

An essay on the use of narcotics and other remedial agents calculated to produce sleep in the treatment of insanity / [Joseph Williams].

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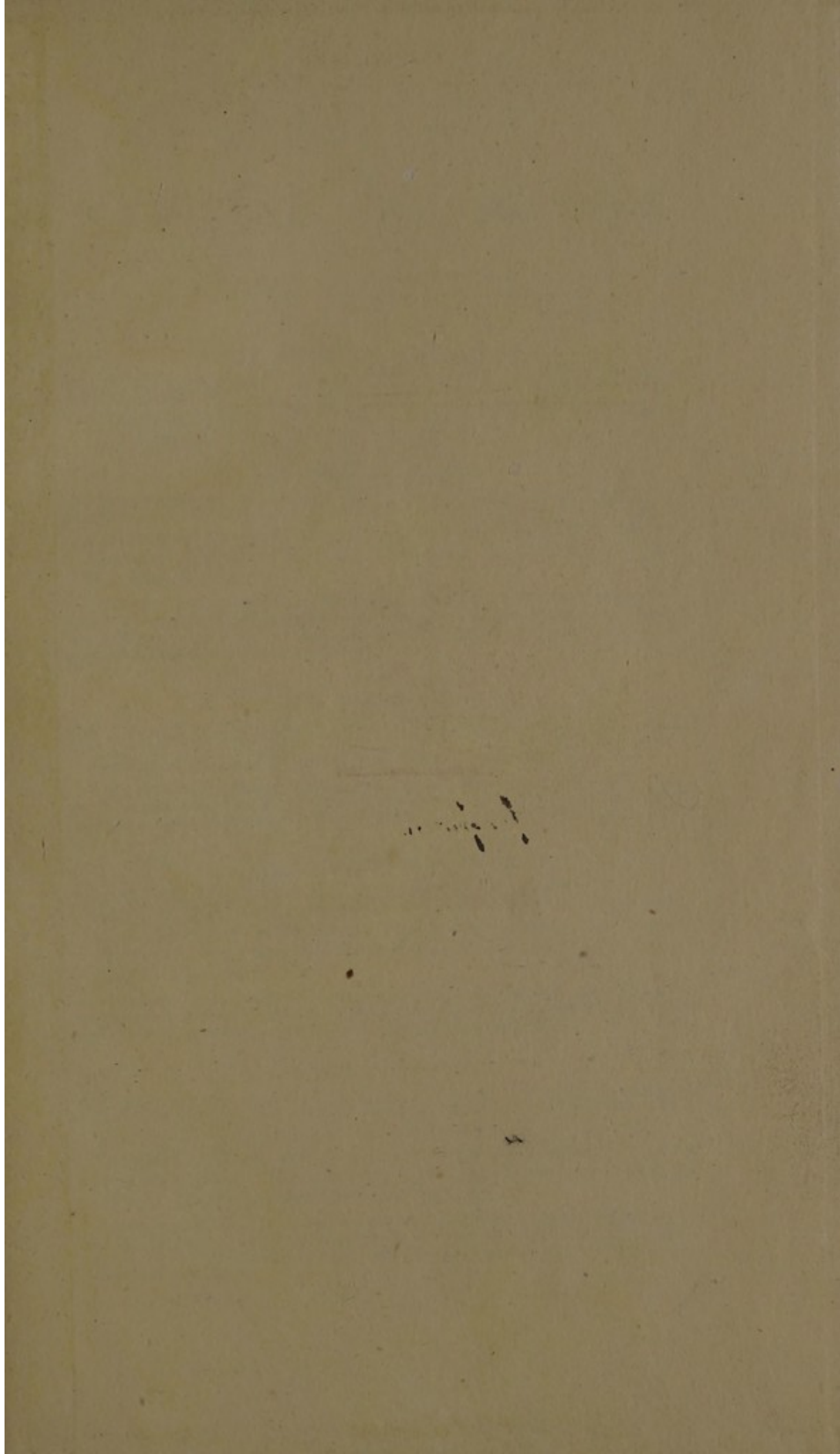
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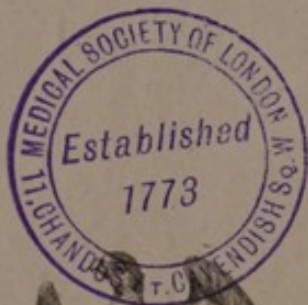
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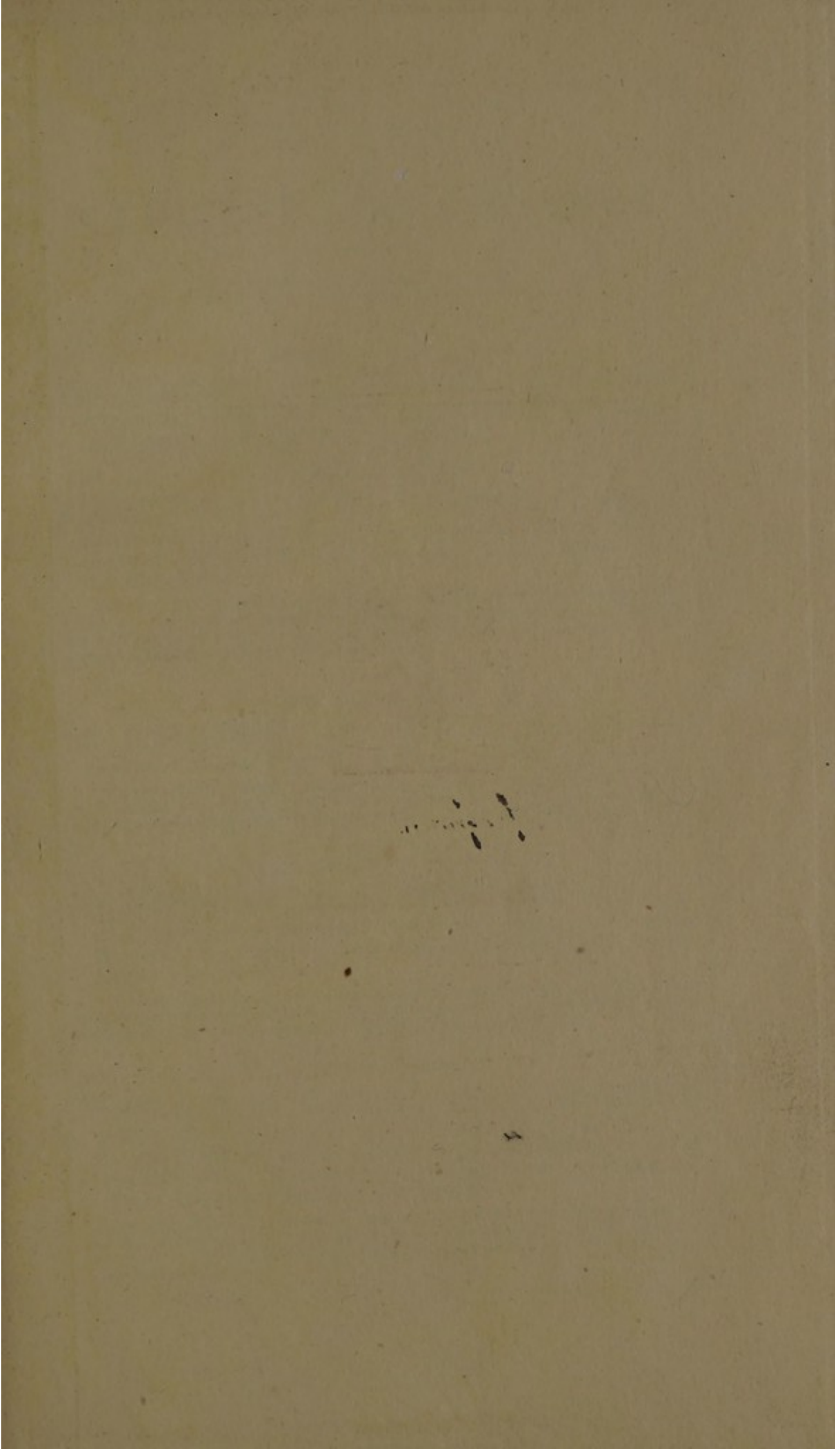
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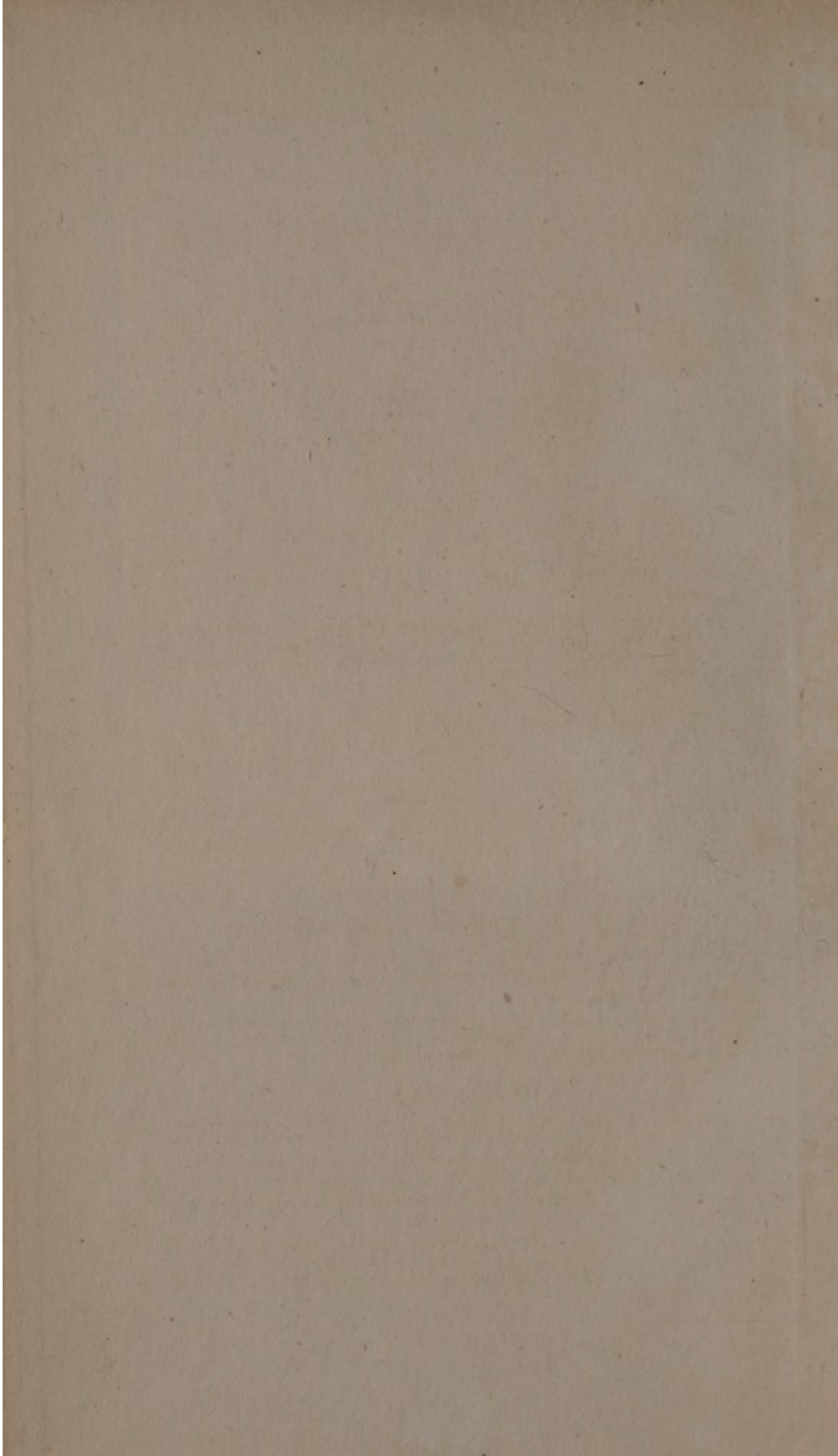


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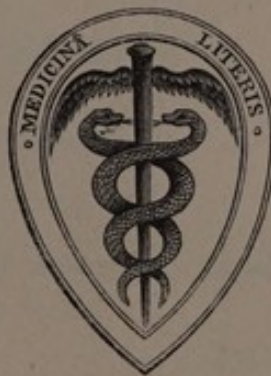


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AN ESSAY
ON THE
USE OF NARCOTICS
AND
OTHER REMEDIAL AGENTS
CALCULATED TO PRODUCE
SLEEP
IN THE
TREATMENT OF INSANITY.

FOR WHICH THE AUTHOR OBTAINED
THE LORD CHANCELLOR'S PRIZE IN IRELAND.
AWARDED BY THE PRESIDENT AND FELLOWS OF KING AND
QUEEN'S COLLEGE OF PHYSICIANS.

BY
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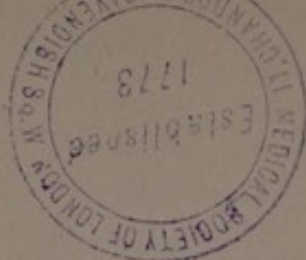
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USE OF NARCOTICS
IN THE
TREATMENT OF INSANITY
BY
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TO
THE RIGHT HONOURABLE
SIR EDWARD B. SUGDEN, KNT.

LORD CHANCELLOR

OF

IRELAND,

BY

HIS LORDSHIP'S PERMISSION,

AND

WITH EVERY SENTIMENT OF ADMIRATION AND
RESPECT FOR HIS HIGH ATTAINMENTS,

This Essay

IS DEDICATED

BY

HIS MOST OBEDIENT AND FAITHFUL SERVANT,

THE AUTHOR.

THE GREAT ...
BY ...

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P R E F A C E.

THE Lord Chancellor of Ireland having placed at the disposal of the President and Fellows of King and Queen's College of Physicians a premium for an essay, on some subject connected with the treatment of insanity, the President and Fellows consequently selected and publicly announced "the use of narcotics and other remedial agents calculated to produce sleep in the treatment of insanity." This essay having met with the favourable notice of the President and Fellows, is now submitted to the profession.

The importance of this subject cannot be over-estimated—to induce sleep in every stage of in-

sanity is most desirable—to procure it in incipient cases, is often to effect a cure—and in many persons, the symptoms primarily nervous, become subsequently inflammatory, if vigilancia be not arrested—many cases of insanity being entirely prevented by procuring sound and refreshing sleep.

The author has rapidly glanced at the following topics—the importance of early treatment in cases of insanity—the prevention of insanity by procuring sleep—the error of always attributing insanity to organic disease—and those numerous agents which indirectly produce sleep, although not narcotics.—Bleeding and the antiphlogistic treatment have been more fully considered, and an attempt has been made to show the importance of distinguishing inflammation from maniacal irritation—the great advantage of the calming and soothing system being duly estimated. Considerable attention has also been given to narcotics—the use of various kinds of baths—exercise and amusements—and travelling—together with some observations respecting metaphysical and moral treatment.

This subject has been investigated as a very important branch of the practice of medicine, and it is hoped a candid and rational inquiry has been made into the value of the various agents useful in producing sleep.

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1875

This subject has been investigated in a very
thorough manner by the committee of the
Royal Society, and the results are
now published in the form of a
report.

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NOCTES VIGILANTUR AMARÆ.

THE subject of insanity has occupied the attention of men no less remarkable for acknowledged learning and philosophical attainments, than as minute and accurate and faithful observers.

The psychological disquisitions which have engrossed the attention of metaphysicians as to the subject matter of mind, will not distract our attention in these few pages, nor is it intended that physiological speculations shall lead us away from the object more immediately in view, but it will be our endeavour to concentrate the attention on a subject so much neglected, that although many

physicians have grappled with the causes of insanity, have described its most varied hues and its minutest shades, leaving the treatment to the personal suggestions and private resources of their readers; while others again, in treatises no less diffuse, but endowed with a more practical adaptation, have enlightened us as to some of the best means of successfully combating or of warding off so dreaded a foe, yet the more close review of remedial agents calculated to procure sleep in those labouring under insanity, seems to have been either but slightly regarded, or often totally avoided.

It is not a little remarkable that such should be the case, considering that insomnia or vigilantia are generally the precursors, and but too frequently the constant concomitants of those suffering from insanity, nay, that the very disease itself appears often to depend on this insomnolent condition; so that if sleep can be artificially induced, the threatened affliction may be retarded or even altogether prevented. Impressed with the difficulties of the subject, but stimulated thereby, we will now en-

deavour to give a rational exposition of the adaptation of hypnotics to many of the varied conditions in which we find the insane.

There are several agents which although indirectly producing sleep, cannot be called narcotics nor even anodynes, except inasmuch as they tend to allay irritation, and in that way admit of sleep: for example, we find a person with fever, heat, restlessness, pain and weight in the head and vigilantia; Calomel c. Scammony or Colocynth are administered, worms are voided, the restlessness and fever cease, sleep follows. Again, we see a patient with high fever, bounding, full, and strong pulse, rolling, injected, and sparkling eyes, great pain in the head, white tongue, dry and hot skin; blood is abstracted, an aperient is given, and sleep which has been denied some forty-eight or sixty hours, soon follows. Instances might be multiplied, but these will be sufficient to form an apology for the apparent digressions which must necessarily occur in writing on the various means useful for inducing sleep in the insane.

It is not our intention to discuss the physiological question respecting narcotics producing an immediate impression on the nervous system without entering the circulation, or whether it is essential that the narcotic principle must have passed through the brain previously to its effect being induced. On this subject opinion seems divided, and it would appear that although some narcotics before producing their effect must enter the circulatory medium, others act at once on the nervous system. Sedatives immediately depress, while narcotics cause temporary excitement and subsequent depression: we possess very few real sedatives, unless narcotics can be considered as such when administered in poisonous doses. Hydrocyanic acid, tobacco, belladonna, and morphia, are amongst the most powerful sedatives, and opium if given in very large doses.

All narcotics act primarily as stimulants, and this has induced many writers to condemn them in the treatment of mania; but although they often undoubtedly at first increase cerebral and arterial excitement, yet the period of excitation is short,

occupying ten, fifteen or twenty minutes, while the hypnotic effect is prolonged, continuing four, five, six, or even eight hours, and this continuous and lengthened tranquillity is of the greatest benefit to the patient.

Some of the mildest cases which occur where there is preternatural excitement with *vigilantia* are those of persons having overfatigued the mental powers by continued application, more especially if confined to one subject, and the ill effects seem to be produced more frequently in those whose hopes and fears are in addition adding to the excitement, as is often noticed in junior barristers and students at our Universities.

Now, in such instances, if a young man apply early, the case is usually cured very rapidly, sometimes even within twenty-four hours; if passed over for a few days, recovery is retarded, and if totally neglected, *phrenitis* or *mania* by no means unfrequently ensues. In such cases there is great *action*, which is but too frequently mistaken for *power*; the pulse is quick, perhaps 100, 120, or even more, tongue white, face flushed, throbbing

and heat of the temples, rolling, sparkling, and injected eye, rapidity of speech, everything showing great excitement; now this description is not sufficient to guide us as to the treatment, for all these symptoms may depend on excessive nervous irritation, but more attention must be given to the pulse; if the pulse, in addition to being quick, is also full, hard, and bounding, and if the skin is dry and hot, *indicates* then the abstraction of blood both general and local will usually be necessary, and often within an hour or two after depletion, the skin becomes moist, and the patient falls asleep. *contrary* But what I am the more anxious to particularize is the opposite condition where bleeding is unnecessary and unsafe. Supposing the pulse to be quick, soft, and fluttering, weak or intermittent, the skin moist and clammy, and yet the excitement just as decided as in the other case, to bleed here is most improper, and many cases of insanity have arisen from such practice. The judicious administration of a narcotic will frequently act as a charm, and we have often found the following prescription very useful:

℞. Tr. Hyoscyami ℥xxx.
Tr. Humuli ℥ij.
Camphoræ gr. v. ad x. aut xv.
Syr. Aurantii ℥ij.
Mist Camphoræ ℥vj.
M. et fiat haustus. h. s. s.

This has often caused calm and refreshing sleep ; and the patient, who has previously passed two or three nights with great restlessness and watching, feels himself invigorated, and receives his medical attendant with the greatest gratitude. How different are the consequences if sleep have not occurred, the patient more restless, more excited, more irritable, pulse quickened and more irregular, tongue more furred ; that which was excitement is now delirium, and the patient with his burning head, flushed face, and rolling eye, is no longer master of himself.

So important is sleep to those in that vigilant and restless state which precedes madness, that very many cases may be entirely prevented by calming the excitement and inducing sleep ; and whatever may have been the cause of mania, whether incipient or chronic, to produce sleep where there

is restlessness is always indicated. Dr. Combe says, if those who are exposed to any of the exciting causes of cerebral disease or of insanity, put themselves on their guard to secure regular sound sleep, they will do much to ward off an attack.

It is most essential to discover the cause, and trace the source of all this restlessness, as, if it arise from an excited or depressed state of the nervous system, the treatment would be different to that dependant on inflammatory action. The period of duration should be minutely considered; many cases from a severe shock to the system, as caused by an unexpected bankruptcy, a sudden death, or a quickened realization and awful apprehension of Omniscience, are *primarily* nervous, and may be treated with anodynes, hypnotics, and sometimes even with stimulants; but if these symptoms are allowed to continue uncontrolled, inflammatory action generally more or less speedily follows, and the case becomes necessarily more complex, there being inflammation with excessive irritation.

I believe the great error in treating insanity, has arisen from physicians having too frequently attri-

buted the various symptoms to organic disease. So far as pathological investigations yet extend, many cases have afforded no appreciable lesion, although during life the subjects of ferocious delirium : we cannot of course speak positively respecting those cases which recover ; but of those who die, it is found the more recent the attack, the less frequently is alteration of structure observed. However, an excited state of the system cannot usually continue long without producing a congested state of the brain, and perhaps of all effects, congestion is the most uniformly found.

Without entering into the minute classification of the various forms of insanity, it will be necessary to glance at the three principal divisions, into

MONOMANIA, MANIA, and IDIOTISM.

Monomania is the melancholia of early authors, and is subdivided into suicidal, religious, erotic, nostalgic, misanthropic, hypochondriac, &c.

Mania is subdivided into dementia, where the faculties are exalted, and amentia, where they are diminished.

We can only name the more minute divisions of dementia, or incoherence, as forgetfulness, irrationality, incomprehension, and inappetency.

Dr. Elliotson and, I believe, Sir William Ellis with some others, identify melancholia with mania, considering there is no essential difference between them; one faculty of the mind being disturbed in one case, and one in another.

It will here be advisable to mention in some establishments the sthenic are called *high* cases, the asthenic *low* cases.

Determination of blood to the head in the insane has been noticed by Aretæus, Aetius, and other authorities down to the present time, and quickened circulation was supposed by some of them to induce mania; and as the circulation is for a time much accelerated by ardent spirits, and as drunkards are peculiarly exposed to maniacal attacks, these have been cited as examples to prove that mania depends on increased arterial action; but we consider that sufficient stress has not been laid on the stimulating effects of the spirit on the brain itself. I once saw a young man who had for a wager drunk a pint of

gin—he died very soon after; on removing the calvarium, every one present smelt the spirit; in fact, the brain exactly resembled one that had been kept in spirit.* Now imagine even a minor effect produced on a brain, day after day, perhaps for years, and we shall be at no loss to conjecture why mania is so often the consequence, but may probably be surprised how habitual drunkards ever escape. An attack of delirium tremens is probably owing more to the absence or deficiency of the usual stimulus acting on the brain itself than to enfeebled circulation, this being probably only symptomatic, and actually induced by diminished nervous energy.

Experience seems to confirm the opinion that predisposition acts most powerfully in particular families in favouring or inviting insanity, it being often under such circumstances called into action by the slightest cause; it is a disease probably more hereditary than any other with which we are ac-

* For another case where a man died from drinking a quart of gin, and where the spirit was found in the cranium in such large quantities as to be even inflammable. See *Lancet*, p. 215. 1836-7. *Vol. I.*

quainted, this referring equally to every form of mania, not even excepting the puerperal. Dr. Burrows states "that above half of eighty lying-in-women becoming delirious, had an hereditary predisposition to insanity."

Great public calamities have been noticed to considerably augment the number of those thus afflicted; much seems also to depend on climate and temperature: it is often called into action by extreme heat, as is proved by the greater number of cases occurring during summer, and as was particularly exemplified in France during the autumn of 1818. Those occupations necessarily carried on in an elevated temperature should never be recommended where there is the slightest predisposition to the disease. Famine has been noticed to be very injurious to those predisposed as well as to those actually suffering from mania, as was so painfully observed during the French Revolution in 1796.

M. Brierre de Boismont refers insanity in civilized nations to moral causes, and in savage life to physical effects. In Turkey, where the mind is

never excited, mania is unknown, but an idiotic state is very common, resulting from continued apathetic lethargy, as well as from the abominable system of criminally exhibiting narcotics.

Many diseases seem to introduce insanity to those predisposed, such as inflammation of the brain and its membranes, also of the lungs and heart; Corvisart has particularly referred insanity to the influence of the heart, especially in old persons; it may also arise from sub-acute inflammation of the alimentary canal, the gastro-enterite of the celebrated Broussais; vermination, intestinal irritation; amenorrhœa and dysmenorrhœa often acting as the exciting cause. Mania sometimes occurs from jaundice, being occasioned by vitiated bile circulating through the brain. It is extremely probable that some very peculiar relation or sympathy exists between the whole of the serous membranes, and this seems to be confirmed from having seen insanity apparently depending on pleuritis and pericarditis, where it is probable that effusion took place under the arachnoid. Sir Henry Hallford particularly noticed the cerebral symptoms so often

dependant on ischuria, and on inspecting such cases, fluid is generally found under the arachnoid. Hysteria with ischuria is by no means uncommon, and in incipient cases of mania there is generally a diminished secretion of urine. Maniacs often complain of pain about the arch of the colon, and it has not unfrequently been found enlarged and misplaced in such instances, and Pinel has even referred insanity to this mal-position of the colon. In short, there are few diseases that have not been supposed to induce mania in some of its forms ; and although maniacs are very frequently exempt from other complaints, yet there is scarcely a disease known which is not occasionally observed in the insane.

There appears, however, to be a special sympathy between the brain and organs of reproduction—particularly in the female, as we so often find mania to arise from defective menstruation, especially at its first or second periods : also in the earlier or later months of gestation, and so also before and during labour, but more especially after its completion ; indeed, puerperal mania is so frequent, and requires so much care and judgment in its treat-

ment, that too much attention cannot be given to the subject. Both Drs. Marshall Hall and Gooch have attributed this puerperal affection to excited action in a debilitated frame. So again, mania often occurs during lactation, and especially when too long protracted. These different causes have diversified the names ; thus, there is the conceptive, parturient, puerperal, lacteal, and erotic.

Those living in a state of celibacy, are more liable to attacks of insanity than the married ; but even then, as Broussais says, “ ordinairement il y a une organisation encéphalique favorisant l'érotisme et constituant une prédisposition.” Total abstinence has, no doubt, in some cases occasionally induced it, and in stating this I would not be misunderstood, but may give in the words of Esquirol, “ Quoique la continence soit très rarement cause de la mélancholie, il n'est pas moins vrai que, dans quelques circonstances, l'évacuation spermatique a guéri.” I am well aware of the danger of disseminating such a doctrine, although so strongly supported by ancient authorities as Aetius, Stahl, Zimmerman, and others, and I perfectly coincide with Gall, that

erotic mania is far more frequently caused by excesses than by continence; still these cases do occasionally present themselves, and it is only within the last few days I saw a case of melancholia with a suicidal tendency, in a gentleman educating for the ministry, where an erotic state of the system was induced from this cause.

Dr. Prichard has endeavoured to show that the primary cause of insanity is not to be found in the brain, but in some other part of the body; and Jacobi and Bichat considered the viscera to be in the first instance at fault, while Dr. Morris, of York, attributes it to irritation of the nervous structure of the brain itself. Georget considers the brain to be always primarily affected, and Guislain that the brain is always diseased. Mr. Solly is convinced that insanity invariably depends on inflammation of the hemispherical ganglia, and this opinion is also advanced, although in a less decided manner, by Esquirol and Dufour, but is opposed to the experience of Dr. Clutterbuck. I believe I understand Dr. Seymour, when I say, he

considers the mind to be often affected when the brain is not diseased, and this accords with the opinion of M. Foville. Dr. Sutherland considers madness a disease of the brain, but thinks the *fons et origo mali* is not always to be traced to that organ.

Amongst those physicians who refer insanity to corporeal disorder are Knight and Spurzheim. Dr. Burrows also says, "Insanity always originates in a corporeal cause; derangement of the intellectual faculties is only the effect."

M. Leuret says, if madness depends on organic disease, one is ignorant in what part of the brain it is to be found: it is more than probable that the various effects of inflammation as seen in the brain of those dying of mania, have been produced as the consequence of mania, and this is why it is so important always to calm the mind of a patient, and why absolute rest, as in sleep, is so essential. Dr. Marshall Hall has laid great stress on this importance of distinguishing between cause and effect in these cases.

Mr. Shephard, of Stonehouse, conceives that the

proximate cause of insanity is in the blood, and although this may at first be thought improbable, yet when we consider the influence the mind has over the various functions of the body, how excessive rage causes biliary derangement, nay even jaundice, that this very bile circulating through the brain, sometimes induces mania;—that great fright, or passion, or disastrous news, often deranges the alimentary canal, and probably vitiates the chyle and blood, thus inducing fever; we shall hesitate before we finally reject Mr. Shephard's theory. It is well known that soda given in full doses, is often useful in some cases of mania, and probably this is owing to the blood becoming more fluid: as soda possesses this power of liquefying crude or thickened blood; and so again when the blood is too fluid, we order the mineral and vegetable acids, which have the property of enriching and increasing the viscosity of this circulating fluid. Dr. Locker placed great faith in vegetable acids in the treatment of insanity.

Up to the present time, the pathological investigations of the brain in cases dying with insanity

are by no means satisfactory—thus, while some physicians state, they have always found palpable proofs of disease, some have occasionally been unable to detect any alteration of structure, while again others have in very few instances indeed, observed any organic lesions.

Dr. Wright, of Bethlehem Hospital, examined the brains of more than one hundred insane patients, and found in all these cases palpable proofs of disease. Out of 221 cases, Sir Wm. Ellis found 207 showing disease, either of the brain or of its membranes. Mr. Lawrence examined the brain of 72 cases, and found the brain diseased in all. Dr. Armstrong always found disease of the brain, often of the liver and colon. Dr. Burrows has frequently been unable to detect organic lesions, and M. Foville, who has most minutely described various alterations in structure, in a few cases could find no appreciable effects of disease. In Berlin, numerous inspections were made, and in very few instances were organic lesions detected.

It is impossible to know what changes may have occurred in those cases which have recovered, but

when insanity has continued beyond a few months, on inspecting the brain, disease is generally evident, nor is this to be wondered at when we consider how many lunatics become imbecile, and die paralytic.

The cranium itself is often hardened, thickened, and heavy, bone having been deposited between the diploë: the sinuses are gorged with blood, the membranes injected, the arachnoid opaque, the dura mater is often thick and yellow, and adherent to the inner table. Purulent or sanguineous effusion is sometimes found between the bone and dura mater, or between the dura mater and arachnoid, and fluid is frequently found under the arachnoid, especially in aged persons.

The cortical substance is often varied in colour, and may be either indurated, atrophied, or softened: both the white and brown matter exhibit different shades from a delicate rose colour to deep crimson, and minute ecchymoidal points are generally noticed. The external portions of the brain are often indurated when the inner parts are softened, and M. Foville has found the grey matter of the periphery

of the brain remarkably and specifically altered, while the grey matter of the interior was not affected. Sometimes the cortical portion may be easily separated into layers, the pia mater being inseparably adherent, as particularly described by Dr. Bright, especially in habitual drunkards. Mr. Davidson, of the Lancaster County Lunatic Asylum, often found chronic inflammation had attacked the brain and membranes, but more especially the periphery of the convolutions in the cineritious substance.

In early cases there is generally excess of nutrition, especially in the cortical substance, while in chronic cases the brain is usually more or less atrophied.

That insanity, often, nay, most generally depends on disease of the brain no one can doubt, and that very frequently, various organic lesions are found in these cases, no one can deny, but to state that all cases are consequently dependant on corporeal causes is assuming a position which it is very difficult to sustain.

A person with melancholia fancies he has within

him a worm continually preying on his vitality—it is a constant incubus—he loathes his food—he daily emaciates—his attendant, when in full confidence, gives an emetic or a purge, dexterously inserts a worm in the excreted matter, shows it triumphantly to his desponding patient, who, instantly relieved from perpetual torture, greets his medical adviser with open arms, and from that moment feels himself a man. Now in this case it may be said the purge or the emetic may have had its share in the cure, by relieving congestion, or draining off bile, therefore I adduce another example.

A lady impressed with her sinful state, imagined she had sinned a sin unto death, that she had sinned against the Holy Ghost: for months and even years her mind was on the rack: her friends saw her daily sinking to the grave: they would comfort her—console her—entreat her—but alas in vain—she refused to be comforted. At length a most judicious and pious clergyman visits her, she tells him, as she has told others, that she has sinned against the Holy Ghost. Without opposing her delusion, he says, And do you repent of this sin?

I do repent, is her reply—are not my looks, my withered form, evidences of what I have suffered? The judicious answer is, *Then you cannot have sinned against the Holy Ghost, because that is a sin that is not to be repented of.* Immediately convinced, she grasps her consoler's hand, at once sees her error, and is cured.

Now these are actual instances which have occurred, and if organic lesions had existed in the brain, could an innocent deception or a judicious word, by removing a false impression, at once cure organic disease? or by thus correcting a mere error in perception, could an important corporeal cause be at once removed? The fact seems to be that the mind may be affected independently of disease of any organ, but that more frequently the brain through which the mind acts is itself at fault.

Insanity may also arise from disease of other organs besides the brain; thus, the heart, the lungs, the liver, the kidneys, and above all, the organs of reproduction, in many cases act as the primary cause; nor must we here omit intestinal irritation, which is a very fruitful source of this disease.

Inflammation of the brain is a frequent cause of

insanity, and is often easily cured, perhaps with more certainty than when arising from any other cause. Broussais stated that he could cure early cases of insanity with as much certainty as inflammation of other organs, such for instance as of the lungs.

It is of the greatest importance to determine whether arterial action is the result of inflammation, or whether it arises from maniacal irritation.

In mania, the pupil is generally dilated, the pulse varies, is often feeble, quick, compressible, or may be splashing and apparently full, simulating power, and thus deceiving the inexperienced; the skin is clammy, tongue tremulous, face, forehead and eyes flushed,—the symptoms are *paroxysmal*.

In phrenitis there is usually *no remission* of fever, the pupil is generally contracted, sometimes on one side only, often double vision, and noise in the ears, the head is hot, the pulse full, firm, hard, and bounding—tongue white, and thickly furred—skin dry and hot—urine red—and if these symptoms have been preceded by pain referred to some particular part of the head, with intolerance of sound and light, and flitting of ideas, we may with almost certainty

diagnose inflammation of the brain or its membranes. If, on the contrary, we find dyspepsia followed by hypochondriasis, with general inattention and abstraction, and this gradually increasing until insanity actually existed, we should scarcely hesitate to refer it to disease of the chylopoietic viscera, and it would be by directing special attention to the primary affection, and by improving the general health that any good could be reasonably expected. So again if the lunatic presented to us seemed apathetic, had difficulty in articulation, paused ere able to project the tongue, and required to be powerfully aroused before the slightest attention could be excited, we should fear that these incipient symptoms of paralysis would speedily more plainly evidence themselves, and might with tolerable certainty predicate organic disease. Because the motor nerves are affected a case must not be considered hopeless, although the prognosis will generally be unfavourable. When epilepsy is complicated with mania, it probably arises from irritation or inflammation of the surface of the brain. Esquirol never saw mania with epilepsy recovered

from, but when epilepsy has *preceded* mania, Dr. Sutherland has seen patients completely restored to health and reason.

Monomania or melancholia is not necessarily preceded by dyspepsia, but may immediately occur from some sudden shock to the system, such as bad news; and when thus excited by fright, is much more likely to be nervous than when creeping on in an insidious and gradual and more dangerous manner.

In the treatment of insanity it is most essential to refer it to its proper cause, to ascertain if it be dependant on some physical effect, or whether the result of mere error in perception. If on inspection after the death of a maniac, we find inflammation of the brain or its membranes, effusion, ecchymosis, or ramollissement, to a certain extent we may be justified in attributing the insanity to the pathological condition observed; but supposing, on the other hand, no morbid alteration can be detected, yet the symptoms during life may have been equally severe, as in those where disease was so evident, we must pause ere we attribute the effects to the same causes.

In many recent cases, no alteration in structure can be detected, nothing in fact to account for the symptoms; but where insanity has continued many months or years, the membranes are often found thickened, the bones of the cranium indurated, sometimes effusion, and not unfrequently ramollissement or atrophy; this cannot excite surprise when we reflect that of the number of those who die lunatic, half are paralytics.

There is almost always extreme irritability in incipient insanity: generally the brain first suffers, then some other organ: the great object, however, is always in the first instance to allay irritation: endeavour to ascertain whether the brain was primarily affected, or whether insanity followed some visceral affection. It is of the greatest importance to determine whether insanity is symptomatic or idiopathic—whether the result of mere error of perception, or whether the medium through which we *reason* is at fault. Mind is independent of matter, and it may from some sudden shock become incapable of perceiving, discriminating, or

judging correctly, and it is in such cases when tranquillity has been restored by narcotics, that the metaphysical treatment has been successful. If the excitement, consequent upon reaction, in these cases, be not speedily lulled, the brain itself often becomes congested or inflamed, and this continuing, symptoms increase, and those alterations in the brain and membranes so frequently observed, more or less speedily occur.

Time is of the greatest importance with reference to the treatment of insanity; it is in early cases so much may be done, the chances of cure being in the inverse ratio to the period of duration; and although we are encouraged to persevere from finding that in some few instances persons have been restored to the full use of their mental faculties after five, ten, and even twenty years insanity, yet these cases are but few in number, and must be considered as the exception. Experience seems to justify the conclusion, that if decided improvement does not occur within twelve months after the attack, the chances of recovery become very much diminished. Insanity

seldom occurs before the fifteenth year, and if it attacks a person advancing in life, or even beyond 45 years of age, the prognosis is not so favourable, few persons indeed recovering after that age, and it may usually be considered, the younger the patient, the greater the chance of cure.

BLEEDING.—While bleeding is generally injurious in the treatment of mania, it may occasionally, although rarely, be indicated. All modern authorities condemn its employment, except under peculiar circumstances; the longer disease has existed the more dangerous is general depletion, and it is usually only in incipient cases that any good can be expected from its adoption. Loral and Rush appear among its strongest advocates; while Cullen, Esquirol, and Haslam, employed it only in early cases when plethora existed. M. Foville appears to bleed but seldom, then with great caution. M. Georget and Dr. Prichard bleed when the pulse is full and frequent with plethora and insomnia. Pinel found bleeding retard recovery, often leading to dementia or idiotism, and is one of those who has

strongly pointed out, that determination of blood to the head is often deceptive. Dubuisson bleeds when the maniac is young, vigorous, and plethoric ; but above all when mania depends on suppression of natural or habitual hemorrhages. Andral bleeds in early cases with plethora, or the catamænia being suppressed. Messrs. Beverley and Phillips found very few with vascular excitement requiring blood-letting ; and Dr. Seymour has seldom seen bleeding attended with good effects, the soothing system being more useful. It should never, in cases of insanity, be resorted to without the most paramount necessity, and even then not largely, as the constitution will not rally after excessive depletion ; if it be found after the abstraction of blood, however small the quantity, that stupor or loss of consciousness occurs, bleeding is strongly contra-indicated. In a robust, healthy individual, accustomed to epistaxis, or in a female suffering from congestion at the change of life, especially if resident in the country, bleeding may be advised ; but there are very few persons suffering from insanity who can bear general depletion when living in densely crowded cities.

We must never be deceived by mere vascular excitement; but when it is considered necessary to take away blood, and yet the powers of the patient would not justify general bleeding, cupping or leeches may be resorted to. Cupping takes away the blood more rapidly and acts more promptly, and is therefore followed by more reaction than is observed when leeches are employed. There is evidently a soothing effect produced in some cases, while the blood is gradually oozing from the leeches, and they may often be applied to particular parts of the scalp where it is impossible to place cupping glasses. Leeching appears to be much neglected in the treatment of mania; in the majority of cases, the local abstraction of blood may be ordered with more safety than general depletion. It is necessary sometimes to leech in delirium tremens, even while administering stimulants, when bleeding by the lancet would very soon prove fatal.

Broussais recommended, where inflammation existed, to keep up the draining by a continued succession of leeches; this advice is most important, and whether we consider it as either applicable to

local or general depletion, or as relating to the application of cold, still the principle is the same, *prevent reaction*. A decided impression may have to be made on the system at once ; but because this is essential, it becomes doubly necessary to prevent reaction, and this is a point very much neglected in practice—we are too apt to wait and see if reaction will occur, whereas our measures should always be so directed as if possible to prevent it.

A very efficient way of relieving head symptoms, when dependant on visceral congestion, more especially of the liver, is applying leeches to the rectum, and if considered necessary, subsequently placing the patient in a warm bath ; a large quantity of blood may be lost in this way without producing much prostration.

Many cases of insanity arise from extreme irritability dependant on prostrated power ; and to support this power by good nutritious food, and sometimes even with brandy and wine, at the same time soothing the system by procuring refreshing sleep at night by morphia, will speedily evidence the advantages of such treatment. The great error

originally, was allowing the powers to sink ; it is of the greatest importance that these powers should be supported—the nervous excitation must be calmed. In these cases, mistakes are but too frequently made ; *irritation* is confounded with *inflammation*. The maxims so ably taught by Mr. Travers are forgotten ; the object being to calm the action, not to diminish from the power—this nervous power being much more easily depressed than raised. Should this advice be neglected, and bleeding be ordered, stupor, or coma, or confirmed mania may be the consequence. In many cases where there is the most ferocious delirium with great muscular power, yet the pulse is very quick, weak, and fluttering, and even the slightest depletion at once knocks down the powers ; but even if the patient should again rally, there is great danger of his becoming idiotic. As Dr. Marshall Hall has so truly stated, under *irritation*, exhaustion is sooner produced than in health ; while under *inflammation*, the system bears loss of blood, with less exhaustion than in health.

As a general rule, the quicker the pulse the

greater the danger. Taking an average of maniacal cases, the pulse will be about 100; often ranging as high as 140, and but seldom descending lower than 90. Disease of the heart is by no means uncommon, as noticed by numerous authorities, and more recently by M. Foville.

No one was more anxious than the late Dr. Abercrombie to point out the impropriety of depleting in many affections of the brain, even where there is wildness, excitement, and incoherency, with great restlessness; the pulse must be the guide, with the antecedent circumstances and condition, and very possibly tonics and stimulants will be the most proper treatment. Where the countenance was exsanguined, and the pulse small and rapid, with exhaustion, then Abercrombie always gave stimulants.

Dr. Gooch, in speaking of a puerperal maniac, who had no sleep, says, her pulse was soft [*soft*] and never very quick, and her face pale; nevertheless, from fear of congestion in the brain, her head was shaved, and ten ounces of blood were extracted from the scalp by cupping glasses, without diminishing in the slightest her violence and incoherence.

The fact is, many of these puerperal cases will not bear loss of blood; they resemble delirium tremens, are often induced by the same immediate cause, fright, and occur in both instances when the system is very much exhausted, and usually where the persons have previously been very nervous. The treatment must be anodyne, narcotic, and sometimes stimulant. Narcotics produce more decidedly good effects in puerperal than in any other form of mania. Dr. Gooch, speaking of a lady who had lost a large quantity of blood after delivery, found her in a profuse warm sweat, pulse much above 140. He gave her some wine and water with immediate benefit, but says, "I had better have given her an opiate." In another puerperal case with *vigilantia*, the pulse was 140, small and weak, seven days after delivery. Two small doses of laudanum were given, *sleep followed*; in the morning her pulse was 80, she was cured.

When Gooch was called to such cases, he gave opium first; if it disagreed, he then gave hyoscyamus and camphor, gr. v. of each, every six hours,

and doubled the dose at night, withdrawing it altogether if flushes and pains in the head increased.

When a patient is in a highly excited state from loss of blood, a full dose of opium is the best medicine we can employ, and it is often successfully prescribed in that highly nervous state so closely resembling mania; and if, when that excessive restlessness occurs, which precedes puerperal mania, a full dose of opium be given, such as 1 gr., $1\frac{1}{2}$ gr., or 2 grs., this formidable disease may be often prevented, and as a prophylactic opium may be considered invaluable. In some instances Dover's powder, or morphia, may be preferred; but generally the opium itself is more valuable in these cases of exhaustion.

Anæmia of the brain, so strongly pointed out by Dr. G. Burrows, has been but too little regarded until lately. Many cases where there is great action, require stimulants and support; thus in the case of a young man, æt. 44, mentioned by Abercrombie, there was at first great depression, want of sleep, with incessant talking: reaction took

place, excitement increased, pulse 160, continued talking, and obstinate vigilantia; yet stimulants were here required, as after death no traces of inflammation could be found.

There is an insidious and dangerous affection, occurring principally in females or in debilitated men, especially when previously intemperate, often commencing with depressed spirits, suddenly succeeded by unusual cheerfulness, this very rapidly terminating in maniacal excitement—there is incessant talking and obstinate vigilantia. These persons sink from exhaustion, and cannot bear general bleeding; but local bleedings, purgatives, and antimonials, were recommended by Abercrombie, and subsequently he gave stimulants. In many such cases examined by him, nothing could be detected but a vascular condition of the pia mater. Amongst others, he mentions the case of a young lady *æt.* 23, who was much depressed from grief; this continued two months; she then became highly excited, incessantly talking, pulse 80 to 90—was temporarily calmed by an opiate, and slept for two hours. The excitement returned,

continued for several days, the pulse gradually rising in frequency, and reaching 150 and 160. She died, and on examination, nothing but vascularity of the pia mater was found, with minute ecchymoidal spots in the brain. It is probable that such cases would be much benefited by continued doses of digitalis, or of the preparations of morphia.

It has been previously stated, if bleeding is indicated, it is almost invariably in a very early stage, and if caution be necessary at this period, it becomes doubly so as disease advances; and when inflammation has existed some time, the greatest circumspection is necessary in resorting to depletion. Even Broussais says, "Quand l'état inflammatoire a déjà duré long temps, il faut user des saignées avec beaucoup de circonspection." But in those cases where a patient convalescing, suffers from a relapse, small local bleedings, as recommended by Sir W. Ellis, are often of the greatest advantage, and will materially shorten the attack; many weeks of suffering being frequently prevented by the judicious application of a few leeches.

It should never be forgotten, that insanity does not always depend on organic disease, and therefore the antiphlogistic treatment is not always indicated. With respect to diet, the general rule is, nutritious, but not stimulating. In incipient cases it must be a little diminished, but after a short time good wholesome food must be allowed. Too spare a diet is often most injurious, and when much curtailed is most disastrous; and the painful experience gained during the French revolution in 1796, must never be forgotten. A nutritious meal often wonderfully calms excitement, while hunger or craving materially aggravates maniacal irritation. In many cases the hunger is extreme, and seems to depend on continued physical and metaphysical excitement. While the appetite is good, it is often a favourable sign; but when a convalescent begins to loathe his food, a relapse may often be prognosticated. It is a caution worth mentioning, that medicines should never be mixed with food; the patient detecting it becomes suspicious, and will probably for some time refuse his accustomed nourishment.

PURGATIVES.—When hesitating as to the necessity of bleeding, and yet being anxious to diminish vascular action, purging will often be advisable. This practice was strongly recommended by the late Dr. Abercrombie. Repeated purging will often do more good than any other treatment, as must be familiar to those who have had much experience in these cases. Croton oil is very certain in its effect and acts rapidly, and is very generally strongly recommended. Antispasmodic and stimulant purgatives, with the foetid gums or turpentine, are often useful where there is congestion of the brain without much action, with a cold skin.

Where there is a latent tendency, insanity may be induced by irregularity of the bowels, cerebral congestion being so commonly caused by constipation. Paying great attention to the bowels in all cases of disease of the brain, is most important; and purgatives are useful in both the acute and chronic diseases.

In hypochondriasis or melancholia, continued purging is often most useful, as the symptoms are

usually dependant on sub-acute inflammation or congestion of the brain ; and if so, no practice is so certain and so safe, as keeping up a continued action on the bowels. In those hypochondriacal cases, where there is epigastric tenderness, with pain in the head and vomiting, continued purging will often effect a cure. Nothing seems to relieve the delirium, vigilantia, and headache, in varioloid cases, so much as continued action on the bowels, with a saline purgative ; substitute for it, or even give with it, laudanum or even henbane, and frequently the restless vigilantia becomes increased ; whereas the exhibition of saline purgatives every four or six hours, will check fever, relieve the head, and although not immediately producing, yet admits of sleep. Sometimes in these cases, especially if inflammation of the brain threaten, calomel with antimony, or James's powder, will often produce sleep ; and on exhibiting an aperient draught on the following morning, the bad symptoms are entirely removed.

It is needless for me here to specify the particular purgative necessary, whether mercurial, saline, or aloetic, as this obviously depends on the parti-

cular indications present, and must immediately suggest itself to every educated practitioner. There is, however, a caution which must not be forgotten, that where there is chronic inflammation of the mucous membrane of the bowels, strong purgatives must not be given ; and in such cases, when it is imperative to produce some action on the bowels, the mildest aperients must be selected. It may be useful here to state, that I have found doses of five grains of soda and five grains of powdered calumba, repeated every four hours, very useful in a case where there was ulceration of the mucous membrane, and where death had been thought inevitable. Dr. Clutterbuck mentions the case of a maniacal lady who had not slept for three days or nights ; she was purged with elaterium, and fell asleep for twelve hours ; next day maniacal symptoms returned, elaterium again given ; it caused vomiting and purging, with much benefit. If omitted for one day, the symptoms became aggravated.

In those cases where narcotics have been injudiciously given, and where excitement is in consequence increased, acting on the bowels with

saline purgatives, will often be of the greatest service.

The lower bowels in lunatics, often become obstructed; and enemata, with or without colocynth, are very useful. In some cases where there is colic or spasm, turpentine injections may be ordered.

Where the pulse is quick, and the skin dry, and the urine scanty, nitre, in ten grain doses, will be often useful. In those cases where afraid to bleed, purge, or antimonialize, nitre, with henbane and camphor, will often be advantageous; nitre, when even administered alone, will frequently prove a sedative.

EMETICS.—Much difference of opinion exists with respect to the advantages or disadvantages of emetics in the treatment of the insane; formerly they were prescribed as the regular routine at Bedlam, but happily this unscientific practice is now discontinued. They have been strongly recommended by Cox and Hallaran, and abjured by Haslam. Dr. Hallaran found them particularly useful in incipient cases, to be succeeded by pur-

gatives. Dr. A. T. Thomson gives emetics frequently in cases of melancholia where there is oppression rather than exhaustion; and it is found while the sickness continues, the mind is always more calm. In the Philosophical Transactions, several cases of mania have been detailed by Dr. Kinneir, in which vomiting was very beneficial. Esquirol regards an emetic in puerperal mania almost as a specific, having found it so very serviceable.

The objection often made to the employment of emetics, is that congestion of the brain, caused by the violent expulsatory efforts; but Sir W. Ellis found the temporary inconvenience more than counterbalanced by the subsequent good effects.

Many cases of vigilantia, dependant on monomania, or even furious mania, will yield to Ant. potass. tart., and often on the vomiting ceasing, refreshing sleep will follow. It has been remarked by Dr. Cox, that one-third the usual dose of tartar emetic will prove efficient if a narcotic has been given the night before; generally, however, full doses are required; and the more violent the attack,

so is there usually the greater resistance to the action of remedial agents, and as the symptoms remit, a smaller dose becomes necessary.

The continued action of tartar emetic cannot be too much lauded in some incipient cases of mania; while under the influence of antimony, the patient seems rational; it is withdrawn, reaction occurs: the eyes roll or remain fixed; noise succeeds tranquillity; the head again becomes hot. As evening sets in, symptoms increase, and the patient, with unclosed eyes, passes a restless and boisterous night; whereas, had the action of antimony been kept up, placidity, if not actual sleep, would have been substituted for extreme restlessness and violence.

There are cases of excitement where, although injudicious to bleed in any form, yet administering an emetic, will be found most useful; patients who have not slept for several nights, will often obtain many hours' sleep after vomiting has ceased. Emetics must never be administered to paralytics, nor indeed where there is the least tendency to apoplexy; they are more useful in incipient insa-

nity, are rarely indicated in chronic cases, and should never be given to those advanced in life.

OPIUM.—In prescribing opium, it should ever be remembered, that it first acts as an excitant, and subsequently as a narcotic; and usually a small dose occasions prolonged excitement, the hypnotic effect being so slight as to escape observation. It is not our intention to inquire whether a sedative immediately depresses the vital energies, or whether a narcotic primarily augments these energies, being followed by subsequent depression. Some suppose sleep is produced by the consequent depression succeeding preternatural excitement, but with opium this scarcely seems to be the case, inasmuch as on administering a large dose, the period of excitation is cut short, and the narcotic effect immediately produced; while if on the contrary, a very small dose be given, it causes excitement alone. When its sedative effect is required, a full dose must be prescribed, and less than one grain of opium will seldom be useful; if its continued influence be desirable, it will be necessary to repeat it every eight

hours, as its effects usually cease after that period.

To prescribe opium as a narcotic in every case of mania, is bad practice; and it is this which has brought it into such disrepute in the treatment of the insane. Opium is contra-indicated where there is great heat of skin with extreme restlessness, and determination of blood to the head; and all authorities seem agreed that it should never be administered where the system is plethoric, unless depletion, or purgation, or both, have preceded it; otherwise excitement will become doubly aggravated.

There are many circumstances which influence or modify the various effects of opium; thus idiosyncrasy predisposes some to high excitation or to a lethargy almost amounting to coma, and the various gradations between these two extremes are daily to be met with—in some, opium so disagrees as even in small doses to produce violent mania. Again, the habit of taking opium always diminishes its effect, while those unaccustomed to it are usually easily brought under its influence. Females re-

quire smaller doses than males, and persons of the melancholic temperament bear larger doses than the sanguine; so in cold and damp climates, the inhabitants bear opium better than those in arid and sultry regions, and the difference is no less remarkable in our own country in summer and in winter. There is always more excitement produced by it in the morning than in the evening, and this is also observed when given on an empty stomach. Exhibiting opium or laudanum a short time after a tea-cup full of arrow-root, will render it much milder in its effects.

Where the nervous system is highly excited, and this is caused by increased arterial action, opium is contra-indicated; and if administered, the symptoms will certainly become aggravated. M. Brachet, in his work *de l'emploi de l'opium*, strongly urges the importance of not giving opium where there are decided inflammatory symptoms of the brain or its membranes, and particularly alludes to the increase of cerebral congestion caused by its injudicious employment. Opium will generally be found more useful in incipient than in chronic insanity; it is

contra-indicated where there is congestion or inflammation of the brain, and especially if the motor nerves are affected. In paralytics, or where organic disease of the brain exists, it should never be given.

It is impossible to limit the extent to which opium may be required; but in stating that a full dose is necessary, from two to five grains may be considered a large dose for most constitutions; where habit has impaired its effect, one and even two drachms of solid opium have been taken in a very limited period. Pinel knew 120 grains of opium given in one dose to a patient suffering with cancer of the uterus; and I have seen a wine glassful of laudanum taken at a draught, and this has been repeated three times daily for months—such cases, however, necessarily form the exception.

Dr. Burrows has never ventured beyond five grains, and generally begins with three grains, repeats one grain every two or three hours, never allowing it to exceed twelve grains, when, if sleep have not resulted, he desists. This must be ad-

mitted as far safer practice, than to give fifteen grains or two scruples for a dose, as advocated by some.

There is much difference of opinion as to its utility in treating insanity. Sir Wm. Ellis says, "Opium is rarely found admissible in insanity; it more frequently creates heat and general febrile action, than procures sleep." Valsalva and Morgagni proscribed it altogether. Esquirol considers it as absolutely hurtful, but Andral allows it to be useful where there is restlessness without quickened circulation. Cox tried it to an almost incredible extent without perceiving any, even temporary, much less permanent advantage from it; but when combined with digitalis or antimony, sometimes found it useful. Cullen found large doses of opium to be a sovereign remedy in those maniacal cases where delirium is produced by irritation; he repeated the dose every eight hours as long as circumstances indicated; and he subsequently states, "In several cases of mania we have employed opium, and in some have found it useful in moderating the violence of the disease; in other

cases we have found it absolutely hurtful." Dr. Clutterbuck considers the giving opium or any analogous drugs in order to procure sleep, is in general highly injurious, as tending to aggravate the inflammatory condition of the brain. Dr. Armstrong gave opium after bleeding even when the inflammatory action was not checked. Dr. Sutherland strongly objects to the use of opiates to procure sleep, and trusts to diet, employment, and exercise, with tepid or cold baths.

A large dose of opium has been known to cure mania. Thus Andral quotes the case of a maniac who, to commit suicide, took opium, fell soundly asleep, and awoke rational. Dr. Hodgkin has related two instances of the value of large doses of opium where there was a strong suicidal tendency; in each case a large dose procured sound sleep and perfect restoration of health. In a case mentioned by Van Swieten, an insane girl, by mistake, swallowed a scruple of opium mixed with vinegar, and was cured. Dr. Hallaran saw a maniac sleepless for forty-eight hours; two hundred and forty drops of laudanum were administered in three doses, at

three short intervals ; sleep approaching to apoplexy continued for twenty-four hours, which was evidently the means of effecting an entire and lasting return of the mental faculty.

Where insanity is caused by long intoxication, opium is especially indicated ; and in the treatment of delirium tremens, combined with calomel, may be considered invaluable.

Delicate and debilitated constitutions, with spasmodic irritability, generally bear opium well ; and this perhaps accounts for its disagreeing less frequently with females than with males. Where the nervous system is the most highly developed, there opium is often the most useful, and is especially indicated in those vigilant and restless cases resulting from nervousness. In puerperal mania, where it has been necessary to deplete or purge, large doses of opium are doubly necessary ; and should sleep follow, the attack will generally be alleviated or suspended. Opium is especially indicated where the system is depressed, when it often acts as a charm ; and by its stimulating properties is far more useful than Battley's sedative or the preparations of morphia.

The good effects of a narcotic in large quantity, is shown in the following case detailed by Dr. Burrows, where a nervous delicate lady, the subject of a uterine complaint with suppressed catamænia, and convalescing from bilious fever, was from some accidental circumstance considerably agitated ; and although unable to leave her bed for two months previously, suddenly jumped up with the greatest activity, and exhibited considerable muscular strength, yet haggard in appearance, with a fixed, wild, projecting, and injected eye, hot skin, pulse 114. She was cupped to nine ounces, a branch of the temporal artery being accidentally divided: a little exhausted—put to bed—pulse 104, firmer. Ordered thirty drops of Battley, repeat it, till sleep is procured. Sleep appears to have occurred at intervals. The opiate was continued, and in twenty-four hours she had taken 257 drops, when her delirium and headache had subsided.

Persons afflicted with suicidal mania, generally bear opium well, and in such cases it is very commonly prescribed in this country. On the Continent it also has some advocates. Esquirol, on suicidal

mania, says, " Je puis dire que le quinquina combiné avec l'opium, avec la jusquiame, avec le musc, ont quelquefois réussi en modifiant la sensibilité des malades, en leur procurant du sommeil." In suicidal cases it is often important to keep up the effect of opium, and to take every precaution, as in those who are thus desponding, depression returns as certainly as the effects of the opiate cease ; these patients are always thinking, and hence it is that sleep is so essential.

If prescribing opium to a person not habituated to its influence, the second dose should be smaller than the first, by combining it with calomel or antimony, or James's powder, it does not so much disturb the usual secretions : there are cases where Dover's powder, and occasionally even the Pulv. cretæ comp. c. opio may be necessary. It is well to remember that when opiates are indicated in cases of insanity, the dose must be large. Combining opium with camphor or henbane or digitalis, will often be very judicious. With tartar emetic, calomel and opium in large doses will often calm the system when there is great restlessness and

fever, especially if the head be kept cool. Opium should never be omitted where insanity has succeeded constant intoxication; and in those cases where the countenance is exsanguined with a cold clammy skin it is especially indicated, and is no less useful in that anæmial state of the brain, where there is great exhaustion, in whatever way produced.

Where there is constant vomiting opium may be administered in an effervescing draught. Opium is now rarely ordered from day to day as formerly, having given place to the preparations of morphia, but should it be considered necessary, it will be advisable to combine it with some alöetic preparation. The infusion of opium with a bitter, as recommended by Dr. Paris, will secure the narcotic principle without interfering with the intestinal secretions.

If opium be ordered solely as a hypnotic, it should not be in combination with aromatics, as is the case with black drop; for although this preparation is stronger than laudanum and decidedly more anodyne, yet its narcotic power is considerably

diminished, while its stimulating effects are augmented.

Rousseau's laudanum, is stated to be rendered much milder than laudanum or opium by the fermentation it undergoes, and Dubuisson has used it very frequently in cases of insanity, in large doses, and has not observed that it ever produced stupor, comatose sleep, convulsive movements, vertigo, or disconnectedness of ideas so often observed after having employed opiates: still Dubuisson was always careful as to the cases he selected for exhibiting even this milder preparation.

THE LIQUOR OPII SEDATIVUS is undoubtedly much milder in its effect, and less stimulant than laudanum, and many years since I made it the subject of experiment, in order personally to determine as to its efficacy, and I found it more uniform and certain in its effect, while it did not cause the disagreeable waking symptoms so often noticed when an opiate has been given. Many persons who slept well with it, passed a restless and uncomfortable night when laudanum was substituted for it. Battley's solution

has been of the greatest service, and I believe it to be surpassed by no preparation, except the hydrochlorate of morphia.

When opium has disagreed with a patient, a strong cup of coffee will often remove the unpleasant effects.

Administering an opiate in the form of enema renders it much milder, and at the same time secures its sedative and narcotic influence, without producing that headache, sickness, and dryness of the fauces, so often complained of when opium is taken by the mouth. Dr. Burrows has found it induce sleep, soothe and relieve delirium, when, if administered by the mouth, mania would have become worse. The French, who use enemata more than ourselves, are very much opposed to introducing opium in this manner; this is somewhat singular, as the effects are generally milder, than when taken by the mouth. This is a good plan of administering medicines when patients obstinately refuse to take them.

If narcotism be highly desirable, and neither of these modes seems practicable, rubbing the abdomen

with laudanum and oil will sometimes be found effectual. This practice was adopted by Whytt; when he found a patient could not bear laudanum, he ordered three or four tea-spoonfuls to be rubbed over the stomach and belly; this, if necessary, he repeated every six or eight hours. He also mentions the case of a woman who suffered from *vigilantia* and took opium internally; and a solution of opium in spirit of wine was often applied to her head and neck, and always gave her ease. Mr. Hill found, where there was disturbed sleep, rubbing the head with *Lin. camph. fort.* with ʒss. of opium to each ounce, was no contemptible auxiliary in procuring rest; and opiate frictions were extensively used and strongly recommended by Dr. Chiarugi of Florence.

These narcotic frictions over the head will be often found useful: even brushing the hair with a common hair brush for half an hour, will frequently tranquillize a nervous and irritable patient. In some cases it may be necessary to rub the scalp with liniments, or ointments, containing morphia, belladonna, veratria or aconitine.

MORPHIA.—Where opium disagrees, morphia will often be useful : it has been found that the narcotine of the opium causes many of those distressing sensations of which patients complain who have been under its influence. The acetate was the first preparation of morphia introduced, and was largely employed with great satisfaction ; still, however, it was noticed, especially when a large dose had to be prescribed, that peculiar spasmodic effects ensued ; and the hydrochlorate having been subsequently tried, was found immediately to produce its direct calming and sedative effect, without the distressing jumps and twitchings so often noticed when the acetate had been taken : and general experience now fully proves that morphia may be given without producing that headache, dryness of fauces, vomiting, and subsequent distress, not unfrequently caused by opium, so that when this disagrees, morphia may be tried with more than probable success. Another great advantage of morphia is that it may be continued daily for weeks and even months undiminished in effect, without increasing the dose, and without producing any disagreeable

or troublesome symptoms, when if opium had been thus administered, dementia or idiotism would have probably ensued.

The hydrochlorate stimulates less than the acetate, and is the most valuable remedy we possess for calming excessive excitement; the acetate being more specially indicated in the low form of insanity. Dr. A. T. Thomson, and Dr. Seymour, both strongly recommend the acetate of morphia in cases of melancholia. Dr. Seymour orders grain doses, constant refrigeration of the head, and mild aperients, and has prescribed it for months with excellent effect. I have myself ordered it for weeks under the same circumstances, and can add the strongest testimony to its efficacy. In one case now under treatment, it calms the agitation and causes sleep, when on substituting for it laudanum, the patient becomes highly excited; and it possesses also yet this advantage, that it does not constipate the bowels.

Dr. Seymour mentions the case of a gentleman suffering much from want of sleep, who had not been able to lie down for twenty-two nights; opium

was largely given, and caused great distress: three quarters of a grain of the acetate of morphia were administered, he slept well, and it subsequently for many weeks, never failed to produce the most complete success.

A properly apportioned dose of the acetate of morphia does not materially quicken the pulse, as is the case with other narcotics, and the hydrochlorate acts still less as a primary excitant, yet more certainly as a subsequent hypnotic. If an over dose of either preparation be administered, it causes considerable cerebral excitement. In some persons, the hydrochlorate causes sickness, but if persevered in, this usually ceases on the second or third exhibition. The usual dose of either the acetate or hydrochlorate is from $\frac{1}{3}$ to $\frac{1}{2}$ a grain; this may be given every six or eight hours, if necessary, but when intended as a hypnotic, $\frac{1}{2}$ a grain, or even one grain, may be ordered at bed-time, when sleep usually follows, and even if this be not the case, the nervous system becomes calmed, and the patient lies in a state of repose. The excitement caused by the hydrochlorate is often inappreciable, therefore

this must be considered as the most valuable sedative we possess in the treatment of insanity; as even the temporarily stimulating effects of other narcotics, not unfrequently forbid us prescribing them.

Dr. Seymour considers the acetate peculiarly useful in suicidal cases; he says, "Within the last seven years, I have had the opportunity of testing the efficiency of this remedy in eighteen cases of mania characterized by a gloomy despondency, and a strong disposition to suicide." And he considers these suicidal cases to be where the acetate is the most indicated: it seems to exercise an irresistible influence over them in preventing them from doing mischief.

Amongst others, Dr. Seymour quotes two cases treated by Messrs. Beverley and Phillips. A woman *æt*, 36, had a strong suicidal tendency during pregnancy, which increased after delivery: various remedies were tried without effect. Morphia was then given, sleep followed the second dose, the next morning she was cheerful and without any suicidal inclinations: the morphia was continued, and she subsequently recovered.

Another case, a woman *æt.* 36, admitted in a high state of nervous excitement: tongue dry, pulse very quick, skin moist: ordered porter, beef tea, and arrow root, but all efforts proved unavailing in giving her food. The acetate of morphia was given, excitement unabated: second night, $\frac{1}{2}$ a grain was administered,—no noise during the night, and drowsy in the morning: excitement less: third night, dose repeated; slept well, reason returning, pulse less, bowels open. The morphia was continued about a fortnight, when she appeared perfectly well.

Subsequently, in such cases, Messrs. Beverley and Phillips preferred the hydrochlorate to the acetate. Many cases of insanity treated with morphia, have been completely cured, especially where there have been lucid intervals. The chief object is to prevent false impressions, by keeping up the continued effect of morphia, it being necessary to repeat this medicine at least every eight hours. Messrs. Beverley and Phillips never administered more than half a grain of the acetate or hydrochlorate, and generally commenced with a quarter of a grain. The intention, in treating the insane in this way, is not new,

although the means employed are more modern. Dufour, surgeon of the Ecole Militaire, as far back as 1778, undertook to cure maniacs by soporific beverages; he made many trials upon patients in the Bicêtre, and their cure was confirmed by the commissioners appointed by the Faculté de Médecine.

Dr. Opperheim has stated that idiotcy is produced artificially in the East, by constantly giving infants small doses of narcotics, by which means the mental powers never become developed, and an idiotic state is the subsequent result. The same iniquitous practice is also applied to adults, where irrationality is desirable, but where death would be inexpedient or impolitic. Although this wicked *system* does not find countenance in this country, yet the same mischievous effects are not unfrequently produced in our manufacturing districts, by ignorant mothers giving opiates to their children, previously to leaving them for the day, while at the manufactory or mill: this subject demands a rigid inquiry, and ought to be at once checked.

DIGITALIS is a decided narcotic ; it appears to act primarily as a stimulant on the brain, alimentary canal, and also on the vascular system, which, however, very soon becomes depressed. It is a medicine which acts with more or less power, this depending on the constitutional peculiarity of the patient ; it is owing to this uncertainty in its action that it is necessary to begin with small doses, which may be gradually increased if no disagreeable symptoms follow ; at the same time its cumulative effect must never be forgotten.

Dr. Withering introduced digitalis as a remedial agent, but Dr. Hallaran has the merit of having brought it more prominently into notice in the treatment of the insane ; his attention seems to have been attracted to it in the case of a young man suffering from dementia, vigilant and dangerous, who was ordered ten drops of Tr. Opii every two hours till sleep ensued. Tr. Digitalis was by mistake given : he had taken sixty drops, and enjoyed eight hours sleep ; pulse diminished from 120 to 96 ; no heat of skin, no confusion of intellect, which usually occurs after a full dose of laudanum.

This young man was subsequently cured by continuing the digitalis with occasional aperients.

Mr. Knight considers the primary effect of digitalis as decidedly stimulant as brandy or geneva, and Dr. A. T. Thomson is of opinion that it should not be given where there is an inflammatory diathesis. Dr. Hallaran does not consider it admissible where there is high arterial action, and agrees with all other authorities in recommending that the system be previously reduced by proper evacuants. Dr. Armstrong recommended digitalis where there was considerable arterial action, and many physicians still order it in such cases, when it often wonderfully calms excitement. I have often successfully prescribed it, and seen it exhibited by many eminent physicians to lower the pulse where there was increased arterial action, care having been taken that the antiphlogistic treatment had preceded it.

When there is considerable arterial action with vigilantia, after having well purged, digitalis will very often reduce the power and frequency of the pulse, and sleep follows. In mania, with or without henbane or camphor, digitalis will be found a most

useful narcotic, but if the excitement be excessive, and this arise from acute inflammation, tartarized antimony must precede it. Many consider digitalis as by far the most serviceable of any remedies prescribed in these cases; and Dr. Hallaran states "even the insane themselves become conscious of its beneficial and almost immediate effect;" and subsequently he says, "I have continued to prescribe it with as much expectation of procuring sound and refreshing sleep, as I would from the use of opium under different circumstances." Cox considered it with or without opium a powerful sedative, and often found it of use when opium had failed.

Dr. A. T. Thomson thinks digitalis should not be prescribed where there is high arterial action, but prefers giving it in cases of diminished excitement of a maniacal kind; and he states, "I have had several opportunities of putting this mode of employing fox-glove as a narcotic to the test of experience, and when proper measures were taken to unload the system previously to the commencement of the use of the tincture, which I have carried to the extent

of sixty minims, three times in the twenty-four hours, I have seldom failed to procure sleep, quiet, and the restoration of the patient to sound health and intellect."

The tincture seems the most eligible form for administering digitalis, and about ten minims every six hours may be considered an average dose to commence with in maniacal cases; if the pulse does not diminish in frequency five or six days after its employment, it should be discontinued. Sir. W. Ellis prefers giving small doses and often repeating them if necessary. He says, "I have heard of a drachm of the tincture being given for a dose, and even repeated in that quantity; I can only say, I have seen very serious consequences arise from much smaller doses."

Some have strongly recommended digitalis in suicidal monomania. Dr. Hallaran mentions the case of a monomaniac who had been for some time intent on self-destruction, and who declared that the propensity was never present whilst under the influence of digitalis. Dr. Cless of Wurtemberg was in the habit of giving a spoonful of a strong

infusion of digitalis every two hours in persons suffering from delirium tremens ; when narcotism occurred, recovery followed. Out of thirteen cases thus treated eleven were perfectly cured ; a relapse occurred in the remaining two cases.

The infusion of digitalis is sometimes ordered as a diuretic in early cases of insanity when there is suppression of urine, and has been found very efficacious ; it is strongly recommended by Dr. Sutherland.

HYOSCYAMUS.—Henbane is said, like other narcotics, to act at first as an excitant ; the period of excitation, however, is so short, and its stimulating effects so slight, as often entirely to escape observation. It is probable that it slightly increases the heart's action at first, before its narcotic effect is produced ; it does not, however, excite the brain, or cause confusion of thought or headache, but, on the contrary, calms irritability when present, and it yet possesses this advantage, that it does not constipate, but actually relaxes the bowels. Hyoscyamus is especially useful in nervous habits, and is

particularly indicated in monomania, and even the temporary quiet derived from it in mania is often of the greatest benefit. When there is excessive nervous irritability, it has often a remarkably calming and soothing effect; it may also be given where there is vascular excitement, when opium is so strongly contra-indicated; it does not excite the brain in these cases, and is often found to reduce arterial action. When patients awake after sleep caused by henbane, there is not that confusion of thought, that stupefied expression, nor heat of skin, and dryness of the fauces and tongue, so often seen when other narcotics have been taken.

Hyoscyamus will frequently diminish excitement of the brain in several forms of mania: it was very strongly recommended by Dr. Fothergill in puerperal insanity; he generally gave of the extract gr. v. three or four times daily.

When a sedative has to be continued from day to day, or several times during the day, hyoscyamus will be often the very best we can select; as, in addition to its tranquillizing effects, it will not check if it does not actually cause diaphoresis, while it

promotes the flow of urine, and also relaxes the bowels. It acts almost as a specific in some cases of monomania, causing tranquil sleep and a quiet, placid waking.

It has been strongly recommended by Storck, Home, Fothergill and Monro. Hill likes it, especially in puerperal insanity; and Cox considers it has far superior claims to opium; he has seen it diminish irritation and excitement, and cause sleep in some cases of insanity, when gradually introduced into the system. Dr. Whytt found hyoscyamus to be often preferable to opium, and took advantage of its laxative effect.

From a case which has recently come under my notice, I cannot doubt that hyoscyamus accumulates in the system. A gentleman for nervousness was ordered by his physician to take five grains of the extract three times a day; this was persisted in for six weeks or even longer. Vertigo, syncope, and extreme depression suddenly occurred, the pulsations of the heart very feeble. Brandy and ammonia were largely administered before the slightest reaction took place. The patient himself, his medical atten-

dant, and friends expected an almost immediate death. The depression continued several days; the heart and lungs did not indicate organic disease; and the symptoms were subsequently referred to a sympathetic affection of the heart caused by the cumulative effects of henbane; the restrictions which had been put on the patient, with his fears, were removed, he was purged, had a good stimulating diet, was allowed to resume his ordinary occupation, and is now in the city daily, quite restored.

Opium in combination with hyoscyamus is often rendered much milder and more uniform in its action. With camphor, henbane is very useful in producing sleep and tranquillizing the irritability of the insane, and has been recommended by numerous authorities. Some are in the habit of giving five grains of each every four hours; but Dr. A. T. Thomson prefers one large dose of ten grains of each, to repeating smaller doses. From v. to x., xv., or even xxx., grains of the extract may be given at once; when necessary to be repeated, from gr. v. to gr. x. may be considered

an average dose. If an over dose be given, it may occasion stupor, vertigo, convulsions, and even coma.

It will here be necessary to give a caution as to exhibiting henbane as an enema ; several fatal cases have resulted from this indiscretion, and therefore it should *never* be given in this form.

CONIUM.—Hemlock is not at present much used as a hypnotic ; it will undoubtedly sometimes calm nervous irritability, but does not seem to possess the tranquillizing powers of hyoscyamus. In over doses it strongly excites the system, and not a few cases are on record of persons having become raving mad from having accidentally partaken of hemlock in their food. Its effects vary much in different constitutions, thus, while it sometimes acts energetically on the sanguine, scarcely any effect is produced on the melancholic.

LACTUCARIUM.—The extract of the lettuce is anodyne and hypnotic in some constitutions ; it is, however, an uncertain remedy. Even the lettuce

itself will induce sleep, as testified by Galen, who suffered from *vigilantia*; and the extract will sometimes calm that vigilance and restlessness which depend on febrile disorders.

CAMPHOR acts first as an excitant, the heart's action is increased, blood is thrown to the surface, diaphoresis succeeds, the pulse then falls, and sleep follows; owing to its diffusibility it acts more rapidly than other narcotics. If given in small doses it acts only as a stimulant, and it is with such intention Dr. Sutherland combines it with myrrh in cases of debility. From ten to fifteen or twenty grains must be given to produce its sedative effect; if half a drachm be administered it acts very powerfully as a narcotic, and is often found very useful in calming delirium. It may be necessary to combine it with opium, hyoscyamus, digitalis, nitre, ipecacuanha, or antimonials, the choice of course depending as particular symptoms may indicate.

In camphor, as with hyoscyamus, although acting for a short time as an excitant, yet a calmness speedily succeeds, and the pulse falls. These two

combined will often lower the pulse in mania considerably, and Dr. Hallaran considered if it did no other good, it reduced the febrile diathesis. Whytt found camphor render some maniac and melancholic patients more quiet, where opium would have proved hurtful. Dr. Cullen related the case of a young man, maniacal, in which large doses of camphor gave sleep, and rendered the attacks of mania less violent: and he subsequently says, "in several cases it has induced sleep, and rendered the mind for some time more quiet." It has been strongly recommended by Kinneir and Avenbrugger, but more particularly by Perfect. Kinneir placed very great confidence in camphor, and found half-drachm doses very effectual, especially when preceded by an emetic. Hallaran considered it an uncertain remedy, but has often seen the pulse of maniacs fall when under its influence. Professor Berndt in large doses regards camphor almost as a specific in puerperal mania.

Laugther in Austria and Ferrier in England considered it altogether useless, and Dr. Haslam gave it in two-drachm doses without perceiving any

effect, while Mr. Hill found " camphor almost universally proved a most safe and efficient remedy ;" and he subsequently states, that in every degree of mania when camphor was given in doses of from ten grains to sixty, three times a day, it has never once been followed by disappointment in producing salutary effects upon augmented brainular and arterial action.

It will often procure sleep and promote perspiration in fevers and maniacal and melancholic cases, where opium would have aggravated every symptom. Dr. Cox did not find it useful when given alone, but prescribed it with success in combination with antispasmodics, when by its sedative and diaphoretic power, it often diminished hallucinations.

Camphor is very useful where there is irritation in the reproductive organs, and has been very serviceable in cases of nymphomania, especially when occurring a few days after delivery; it has been strongly recommended in such cases by Dr. Berndt, who usually gave four grains every alternate hour, with very great success.

When hysteria is complicated with mania, cam-

phor should be given, as particularly recommended by Esquirol. In combination with conium and nitre it is anaphrodisiac, and by continuing the use of conium for some time, the mammæ and testes may be much diminished in size. The application of cold lotions to the genitals, and in severe cases adding the diacetate of lead, is often very serviceable, not forgetting at the same time to act well on the bowels with saline purgatives.

Clitoric irritation sometimes causes maniacal symptoms, and also nymphomania, as noticed by Aetius, Plato, Haller, and many others, and it may occasionally be advisable to remove the clitoris, as more lately recommended by Dubois. A very interesting case of idiocy apparently depending on unrestricted habits was thus cured by Dr. Graefe of Berlin: and very shortly after the operation, the intellectual faculties began to develop themselves.

BELLADONNA may be considered one of the most powerful sedatives we possess. It acts by diminishing the sensibility of the nervous system, and hence it is specially indicated in those cases of mania where

there is pain and increased sensibility of the brain ; and in some of those cases of dementia, where there is such extreme irritability, this medicine is likely to prove very serviceable. Where mania is complicated with convulsions, epilepsy, or neuralgia, belladonna has been recommended, being peculiarly indicated in those cases where there is severe pain. Belladonna produces effects very much resembling intoxication, and is in consequence by many considered unsafe in the treatment of mania, especially when the system is plethoric. It has been chiefly used in Germany, where it holds a high reputation. Dr. Burrows does not think favourably of it as a narcotic, having found patients awake more violent after its employment. Dubuisson considers it more palliative than curative, and administered it to prevent a maniacal paroxysm, and found it chiefly useful in diminishing muscular irritation.

It is always better to commence with small doses and gradually to increase them : in a small dose it is anodyne, but in larger quantities it is a powerful sedative. An over dose causes nausea, dryness of the throat, vomiting, diminished sight, disconnected

ideas, and disturbed sleep, and if the dose have been excessive, these symptoms will pass into coma, and death follows. It will be better, therefore, to commence with half a grain, which may be repeated every four or six hours, if the symptoms are violent ; it may be daily increased if considered necessary, at the same time taking care that the patient is seen at least twice or three times in the twenty-four hours.

A question has been mooted as to the utility of prescribing belladonna in those cases where the pupil is contracted, but the stupor, delirium, and vertigo so often following its exhibition, would scarcely justify us to recommend it. We well know in such cases opium is contra-indicated, as strongly pointed out by Dr. Holland, and this appears the general opinion in the profession. Dr. Graves has, however, recommended *belladonna* in recent cases of fever, where there is contracted pupil, and a similar practice has been suggested in some cases of mania.

The following will be found a most interesting case, as showing the influence belladonna possesses when used endermically.

A publican, æt. 36, an habitual drunkard, subject to attacks of delirium tremens, was visited by Mr. Flood of Leeds, who found him with the usual symptoms indicating delirium tremens, pulse 100, weak and irritable, tongue clean, urine scanty, dark and offensive, blood voided in large quantities by stool; insomnolent for a week.—Head to be shaved; twelve leeches to temples, cold lotions; strong purgatives till bowels relieved. Within eight hours the bowels had been freely emptied, pulse 100, no sleep, great restlessness and agitation. The hydrochlorate of morphia in *two* grain doses, subsequently increased to *ten* grains, with *one grain and a half* of tartar emetic, also increased to *eight* grains, were administered every two hours, with two table spoonfuls of the following mixture:

R. Ammoniæ Sesquicarb. ℥ij.

Tr. Opii ℥i. (subsequently increased to ℥i.)

Mist. Camphoræ ℥viiij. M. Ft. Mist.

The next day no improvement; no sleep; cupped to eight ounces; narcotics increased.

Has been gradually getting worse up to the 7th day of attendance. Hyoscyamus, opium, and

morphia in every form, with digitalis and antimony, cold affusions, and his *usual stimulus*, all have failed—pulse 110, weak and irritable—ungovernable.

8th day.—Bowels have been well cleared by castor-oil, and a blister has been raised between the scapulæ. The cuticle was stripped off by Mr. Flood to the extent of three inches by two inches, and covered by a layer of pure extract of belladonna. It excited acute pain, which subdued his previously boisterous condition; the pain ceased in three minutes; in five minutes, twitchings of arms and facial muscles; appeared intoxicated; the pupils, before contracted, in seven minutes became fully dilated; drowsy. In nine minutes the belladonna was removed, the patient being in a profound sleep, which continued for seven hours, neither disturbed nor stertorous. The pulse was at first 110, small and irritable; in five minutes 140; in twenty minutes 160; it then gradually fell, and in six hours it was 108, full and soft. He awoke quiet, but very soon became excited.

10th day.—Has been watchful since last report; opiates have produced no effect; apparently sinking

from prolonged excitement.—Another blister to be placed rather higher up than the former. Belladonna again applied; sleep followed in twenty-six minutes, which lasted four hours and a half; he awoke perfectly subdued, pulse having fallen to 70; passed a tranquil night, although without sleep; and after this gradually convalesced.*

HYDROCYANIC ACID has been largely used as a sedative in many of the lunatic asylums in Great Britain. By some it has been found ineffectual, others thought it occasionally beneficial, and there were yet some who considered it even anti-maniacal.

Dr. Balmanno of Glasgow is one of its strongest advocates; he prescribed it with henbane and sugar: began with thirty drops of prussic acid, and has increased it to even eighty drops for a dose! and yet never saw the smallest injurious symptom produced by the largest dose he has given, and never found it fail to quiet the most highly excited cases. The prussic acid used by Dr. Balmanno, was that commonly procured from the shops in Glasgow.

* *Abridged from Lancet*, p. 12, vol. ii. 1842-3.

From what we have seen of the effects of prussic acid, when even a few minims have been prescribed, we should certainly not recommend Dr. Balmanno's doses of hydrocyanic acid, if procured in London, especially as we have not forgotten those deplorable deaths caused by the exhibition of hydrocyanic acid to some unfortunate lunatics in Paris ; besides we have the direct testimony of Dr. Burrows, who has tried Dr. Balmanno's treatment, although not to so full an extent, and this too without the slightest success in a single instance.

The cases of insanity in which prussic acid is most likely to prove useful, are those where there is pain about the precordia with acid eructations, and it has occasionally been found useful under such circumstances by Dr. Sutherland. If wishing to produce a sedative effect, it will be better to administer this acid in distilled water, and without those numerous combinations which undoubtedly materially diminish its influence.

COLCHICUM may be regarded as a sedative, proving somewhat stimulant in its primary effect. It acts

particularly on the duodenum, and by increasing the flow of bile, is very serviceable in the bilious and melancholic; it is probably owing to this increased flow of bile, when combined with a purgative, that it diminishes that excitement, so often caused by bile circulating through the brain. Colchicum with digitalis often acts very kindly as a sedative; given alone it quiets arterial action and nervous excitability, and if the tincture of the seeds be used instead of the root, there is no fear of congestion of the brain being produced by it, and it may consequently be regarded as a most valuable narcotic in the treatment of the insane.

STRAMONIUM was formerly strongly recommended and much employed as a sedative in mania, but its narcotic principle is so extremely uncertain, that it has now almost fallen into disuse. Greding administered it in a great number of maniacal cases without benefit in a single instance, but thought he had once seen it slightly advantageous where mania was complicated with epilepsy. It is said by M. Gitner to cause a redness of the skin, and to ex-

cite the genital organs; if this is commonly the case, it is not likely to prove advantageous in the treatment of mania. Dr. Burrows gave one grain of stramonium in a case of mania where other narcotics had failed, but the patient was more violent when he awoke. Dr. Sutherland, although prescribing it in large doses, did not derive any benefit from its use. Mayo, however, did find it serviceable in a case of puerperal mania.

In America, stramonium is preferred in the form of tincture. Of the extract, one grain may be considered a medium dose, and two, or even three grains a full dose for an adult; it has been given occasionally in larger quantities. The practice formerly was, to administer one grain, and gradually increase it every two or three hours, until a sedative effect was produced; seldom allowing more than eight grains to be taken within twenty-four hours.

ACONITE is another narcotic, but entitled to even less confidence than stramonium, being extremely uncertain in its action; and in cases of insanity it is now very seldom prescribed. Its active prin-

ciple, *aconitine*, must (if it ever should be administered internally) be given with the *greatest caution*, as it has sometimes produced congestion of the brain, and even apoplexy; some have strongly recommended it to be employed endermically.

Of the extract of aconite, the dose should at first be small, not exceeding half a grain; this may, if considered advisable, be gradually increased to five or six grains. Some physicians prefer the tincture, of which five or six drops may be given three or four times in the twenty-four hours. If this tincture be applied externally in neuralgia, it will often be found invaluable.

The *lobelia inflata* is now scarcely at all used, nor is the *nux vomica*; but its active principle, *strychnia*, is still recognised as a very useful tonic, stimulant, and narcotic, where there is want of power *without* organic lesion. It must be given in small doses, commencing with one-sixteenth of a grain, and it may be gradually increased. In cases of debility, and where there is a want of tone and power, this, when judiciously employed, will be found a valuable remedial agent in the treatment of the insane.

STIMULANTS, as castor, musk, valerian, assafœtida, aromatic spirit of ammonia, æther, brandy, wine, all may be useful means in some instances, for procuring sleep; and many cases of hysteria and hypochondriasis will be benefited by employing one or more of these agents. Whytt was in the habit of giving a grain or a grain and a half of opium, with a little assafœtida at bed-time, and found it lessen the restlessness, flushings, and sick fits, from which many hypochondriacs suffer. The combination of opium with the Sp. Æther. Sulph. Comp. is often advantageous, and may be given when opium alone has previously disagreed. Whytt found castor often procure rest; he gave it in doses of from twelve to twenty grains, and did not consider it acted directly as a narcotic, but indirectly, by lessening that uneasy sensation in the stomach from wind, which is often the cause of watching. With the same intention he combined Tr. Castor. Comp. with laudanum, which he supposed was thus rendered milder in its effects; and he also found assafœtida, like castor, sometimes procure sleep and give relief, where the spirits were much depressed.

Musk has been recommended by Hill, in irritable and enfeebled females who have passed the grand climacteric, and are disposed to resort to secret cordials ; and he has also found it useful in young persons labouring under great mental disturbance from horrid dreams, incubus, convulsive twitchings, and somnambulism, preceding it by a tepid or warm bath, or the pediluvium.

In some cases where there is irritability with diminished action, a glass of good porter, ale, or port wine negus with grated nutmeg, will insure a good night's rest, and in a few instances even a hot supper must be allowed, especially where persons have been accustomed to it for years.

Tea, in some individuals, acts as a decided narcotic, and in others has a directly opposite effect. In low nervous patients, coffee is often preferable, and will cause temporary exhilaration and warmth, with subsequent placidity.

TOBACCO, in its various forms, may sometimes be necessary for the comfort and quiet of a patient, especially when use has rendered it essential to him,

this applying equally to snuffing, smoking, or chewing. To those unaccustomed to smoking, this will occasionally prove a useful means of combating vigilantia when other remedial agents have failed; and where habit has rendered it necessary, sleep often cannot be obtained without it.

The *hop pillow* has been much valued as a means of removing watchfulness and causing sleep, and perhaps in a very nervous and sensitive individual, it may have some slight hypnotic effect, and of the two, we should certainly recommend it in preference to the *dill*, which was formerly suspended over the head to encourage sleep. The various scents and essences are peculiarly grateful to some, and particularly noxious to others. The *Tincture of Hops* is a very valuable hypnotic in some low nervous cases, as it combines a tonic with a narcotic principle. When prescribed with Tr. Hyoscyami and camphor, it acts as a very decided hypnotic, wonderfully calming the system where there is excessive irritability.

Insanity is sometimes periodical, and it should be remembered, that when it is intermittent, it is not

inflammatory, and in such cases, arsenic, Tr. Ferri Sesquichloridi, the preparations of zinc, and copper, with tonics, may be often usefully prescribed. Arsenic can be strongly recommended in these cases, and has been given with the greatest advantage; it appears to alter the sensibility and irritability of the brain. Quinine is sometimes given with the same intention: thus, a case of insomnolence was cured by giving gr. vj. of Quinine at bed-time. M. Barbier of the Hôtel Dieu, Amiens, ordered it, because every evening there was nervous agitation with pain, occurring *periodically*.—Quinine was given two nights, the patient slept well—omitted, no rest—when again administered, six or seven hours of sound sleep followed. Quinine may be useful in many other cases—it acts very powerfully on the nervous system, as is proved by those temporary cases of blindness and deafness not unfrequently caused by large doses, especially when continued for a lengthened period.

Dr. Seymour gave arsenic to a woman æt. 40, with symptoms closely allied to mania, where there was chronic pain in the head, trembling, sleepless-

ness, quick and weak pulse. Nothing relieved her but ten minims of Liq. Arsenicalis twice a day, and subsequently three times daily. In a week, great improvement, pains diminished, nights tranquil: in a fortnight convalescent.

Dr. Seymour gives another case of a man *æt.* 30, with excruciating pain in the forehead and sides of the head, increasing at night and preventing sleep: pupils dilated, conjunctivæ injected, increased sense of smell, bowels constipated, pulse 100, very weak, skin cold.—Bowels to be kept open, sedatives and antispasmodics. Twelve days subsequently, ordered five minims of Liq. Arsenicalis twice a day: pains greatly relieved. Ten days subsequently, to take the solution three times daily. In a fortnight more, no relapse having taken place, was dismissed cured.

In a case of intermittent insanity, where every thing else had failed, Dr. Sutherland found aconite of great use.

WARM BATHS.—There are many cases of insanity where there is want of sleep, in which it would be perfectly useless to prescribe narcotics, but very good

effects constantly follow the judicious employment of warm and tepid baths. Much discrimination is necessary to determine as to the heat best adapted for the particular case, and the greatest care must be taken never to raise the temperature too high; it should never exceed 98 F. or it will act as an excitant, and may even induce apoplexy: 96 F. may be usually considered as the best temperature for a warm bath for the insane.

Persons of a nervous temperament bear a higher temperature than the bilious; and the warm bath is more decidedly useful in cases of melancholia than in other forms of insanity; but it will be generally found a very powerful means of diminishing cerebral congestion, and allaying irritation in most maniacal cases. Sir Wm. Ellis says, "We scarcely possess any remedy so generally powerful in allaying irritation as the warm bath." And Dr. Sutherland gives his opinion in these words, "Diet, employment, exercise, are the true remedies for sleeplessness; tepid or cold baths induce sleep, and are truly efficacious, and no bad results ever follow their use." Pinel says, "Les meilleurs observateurs s'accordent

à recommander les bains tempérés comme un puissant remède de la fole ; il's ont l'avantage de relâcher la peau, de faciliter la transpiration, de rendre la circulation plus uniforme, de prévenir l'impulsion trop forte du sang vers la tête, et de procurer un sommeil tranquille."

It is often asked how long should a patient remain in a bath, and how frequently should it be repeated. It may be necessary to order a bath daily, or even twice a day, and the patient may be immersed half an hour, one hour, and even two hours, the time depending on the effect produced. Esquirol kept patients in the warm bath till the vascular action was reduced, and frequently found two hours immersion to be necessary. The warm bath will be found very effectual when the circulation is sluggish, skin and feet cold, when often half an hour's immersion will insure a good night's rest. The first effect produced is languor ; as soon as this is perceived, the patient must be removed, or actual syncope may occur. The effect of a warm bath in some persons is so tranquillizing, that they actually fall asleep while in the bath, and most persons are drowsy

before being thoroughly dried, and will almost certainly sleep if immediately entering a warm bed.

In those cases, where more exciting capillary action is required than is produced in the warm bath, and yet being fearful of increasing the temperature, *salt water* baths either natural or artificial, will prove much more stimulating, and are often useful when the circulation is feeble, taking care the patient is well rubbed with towels previously steeped in salt water, then dried, and used warm.

The tepid bath varies from 86° to 92° F. and is a very efficient means of removing superfluous heat and quieting excitement in cases where there is great power ; a sense of chilliness is soon produced, owing to the escape of caloric from the body, it being carried off more rapidly than it is generated : the tepid is far less soothing than the warm bath, but is a very useful remedy in some cases of dementia, and indeed wherever we are anxious to reduce the temperature of the body and to avoid reaction.

MEDICATED BATHS have sometimes been employed.

Signor Bertolini of Turin, is in the habit of treating insanity by narcotic baths, and for this purpose he employs two pounds of henbane, belladonna, hemlock, and cherry laurel leaves, which are infused in the quantity of water sufficient for a bath for an adult.

THE SEMICUPIUM OR PEDILUVIUM are both very useful in counteracting determination of blood to the head, especially where there are flushed cheeks, hot forehead, pulsating carotids, and rolling eyes: the effect produced much depends on the temperature, and on the length of time the foot bath is employed. If the feet are immersed in hot water, and the heat is diligently sustained by constantly adding a little boiling water, even fainting will be produced in some individuals, after the lapse of a quarter of an hour, and by applying at the same time wet and cold cloths to the head, this will be found one of the most efficient ways of calming excitement. Sir Wm. Ellis says, I have repeatedly seen patients who had been in the most violent state of excitement, and entirely without sleep for many days and

nights, notwithstanding every effort had been made to procure it, by administering various narcotics and the use of hop-pillows, sink into the most comfortable repose on using the pediluvium and applying cold to the shaven head. Whytt has also detailed the good effects of the pediluvium in several cases of delirium. It will occasionally be necessary to add a pound of mustard to the foot bath, or even the application of sinapisms to the feet may be advisable, especially if the symptoms are dependant on retrocedent gout.

Where there is much excitement, applying cold cloths to the shaven head, while the patient sits in the warm bath, may be considered one of the best means of counteracting it, in a delicate constitution. In mild and temporary cases the hair may be cut short previously to the application of cold, but when severe symptoms threaten it is always better to have the head at once shaved. If any particular part of the head seems hotter than another, the cold should be more assiduously applied to that part, at the same time remembering that it is seldom necessary to depress the temperature much below the natural

standard. Where there is great power with furious and ferocious delirium, cold water may be poured on the head, as recommended by Celsus and Aretæus ; but if the patient be feeble and irritable, this application of the douche is strongly contra-indicated. Cold water must not be continued to be poured over the head after the first sign of prostration has occurred, or the patient may become comatose.

THE DOUCHE should never be resorted to except when imperatively necessary, and the application of the ice cap will generally be found far more efficacious. It is much better, much safer practice, to keep the head constantly cool, rather than making it at one time very cold, and then allowing reaction to take place ; the object not being prostration of the powers, but to calm excitement and remove superfluous heat, whereas if reaction occur, this excitation becomes augmented. Where there is burning heat and ferocious delirium, the ice cap is very useful, and may be applied after the douche has been employed. Many patients will not resist the application of an ice-bag, when the douche would

occasion them great terror. The douche has been used by M. Leuret as a moral as well as a physical agent, to frighten or punish patients for holding erroneous impressions, or assuming fictitious ideas or characters; for this purpose it must however be considered a very severe remedy, and should seldom if ever be advised.

In early cases cold applied to the head will often effectually procure sleep, but as disease advances we must place more dependance on exercise.

When necessary to apply cold to the head in bed, it will be found convenient to place an oiled skin under the shoulders.

COLD-BATHS.—Some prejudice seems to exist in this country respecting the use of the cold-bath in the treatment of the insane, which has very possibly arisen from the barbarous practice formerly adopted of semi-drowning a lunatic, as well as from the ill effects sometimes caused by the *surprise* bath, as it has been technically called, and which was erroneously thought by some to be available from the terror and shuddering it excited. The surprise

bath should never be recommended ; but the cold-bath may in some cases, if judiciously used, prove very serviceable, and many patients who have suffered from partial or complete vigilantia, have enjoyed profound sleep after immersion in the cold-bath. It is more generally useful in young persons, and where followed by a glowing warmth over the whole surface of the body. It is also to be strongly recommended in some cases of suicidal mania ; also where there is personal abuse, and in such cases making a patient sit in a bath containing cold water, and at the same time pouring cold water over the back and genitals will often be of much service.

The cold-bath should rarely if ever be ordered for those advanced in life, never where there is plethora, and is contra-indicated in paralytics. It should not be repeated where shivering and head-ache have succeeded its employment ; nor is it advisable if the subsequent reaction have been excessive ; but in such cases, affusion over the whole body either of cold or of tepid water, or sponging the body and rapidly drying, will be found very beneficial. Du-

buisson prefers affusion to either the surprise or cold-bath.

THE COLD SHOWER-BATH is more used on the continent than in this country : in many cases it is very serviceable, and has been strongly recommended by M. Foville ; it quiets arterial action, soothes restlessness, reduces the temperature of the skin, and refreshing sleep follows. It may be necessary to order it night and morning, but where the nights alone are troublesome, and feverish heat and irritable restlessness gradually come on as evening advances, employing it just before going to bed will generally be sufficient. In some delicate persons the shock to the system is too great, when a tepid shower bath will occasionally be more proper, the temperature depending on the judgment of the attendant. It is better in each instance to allow the patient to stand in a little hot water.

When cold applications increase the excitement and make the patient more furious, they should be discontinued. Esquirol mentions the case of a young man suddenly attacked with mania ; being

very violent, cold sponging was ordered; he first became restless, then calm; next seized with a rigor, then the pulse became very small. In this state he fell asleep, and a profuse perspiration broke out. He slept for several hours, and awoke in the full exercise of reason, which he ever afterwards retained.

As a general rule, the greater the power, the better can a patient bear a lower degree of cold, and the more suitable will it be: hence it is that the ice cap and the cold shower-bath are so often serviceable in cases of dementia; whereas on the contrary, in low desponding sluggish melancholics, or in those maniacal cases where the pulse is feeble and the skin cold, the warm bath is clearly indicated, and the application of cold would often be most improper.

If cold be applied to reduce superfluous heat, sponging the body with cold water is most effectual; but where a general determination of blood to the skin is desirable, the plunging or shower-bath will then be preferable: it is by experience in each individual case that we must be guided as to the

necessity of adopting or withholding these various kinds of baths. We must not prescribe them empirically, but must consider whether we wish to elevate or depress the temperature of the body, and whether this will be best effected by the application of heat or cold, each producing similar, and also opposite effects, under different circumstances.

EXERCISE.—One of the most important means of procuring sleep in the insane is by exercise and employment in the open air. Daily experience proves that those whose avocations compel them to be out of doors the whole day, almost always sleep well, and the converse is not less frequently noticed. As to the choice of the particular mode of taking this exercise, whether walking, digging, riding, driving, &c., this must depend upon circumstances. To some walking is more agreeable, and the strength they possess enables them in a few hours to get rid of a good deal of superfluous nervous energy, and by having their attention fixed on various passing objects, fatigue succeeds and rest follows. To others exercise on horseback is more

agreeable, more useful, and by habit more natural to them; while yet again, others more delicate, prefer driving in a cabriolet, and the attention thus given to the horse is necessarily transferred from themselves, and by such apparently simple means much good may often arise. Digging has been objected to, on the ground of the necessary stooping posture, this determining a flow of blood to the head, but the constant motion of the arms and legs, and the continued re-elevation of the head and shoulders convince me that the evil is more imaginary than real.

Close carriage exercise may suit some, but it is manifestly improper for others; in many individuals it causes head-ache, flushed face, injected eyes, and owing to the pressure on the brain, vomiting soon follows. I know several persons who are always very much excited when riding inside a coach, and this excitability augments as the rapidity of travelling increases; and I have several times seen epistaxis occur from the same cause, therefore no one can doubt that carriage exercise is often contra-indicated in those subject to determination

of blood to the head. The numerous deaths which have occurred in railway-carriages from apoplexy, may also be adduced in support of this opinion.* There are some persons, again, who find a peculiarly tranquillizing effect from this very exercise which in others so much disturbs the nervous and vascular systems.

When there is much determination of blood to the head, severe exercise must not be permitted, especially in incipient cases, as if the circulation be much increased mischief will occur; this does not apply to all cases of congestion, the more especially if chronic, as active exercise will then often be very desirable.

The use of the *swing* must not be invariably re-

* While this essay is going through the press, two noblemen have died from this cause within a few days of each other, and scarcely a week passes without several cases occurring. Many lives would be prolonged if, as age advances, Members of Parliament and others whose brains are continually exercised, and who at the same time feed freely and luxuriously, would let off the *high pressure* the day before starting on a journey, by cutting off the supplies, and taking an aperient.

commended, as it sometimes causes congestion of the brain, and on this account the employment of the *rotatory swing* is manifestly improper, and it is extremely doubtful whether the vertigo necessarily caused by this whirling engine, ever could have produced the slightest benefit in a single case of insanity ; while its adoption as a moral means of controlling a patient cannot be for one moment justified.

Travelling may be considered as one of the most useful means of calming the system, of occupying the attention, of removing false impressions, of substituting physical exercise for metaphysical delusions ; and by judicious management in this way, persons who have for weeks, or even months, passed restless nights, may gradually obtain quiet, rest, and sleep ; and subsequently return home re-invigorated in body and mind, a comfort to their family and friends. It is in early cases that the most decided benefit accrues, and the mistake usually is, that change of scene and habits are delayed too long. It is chiefly in monomania that travelling is so useful, and especially in cases of hypochondriasis. The

mode of travelling as to whether it is preferable to make a pedestrian tour, or whether desirable to ride on horseback, or to occupy an open or close carriage, must depend on the peculiarity of the case ; as must also the choice of the country through which the patient is to be guided. But to enter more minutely into this question, would greatly exceed our present limits.

Any amusements or games to which the insane have been partial, should be recommended ; and cricket, hockey, and other active sports should be encouraged. The utility of such exercise is daily pointed out to us in the excessive gesticulation and vociferation so indulged in by the insane, being the means Nature unsuspectedly points out to them for relieving preternatural excitement. So in the evenings, and on wet days, backgammon, chess, &c., should be introduced ; and cheerful occupation enjoined. Monomaniacs are always thinking ; they are but too frequently exercising their memory, which is often rendered preternaturally pertinacious ; and to draw off this attention to cheerful amusements, will often prevent nocturnal vigilance.

In persons subject to excitement and suffering from *vigilantia*, reading of an evening should be imperatively forbidden, and some light conversation or amusement substituted. It is often desirable to allow some nourishment half-an-hour or an hour before retiring to rest, such as arrow root, bread and milk, &c., and many insomnolent individuals will not sleep without these apparently simple attentions. Extreme regularity as to the hour of going to rest is also important, every one knowing how the system becomes reconciled and accustomed to successive and continued habits. Where restlessness is excessive and cannot be accounted for, it will be advisable to inspect the mouth, as sometimes a carious tooth will occasion all the inconvenience. Neither should examination of the ears, throat, and other parts of the body be neglected; and often by directing local treatment alone, much suffering and *vigilantia* may be prevented.

In every possible way the system and mind should be calmed, and no needless opposition should ever be offered to the sufferer: many hours of irritation, and a restless and sleepless night, may be caused

by one moment's indiscretion. We should never forget that it is much better to pacify than to restrain.

If any particular studies have previously occasioned much pleasure, they may be permitted; and as the late Sir Henry Hallford stated, the study of the Holy Scriptures is a most efficient resource, where it can be allowed with propriety, requiring some caution, and being avoided when the disease has been originally connected with religion. The greatest judgment is necessary in discoursing with religious monomaniacs; they are seldom convinced, generally irritated, and it will usually be better to avoid the subject altogether, unless introduced by the maniac himself.

Many cases of insanity may be prevented by great judgment in leading the conversation and directing the thoughts and correcting false impressions and inferences; this is particularly observed where there is *deep despondency* from false religious views. Prostrating anxiety often continues for months—the intellect becoming more and more impaired, and at length the sufferer sinks. Now in such in-

stances, much may be done by taking advantage of circumstances, and my meaning cannot be better illustrated than by giving the following example.

A lady in great trouble was for months afraid she did not believe Divine Revelation, and could not be convinced but that she was an Atheist. When one day walking in the garden, a thunder storm suddenly came on, and the rain descended in torrents. A clergyman, before referred to, said, "Come in madam, there is another *deluge* coming, we shall all be drowned." "No," said the lady, "that can never be; for God has said, I have set my bow in the clouds." The reply was, "Then you do believe in Divine Revelation?" and she was now convinced, that she *had* previously the belief, without the power of realizing it.

It is extraordinary how inconsistent are the views and reasoning of monomaniacs. Thus, a suicidal monomaniac, anxious to terminate his existence by his own agency, takes more than ordinary precaution to secure himself from any extraneous danger, whether apparent or imaginary; and in such cases, a powerful impression, which at once

calls forth all the energies, will sometimes effect an immediate cure, as was strongly exemplified in the well-known case of the maniac who visited one of the bridges for the purpose of committing suicide, was attacked by thieves, defended himself, and ran home thoroughly cured of his monomaniac predilection.

Persons are too apt to say from prejudice, that religious subjects or exercises should never be brought before the insane, because religious mania is not uncommon. That many lunatics speak of religion and of the Bible is most true, because educated under the influence of the one, and by the precepts of the other ; but the fact is, that *except* to those insane and excited upon religious points, constant attendance on public worship at regular intervals keeps up the attention, often forms the basis of a new chain of ideas, and may most materially tend to advance their spiritual and temporal interests.

Sir W. Ellis says of religion, that many patients have not only been comforted by its salutary lessons whilst they have been in the asylum, but

have retained the benefit after they have been discharged. Many from going to a place of worship formally, have been awakened spiritually, and have sought pardon and remission of their sins through the blood of Christ ; and they have even blessed God for having afflicted them, as it brought them within the sound of the Gospel. And he gives the instance of a woman, who while recovering from mania, although previously an abandoned and worthless character, attended morning and evening prayers—light broke in upon her mind, she saw the dreadful consequences that would inevitably result from the life she had been leading, and determined by the help of God to amend. She left cured, gave up her vicious courses, and reformed her husband.

Occupation and constant employment is most desirable in the treatment of insanity—divert the attention from irrational and perverted impressions. Probably one reason why the rich are less seldom cured than the poor is, that they have not the same diverting resources which the artizan enjoys. By steadily undertaking from day to day some object which requires regular application, the attention be-

comes fixed, and a connecting link of observations, actions, inferences, and effects are established. So in directing the reading of a literary patient, although we should not pertinaciously confine his attention to one subject, yet at the same time we should endeavour judiciously to establish some connection between the various authors selected for his *amusement*; and much will depend on the manner we subsequently conduct the conversation respecting what has been read. Judicious questions, and quietly and unsuspectedly *leading* correct inferences and replies, may be of the happiest service.

Upon some, music possesses peculiarly soothing charms, and may generally be advised with great advantage; with others, it causes much distress, and proves how impossible it is to prescribe uniformly in every case.

Whatever is agreeable to the sensations, is very likely to encourage sleep; and M. Esquirol has seen many restless cases calmed by the introduction of agreeable odours into their apartments. Pure air is of the greatest importance to lunatics; and good ventilation, especially of the bed chambers, is very essential.

Some persons cannot sleep when alone, others are disturbed even by the respiration of an attendant. Some cannot rest unless there is a light in the room, others if it be not totally dark; and so again some sleep through the loudest noise, while others start at the faintest sound.

Thus in the case of a young lady who, during the night, trembled at the slightest noise, even that caused by the turning in bed, M. Esquirol ordered a light in her bed room, with an attendant to sit up and watch her, and she then procured rest. And in another maniacal case, where a young lady who was devoted to the fine arts, fancied she saw pictures wherever her eyes rested on the curtains, slept well when the light was removed.

Light is the only effect the moon has upon lunatics: they cannot sleep, the moon is at the full, and the common opinion is that some direct lunar influence augments the paroxysm: hence the name, *lunatic*. M. Esquirol at the large hospital at Charenton, closed the shutters at such times, and no more agitation and restlessness were then exhibited, than when the moon waned.

Even during the day, light is often disadvantageous in early cases of mania, and a darkened room should generally be recommended during the acute stage.

A constant and uninterrupted succession of sounds if not too loud, such as the rise and fall of the waves, the distant waterfall, the revolving mill, all encourage sleep. Gently patting the back of an infant soon lulls it to sleep, and this is sometimes equally successful in some very nervous individuals who may be coaxed into a slumber, by gently rubbing the forehead and patting the back: in some of these low cases they complain that the head and nose are cold, when a warm flannel night-cap will frequently add to their comfort. Great attention should always be paid to the feet: if cold, few can obtain sleep, therefore a foot warmer should be advised wherever the patient complains of cold feet; and as a general rule it may be considered that warmth encourages sleep: and while it may be necessary to refrigerate the head, it will often be advantageous to order an extra blanket to cover the body.

An attempt has been made in these few pages to

investigate the merits of the various means of procuring sleep, and although we have occasionally spoken of the adaptation of remedies when particular symptoms are present, yet minute directions have not always been given, as every qualified practitioner of course possesses a knowledge of the art of prescribing, knowing how very much remedial agents become modified by combination; and it is probable that this has not been sufficiently remembered by those who have denounced narcotics in the treatment of insanity; and I think few persons having read these pages, will say that narcotics are never indicated or useful in the treatment of the insane.

Fortunately, that vapid state which is termed idiotism does not seem to discourage or avert sleep, the unconscious sufferer occasions pain to those connected with him, while he himself, in apathetic listlessness, eats, drinks, and sleeps; his passions may be momentarily excited, but he immediately relapses into his accustomed pitiable condition.

In those cases of monomania or melancholia, where the faculties are depressed, whether we regard the man bent on suicide, the low, desponding and distrustful

hypochondriac, or the ascetic and suspicious misanthrope, we constantly find a pertinacious vigilance which unceasingly aggravates the condition of the sufferer; but the most horribly distressing restlessness attends cases of mania, more especially under the class dementia, where there is often the most ferocious delirium, and where the whole faculties seem to be exalted and drawn out to their utmost limits.

In so short a paper, it will be quite unnecessary to take even a general review of the various means recommended for inducing sleep in the insane, nor is it requisite to repeat the caution respecting general depletion in such cases, but I may be pardoned for again shortly alluding to the use of narcotics.

Physicians are much divided in opinion respecting the propriety of exhibiting them when there is furious delirium, it having been frequently noticed that even when sleep has followed very large doses, yet the patient has awoke with aggravated symptoms; and hence, although the sleep may for some hours have appeared tolerably easy and natural, yet from the

subsequently increased phrensy on waking, it has been thought inadvisable to continue the narcotic, and this has induced some authorities to recommend that narcotics should never be given until the paroxysm has somewhat abated, endeavouring then rather to assist than direct Nature. Broussais says, " Lorsque la première impulsion vers le calme est donné, c'est le moment des narcotiques."

When inflammation of the brain or of its membranes actually exists, opiates must not be given, or the symptoms will be aggravated and even coma may be produced: indeed wherever there is considerable arterial action with a hard full pulse antiphlogistic measures must be resorted to before giving narcotics. Broussais never gave a narcotic until the antiphlogistic treatment had been carried as far as the powers of the patient would permit. It is most important to ascertain what are the complications with insanity, whether the brain, membranes, heart, lungs, liver, kidneys, &c., are involved; opium being peculiarly contra-indicated where the abdominal viscera are at fault.

If in doubt, the mildest narcotics should be pre-

scribed, such as henbane and camphor, or in some cases digitalis, or calomel and antimony, or James's powder may be combined with opium, or digitalis with opium or colchicum; but generally, the safer practice when in doubt, would be to order the hydrochlorate of morphia, remembering that in most cases, it will first be necessary to purge. At the same time it must not be forgotten that tepid, warm, or cold baths, refrigerating the head, with the use of the pediluvium, may sometimes be very beneficial, when the employment of any narcotics would be positively injurious.

It is well known that absolute repose and quiet are very essential in the treatment of incipient cases of mania; and whenever it is necessary to administer a narcotic it is important that the room be kept very quiet, generally dark; and usually it will be advisable to keep the body warm and the head cool.

To say that bleeding should never be resorted to, that opium should never be given in the treatment of insanity, is highly objectionable: bleeding may be necessary where with mania there is inflammatory action, and opium is almost always indicated where

delirium is consequent on loss of blood. That the injudicious and indiscriminate use of narcotics has been productive of much mischief in the treatment of insanity all will admit, but that these same medicines when administered with judgment, have been of the most marked benefit to the sufferer none can deny. There are cases where the stimulating properties of opium itself are of the greatest service, and in other instances we gladly avail ourselves of the hydrochlorate of morphia, because its stimulating powers are so slight as scarcely to be appreciable, the sedative effect being immediately induced; and again, the spasmodic irritability produced by the acetate of morphia, render it, like strychnia, more useful in some of the low forms of insanity. So when wishing to calm excitement and diminish arterial action we give antimonials with digitalis or henbane, in some cases preferring nitre with henbane, or again, camphor with hyoscyamus, the adaptation of these remedies depending on the indicating symptoms.

In fact, no one can reasonably expect to treat cases of insanity successfully, who is not well ac-

quainted with therapeutics and pathology. Being often unaided or even misled by the lunatic himself, the physician must exercise peculiar caution and penetration : his eye, his ear, his touch, must constantly assist him. Aware of every possible, and awake to every actual symptom, he should ever be ready to anticipate and to combat ; and although in many instances he will necessarily find that every attempt fails to bring back that healthy state of mind, which we would all possessed ; yet knowing that the fiat of the Almighty cannot be altered, he will have the satisfaction of having been the means of adding many alleviations, of preventing many ills, of perhaps soothing and calming many sorrows.

THE END.

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