

and removal of scrofulous disorders than in this island. It is, in short, possible that slighter and more gentle medical measures may produce palpable therapeutic effects in France, the Rhine Provinces, and Italy, than in Great Britain, in which summer weather is late in appearance, unsteady during its abode, and not long in duration.]

ART. IV.—*On Catalepsy or Trance*. By EBENEZER MILNER, M.D., Edinburgh, L.R.C.S.E.

CATALEPSY being a disease of extremely unfrequent occurrence, has always received marked attention, from those who have witnessed the remarkable and striking phenomena by which it is characterised.

The disease is known to nosologists as CATALEPSIS, and may be briefly defined as a morbid affection of the human system, characterised by more or less sudden loss of consciousness, of volition, and of muscular motion, at least that known as voluntary, with persistence of the attitude in which the patient was observed to be, at the period of the invasion of the disease, or in which he had been purposely placed.

The early history of this disease is involved in much obscurity, more especially as different names have been employed to designate it, by various authors.

Hippocrates has been supposed to have described the disease under the term *catochus*. Other authors have noticed it under the names, *aphonia comatodes*, *apprehensio*, &c. But Asclepiades is understood to have first given it the name by which it is now known.

It is impossible to define the meaning of the descriptions given by the oldest authors of any of the so-called disorders of the nervous system, because they were unable to distinguish one disorder from another, and consequently described *syncope*, *coma*, *apoplexy*, *phrenitis*, *tetanus*, and other diseases in conjunction with that of catalepsy, as one and the same morbid affection.

Caelius Aurelianus has the credit of being the first physician to separate catalepsy from other nervous diseases, and to describe faithfully the signs and symptoms by which it is known. If, however, it be true, that he supposed cataleptic patients “to fall like an ox under the murderous stroke of the butcher; tears to flow plentifully from their eyes; the muscles of their lower jaws, their lips, and eyelids, to be subject to frequent involuntary contractions or twitchings; and their hands and fingers to be firmly clenched;”—it is evident that he was not aware of the characteristic symptoms of catalepsy, and that he was unac-

quainted with the disease which has, in later years, been admirably described by Boerhaave and other physicians following him.

Many of the older authors on medicine have discussed the question, whether catalepsy and epilepsy were not one and the same disease. Galen appears to have recognised catalepsy as a distinct disease; but by far the greater number of authors regarded the two as identical, and employed either name indifferently to designate either disease. Notwithstanding all that had been written concerning its nature and its causes, the symptoms were always described with a degree of vagueness, and with so great an admixture of hypothesis, as to render the whole totally unintelligible.

The same may be said of their notices of the causes of the disease, which are generally nothing more than the most untenable hypotheses. Thus, a very favourite explanation of the nature of catalepsy was, that the nervous matter or fluids had been frozen by cold, the extreme effects of the one being considered identical with the prominent symptoms of the other. They were confounded together, because insensibility and rigidity of the limbs are observed in both cases.

The history of catalepsy, in more modern times, may be said to be the history of disease itself. As physicians began to observe diseases with more care and attention than had been usually bestowed on them, the symptoms by which they were known were described with a greater degree of truth, and the diagnostic marks, by which they were distinguished from each other, were noted with considerable precision; catalepsy had its share of attention, and was at length clearly distinguished from epilepsy, hysteria, and other diseases of a somewhat similar character.

But the position which catalepsy should hold in the catalogue of diseases has never been satisfactorily determined by nosologists, nor will it be determined until our knowledge of the exact nature of the morbid changes causing or following it has been greatly increased. It was supposed by some to belong to the class of comatose diseases. Cullen considered it to be a species of apoplexy, and called it cataleptic apoplexy. It has also been regarded as a convulsion; and it is now classed among the NEUROSES, or diseases of the nervous system. Whether the disease is placed in its proper nosological position or not, is a question which it is unnecessary to discuss. Indeed, the very evident lesion of the functions of the organs of sense, the total loss of sensibility, and the abrogation of the power of performing voluntary motion, indicate that the nervous system is the chief seat of the disease.

The cataleptic patient may be pinched, cut, seared with a red hot iron, or submitted to other strong stimulants to sensation and

motion, yet he exhibits no signs of perception, and is incapable of removing his person from the object that is injuring him.

Before entering on the consideration of the causes, symptoms, and the whole pathological history of the disease, it is necessary for me to premise, that, having seen but one case where all the phenomena were well marked, and fully comprehending the difficult task to give a comprehensive and correct view of all that is stated concerning it in the writings of others, I shall endeavour to state cautiously those facts only which seem least exposed to be called in question. It is now well understood that the phenomena of catalepsy oftentimes precede or follow an attack of hysteria, of monomania, and of somnambulism, complicating, and being complicated by, these affections to a certain degree, so that it is almost impossible to distinguish, in some cases, the primary disease from the secondary phenomena. In consequence of this, there is still great confusion in the various descriptions of catalepsy which are on record, and, therefore, in attempting to describe the disease in all its bearings, I may have been misled, and have stated what, on further investigation, may not be found to be strictly correct. If such should be the case, the necessity of placing reliance on the descriptions of the most credible authors, must be my apology.

Causes.—There is no disease whose development is not favoured by certain conditions, acting in various manners, and with different degrees of intensity; and, therefore, it is only necessary that I should mention, as briefly as possible, the various conditions which predispose to and excite Catalepsy or Trance.

The predisposing causes depend, for the most part, on the general constitution of the individual, as upon age, temperament, sex, and, probably, also on occupation. Individuals of a hypochondriacal, melancholic, or hysterical temperament are extremely liable, under certain circumstances, to fits of this disease; in fact, an attack seldom or never comes on except in those persons who have a strongly marked nervous temperament. Middle-aged or young people are most liable to it, the time varying from childhood to old age, although it is seldom observed before puberty or in the decline of life. Females are more subject to it than males, and this is readily accounted for by the greater nervous susceptibility of the sex. A sedentary life, intense study, and any occupation which depresses the general system or excites the nervous centres, may predispose an individual to an attack of the disease, especially where the sex and temperament are favourable.

Anything which diminishes vital power and augments the susceptibility of the nervous system, must rank as a predisposing

cause;—for example, exhaustion resulting from hæmorrhages, difficult labours, and frequent miscarriages, intense and long-sustained mental applications, great anxiety, violent and continued grief, religious contemplations, excessive venereal indulgences, and similar circumstances which act on the nervous system, and excite the emotions.

The exciting causes are identical with many of the predisposing, and differ from them more in degree than in kind. Amongst the many exciting causes which are usually mentioned, the following appear of most interest. Violent and sustained grief, a fit of intense passion, great terror or fright, unrequited affections, the sight of hideous objects, the immoderate use of spirituous or fermented liquors, worms in the intestinal canal, the sudden suppression of any discharge, natural or morbid, as the menstrual fluid, hæmorrhages from piles, the sudden extinction of an exanthematous eruption.

Catalepsy has also been known to ensue after disease of the ovary; and, as before stated, after other nervous affections, especially hysteria, which, in certain of its many forms, closely simulates it. The fumes of charcoal have also been conjectured to cause a fit of catalepsy, but it is most probable that the insensibility and loss of voluntary power over the muscles which follows on the inhalation of diluted carbonic acid was mistaken for trance.

It is to be remarked, that, of all the exciting causes mentioned above, those which act by an intense impression on the mind, and suppressed discharges, are the most powerful amongst adolescents and adults; but that when catalepsy or trance occurs in children, it is most probably owing to irritation from worms in the *primæ viæ*. It has been conjectured, however, that when catalepsy co-exists with worms in the intestines, the disease is independent of the irritation they produce. This may probably be the case in some instances, but it must always be remembered that worms are often the cause of convulsions; and consequently there is nothing to prevent them from producing any other affection of the nervous centres.

Catalepsy does not always manifest itself with any regular series of symptoms, and this probably arises from difference of cause and varieties in the constitutions of the individuals attacked by it. Perhaps this disease would be best understood by considering it, *first*, in its most simple and well marked form; *secondly*, in its various phases of complication arising from its co-existence with other morbid states of the functions of the brain; and, *lastly*, in the forms it assumes as a symptom of other diseases. Simple catalepsy is very easily recognised by certain symptoms of pretty regular occurrence in different cases.

Complicated catalepsy cannot be so easily recognised, nor studied with such ease, as the disease in its simple form, because its symptoms are more or less masked and modified by hysteria, mania, hypochondriasis, melancholia, and epilepsy, either of which may, and does not unfrequently co-exist with it, as already stated; and the two combined form a disease of a somewhat mixed character, and difficult of diagnosis. Symptomatic catalepsy usually ensues on an attack of remittent or intermittent fever, the presence of worms in the intestinal canal, suppressed discharges, and the like; and although it does not differ in any essential degree from the simple form of the disease, yet it is well to consider it as constituting a distinct form, inasmuch as while therapeutic remedies are being used against the more formidable symptom, the disease of which it forms a symptom must be removed before any permanent relief can be given to the patient.

While I have thought it necessary to indicate the forms of the disease as best adapted to its practical consideration, I am compelled, by the limits of this paper, and by a want of knowledge of the disease as derived from personal observation, to consider them as one. With this premise, I shall at once proceed to describe the symptoms by which catalepsy is accompanied and known.

Premonitory Symptoms.—Fits of catalepsy, like those of hysteria, are ordinarily preceded by precursory phenomena, which announce their invasion. In some individuals, these phenomena present themselves in a regular manner, so as to enable the patient or the physician to predict the coming fit. They consist of cephalalgia, especially about the occipital region, general heaviness about the head, depression of spirits, and with it mutability of temper, pains and spasms of the muscles, more particularly those in the region of the neck, weakness of the intellect, vertigo, palpitation of the heart, ringing in the ears, together with a general feeling of lassitude. Sometimes the attack is preceded by a profound sleep. The countenance of the patient is either suffused with blood or preternaturally blanched, and he complains either of extreme heat or cold of the whole body; but these premonitory symptoms are not always observed. The individual is sometimes attacked suddenly, and retains the posture in which he was at the time of attack.

Symptoms.—Whether the attack be preceded by premonitory symptoms or come on suddenly, the individual presents a certain series of symptoms by which the disease may be known when not greatly complicated. The most prominent symptoms are total loss of sensibility, of intelligence, of sense, of voluntary and

of reflex motion, the patient retaining the position in which he was attacked during the paroxysm, or in which he may be placed at the will of the bystanders. The eyes are wholly insensible to the action of light, the pupils being either contracted or dilated, and remaining so, however intense the stimulus. The greatest noises are disregarded by the individual, his organs of hearing being insensible to the impressions made on them. Smelling and tasting are alike impossible. He may be pinched; incandescent objects may be applied to the surface of his skin; wounds may be made in the most sensitive parts of the body; yet no impression is transmitted to the nervous centres, or if so, it is not perceived nor acted on; and the patient remains insensible and cannot execute the slightest movement.

The most prominent symptom, however, is the unvarying position of the body. All the others are seen in other diseases, but this is peculiar to trance. The limbs, which are found somewhat flexible in some cases, and more or less rigid in others, remain in any attitude in which the anatomical structure of the part permits them to be placed. If the arm, the hand, the thigh, the leg, and the foot, be flexed by the physician, they all remain so, until their position is altered. The countenance has not unfrequently the expression either of laughter or of grief, according to the ideas of the individual at the time of the attack.

When complicated with hysteria or epilepsy, this remarkable state of the muscular system is not so prominent. The rigidity of the limbs is greater, and, although by using considerable force they may be flexed or extended, yet, after the lapse of a greater or less period of time, according to circumstances, they return into their original position. This may also occur under other complications.

The most remarkable deviations in the temperature of the surface of the body are observed in different cases, occasionally, at various paroxysms in the same individual. The general surface may be hot or cold, the latter being the more frequent condition. But it is stated that one part of the surface may be hot, while another is cold. Whether this be true or not, cannot be satisfactorily determined. But we know that, in other affections of the nervous system, somewhat similar phenomena are by no means uncommon.

The eyelids may be open, as when the patient has been attacked during meditation; or may be closed, as occurs when the individual was seized during sleep. In some cases the eyelids have been found so firmly closed during the paroxysm that it was impossible to open them. Here, some complication most probably existed.

Sometimes the respiratory movements are executed with as

much freedom as in health; at other times, the muscles of inspiration are involved in the same morbid change as the other muscles of the body, and respiration is then difficult.

Ordinarily, respiration is performed slowly, so as in some instances to be almost imperceptible, and, in rare cases, both inspiration and expiration are executed more strongly and more frequently than in health. It is impossible to account for these variations in different cases; the fact, however, that such variations are met with, is not without significance.

The action of the heart is affected in the same manner as the lungs in each individual; and this is to be expected from the intimate relation between the two. The pulsations of the heart may therefore be found more violent or less perceptible than in health, the latter being most frequently observed, and, in some cases, being carried to such an extent, as to render it difficult to detect the action of the heart either by the hand or by the ear. The pulse in the arteries will coincide with the diminished or augmented force of the heart; and here it is worthy of remark that, even in cases where the pulsations of the heart are scarcely perceptible, the carotid arteries often pulsate with considerable force, while the pulse at the wrist can be scarcely detected; showing, indeed, that there is a very considerable disturbance in the circulation, and more especially in the distribution of blood to different parts, and explaining why, in some cases, there should be such a marked difference in the temperature of the head, and the rest of the body.

Deglutition is in some instances performed with some degree of ease, but more frequently with extreme difficulty, and often not at all.

The alvine dejections are sometimes suspended during the paroxysm, and occasionally are passed involuntarily; but this rarely happens. The urine is either not secreted, or, if produced, is retained in the bladder, or passed involuntarily.

Digestion is in abeyance. In fact, all the functions of the body partake more or less of this very remarkable temporary state of physical and mental annihilation. I have already alluded to the expression of the countenance, and have now only to notice its state as connected with the circulation. In general, the face is but slightly altered; sometimes it is flushed, and even has the appearance of animation; and, at other times, it is pale and discoloured.

Such are the most ordinary symptoms of catalepsy. But if we consult the writings of different authors, and examine the descriptions of the various cases which have been placed on record, we observe at once that this disease presents itself with such different symptoms, as to render no two examples of the disease

perfectly similar. This arises from the numerous complications to which the disease is liable, and therefore I shall now proceed to consider the various complications, and the modifications to which they give origin. Previously to doing this, however, I may remark, that the most prominent modification observed in the simple form of catalepsy, is the non-extinction of sensibility and voluntary motion; for it has been noticed that, in some rare cases, the patient is capable of making some very slight movements either voluntary or on the application of a stimulus,—this being due to reflex action,—and retains the power of perception in a slight degree, having apparently an imperfect consciousness of what is done at the time, but no recollection of it subsequently. Again, consciousness is sometimes perfect, or nearly so, while the power of speaking and of motion are in abeyance. There are numerous instances of this last form of imperfect catalepsy on record, and it has very generally received the appellation of *Catochus* from nosologists, Galen being understood to have first distinguished it.

Symptoms in Complicated Catalepsy.—The above exceptions to the general form of symptoms of catalepsy are for the most part due to hysteria; mania also complicates and modifies the symptoms of catalepsy, but both it and hysteria generally take on a different character to that which has been described above. The modifications produced in the ordinary symptoms of catalepsy by mania, and more especially by hysteria, are usually of such a marked kind as to have led physicians to describe the combination as a distinct disease, under the name of cataleptic ecstasy; but it is, in fact, one and the same disease, presenting itself in a somewhat different form, in consequence of the concatenation of circumstances.

Cataleptic ecstasy, or complicated catalepsy, according to the term which may be applied to it by different physicians, differs from the simple form of the disease, principally in there being some degree of consciousness still remaining, and the muscles continuing more or less rigidly contracted, or only partially relaxed. Still catalepsy can, even under these important and extensive modifications, be readily detected; for the consciousness of external objects is still suspended, and voluntary, if not reflex motion, is abrogated. There is also a high degree of mental excitement and abstracted contemplation attending this form of catalepsy.

This form of cataleptic disorder is induced by the same excited states of the mind as the simple variety,—love, fear, grief, rage, profound and sustained meditations, especially on religious subjects, excessive study, habits of contemplation; in a word,

those influences which are most capable of causing strong excitation of the cerebral functions, are those which generally produce this disease in individuals with a tendency to hysteria or mania. The patient seems suddenly mentally struck, or carried away from all external objects; either standing or sitting in a most excited and impassioned position, with the eyes fixed and open, and sometimes uttering either the most enthusiastic and fervid expressions, or the most earnest denunciations and warnings, or the most absurd exclamations, with the feeling or belief of their reality, and total abstraction from, or unconsciousness of, all surrounding objects or persons.

It is understood that many of the Italian improvisatori are deprived of this faculty when in a state of health, but possess it whilst they are in a state of ecstatic trance, similar to, if not identical with, this variety of catalepsy. The effects produced on very nervous persons by the practisers of animal magnetism are also nearly allied to this affection; but that phenomena, such as the following, ensue from such excitations of the nervous system, appears impossible.

Dr Petitin of Lyons published, many years ago, a case of cataleptic hysteria, of which the following is a brief account, as given by Dr Petroz in an article in the *Dictionnaire des Sciences Medicales*, (tome iv. p. 282): "During the paroxysm, the cataleptic individual referred all her sensations to the region of the stomach. This was also the seat of the senses, for thither was touch, smell, taste, hearing, and vision transferred. There she enjoyed the most extreme sensibility. According to the report of M. Petitin, she distinctly saw her internal organs; determined with great precision their form and their movements; announced the periods when the attacks would return, their duration, as well as the phenomena with which they would be accompanied. What was perhaps more extraordinary, was the phenomena induced by placing the individual in magnetic relation with herself; for if the fingers were then applied to the *scrobiculus cordis*, or to the great toe, and a question asked in a loud voice, an intelligent reply was at once given. Although the objects employed for exciting sensations were applied to the epigastrium, or to the extremities of the fingers or toes, yet she constantly referred the sensation to the seat of the sense excited, at the same time stating the pleasure or the pain which the impression had made; for example, mastication was excited, when agreeable and savoury substances were placed on the epigastrium."

Since this extraordinary case was brought before the public, a great number of others have been recorded, either similar or differing only in some slight circumstances. In all, there is

much reason to fear that imposition was practised; yet many are vouched for by men whose veracity in other matters is undoubted, and therefore I have admitted these phenomena without attempting to determine how far they are founded on truth.

Duration and Termination of the Attack.—The cataleptic paroxysms last a longer or a shorter time in each individual case. Generally, they do not last longer than some minutes or a few hours. There are not wanting cases, however, in which the duration of the paroxysm extended over a period of many days. There can be no doubt that the fit sometimes lasts three or four days; but how far the statement of Vial, that he has known the attack to extend over a period of thirty days, is deserving of credence, cannot be determined.

Whether the paroxysm last a longer or a shorter time, it in general terminates suddenly; sometimes the patient returns to consciousness, with the appearance of having been in a state of profound sleep. In every instance, the patient has no recollection of what has passed during the paroxysm; if wounds have been made to establish the fact of insensibility, the patients wonder at their existence, as their ideas immediately revert to the period immediately before the paroxysms. Indeed, this occurs to such an extent, that a patient who was speaking at the moment when rendered cataleptic, has, on recovering his consciousness, concluded the sentence which had been brought to such an abrupt termination.

The paroxysm is sometimes followed by other diseases of the nervous system. Delirium, convulsions, epilepsy, and confirmed insanity, occasionally result from or follow it. There are also cases on record in which the issue has been melancholia or apoplexy, and even tetanus, or a state approaching very closely to it. The most frequent termination of the disease, where health is not established, is hysteria, which followed very severely in the case of catalepsy, which I attended in Dundee under the late Dr Carruthers.

Catalepsy, however, is essentially an intermittent disease, its paroxysms being renewed more or less frequently; and where this has occurred over any considerable period of time, the fit is induced by the slightest cause, such as unexpected noise, a slight fit of passion, and the like. Sometimes the patient has many attacks in one day, or only one a-day, or every two, three, six, or eight days, or months, according to circumstances.

Between the paroxysms the individual sometimes enjoys good health; but in ordinary cases he suffers from cephalalgia, especially at the back of the head, from vertigo, from great excitation

of the animal spirits, from embarrassment or confusion of ideas, from melancholy, convulsive twitchings of the limbs, palpitations of the heart, and from great nervous excitability. All of these ailments do not exist in each case. Those which are most frequently complained of are headach, and fatigue, and lassitude. The patient is also occasionally unable to sleep at night, or if he sleep, his rest is disturbed by dreams. Sometimes he sighs, laughs, or weeps, without any cause, and, in some rare instances, is affected with deafness or loss of voice. The appetite is usually diminished, and digestion is not easily performed. The patient is, in general, pale and emaciated.

If the patient be a female, the menses are generally found very irregular, both as to quantity and to time.

The only other observation I have to make on the terminations of the disease is, that after the individual has sustained numerous paroxysms, it is sometimes cut short and removed by hæmorrhage,—either from the nose, or, as occurs most frequently in women, from the uterus,—epistaxis, or menorrhagia.

Pathology.—The exact condition of the encephalon and spinal cord in cataleptic seizures has never been, and probably never will be, satisfactorily determined. The difference in the temperature of the head and of the rest of the body, in some cases, and also the strong pulsation of the carotid arteries, sometimes observed, would point to a state of congestion,—as the pathological condition of the nervous centres during the paroxysm indicates,—but whether this congestion is of an active or passive nature, is not known.

The vessels of the brain and cerebellum have been found much congested with black blood, and slight extravasation also, in a case that had terminated fatally. Fibrinous concretions have also been found in the longitudinal sinuses. But our knowledge derived from post-mortem examinations is not sufficiently extensive to allow us to consider a congested state of the vessels as common.

Catalepsy is undoubtedly more a lesion of function than of structure. The close approximation of its symptoms to severe hysteria shows that those two morbid affections are closely related; and the circumstance that the paroxysms of either are produced by the same causes, would tend to support the hypothesis that they are merely forms of one and the same disease. In hysteria the muscles are convulsed clonically,—that is, with motion; in true catalepsy they are convulsed tonically,—that is, without motion; and in this rests the principal difference between the two.

The nervous system, or rather centres, have their functions in

abeyance during the paroxysm,—there is, in fact, a triple lesion of sensibility, of intelligence, and of muscular motion.

Although it is impossible to define or determine the nature of the cerebral disorder in this disease, in true cases of simple catalepsy, in consequence of but few cases terminating fatally, yet it has been noticed, that the state of congestion of the brain is distinctly traceable where individuals have died of catalepsy complicated with mania. In two cases of this kind, given in the *Dictionnaire de Medecine*, the brain was found in one much injected with blood; the grey matter on the surface of the convolutions was firm and had a roseate hue; the medullary substance presented a large number of mouths of vessels gorged with blood; and the *corpus callosum* was softer than usual. In the other case, the grey matter was observed to be of a dark colour, approaching that of violet, and the medullary substance presented the *puncta vasculosa* large, numerous, and filled with blood. It must be remembered, however, that the same pathological phenomena are observed after death from true uncomplicated mania.

Diagnosis.—This disease has been confounded with hysteria, ecstasy, asphyxia, apoplexy and syncope, tetanus, and the state of death. The older physicians also mistook death from cold for catalepsy, and described cases of soldiers in a state of catalepsy riding into the camp on horseback, firmly seated like statues on their saddles. Here, death from intense cold formed a source of error.

Although our knowledge of the distinctive marks of the diseases liable to be mistaken for trance is now so great that no physician ought to fall into error, yet it is necessary to notice briefly the signs by which a correct diagnosis may be made.

1. From true ecstasy, catalepsy is distinguished by the patient labouring under the former disease being occupied in profound and sustained meditations. The faculty of thought, instead of being annihilated or suspended, is found exclusively directed towards the contemplation of a single object, entirely absorbed with one idea, with some imaginary pleasant object, the powers of imagination being augmented by an enthusiastic exultation. Again, there are no convulsive movements, no rigidity, partial or complete, of the muscles; and, above all, the limbs, if placed in any position by the physician, do not retain that position as they will in simple, and oftentimes in complicated, catalepsy.

2. Catalepsy is distinguished from hysteria by signs which have been noticed when speaking of the pathological nature of the disease. In hysteria the muscular system is oftentimes strongly convulsed, and motions are performed; but the most

distinctive sign is the non-retention of any posture in which the patient may be placed.

3. Asphyxia is accompanied with suspension of the functions of respiration and circulation; the countenance is also ordinarily livid and swollen, the mucous membrane of the lips having a very dark hue.

4. Syncope is distinguished from catalepsy by the state of the muscular system, the limbs being extremely flexible,—and this appertains also in a great degree to asphyxia,—and by the general palor of the countenance and surface of the body, consequent on the suspension of the heart's action.

5. Apoplexy is known from it by the stertorous or sonorous breathing, by the more or less profound lethargy, by the lax state of all the muscles of the body, and also by the co-existence of paralysis.

6. Although tetanus has been mistaken for catalepsy, in consequence of the tension and rigidity of the muscles, yet, the fact that neither sensibility nor the intellectual functions are interfered with, should have prevented such a mistake from being committed.

7. Patients labouring under an intense and prolonged paroxysm of catalepsy have been supposed to be dead, and have been interred alive.

There are numerous cases of this kind on record, and many more where the individuals, after being laid in their coffins, have fortunately recovered from the attack before the period of interment. In such cases, respiration is insensible, and the heart's action is almost in abeyance; the surface of the body is nearly cold, and presents the palor of death; and the articulations are stiff. Although it is no doubt a difficult task to distinguish this state of trance from the state of death, yet a careful examination of the body, and time, would lead to a correct diagnosis. The limbs after death are first lax, then stiff, and ultimately lax again. The stiffness of the limbs, known as the cadavern rigidity, or *rigor mortis*, lasts for a longer or shorter time, according to circumstances; the sooner it supervenes, the shorter is its duration, and conversely. Now the stiffness of the limbs accompanying this intense form of trance, supervenes at once, and lasts as long as the paroxysm continues. This is consequently a valuable diagnostic sign.

Again, as the heart's action most certainly continues in a slight degree during the attack, the stethoscope may be used with advantage to detect the impulse and murmurs. The state of the eyes and the expression of the countenance, as well as the circumstances that the temperature of the body may be sustained

in a slight degree, also furnish means by which a diagnosis may be made.

If pressure be made on the eyeball a few hours after death, the cornea becomes opaque; and this occurs invariably. But if the least spark of life remain, that effect would not be produced. This may therefore be said to be a sign at once distinguishing the state of trance from that of death,—one of ready application, and thus rendering wholly unnecessary the carrying out of the suggestion that inhumation should never be proceeded with until the body has shown unmistakeable signs of decomposition.

Catalepsy is a disease which is often feigned, sometimes for the purpose of exciting the sympathies of the charitable, occasionally by soldiers to procure their discharge from the army, often by females in good circumstances merely from a desire of creating an interest in their behalf, and by itinerating mesmeric impostors. To detect the imposition is oftentimes a matter of great difficulty, all the symptoms and signs of trance being exhibited with great truth. Such persons require to be carefully and vigilantly watched, and their character inquired into, when some inconsistencies will be noticed, and the imposition detected. Perhaps the inhalation of chloroform, where malingering is suspected and is necessary to be known, would be of great service. However slowly the individual breathed, the anæsthetic effect of this fluid would be produced; and then, if he did not speak or move while the effect lasted, it is more than probable that he would do so on recovery. This is merely thrown out as a suggestion, which I believe may be used successfully in most cases of malingering.

Prognosis.—The prognosis to be given in cases of cataleptic seizure, whether simple or complicated, must depend on a variety of circumstances, requiring judgment on the part of the practitioner. The age of the patient and collateral circumstances require attention. Young individuals, and adults, who, as already stated, appear more liable to attacks of this disease than those of a more advanced age, generally recover, both from the paroxysms and ultimately from the malady. The termination of the disease is usually favourable in young patients, but those who happen to be attacked with it at an advanced period of life generally succumb under it, or under the complaints which it engenders, epilepsy being understood to be the most common of these. It is stated that old people become afflicted with great melancholy, which leads them to avoid society and plunge into the most profound meditations, and derive from this greater pleasure than they can enjoy under other circumstances. Such individuals usually present a series of interminable paroxysms,

which ultimately produces an attack of apoplexy, from which they seldom or never recover. The same also occurs in the greater number of diseases known under the generic term of **NEUROSES**, which do not present any fixed character, nor any regularity in their period of duration, so that, in such cases, the diagnosis will be governed by the principles laid down for our guidance in such diseases.

The prognosis will also vary according as catalepsy may be simple or complicated, or merely symptomatic. It has been already stated that the diseases which most frequently occur in conjunction with and complicate it are, hysteria amongst females, and in both sexes hypochondriasis, melancholia, mania, and epilepsy; consequently the prognosis will be regulated by the modifications induced by the complicating malady in each particular disease, and more especially by the amount of danger usually apprehended from it when appearing by itself. In symptomatic catalepsy it is indispensably necessary that attention should be paid to the nature of the complaint of which it is a symptom or which gives rise to it, and to note how far such disease is answerable to therapeutic measures. When catalepsy declares itself during or subsequent to acute diseases, as inflammations and fevers, the patients are then in considerable danger, and not unfrequently yield under the shock to which their system has been subjected.

On the whole, it would appear that catalepsy is not to be esteemed a dangerous disease, although many cases terminating fatally have been recorded. These, however, were for the most part complicated by other diseases, and do not give any support to the opinion of many of the older authors, among whom Boerhaave must be included, that it most commonly terminates in death.

Treatment.—During the paroxysms, the state of congestion of the head, if well marked or suspected, indicates the use of the lancet, the application of cold evaporating lotions, and even of ice, to the head. If blood be drawn, it may probably be best done by opening the external jugular vein or the temporal artery, because the circulation in the limbs is but slight. There is no rule laid down for the place in which venesection or arteriotomy should be performed; but looking at the symptoms attending the attacks, the available parts about the head and neck would probably be best. French physicians recommend the employment of leeches or cupping, rather than the lancet, because the power of the system is not so much depressed, while the local effect is produced. The leeches are applied by them to the interior of the nostrils, the feet, the thighs, and the head, in small numbers, and at intervals of a few days.

After blood-letting, either general or topical, cold applied by

means of lotions or ice to the head, has been found to diminish the duration of the attacks, and, it is stated, even to cut them short, and to remove the rigidity of the muscles after the other symptoms have passed off. The cold bath is believed to be injurious, as might be anticipated, but hot baths and pediluvia have been found useful. The most effective treatment is now believed to be hot pediluvia, and the cold douche applied to the head at same time.

Such are the measures usually employed to shorten the duration of the paroxysm, but otherwise little or nothing can be done. The patient cannot swallow medicines; nor should any attempt be made to administer them, as they may pass into the respiratory passage and induce asphyxia. If there should be any sensibility remaining in the lining membrane of the nose, ammonia and other stimulants might be applied, held near the nostrils; but it should be borne in mind that their long-continued application, when the powers of the part are greatly diminished, may lead to inflammation and other disastrous results. Friction of the surface of the body with rubefacients might be useful, by recalling the circulation to its wonted channels, and thus relieving the nervous centres. Stimulating enemata might also be of service, by relieving the bowels, and acting as a stimulant to the circulation in the part.

Whatever may be done by the practitioner during the paroxysm, little is to be expected towards accomplishing a cure. It is during the intervals between the attacks that therapeutic remedies are likely to be of any avail. If the disease be symptomatic, means must be used to remove it by the employment of such medicines as the circumstances of the case may require; indeed, the treatment may be summed up in a few words. The cause must be searched for and removed, if it be possible. If a hemorrhoidal hemorrhage has been suppressed, leeches must be applied around the anus. If there are worms in the intestinal canal, anthelmintics must be administered to remove them. Again, if the disease be caused by the retropulsion of an exanthematous eruption, everything must be done which can remove the irritation caused thereby.

The state of the alimentary canal must be attended to in all cases; and particular attention must be paid to the menstrual flux. As hysteria and catalepsy so closely resemble each other, and as in both the menses are irregular, the physician will take care to employ those measures which the particular circumstances of the case may require. The fact that many cases are cured by nature through an inordinate flow of the menstrual fluid, points out important indication in practice, namely, that the uterine and other evacuations are to be carefully attended to,

and, if deficient, the usual therapeutic agents administered to cause an increased flow.

The class of medicines called antispasmodics are oftentimes of great use, by removing the great nervous excitability, and increasing the tone of the nervous system, and, therefore, should be employed in all cases where the judgment of the practitioner shows them to be indicated.

Where there is much attendant debility, nourishing diet and the moderate use of wine or fermented liquors would be of great service, by increasing the general tone of the system, and preventing the tendency to passive congestion which always accompanies a weak and debilitated constitution. This is to be looked to in all cases, but more particularly if the patient be aged.

When the attack is prolonged, sustenance must be given through the rectum or an œsophageal tube. This is not rendered necessary in the majority of cases; but there are instances on record where the catalepsy was complicated by monomania, and the patient has remained so long in a state of abstracted contemplation, that it was absolutely necessary to convey food into the stomach in order that the patient should not perish through inanition. Some individuals have been fed in this manner for months.

In all obstinate cases, and when cataleptic ecstasy occurs from complications with mania, melancholy, and epilepsy, ptyalism may be advantageously induced by the use of calomel, and should be kept up as long as the practitioner may think proper; counter irritations, as blisters, setons, the moxa, and even the actual cautery, may be called for.

Janet Blackie, aged nineteen, a domestic servant, in Perth Road, Dundee, was, on the 17th June 1842, while waiting table, suddenly struck dumb, and remained motionless, with a spoon in her hand, retaining the posture she had assumed at its accession for above twenty minutes, and, on laying it down, resumed the subject she was pursuing as if nothing had occurred, and without any knowledge of the circumstance had her mistress not spoke to her regarding the fit.

My friend, the late Dr Carruthers, of Dundee, was consulted, and, as the catamenia were deficient and irregular, he prescribed ten drachms of tincture of cantharides and six of the tincture of muriate of iron; to take fifteen drops three times daily in cold water, and two of the pills of myrrh and aloes every alternate night, with hot pediluvia. These means were employed without any good effect, as she had an attack the longest ever she had four weeks after the first one.

When I saw her, the eyes were slightly dilated, the extremi-

ties were deadly cold, the face white as polished marble, muscles not distorted, pulse at wrist imperceptible, motion of the heart scarcely to be felt, respiration was slow, and, as it were, only a step between this imperfect state of life and death. She remained perfectly motionless, and during the continuance of the paroxysm retained the attitude she had assumed at its accession. Whatever position the limbs were placed in, they remained so. The time passed in the fit was to her annihilated. The last idea she had before the commencement of the attack was the first that occurred after its cessation. The paroxysm this time lasted three hours.

Cathartic medicines were freely administered, and as she afterwards showed symptoms of hysteria, I ordered twenty-four minims of oil of valerian, and one drachm and a half of the mass of aloes and assafœtida, to be made into twenty-four pills, one of which was to be taken night and morning. At the same time I directed exercise to be taken in the open air.

Next month the catamenia flowed freely, and she had no new attack for eight weeks, and at this time the fit was slighter, continuing only a few minutes. The fits nevertheless returned several times, and she became so nervous and depressed that she left her situation.

Dr Carruthers thought that the case ought to be treated in a manner similar to epilepsy, and suggested the use of nitrate of silver. This metallic salt was tried along with antispasmodics without any apparent effect. Powerful stimulating enemata of turpentine and assafœtida seemed to have some influence in shortening the affection.

Ten months after the attack there was considerable pain on pressure on the ninth and tenth dorsal vertebræ, and cupping and blistering exerted no permanent beneficial effect. I then applied the actual cautery during a fit, unknown at the time to the patient.

Since this application she had no recurrence of the fits, and is now enjoying good health, although occasionally suffering rather severely from cephalalgia and hysteria.

Leith, September 13, 1850.

ART. V.—*Case of Catalepsy, with Remarks.* By JAMES STARK, M.D., F.R.S.E.

CATALEPSY being one of those very rare diseases which few practitioners have seen, and still fewer had an opportunity of treating, the following case, which came under my care in 1836, may not be deemed unworthy of notice.