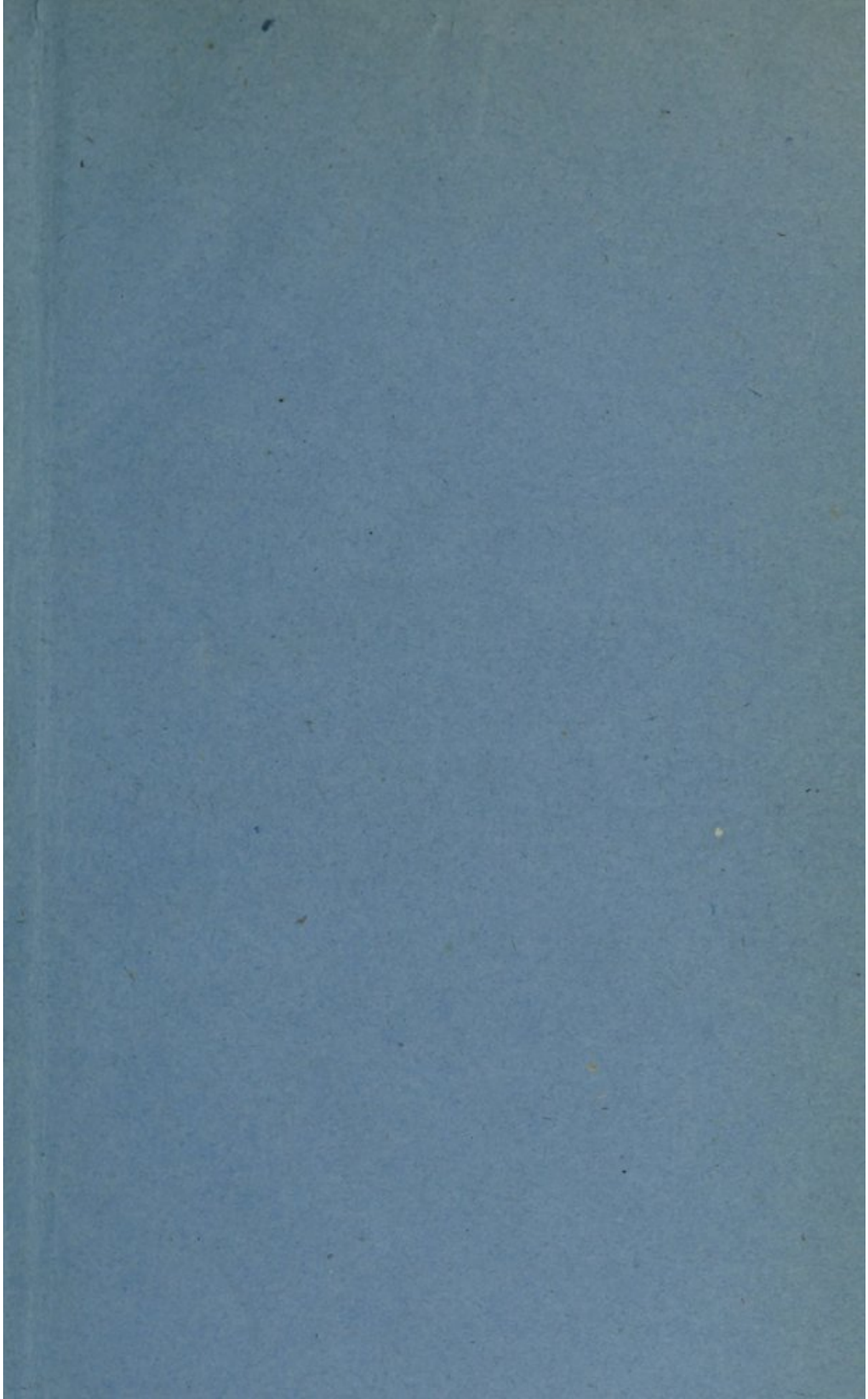


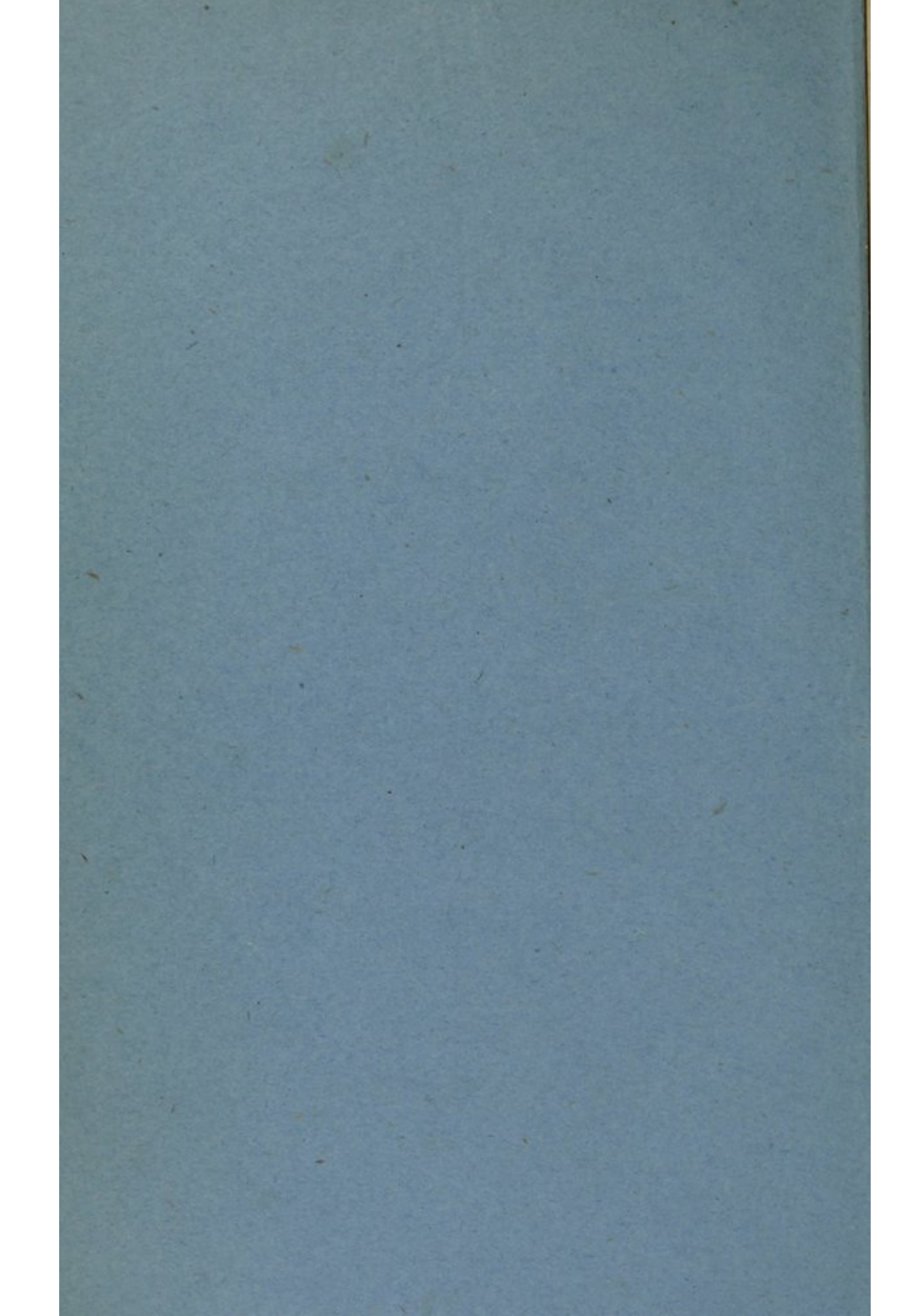
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REMARKS
ON THE
HISTORY AND TREATMENT
OF
DELIRIUM TREMENS.

FROM THE TRANSACTIONS OF THE MASSACHUSETTS MEDICAL SOCIETY.

✓
BY JOHN WARE, M. D.
Fellow of the Society.

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ON THE
HISTORY AND TREATMENT
OF
DELIRIUM TREMENS.

Some apology may be thought necessary for adding another to the many publications, which have been made on Delirium Tremens. I have none to offer except the belief that every subject in science, and more particularly every subject in a science of a nature so peculiar as that of medicine, requires not only careful and repeated observation, but the careful and repeated observation of many individuals, in order to its thorough illustration. This belief is confirmed by what is familiar to all in the history of medicine, that the whole truth on any of its most important subjects has only been arrived at by means of the successive contributions of many inquirers. The disease usually denominated Delirium Tremens, if not of late origin, has been but lately at least recognized and described as a distinct disease; and the numerous papers which appear relating to it in the

periodical journals, show it to be the general feeling, that the subject of its history and treatment has not yet been exhausted.

The value of any publication on a practical subject can only depend on the extent of the experience of the author, and on the degree of care with which his observations have been made. It is proper therefore to state, that the cases upon which the following remarks are founded, have been observed during the last fourteen years in private practice, and in the practice of the Almshouse in this city. They have amounted in the whole to between ninety and one hundred ; of which seventy-seven occurred in private practice, and about twenty in the Almshouse. In these cases the peculiar symptoms of Delirium Tremens were clearly, if not always fully, developed. I have, in addition to these, in common with all other practitioners, witnessed a large number of cases of disease in drunkards, which in some stage of their progress, indicated a greater or less tendency to pass into Delirium Tremens.

It is my object to state the results, with regard to the history and treatment of this disease, which have been derived from these cases, without any particular examination of the works or opinions of those who have already written.

It seems to be generally admitted among physicians, that cases of this disease are by no means always alike ; that, though they may agree very well in those peculiar symptoms which are cha-

racteristic of it, yet they differ widely from one another, in some subordinate, or perhaps I ought rather to say, less obvious particulars. It has not, however, seemed to be the common opinion, that the consideration of this difference should lead to any corresponding difference in the mode of treatment. Indeed it has been the general belief, that the most prominent symptoms were those to which the principal regard was to be had in the administration of remedies, and consequently physicians have usually attempted the removal of the delirium and watchfulness, leaving such other affections as might accompany these, to the chance of relief which the efforts of nature might afford, or at least deferring any attention to them, till what they regarded as the more important part of the case had been subdued.

The result of such observations as I have been able to make, has led to a conclusion somewhat different from this; to a belief, indeed, that the most peculiar and prominent symptoms in cases of this sort, are not those to the removal or alleviation of which, our efforts are to be chiefly directed. On the other hand, I believe we are mainly to be governed by a reference to such circumstances in the situation of the patient, in the character of his disease, or in the state of his constitution, as would require attention were he not affected with Delirium Tremens. Still it is not intended to deny that the presence of this affection may and should frequently modify the principles on which we proceed in the treatment of such other difficulty as the patient may labor under.

There is hardly any state or degree of disease in drunkards, in which an attack of this disease may not be looked on, as a possible or even probable occurrence. Generally speaking, the more severe the original affection, the more likely is this secondary one to make its appearance ; but this is not always true. It supervenes on a very slight indisposition in one individual, whilst another will pass through an attack of great severity, without exhibiting any indication of its approach. Neither does the degree of indulgence in the use of ardent spirits, afford any rule for measuring the probability of its occurrence. It often happens that the confirmed sot will escape its visitation for years, and perhaps for life ; whilst a young man who has but just begun the habit of indulgence, may have an attack on the slightest indisposition.

Much of this difference depends no doubt on the constitution of different individuals. Some are much more susceptible to the immediate or intoxicating effects of alcoholic stimulants than others ; and so, too, some seem to be more liable to suffer from their indirect operation, or that which produces disease. Still it does not appear that those who are in the first instance most sensibly affected by the stimulus of ardent spirits, are more likely to have disease produced as a consequence of their use, than others.

This difference depends partly also on the manner in which the habit of intemperance has been formed. Those who become intemperate early in life, and

give themselves up almost at once to unlimited indulgence, are commonly broken down within a few years, their constitutions fail them in early manhood, and among other bad consequences they are peculiarly liable to attacks of Delirium Tremens. Those, on the contrary, who have formed the habit gradually, who have used ardent spirits moderately in the first instance, and have come slowly to their excessive use, do not suffer nearly as much in health and constitution, do not sink so easily under the same degree of excess, and are less liable to be affected by the disease of which we are speaking.

It is a common belief, that Delirium Tremens is immediately occasioned by abstinence from ardent spirits, whether this abstinence be forced or voluntary. It is not intended to deny that abstinence may sometimes produce this effect; yet I feel very certain, that in a large proportion of cases, it has nothing to do with it. The symptoms of this affection frequently ensue shortly after a course of excessive indulgence. In this case it is not that the discontinuance of the indulgence occasions the disease; but that the access of the disease creates a distaste for liquor, and is the occasion of the discontinuance of its use. The disease occurs also in individuals, whose habit of drinking has never been suspended at all, but has continued up to the very commencement of the delirium. It happens, also, that a few glasses of spirit will be sufficient to induce a temporary attack of it in an individual

in whom it may be said to have existed in a chronic and intermitting form, or in whom at least there is so strong a predisposition to a delirium of this character, that very slight causes are sufficient to excite it.

In persons sick with acute diseases, who suffer in the course of them from Delirium Tremens, it makes its attack, not commonly on the access of the original complaint, but after it has continued some days, and frequently when it has apparently begun to subside. Hence its commencement will be, in most cases, at a considerable period after the use of liquor has been suspended ; since in acute diseases the propensity for it is either lost, or so much diminished, as to lead the patient to relinquish it of his own accord, or to make him at least ready to do so when directed by a physician. It is common in such a case for the occurrence of the delirium to be attributed to the suspension of the accustomed stimulus, and from this circumstance perhaps the general belief has arisen.

Although Delirium Tremens occurs in various states of the constitution, and in various diseases, and is to be looked upon as a possible event in almost all cases of indisposition among drunkards, yet there is a remarkable similarity in the phenomena presented by the affection, and in the course of symptoms through which it passes, whatever may have been the original state of constitution or disease from which it has proceeded. Its approach is often indicated by the existence of certain symptoms from the

very commencement of indisposition. It is particularly likely to take place in those who have suffered from irritability of the stomach and frequent vomiting. Indeed, it often makes its appearance after having been preceded by no other symptom of disease, and comes on as soon as the vomiting ceases. There is commonly also in the beginning of those cases in which delirium finally ensues, a tremor of the hands and limbs, and more frequently of the tongue; a tremulousness of voice producing some indistinctness of articulation; a general anxiety; a hurried manner of moving and speaking; imperfect and disturbed sleep; and startings and twitchings of the limbs. These signs are by no means infallible. They are sometimes observed where delirium does not follow. But where they exist from the very first, are not diminished by the treatment adopted, and do not leave the patient with the other symptoms of his complaint, an attack of Delirium Tremens may be reasonably expected.

But on the other hand, it frequently happens that the attack is not indicated by any such symptoms in the early history of the case. The patient appears to be getting on perfectly well, and the original disease to be subsiding in a satisfactory manner, when suddenly it becomes manifest that an attack of Delirium Tremens is threatened. In either case, however, whether there have been any premonitory symptoms or not, the disease follows very much the same course. The patient first complains that

he has not slept well, that he has been disturbed all night by unpleasant dreams, that he has been hard at work, but that matters have not gone right, that his concerns have troubled and perplexed him. During the next day, perhaps, he is tolerably comfortable, has some appetite, moves about his house or place of business; yet he is uneasy and restless, and exhibits those appearances which have been already described as indicating the approach of the disease. This continues for one or two days; each night being worse than the preceding, whilst in the day there is an increase of the anxiety, restlessness, and trembling of the limbs, tongue, and voice.

The night is then passed with only one or two short naps, from which the patient awakes with some strong impression upon his mind, of the fallacy of which it is difficult or impossible to convince him. His sleep has been filled with dreams of dangers and perplexities and annoyances, innumerable and indescribable. From this state he passes into that of complete watchfulness and delirium. The dreams of his sleeping become the fancies of his waking hours; and in his delirium he conceives himself to be engaged in the same occupations, beset by the same difficulties, and surrounded by the same dangers, that he has described as giving a character to his dreams. In fact it is difficult in many cases to point out the precise time at which the mind passes from the dominion of the conceptions which have been engendered in sleep, to that of those which are the offspring purely of the disease.

At whatever period this state of entire watchfulness and delirium begins, we are to date from it the commencement of what may be denominated a *Paroxysm of Delirium Tremens*.^{*} Yet it will sometimes happen, that, on the morning succeeding the night, from the last continued sleep of which, we are to date the commencement of the paroxysm, the patient does not exhibit any unequivocal marks of the delirium by which he is affected. The attendants inform us that he has had but little sleep, and has been very crazy, but we find him sufficiently rational to give an account of his feelings, and fully aware of whatever is going on about him. Still his aspect and manner are such as to convey to the mind of one accustomed to the disease, the true state of the case, even although there may be no actual exhibition of delirium during the period of the visit.

Most frequently, however, at this time there are occasional wanderings of mind, though not a continued state of delirium. Thus, while sitting by the patient, we perceive his eye become intently fixed upon some remote spot in the room, or without a window, as if it had been suddenly caught by some remarkable object ;—or he will speak in a loud and

^{*} Some objection may probably be thought to lie against this use of the term *paroxysm*, in which it is made to include a course of symptoms extending through several days. I do not know of any other which would express the intended meaning better. By a paroxysm of Delirium Tremens, I mean to include that period of a disease of drunkards, which is characterized chiefly by delirium of a peculiar kind, and (with rare exceptions) by entire watchfulness, which continues for a certain period, generally not less than sixty or more than seventy-two hours, and terminates either in a critical sleep or in death.

quick voice, as if making answer to some one who has addressed him from without, or from behind ; or he will start up hastily from his seat or from the bed, and run to another part of the room, or to look beneath the bed, as if in pursuit of something. These impressions are, during the early part of the day, evanescent ; but in the latter part the delirium returns, and becomes constant. It increases in violence till about the middle of the night, and then diminishes towards the morning.

On the morning of the second day the delirium is still complete, and is not altered in its character ; but the patient is milder and more tractable than during the night. He is as fully possessed of the strange imaginations which have entered into his mind ; but he is more easily influenced by his friends, and is more amenable to authority. The second night is generally worse than the first, and there is less abatement of the disease in the ensuing or third morning, and in the early part of the day ; still there is some alleviation of symptoms, like that of the day before. The third day is passed much in the same way as the second ; but if the disease is to have a favorable termination, the delirium of the third night is less violent than that of the preceding, and the paroxysm terminates in sleep, sometimes in the course of the evening or first part of the night, but most commonly not until the latter part of the night or in the morning. When the disease is about to terminate unfavorably, the delirium continues undiminished until the fatal event takes place.

This description has been taken from cases which were left to take their own course, uninfluenced by medicine. In all essential points it will apply to a majority of cases. Still there are many variations in the time of day at which the paroxysm begins and terminates, in its length, and in other particulars, which cannot be included under any general account. Thus its duration is sometimes less and sometimes greater than that assigned to it. Especially it is apt to be prolonged in those who have had repeated attacks, and in one such case I have known it to extend to nearly six entire days.

During the first part of his sleep the patient is generally uneasy and restless, his breathing is irregular, and is sometimes almost like that of a person dying. During the first few hours, he often wakes once or twice, perhaps gets up and renews the exercises of his delirious state, or else takes merely a little drink, but in either case, goes soon to sleep again.

Soon after getting into a sound sleep, the breathing becomes deep, slow, and sonorous; a profuse sweat breaks out, and for a long time the whole body is bathed with it. After six or eight hours the patient awakes tolerably rational, and sensible of what is going on about him, but generally with some impression left on his mind of the imaginary scenes through which he has passed. He continues, for the next twenty-four or even forty-eight hours, to sleep during the greater part of the time. At the end of that period, his restoration appears complete, so far as

the peculiar symptoms of Delirium Tremens are concerned ; for he may still be the subject of other affections which have preceded the paroxysm, and which remain after it has subsided.

Almost invariably the occurrence of sleep at the close of the paroxysm is indicative of a favorable termination. In some rare cases, however, the patient actually dies after falling asleep, particularly where sleep has been procured by opium ; indeed the only cases which I have seen or known, in which the disease has terminated in this way, have been treated by large doses of opium. In such a case no peculiar symptoms indicate a different result from that which we usually promise ourselves when the patient falls asleep, till after sleep has taken place. But then, instead of gradually passing from a disturbed into a more tranquil and natural slumber, he becomes first more unquiet and restless, moans, breathes with difficulty, and falls at length into a state of complete coma, from which he never awakes.

The disease terminates fatally in several other ways. Sometimes the patient is carried off by the sudden accession of convulsions, and this event is particularly to be looked for in those cases which have begun with them. They also occur very unexpectedly in cases which promise favorably, and which have afforded no ground for anticipating them. Sometimes the patient, after continuing the violent exertions of his delirium to the very last moment, without any of the peculiar signs of approaching dis-

solution, falls back and expires immediately. Sometimes, during the continuance of the delirium, death comes on from the effects of some disease with which it happens to be complicated, and dissolution occurs in the same way that it would from that disease alone.

This is the general course of the phenomena which are exhibited during a paroxysm of Delirium Tremens. A more particular account of the individual symptoms will be given hereafter. As has been already intimated, they occur under circumstances very various, and in connexion with states of the system and of disease very different from each other. They are accompanied in these different cases with different degrees of danger, and require considerable modifications of treatment. Still there is a remarkable similarity in the general course of the paroxysm, and in the conduct and aspect of the patient, between cases the most slight and the most dangerous; between those which arise in a healthy individual, simply from his usual habit of indulgence in intemperance, and those which take place in the course of the most grave and unmanageable diseases. Indeed from seeing the patient only whilst under the influence of the paroxysm, it would be impossible to determine with anything like certainty, what his original disease really was; and whether the symptoms which he exhibited were primary, or had arisen secondarily in the course of some other disease.

It is, however, very important, before making up an opinion concerning the probable course and event, or proper treatment of any case, to determine the nature of the original affection; to ascertain the precise amount and extent of disease, with which we have to contend. I shall proceed therefore to describe, as far as my observation furnishes me with materials, the several circumstances, states of the system and of disease, in connexion with which the symptoms of Delirium Tremens make their appearance.

I. Delirium Tremens occurs as the immediate consequence of a particular excess, or of a succession of excesses, in individuals not otherwise disposed to disease. The kind of excess referred to, is not simply that habitual use to which all the subjects of this disease have been accustomed; though this is, under certain circumstances, sufficient to its production; but a degree of it for a short period somewhat beyond their common habit. It occurs most frequently in such persons as have from any cause been induced or obliged to abstain from the use of ardent spirits for a considerable time, and have again had free access to them. Hence it is often seen in sailors after a long voyage, or in those who have been permitted to go on shore from a vessel of war for a few days. But it may also occur in any intemperate person, who, without having previously intermitted the use of spirits, has been tempted to a course of unusual indulgence for several days in succession. Thus it is very common in those who are taken up in a state of intoxica-

tion by the civil authority, and committed to almshouses or houses of correction for actual drunkenness. This form of the disease is usually denominated by the vulgar, 'the Horrors;' but the same name is frequently given to the other more severe and aggravated cases.

A considerable number of cases of this description fell under my observation at the Boston Almshouse, when that place was made the receptacle of persons taken up in a state of intoxication. The usual symptoms of delirium manifested themselves in a period varying from a few hours to one or two days from the time of entrance. They were not less severe, not less distinctly marked than those which occur in the more important cases; but the paroxysm did not uniformly continue for so great a length of time. It sometimes subsided spontaneously in twenty-four hours, though more frequently running out to the full length which has been spoken of as common to the disease generally.

The patient is left in his usual state of health, and so far as I have ever known, the termination is always favorable. I do not believe that the course of the disease is made shorter, or a fortunate issue more certain by any mode of treatment whatever. Indeed the employment of many active remedies, particularly of opium, has rather a tendency to aggravate the symptoms than to diminish them.

The occurrence of cases of this class in large numbers in the practice of particular physicians, has given

occasion to the expression of the opinion that Delirium Tremens is capable of being almost uniformly treated with success, and that too by very opposite remedies ; sometimes by very powerful, sometimes by very simple modes of treatment. Now were all the cases of this class treated by opium, they would probably all recover, and if they were not carefully distinguished from cases of a different description, they would confirm in the mind of the practitioner the belief that Delirium Tremens was always readily cured by opium. The same inference might be drawn with regard to any other remedy, which should be made use of in any considerable number of cases. But no inference could be more unfounded. The disease subsides of itself, unaided by art. On this account, statements of the degree of mortality of the disease, as it occurs in public institutions, and of the efficacy of particular remedies in its removal, are to be received with caution.

II. Delirium Tremens occurs, secondly, as the consequence of habitual intemperance, without being occasioned by any particular or extraordinary excess, and in this case, it approaches more nearly than in any other to the character of an idiopathic disease. It might indeed be questioned, whether there be sufficient ground for making any distinction between this form of the complaint and the preceding ; whether the difference is not merely a difference of severity, in cases essentially the same in nature and character. Probably the state of the brain and ner-

vous system upon which the prominent and characteristic symptoms of the paroxysm depend, is essentially the same in all cases. But there is a wide difference in the state of the system at large, and in the symptoms by which it is preceded and followed, and sometimes accompanied; and also in the danger which attends it. This consideration is a satisfactory reason for the arrangement here adopted.

Cases of this kind not only occur without particular acts of excess, but are not unfrequently preceded by an abstinence for several days; the approach of disease sometimes rendering the patient indisposed to his usual indulgence, and sometimes leading him to fear that it may increase the severity and danger of his complaint. The attack does not always take place in precisely the same way, and yet the general course which the symptoms follow is not strikingly different. Sometimes the digestive organs are first affected in a manner very common in the intemperate; sometimes the approach of the disease is like that of a febrile affection; and sometimes the head is primarily affected. More frequently there is a combination of the symptoms arising from these various sources. The patient has chills, followed by heat and sweating. The skin afterward continues in a moist state, and is usually cool, particularly on the extremities. Various sensations are complained of in the head, viz. headache, commonly slight, sometimes very severe; dizziness; and a feeling of confusion and uneasiness when there is no pain, the patient

allowing that his head does not feel exactly as in health, although he cannot describe the sensations from which he suffers. The sleep is imperfect, irregular, and unquiet. The tongue is slightly furred, or red and smooth; the appetite usually, but not always impaired. Vomiting frequently occurs. The pulse are usually frequent and wanting in force; sometimes strong, hard, and slow. The eyes are suffused, and the tarsi inflamed. Convulsions are occasionally present; and there is commonly a tremulous affection of the muscular system, which exhibits itself in the motions of the eyes, hands, tongue, and diaphragm. There is often quite early a little wildness in the expression of the eyes and face; and the mind, though not properly unsettled, is a little removed from its usual state.

None of these symptoms are uniformly present; but the simultaneous existence of a considerable number of them indicates pretty certainly that the patient will finally suffer from Delirium Tremens. The same symptoms are present, and may lead us to expect a like result in those cases which constitute the third class.

III. But in these they occur not by themselves, but in connexion with other regularly formed and well marked diseases, or else as the consequence of injuries. In such cases, the paroxysm, when it makes its appearance, is, with some exceptions, as distinct in its character and regular in its course, as in those just described; but there are several circumstances con-

nected with the time and mode of its attack, which require particular notice.

The delirium often comes on when the patient is convalescent from the primary disease. In cholera or diarrhœa it may supervene when the vomiting and evacuations from the bowels have ceased, and the weight of the attack seems to have subsided. In inflammations of the lungs or pleura, after the violence of the symptoms has abated, after the cough and difficulty of breathing have been relieved, and the pulse have returned to the natural standard, we often perceive very unexpectedly the approach of those symptoms which indicate an attack of Delirium Tremens.

The delirium may also come on when the patient is only apparently convalescent; and it is to be remarked, that in whatever state of the system or of disease an individual is attacked with Delirium Tremens, any other morbid affection which pre-exists, is absorbed or at least obscured by it. Thus the apparent convalescence may arise from the obscurity which is thrown over the original symptoms by the approach of those which precede the new complaint. We may erroneously conclude that the patient ceases to suffer, because he ceases to complain; and that the ravages of disease have been checked, because their external indications can be no longer observed. We may learn that this is so from instances in which the primary disorder is again exhibited after the cessation of the paroxysm of Delirium Tremens; or in which death takes place during the paroxysm, and dissection shows that it had never ceased to exist.

In other cases there is neither any actual nor apparent improvement before the new attack, the delirium making its appearance at the very height of the original disease. But here also the primary symptoms may be finally absorbed or obscured, so that nothing is afterward apparent sufficient to distinguish it from uncombined Delirium Tremens, even to a careful observer, who should witness the case in its advanced period only.

There are, however, some cases in which the symptoms of the original disorder continue to be perceptible through the more prominent ones of the paroxysm. The cough, pain, and difficulty of breathing may be such as to indicate satisfactorily the existence of inflammation of the lungs. In cholera, and more particularly in diarrhoea and dysentery, the continuance of the evacuations after the access of the delirium, may bear witness to the continued presence of these diseases, although the pain and exhaustion which they occasion should be obscured by the imaginary sensations and preternatural strength which are the consequences of the new attack.

It is probable that a total change may sometimes take place in the character of the disease under which the system labors, and that the first disease may be actually cured by the attack of the second, an event which is certainly known to happen in other cases. It is not unlikely also, that a severe acute disease may be attended from its very first approach with symptoms of Delirium Tremens, which might thus

veil entirely its character, and conceal its dangers. I am not aware that either of these last named varieties has been known to occur, but as they are equally probable in themselves as the forms of complication which have been already described, it seems proper to suggest them as cases for the occurrence of which we are to be prepared.

IV. So far, we have referred chiefly to those cases in which Delirium Tremens assumes the form of a regular paroxysm, terminating in sleep. In acute diseases, this is the usual course, but sometimes in the acute diseases, and frequently in the chronic diseases of drunkards, a delirium comes on resembling that of which we have been speaking, in everything, except that it does not go through the same regular course, or come to a similar termination. Thus in a case of very severe pleurisy, for two nights in succession, at the height of the disease, the patient was delirious, and resembled so exactly in his appearance, manner, and disordered imaginations, those which are exhibited in Delirium Tremens, that no one, not acquainted with the whole history of the case, would have suspected that it was anything but a regular case of that disease. The course of the pleuritic affection was not at all modified; the patient was nearly rational through the corresponding days; the delirium subsided rather gradually; he slept occasionally while it continued, and finally recovered, without a proper paroxysm.

In another case of thoracic disease, viz. of inflam-

mation of the lungs, a delirium of the same character came on towards the close of the case, which terminated fatally, continuing for about twenty-four hours, and ending only at death; death taking place as it would have done from the pulmonic affection. I have witnessed other cases of a similar character in which the delirium resembled that of the regular paroxysm with great exactness, but in which the course that it took, and the mode of its termination were different.

In chronic diseases delirium may affect the patient in a similar manner; sometimes occurring every night for a succession of nights, and sometimes only a single night at once; and so returning occasionally for a considerable time. In these cases, it would seem to take the place of that delirium which might attend the same diseases in patients not intemperate.

There are also states of disease among drunkards of an anomalous character, affecting at once the mind and body, and approaching very nearly in their aspect, at particular times, to Delirium Tremens. Still they are to be distinguished by the want of regularity in their whole course, by their not constituting a proper paroxysm, and by their having no definite termination in sleep.

Having thus described the general course of this affection, the circumstances under which it originates, and the states of the system and of disease with which it is connected, it may be useful to give a more particular history of its principal symptoms;

our previous object having chiefly been to describe their connexion together as constituting the paroxysm. The most remarkable and constant symptoms are the delirium, watchfulness, and tremor.

Of these the delirium is the most universally and constantly present. It is perfectly peculiar in its character, and so slightly resembles that which is exhibited under any other circumstances, that if witnessed but for a few moments, one may feel sure with regard to its nature and origin. Its general character is the same throughout the whole of the paroxysm, but the subjects in regard to which it is exercised, are as various as the occupations, habits, modes of life, associations and relations of the individual attacked.

His imaginary perceptions are generally removed entirely from the actual state of things about him. They often relate to his particular occupation or business, or to whatever other subject may happen at the time to weigh most heavily on his mind. Almost always he imagines himself to be in a different place from that in which he is, and under some disagreeable circumstances. The seaman thinks himself at sea in a gale of wind, vainly endeavoring to bring his vessel to a safe and proper bearing; the smith at his anvil, laboring ineffectually over a piece of work which he can never finish; the cooper toiling in vain over hoops and staves, which he cannot match; and the rope-maker, twisting forever an interminable length of yarn. All are engaged in a

Sysiphan labor, which they are doomed never to accomplish.

But although the predominating idea for the time, has full possession of the mind, and everything is made to conform to it, yet it is frequently changed in the course of the disease, and has sometimes no relation whatever to any of the habits of the patient, or to any circumstances or things with which he is connected. Thus a patient who had been dissolving a co-partnership before his sickness, was in the first place constantly busied in an entangling controversy about the settlement with his partner ; then he suddenly conceived himself to be chased by an alligator, who had been concealed in the chimney of his room ; then he would seize upon his bed, and shake it upon the floor, in search of rats and mice, which he supposed to be concealed there, or busy himself in picking lice from his clothes, fleas from his pillow, or hairs out of his drink.

There is in the aspect and conduct of those affected by this delirium, a very peculiar and strong impression of reality. This is sometimes exhibited in a manner sufficiently ludicrous, as in the case of a cooper, who insisted that his mother, a woman of a round and plump figure, was a hogshead, which he was to hoop. At other times, the spectacle is painful. Nothing can be more real than the expression of horror, fear, or despair, which are occasionally witnessed in the unfortunate subjects of this disease. The dread of robbery and of murder are as distinctly

produced in their minds, as they can be in those of persons actually subjected to these dangers. There is often a thrilling and almost startling truth in their expressions of voice and countenance; and from the entire absence of any of the proper exciting causes of such emotions, the whole scene appears to the bystander like excellent acting.

The presence of a stranger, and more particularly of the medical attendant, is almost always sufficient to calm, for a short time, the most violent of these patients, and even to suspend the current of their imaginations. It is only, however, for a short time; for if the visit of the physician, even, be prolonged to any considerable length, his authority is lost, and the delirium returns in its full violence. I once sat beside a patient for an hour or two in the beginning of the evening, when the paroxysm was coming on, with the hope of being able to keep up that kind of influence, which I found was at first exerted over him. He was a person of character and education. For some time, by speaking decidedly to him, when attempting to rise from his bed, at the same time lifting up my finger as if to indicate the importance of silence and quietness, I succeeded in inducing him to throw himself back and remain still, though looking wildly around, and talking incoherently of things which he supposed to be going on about him. Suddenly he started up, escaped from the opposite side of the bed, and immediately attempted to jump from a window that was near. After his recovery he for

some time believed that I had sat by him with a pistol in my hand, which I pointed at him whenever he attempted to get up or to escape. The impression thus produced on his mind was very disagreeable, and was not obliterated for a considerable time.

Patients laboring under Delirium Tremens are not disposed to commit violence or do mischief intentionally; and although it is very common for them to tear their clothes and break furniture in pieces, yet it is generally with the intention of bringing about some important purpose, which they imagine they can thus accomplish. There is nothing morose or sullen in the temper they display. Indeed they are usually timid, irresolute, and easily alarmed. The apprehension of some design upon them, is often the predominating feeling in their minds, and they as frequently imagine that they have already suffered some severe injury. They are in fear of sheriffs, of robbers, of being murdered, &c. They commonly believe that they have been carried away, and are forcibly detained from home. They often start at any loud and sudden noise, thinking that a musket has been fired at them. One patient declared that he had been flayed, and as a proof pointed to the bare flesh of his arm, from which, as he said, the skin had been taken; another asserted that he had been taken to pieces and put together again. In the state of extreme terror to which these various apprehensions reduce them, it is not uncommon for them to attempt jumping from windows, and this they sometimes accomplish.

I know of but one individual who has committed any violence on himself. He did this in two several attacks. In the first, he had suffered very severely from pain in the head, was much dejected, and impressed with some undefined expectation of evil. He mangled his throat with a penknife, bled profusely, but was prevented from farther mischief, and his paroxysm went through its usual course. In the second attack, he made a similar attempt with a razor, wounded some small arteries, and cut badly into the larynx. He bled to faintness, and was much reduced by the hemorrhage, but his disorder was not affected by the loss of blood, and he finally recovered.

There is hardly anything in disease more remarkable than the spectacle exhibited by a patient in the height of a paroxysm of Delirium Tremens. We see him intently engaged in the pursuit of some imaginary object, laboring with the utmost diligence and earnestness upon imaginary materials, and with imaginary companions; his countenance haggard and worn by anxiety and watchfulness, and his hair, face and limbs bathed in a profuse sweat. At one time we find him supporting with his whole strength the wall of the house, believing that it is about to fall in and crush him; at another time, he is engaged in a combat with snakes, alligators, rats, mice, or insects, of which his room, his bed, and his clothes are full; at another, his flesh is filled with pins, needles, fish-hooks, or pieces of glass, of which he is endeavoring to get free, cutting himself even to the quick in

the attempt ; at another, he is in an agony of terror, trembling in every limb at the fear of murder or fire, and beseeching in the most piteous accents for assistance ; again, perhaps, we may visit him when he is tranquil and comparatively calm, and ready to entertain us with a long and solemn narrative of the dangers and adventures of the night before.

But strong as must be the impressions upon the mind, which are thus exhibited, they are very evanescent, and with few exceptions, continue for but a short time after recovery. It seems to the recollection of the patient as if the imaginations of his diseased state were the occurrences of a troubled dream. There is the same kind of mistiness and uncertainty about the former that there is about the latter. In short, the state of the mind in Delirium Tremens very closely resembles that which exists in dreaming, whilst the state of the body differs. Not only is the imagination of the patient filled with the objects which form the subjects of his delirium, but the perceptive powers partake in the same unnatural state. With his senses open to external impressions, he sees, hears, and speaks to and of, persons and things, which in his sleep he sees, hears, and speaks to only in imagination. There is in each case the same want of the corrective power of the judgment. The mind follows on passively in the train of its associations, without any attempt to correct their incongruity.

In corroboration of this view, it may be remarked,

that the delirium often seems to be merely a waking continuation of that state of mind, which has existed during sleep for several preceding days. Before the paroxysm begins, the patient describes to you his dreams as being of precisely the same character that his waking imaginations afterwards are, when the disease has become established. In fact, it is occasionally difficult about the time of the access of the paroxysm, to determine whether he has slept or not, so blended are the states of mind in sleeping and waking, and so insensibly does he pass from the disturbed sleep which precedes the disease, to the disease itself.

The correcting power of the judgment is not always entirely lost in sleep. We are sometimes able to reason concerning the probability of our fancies. This happens occasionally in Delirium Tremens. A person of very strong mind may sometimes detect the fallacy of his imaginations, and obtain a partial control over them. This lasts but for a moment. I once succeeded in convincing a patient who thought himself away from home in a strange place, that he really was in his own house, by directing his attention strongly to several pictures, which were hanging around his room, and to the peculiarities in its arrangement, furniture, &c. He was convinced for the moment, that he *was* at home, but not that he *had been* at home. He wondered how he had got back so quick. He soon relapsed into his original state.

We often find that events happening about us which

strongly appeal to the senses, become parts of our actual dreams, by means of certain quick operations of our minds by which they are suddenly incorporated with them. Thus, the shutting of a door, the speaking of a few words, the striking of a bell, whilst we are asleep, often become part of our dreams. It is so in Delirium Tremens. Things actually happening, enter into and become part of the waking reverie, after being magnified or exalted by the excited imagination. The shutting of a door is taken for the report of muskets, the *singing* of wood on the fire, for the music of a band, &c. &c.

There is a resemblance also between the state of mind in Delirium Tremens, and that which exists in the affection which has been denominated ecstasis or ecstasy, of which examples are not unfrequent. The resemblance, however, extends no farther than to the general laws, according to which the mind is affected. In other respects there is none.

Next to the delirium, the watchfulness is the most remarkable symptom. So characteristic is it, that it has been proposed as affording a better distinguishing appellation of the disease than the tremor; and it is unquestionably true, that the tremor is more frequently absent than the watchfulness, and that Delirium Vigilans* is a more expressive name than De-

* Dr. Hayward, of Boston, in the New England Medical Journal, Vol. XI. for 1822, advocates the substitution of this name for that now in use, by arguments for its adoption, which would be unanswerable were the disease to be now named for the first time.

lirium Tremens. Uniformity is, however, so much more important than significance of nomenclature, that it seems not desirable to attempt to substitute a new name for that now in general use.

The termination of a paroxysm of Delirium Tremens is always, as has been already mentioned, by a profound sleep, and no cessation of the delirium or other symptoms is to be regarded as indicating a favorable close of the disease, unless it have been preceded by it. Sleep, however, is not always to be regarded as indicating the speedy termination of the paroxysm, since it is not uncommon for patients to sleep a little,—from a few minutes to an hour, for instance,—on each day of the delirium; and this is more likely to happen when the attack takes place in the course of some other disease. Lucid intervals are not common, but they sometimes occur, and so far as a few cases can go towards establishing a general principle, we are to regard them, when occurring before the regular termination of the paroxysm, as unfavorable indications. Two cases only, however, of this kind have fallen under my observation, and I do not recollect that any others have been recorded.

In the first, the disease began with convulsions, which were repeated during the first twelve hours. On the second morning, without having slept at all, the patient had a perfectly rational interval of considerable duration, and talked with his friends and attendants in a manner which would have led no one to suspect him of having labored under any alienation

of mind. In a few hours, however, the delirium returned, and he died in about forty-eight hours from the first attack of convulsions.

In the second case, the disease, though finally assuming all the peculiar symptoms of Delirium Tremens, and occurring in a person who had once suffered from it, did not exhibit itself in an unmixed form. His symptoms were at first irregular, and arose, as I conjectured, from a combination with inflammation of the brain, but they assumed finally the aspect of genuine Delirium Tremens. After one or two days of delirium, and a night passed without sleep, he became, for nearly a whole day, perfectly rational. This relief followed venesection and the free operation of cathartic medicines, but was not preceded by sleep, and was not relied on as affording a favorable prognosis. The symptoms accordingly returned with increased violence, and with a more close resemblance to Delirium Tremens. Sleep was procured by laudanum, but without any relief of the other symptoms, and the case terminated fatally.

The tremor which has given its name to this disease, is nearly as universal a symptom as the watchfulness; but though present during some part of almost every case, is not uniformly present throughout its whole course. It is occasionally very violent, and reminds one of the shaking of the limbs in an attack of intermittent; but it sometimes amounts merely to a slight tremulousness. It extends to most of the voluntary muscles, affecting the tongue, the

lips, the eyes, the limbs, and the muscles of respiration; the affection of the latter being indicated by the tremulousness of the voice, and of the sound produced by the air in inspiration.

We may make this additional distinction between the watchfulness and tremor, as serving to characterize the disease, that the former occurs only in this affection, whilst the latter makes its appearance in all cases of sickness among drunkards, and is even common in many who are in their usual health. No doubt the existence of the tremor in a case of sickness should lead us to suspect the approach of Delirium Tremens, but it affords no certain indication.

Beside these, which are the most characteristic symptoms, others occur of more or less importance.

Convulsions are not unfrequent. They are often the first symptom which excites notice; they are sometimes the immediate precursors of death at the close of the paroxysm; and they occasionally take place in its course, and sometimes bring it prematurely to a fatal termination. They are always an unfavorable, but by no means a fatal symptom, though they perhaps appear in a majority of cases which end in death. We may reasonably regard them, when they begin the disease, as implying some primary affection of the brain. In a few cases, which I have had an opportunity of examining after death, where convulsions had preceded, effusion has been found to have taken place both on the external surface of the brain and within the ventricles.

Patients are seldom without some unnatural sensation in the head. This, in many cases, amounts to a severe headache; and may be the first symptom of which complaint is made. Sometimes it is only a dizziness, heaviness, or sense of confusion. If the patient, even in the height of the delirium, be asked how he is, he perhaps answers abruptly, that he is "pretty well," "quite smart;" but that he "feels badly about the head;" and he seldom fails to acknowledge some feeling of this kind, at whatever period of the case inquiry is made.

In one instance the patient complained that surrounding objects appeared to him to move to and fro; but he was aware that this arose from a morbid affection of the sense of vision, and did not confound it with the delirious ideas which occupied his mind.

The pulse varies much in frequency in different cases, and at different periods of the same case. At first it is often of the natural standard, becoming rapid as the case proceeds. Sometimes it is frequent from the first. Almost always in the height of the paroxysm it becomes very rapid, rising to 130, 140, or even 150. Still in a few cases it continues at the natural standard, or a little above it, to the termination of the disease in sleep; and such cases rarely do otherwise than well. If the pulse do not rise above 100, we may regard the case as almost certain to do well, and the danger increases as the pulse rises. Still even a quick pulse is not a very fatal symptom, since persons often recover whose pulse has risen to 130

and 140; and a slow pulse is not unequivocally favorable, for I have known a patient carried off very suddenly by convulsions, whose pulse had not exceeded 90. When the pulse, after having been very quick and small, becomes slower and fuller, particularly when this happens toward the close of the paroxysm, we may predict a favorable event with considerable confidence. This change in the pulse often precedes, by a few hours, the termination of the disease in sleep. When, on the contrary, at the proper time for the conclusion of the paroxysm the pulse becomes quicker, smaller and weaker, there is reason to fear an unfavorable event, though the indication in this case is less certain than in the former.

There is nothing peculiar in the state of the tongue. It is commonly preternaturally clean, red, and tremulous; but this appearance is common in the diseases of drunkards. It is sometimes covered with a thin white fur; more rarely with a thick. It is very seldom dry, except after great and exhausting muscular exertion. Sometimes it is protruded, and kept so, with difficulty; and often at the beginning of the disease, the patient, when asked to show his tongue, thrusts it out very suddenly, with some distortion of the countenance, and a staring expression of the eyes. In general, we may regard the tongue as rather indicating the general state of the system, than the state of the disease itself.

The appetite usually fails, partially at least; in some cases it has remained good, and the patient has

been allowed to take his regular meals. It has always appeared to be a favorable symptom.

Thirst is seldom excessive; less so than in most diseases accompanied with excitement. In that form of it which follows immediately from excess in ardent spirits, the desire for them may remain, and sometimes in cases of a different description. But often there is no such indication.

The skin is generally soft and moist from the first, but toward the close of the disease, it is bathed in a very profuse sweat. This may be partly attributed to the muscular exertions of the patient, but not entirely, since it continues after he has fallen asleep. Toward the close of the paroxysm, the hands and feet, and often the whole body become cold, though still covered with sweat, and this more particularly in those cases which have a fatal issue.

The countenance in the early stages of Delirium Tremens, has merely a wild and unsettled look; in the advanced periods, particularly in bad cases, it is anxious and troubled, and during the last few hours before the close of the paroxysm, becomes strikingly haggard and ghastly.

In forming an opinion with regard to the probable event of any case of this disease, we are to be governed by a variety of considerations, the most important of which may be gathered from the preceding remarks. In patients of the first class, or those in which the attack arises immediately from excess, the danger may be regarded as almost nothing. In

cases of the second class, the danger is undoubtedly greater, but is still very small, unless there have been several previous attacks. In those of the third class, the danger is always considerable, but the degree of it will depend chiefly on the nature and severity of the original disease. Where the local affection is slight, such as an inconsiderable external injury, or a common catarrh, the risk of death is but little greater than in an uncombined attack; but where it is severe, as in inflammation of the lungs, in dysentery, or in compound fracture, the patient is in great peril. The danger is greater when the delirium comes on at the height of an acute case, than when it occurs after an alleviation or remission of the symptoms. Indeed the most frequently fatal cases are those already referred to, where the disease does not go through the regular course, but simply takes the place of the delirium which comes on at the height of many acute cases, and precedes death but for a short period.

We can seldom be justified in giving an unqualified opinion of the event of a case of Delirium Tremens, either in favor of or against the recovery of the patient. It is often a matter of much delicacy, so to state the possibilities of the case, as not, on the one hand, to lead the friends to too sanguine an expectation of recovery, or on the other to too unfavorable a view of the result. Degraded as the habits are which lead to this disease, and lost to all that is honorable or desirable in life, as most of the subjects of

it are, still some are not so, and many, even of those who are, are objects of affectionate solicitude to parents and friends. Every physician must meet with many cases where the feelings of those around the patient demand the utmost consideration and sympathy, even if his own character claim no respect. It is not uncommon for this disease to occur in young men who are objects of interest to highly respectable families; in husbands who have wives and children dependent on them; and even in wives and mothers themselves. Some of the most painful scenes we can witness, are connected with instances of this kind, not only on account of the patients themselves, but of those also, who are connected with them and are interested in their recovery. Indeed there is hardly any disease, for the recovery of friends from which there is more anxiety manifested than there sometimes is in this; from the hope, so generally a fallacious one, that the sufferings of sickness and the danger of death may serve to reclaim the patient from the course which has subjected him to them.

On account of the friends, therefore, it is necessary to be careful in the opinion given of the probable event; for there is hardly any case, even those which present the most favorable appearances, which may not terminate fatally, and that very suddenly. The possibility, therefore, that such may be the event, should always be stated fairly, and with proper qualification; the favorable indications being allowed their due weight. In this way, the minds of

those interested, will be in some measure prepared for the worst that may ensue, and yet not unnecessarily disturbed by the anticipation of an inevitable evil.

This, whilst it is the course most consistent with exact truth, so far as our knowledge of disease enables us to judge, is also, on the whole, the kindest toward those who are interested; for a few days' qualified apprehension of danger is far better than a feeling of security, which is founded on ignorance of the real probabilities of the case, and which leads to so much distress when the event shows it to have been false.

Morbid anatomy has thrown no light upon the nature of that affection of the brain and nervous system, which gives rise to the peculiar symptoms of Delirium Tremens. Indeed its history would rather lead us to expect, that these symptoms do not depend on any organic changes discoverable by dissection, but merely on a disturbance in their functions. Accordingly, the morbid appearances, which have been observed, are not such as can account for the peculiar character of the disease. They are such as are common to many affections in which the brain is implicated. In four cases, and in two of these the disease had been accompanied by convulsions, I have seen effusion into the ventricles, and upon the surface of the brain. Similar appearances have been frequently observed by others. But I am not aware that any other morbid appearances are recorded, and

these, it will be obvious, do not at all account for the phenomena, but may be rather regarded as consequences than as causes.

Where Delirium Tremens has been complicated with other diseases, the morbid appearances which those diseases usually present, will of course be exhibited. Since they do not, however, differ from those which the same diseases present in ordinary cases, it is not necessary particularly to advert to them. It is desirable, however, to remark, in confirmation of some statements which have been before made, that in cases beginning with severe acute disease, and ending in a delirium which has entirely absorbed and obscured the symptoms of the original affection, there have been found, after death, morbid changes which prove incontestably, that the original affection has continued, with unabated vigor, up to the very last moment of life. This has been particularly noticed in inflammations of the lungs, and of the stomach.

The treatment of patients with Delirium Tremens, is by no means confined to that period which has been designated as the paroxysm. Since, from the symptoms of many cases of disease in intemperate persons, we are led to anticipate attacks of this sort, it is as important to prevent the paroxysm, or prepare for it, when we perceive its approach, as it is to conduct the patient safely through it, when it is actually present. In speaking of the treatment, therefore, we are constantly to keep in view these two distinct inquiries ;

1. By what measures may we prevent an attack of Delirium Tremens, when it is threatened?

2. By what measures may we arrest or alleviate the paroxysm, or carry the patient in safety through it?

With regard to the first inquiry, little can be said here, which may not be more intelligibly introduced hereafter. It may only be remarked in general, that whatever tends to alleviate or remove the symptoms with which the patient is first attacked, or to soothe and quiet the mind and nervous system, will contribute to the prevention of an attack of the delirium. There are in fact no direct means to be made use of, no remedies to be administered with this particular view. If the paroxysm is to be prevented, it is to be prevented by the judicious use of such general measures as will be spoken of in treating of its management.

There has been much uniformity of opinion among physicians concerning the object to the accomplishment of which the treatment is to be directed during the paroxysm. This object is the procuring of sleep. The absence of sleep is one of the most remarkable symptoms of the disease. When it terminates favorably, it terminates in sleep. It is not without foundation, therefore, that the treatment has had for its primary indication to bring about this termination. The patient, it has been emphatically said, "*must sleep or die.*" There is no doubt that this is true. But may it not have been too hastily concluded from this undeniable position, that sleep must be procured

by the assistance of art, or the patient will die. It is possible that the common impression which has been produced on our minds concerning this, is erroneous in two points of view ; 1. We have concluded that sleep is the cause of the salutary change which takes place in the disease ; and 2, that sleep in whatever way induced, will have the same effect, and that it is therefore to be induced by artificial means.

In order to determine, concerning any disease, what influence our remedies actually exert upon it, we must first ascertain what will be its course and termination if suffered to go through its usual series of changes without the interference of art. This is a point in the history of diseases to which reference should always be had in deciding upon the principles, or calculating the efficacy of the treatment to be employed. This is particularly desirable in those diseases, which, like that now under consideration, have but recently become the subjects of medical observation and inquiry.

I have witnessed a considerable number of cases of Delirium Tremens in which the patient, after the establishment of the paroxysm, has been left to contend with it, without the administration of any remedy whose tendency was to cut it short, or in any decided way to modify its symptoms. The active treatment has been confined to the period of indisposition preceding the paroxysm ; and after its accession articles of a negative character alone were administered, with the exception sometimes of purgatives. The result

has uniformly been, that the disease has gone through that regular course, which has been already described in the former part of this paper, and has terminated in the manner there described, at a period seldom less than sixty or more than seventy-two hours from the commencement of the paroxysm.

The termination in these cases has also been almost uniformly favorable, except where there has been a combination of the delirium with some acute disease in itself dangerous, or where it has appeared in connexion with some fatal chronic malady. This course has been pursued, I do not mean to say without any deviation, but without any deviation which I believe to have essentially affected the result, in about fifty cases of the several classes which have been described; and although several deaths have taken place among them, none are recorded, except among cases, which I have arranged, whether justly or not, in the third and fourth classes.

It may be stated, in confirmation of the opinion now expressed concerning the natural tendency of the paroxysm to terminate in a spontaneous and salutary sleep at the end of a certain period, that, even in the reports of cases, which have been submitted to the public as evidences of the efficacy of various modes of practice, sleep has not actually taken place sooner than it would have done in the natural course of the disease, if the history which has now been given of it be founded on correct observation. In the cases which I have formerly treated with opium,

and which have at last terminated well, a salutary sleep has not actually taken place till toward the close of the third day, let the quantity of opium be what it would. I have indeed seen sleep induced by opium at an earlier period, but it was premature, it passed into a state of coma, and the patient died.

I am satisfied, therefore, that in cases of Delirium Tremens, the patient so far as the paroxysm alone is concerned, should be left to the resources of his own system, particularly that no attempt should be made to force sleep by any of the remedies which are usually supposed to have that tendency; more particularly that this should not be attempted by the use of opium. I do not undertake to say that it can be never right to administer opium for the removal of the paroxysm itself, but I believe it can be rarely necessary, and I have not yet seen a case in which I think that it was.

It is no doubt very difficult to compare the success of the practice of different individuals; it is even difficult for an individual to compare the success of different modes of practice in his own hands at different times. The first cases of Delirium Tremens, which occurred to me, were treated exclusively with opium in large doses, then (in 1817) the popular practice of the day. The proportion of fatal cases was such as to satisfy me, in no very long time, that if this remedy did no harm, it certainly could do little good. Subsequently the emetic practice, introduced by Dr. Klapp, came

somewhat into favor, and though by no means uniformly successful, and never, so far as I know, cutting short the disease after it was once fairly established, it was far more satisfactory in its results than the treatment by opium. Various other remedies have been proposed, which I have either employed, or have known the effects of in the practice of others; but with none has the success been any greater than with the *expectant* mode of practice. I do not mean to claim even for this, a success so remarkable as that which has been claimed by some writers for the practice with opium. I would only state what has been the impression produced by a very considerable number of cases on my own mind.

No doubt the most prevalent opinion of physicians, with regard to the proper mode of treating Delirium Tremens, is in favor of the administration of opium in such doses as will procure sleep; yet, as has been already suggested, other plans have been proposed, and are preferred by a very considerable number; whilst many highly respectable practitioners still profess themselves unsettled in opinion concerning its proper management. A diversity of opinion concerning the treatment of any disease, may be generally considered as indicating some uncertainty with regard to the efficacy of any of the measures employed. Physicians in actual practice have not been uniformly satisfied with the degree of success which has attended the administration of opium, or they would not have been frequently searching, as has

unquestionably been the case, for other remedies. Notwithstanding the almost unlimited success which has been claimed for the opium practice, by some who have written in its favor, physicians in general do not find it equally successful, or they would not seek for anything better. A specific remedy easily administered, attended with no unpleasant accompaniments, and generally successful, would never be thrown aside, even a moment, for the sake of trying experiments with new remedies. We never hear the efficacy of sulphur in the Itch doubted. It is true, new remedies are sought for, not because sulphur is an uncertain, but because it is a disagreeable remedy. There could be no such reason, if opium were a specific, or a tolerably successful remedy in Delirium Tremens. Its exhibition is easily managed. Practitioners have not been disappointed in its efficacy because they have failed to administer it rightly, but because they have not found it to answer the expectations which the representations of its advocates excited. The uncertainty of opinion among physicians, therefore, concerning the use of opium, and indeed generally concerning the proper treatment of Delirium Tremens, is a practical proof that no one method has any superior or exclusive claim to our confidence; or at any rate, that opium does not command the great success which has been attributed to it.

So far from being beneficial, I believe there is ground to believe, that the effect of opium given

during the paroxysm, is to increase the violence of the delirium, to produce a tendency to convulsions, to prevent the termination by a natural and salutary sleep, or to throw the patient into a state of coma from which he does not awake. I do not mean to say that these effects are often produced. There is in this disease, as in some others, a happy insensibility of the system to the action of remedies, which allows it, in a large majority of instances, to take its own course essentially unaffected by them. It may seem presumptuous to make this statement in the face of such authorities as have written on this disease. But many, if not all, have taken it for granted that it is to be treated by medicine; they have never trusted to the spontaneous efforts of nature for a cure. Having pursued a different course myself, I am prepared to say, that there is the difference pointed out above, between the cases which I have treated without opium, and those which I have treated with it myself, or of the treatment of which by others I have seen accounts.

But I have also feared that the unfavorable effects of opium have not been confined to its administration during the paroxysm. It has happened in several instances, that the symptoms of the paroxysm have manifested themselves in cases where they had not been particularly apprehended, very soon after the exhibition of opium. I do not mean to say, that I have evidence to show that opium is in all cases injurious in the diseases of the intemperate, or that it

should never be employed. There are sometimes symptoms which absolutely demand its use, even at the risk, if there be any, of inducing Delirium Tremens.

The cases where Delirium Tremens seems to have followed directly on the use of opium, have been those chiefly in which it has been employed to check or control some dangerous or inconvenient symptom. Thus it has come on in cholera, and in the vomiting of drunkards from irritable stomach, soon after opium has been given to subdue the violent symptoms; or in dysentery and diarrhœa after it has been used to stop the evacuations from the bowels; and this, whether it has succeeded in effecting the intended object or not. This coincidence has happened in so many cases as to lead to a suspicion that it might be something more than accidental.

It will follow, from what has been said, that we derive no advantage from any direct attempt to produce sleep, and thus to cut short the paroxysm. In what then, is our treatment to consist? Are we to leave the patient wholly to the resources of nature and his constitution, or are we to endeavor to promote indirectly that salutary termination which we have no means of bringing about directly? It is not intended to imply, that we can do nothing for the disease in any way, or at any period. Something may be done to carry the patient safely through it, and sometimes to prevent it.

When the attack of Delirium Tremens is preceded

by acute disease, the treatment in the first stage will be governed by precisely the same laws as those which direct us in ordinary cases. That course which is most likely to relieve the original disease, is most likely to prevent the attack of delirium, or if it do not prevent it, to make it run through its course in safety. The great danger in these cases arises from the complication of the severe disease of an important organ, with the unbalanced and irritated state of the nervous system. The only precaution to be taken, when we apprehend this result, is to effect the cure of the original affection, with as little reduction of strength as possible, (and this is a precaution necessary to be taken in all cases of disease in the intemperate,) and, when possible, to avoid the administration of opium for the alleviation of symptoms, which are usually benefited by it.

But with regard to the Delirium itself, we shall best convey a view of the principles, which are to guide us in its treatment, by passing briefly in review the remedies which are applicable under different circumstances to patients who labor under, or who are threatened with it.

Blood-letting is a remedy, which the symptoms would, on a first view, suggest as highly appropriate. It has accordingly been adopted, and at first, indiscriminately, without reference to the nature of the case, or the stage of the disease. Hence its reputation has fallen much lower than it really deserves. It may be often employed with great advantage, and

it probably succeeds more frequently in preventing or mitigating the paroxysm, than any other remedy, emetics alone perhaps excepted. It is very satisfactorily shown by Dr. Hayward, in an examination of Dr. Sutton's work on Delirium Tremens,* that all the cases which were treated with opium, and whose successful termination was attributed to the use of that drug, had been bled at some stage of their progress, either before the occurrence of the delirium, or very soon after its access. This accords with such observations as I have been able to make. The most remarkable cases in which the symptoms of approaching Delirium Tremens have subsided without its occurrence, have been when bleeding, either generally or locally, has been adopted.

In resorting to general blood-letting, we should of course be much governed by a regard to the constitution, previous health, &c. of the patient. Old and worn-out drunkards would probably be always the worse for it; but there are few other cases in which it will be injurious in the early part of the disease. In cases where the pulse is hard, strong, and not very rapid, where there is some pain in the head, with a flushed countenance, and a skin rather dry than moist, venesection is particularly indicated, and will serve to mitigate or prevent the attack. The objections to this remedy seem most likely to have arisen from its employment in too advanced a period of the disease. It is then only that it can be abso-

* New England Journal of Medicine and Surgery, Vol. XI., 1822.

lutely dangerous. It would seem almost evident, before experience, that if persevered in with a view to the removal of the paroxysm, after it has been once fairly established, and after the skin has become moist and flabby, the pulse rapid and weak, and after all the symptoms indicate a state of high irritation, it must be injurious if not fatal. It is probably this use, or rather this abuse of the remedy, which has led writers to denounce it in unqualified terms.

Local bleeding is more universal in its adaptation to Delirium Tremens, and may be employed in a majority of cases. It appears to have an effect to render more safe, and sometimes to prevent the paroxysm. I know how liable we are to over-rate the effects of remedies, of whose efficacy we have formed a favorable opinion; and it may be so with regard to this. But I believe that there is decided benefit in most cases, in bleeding from the head and neck, by leeches and cupping, at any time before the paroxysm, or during the first day of it. I have even employed it on the third day with the apparent effect of hastening the favorable termination. This was in the case of a man of sixty years old, of a highly irritable temperament, in whom the disease was accompanied by no local affection. On the evening of the third day, when he was violently delirious, the application of twenty leeches was followed by an *immediate* mitigation of the symptoms, and in a very short time he fell asleep. It is not to be inferred that in this case the loss of blood had any influence on the

final issue of the case. It would probably have been terminated in the same way in the course of a few hours by the spontaneous efforts of the system. But the decided and direct effect of the remedy was such as to show the influence which it is capable of exercising.

In a large proportion of cases of Delirium Tremens, the digestive organs are deranged in the same way that they are usually found to be in intemperate patients, with whatever disease they may be affected. This is often the only disorder which can be detected previously to the attack of the delirium. To remedy this state of the digestive organs, emetics may be administered with great benefit.

They have also been recommended as a means of cutting short the disease and inducing sleep, after the paroxysm has been fairly established. It has been supposed that there is a morbid condition of the stomach, in patients with this affection, which occasions the disorder of the brain and nervous system; and that powerful emetics remedy this condition, and prevent or cut short the paroxysm. It is not impossible that this is the case, and the authority in favor of the practice is highly respectable. Yet the evidence is not sufficient to show that the accession of sleep is hastened by their administration. So far as I have tried emetics, though as above stated, they may have had a favorable effect on the digestive organs, and improved the general state of the system, when given before the paroxysm, sleep

has not been produced at a period anterior to that at which it were to have been otherwise expected.

No particular advantage arises from purging carried to any great extent. It is desirable in the beginning of every case, unless the bowels are in a perfectly natural state, to clear the alimentary canal thoroughly by some active cathartic; and afterward to maintain it in an open state by gentle laxatives. It is also necessary where the secretions are in a depraved state, to correct them by the use of the common alteratives. After the accession of the paroxysm, no medicines of this kind have any appreciable effect in modifying its course.

The use of blisters has been reprobated as tending to increase the severity and danger of this disease. The dread of them seems to have been handed down to us from one of the first writers who has treated of it; for it does not appear that they have been since much employed. It cannot be affirmed that they are usually found of any decided advantage; but having very frequently employed them, I am prepared to assert that they do no harm, and, so far as their irritation is an objection to their use, that there are few diseases in which they produce so little. I recollect one example, which well illustrates their innocence, at least, if not their efficacy. A man was brought into the Boston Almshouse for an abscess around the knee-joint, preceded by severe inflammation, which was the consequence of external injury. Delirium Tremens supervened. The patient had been bled,

and the emetic, and afterwards the opiate practice were put in operation upon him to their full extent. The day preceding the night when the paroxysm had a favorable termination in sleep, three large blisters were applied, one on the back of the neck, and one on the upper part of each arm ; all of which took effect. At the time I attributed the favorable result to the vesication, since it came on so directly afterward ; but according to subsequent observation it did not take place sooner than is usually the case in patients who recover. It is, however, sufficient to show, that the very extensive employment of blisters does not prevent, even temporarily, the salutary termination in sleep, since the irritation of the remedy was here at its highest point, at the very time when the patient became quiet and slept.

Mercurials have not, I suspect, been often given in Delirium Tremens, with any view to their specific effect on the system. The disease is too rapid in its progress to allow time for a ptyalism to take place. In a single instance, it was produced by large doses of calomel and opium, in an individual, who had been subjected to the operation of active emetics in the early part of his disease. A favorable sleep took place about the time that the mouth became sore ; but no earlier than it may be expected in those cases which have not been treated by medicine.

The warm bath has been suggested as a remedy in this disease. I have never used it, and cannot therefore bear witness to its efficacy, but it is likely

to do good during the period which precedes the paroxysm. During the paroxysm itself, there can be no benefit which would in any degree compensate for the confusion, trouble, and exposure which must be occasioned by it.

Various other remedies have been from time proposed, and their efficacy supported by the narration of cases in which sleep has been supposed to follow, as the consequence of their use. Among these remedies are assafoetida, digitalis, hyoscyamus, valerian, prussic acid, sulphuric ether, tincture and infusion of hops, infusion of wormwood, and borax. Of nearly all these remedies, I have made trial in one or more cases, and some of them I still continue to exhibit; but I have found no reason for attributing any efficacy to their operation, in hastening the termination of the paroxysm.

Having premised these observations upon the general applicability of these remedies to the treatment of Delirium Tremens, we may close this account of the disease, by stating in a summary manner the course which should be pursued in its management according to the principles which have been laid down.

Where we are satisfied that the delirium is the immediate consequence of the excessive use of liquor in an individual previously in good health, no medical treatment is necessary. If the patient be left to himself, and be debarred from ardent spirits, the attack subsides spontaneously. In the worst cases no

medicines can be required beyond a dose of salts, and an infusion of valerian, of wormwood or of hops.

In those cases which are preceded by some general derangement of the system without any well defined disease, our course is to be determined by the nature of the derangement, and the state of the constitution. Where the patient is robust and vigorous, more particularly where in such a patient there has been convulsions or severe pain in the head, general bleeding should be freely adopted, and is the most important remedy. In almost all cases, let the constitution be what it may, local bleeding may be regarded as beneficial, if not indispensable, and it is particularly called for where there is dizziness, pain in the head, or much flushing of the countenance, with heat in the head and face.

When the digestive organs have been long in a deranged state, especially when the stomach appears to be loaded with a mass of secretions which are offensive to it, and which excite it to ineffectual vomitings, a powerful emetic of tartarized antimony is of essential benefit. In common cases a combination of ipecacuhana with the sulphate of copper or of zinc, is sufficient for the proper evacuation of the stomach. This may be followed by a cathartic of calomel, either combined with, or followed by some other article which will promote its full operation. It is afterwards only necessary to regulate the bowels by mild laxatives, unless some unusual symptom arise, which indicates a more active evacuating treatment.

This course, with the exception of general bleeding, may be pursued whether the physician be called before or soon after the commencement of the paroxysm. Little else is required in the large majority of cases. Particular symptoms may call for the administration of particular remedies; but of such a necessity a judgment must be formed in each case upon a consideration of the general principles upon which the disease is to be treated.

Still, although there are no particular remedies which appear to have any influence in the removal of the disease, there are many articles which I have been in the habit of prescribing, which do not interfere at all with the regular course of the disease, and have a grateful and supporting operation upon the system. Such are the infusion and tincture of valerian and of hops; an infusion of chamomile, a solution of carbonate of soda, or of ammonia, or of sulphate of quinine, &c. &c.

The use of spirituous liquors during Delirium Tremens, has been recommended as a means of promoting sleep. If I believed them really advantageous in this respect, I should hardly feel justified in resorting to them, since this must diminish what little prospect there may be, that the disease will be a means of breaking up the habit of intemperance. I have accordingly never recommended this practice, and if the views which have been presented of the course of the disease be founded on correct observation, it will appear probable that it has not had the influence which has been attributed to it.

The diet should in most cases consist entirely of nutritious liquids. But occasionally the appetite remains good, and the patient may be then indulged with small quantities of his ordinary food, particularly in the morning.

As little restraint should be exercised over the patient as is consistent with the circumstances of the case. It is usually necessary, from considerations of propriety, to confine him to his house, and perhaps to his room, but within the determined limits he should be as little controlled as possible. When circumstances admit, it is better that he should have free range within doors and without; the precaution being always taken of having some able-bodied person to watch his motions. There is little to fear from exposure; patients have been frequently exposed to the night air, to cold, and to rain, for hours, and with very insufficient clothing, without the slightest injury.

Patients should never be intrusted during the night to the charge of females alone. The strength of one or two men is sometimes barely sufficient to prevent them from that which would be imminently dangerous to life or limb. They are frequently disposed to jump from windows, from a wharf, &c. with the intention of escaping from imaginary dangers.

During the paroxysm it is well to persuade the patient to lie down several times in the course of the day, as in this way he may secure a little sleep. Toward the end of the third day, this is more important,

as the close of the disease is to be then expected, and the position for sleep may in some degree hasten its approach. When the critical sleep has actually taken place, everything which can interrupt it is to be obviated. The patient is to be kept in darkness and silence. Whenever he awakes, as he does occasionally, he may be supplied with drink or nourishment and encouraged to sleep again.

The treatment after the paroxysm, has in it nothing peculiar. The convalescence is generally rapid, and the health better than before the attack.

Very little remains to be said of those cases, which fall under the third and fourth classes. It is only necessary to remark, that when we are satisfied that the delirium does not take the place of, or suspend a previous disease, we are to proceed in its treatment much as if the delirium had not occurred ; when, on the contrary, we believe that it does, we are to manage the paroxysm in the manner which has been now described.

