ORIGINAL COMMUNICATIONS.

PUERPERAL CONVULSIONS.

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THERE is, perhaps, no branch of medical science, in which so large a proportion of practical benefit can be effected as in midwifery; and this observation in great measure obtains with reference to the subject in hand.

The puerperal convulsion is an incident which takes place, as the name implies, in parturient women, and generally occurs in the later period of pregnancy, during labour, or shortly after it. The importance of this attack has been noticed by many of the older writers of midwifery. Mauriceau, in alluding to the subject, states: "La convulsion est autre accident qui fait souvent perir la mère et l'enfant, aussi bien que la perte de sang, si la femme n'est très promptement secourue par l'accouchement, qui est le meilleur remède qu'on puisse apporter à l'une et à l'autre". (Vol. i, chap. 23.) La Motte, in his *General Treatise of Midwifery*, translated by Tomkyns, devotes his eleventh chapter to this subject, and begins it in these words: "Convulsions, unless speedily helped, put both mother and child in danger of their lives". But it was not till the end of the last and the beginning of the present century, when the practice of midwifery was conducted by such enlightened men as Hunter, Osborne, Hamilton, the Clarkes, Burns, Denman, Blundell, etc., that the pathology and treatment of the puerperal convulsion were scientifically described.

Dr. Denman, in his *Introduction to the Practice of Midwifery*, supports this observation by the following passage: "The rules given by different writers on the management of labours attended with convulsions seem to have been founded on less certain principles, and to have been less confirmed by experience, than those which have been given for almost any other cases that occur."

Puerperal convulsion is divided into two kinds, viz., the plethoric and the irritable. The form in both is the same, that of epilepsy.

The plethoric puerperal convulsion appears to be caused by a turgescence of the cerebral veins from physical obstruction; and that obstruction is the gravid uterus, which may be thus explained. When the body of the uterus is thrown back upon the anterior part of the lumbar vertebræ, pressure is more or less made upon the descending aorta and ascending cava, and both may become obstructed; but it is to the former that the obstruction must be more directly referred: for, if the current of blood should not be free through this canal, the pulmonary circulation, the vessels on the right side of the heart, and all their tributary veins from the head, must necessarily be gorged with blood, and in such a condition as to embarrass the functions of the brain, and become an exciting cause of convulsive action. The correctness of this statement is manifested by the fact, that in many of those who have died of this disease, extravasated blood has been found in the cavities of the brain; and its correctness may also be inferred from those cases, where women recover with hemiplegia, or some other loss of muscular power.

The puerperal irritable convulsion would appear to arise more from reflex causes, through the sacral nerves which supply the os uteri, in their connexion with the spinal cord and brain. Dr. Denman, when writing on this kind of convulsion, appears to be of this opinion, although at that time Dr. Marshall Hall's reflex theory was not known. He observes: "The os uteri is evidently the most irritable part even in the natural state, as well as when disturbed by any morbid or adventitious cause"; and on this observation he has the following foot-note: "In a case of this kind . . . when the os internum began to dilate, I gently assisted during every fit; but, being soon convinced that this endeavour brought on, continued, and increased the convul-

sion, I desisted, and left the work to nature". The irritable or nervous convulsion is seldom met with. Burns, in his *Principles of Midwifery*, states: "The most frequent species of puerperal convulsions is of the nature of eclampsia, or tetanus, which occur a hundred times to once that the others appear". In my own practice, although I have seen many cases of puerperal convulsions, I am not certain that I have met with more than one of the irritable kind depending solely on reflex causes.

It is said that puerperal convulsions are often originated by mental uneasiness,—the result of illegitimate and clandestine pregnancy; and that they are more frequent in first than in subsequent labours.

PUERPERAL PLETHORIC OR VASCULAR CONVULSIONS.

There are certain symptoms or signs which indicate the approach of this attack:

1. A rotund and congested appearance of the head and neck, and a fulness of the external jugular veins, especially if associated with headache, drowsiness, or giddiness.
2. Sudden blindness.
3. Piercing and excruciating pain through the temples.
4. A slow and obstructed pulse.

These are some of the symptoms which warn us of the approach of a convulsive fit. Sudden blindness, or an agonizing pain through the temples, are immediately followed by the attack. By the term drowsiness, above alluded to, I do not mean that irresistible disposition to sleep, which sometimes takes place in the intervals of the pains caused by the dilatation of the os uteri, and which are profitable and refreshing, but that characterised by stupor, accompanied with more or less stertorous breathing.

The fit commences with an involuntary and convulsive action of all the muscles of the body: the limbs are vehemently agitated, the face incessantly drawn into hideous distortions, and the respiration is rapid, irregular, and characterised by labial hissing and muffled guttural sounds. In this form the convulsion continues for some minutes or longer, and then terminates with deep laborious breathing, loud stertor, and foaming at the mouth; the patient falls into a heavy sleep, in which the senses are restored, and she awakes quite unconscious of what has occurred. After a short interval she is seized with another convulsion, which takes the same course. This is the most favorable progress of the case, showing that no extravasation has yet taken place. Such an assemblage of symptoms is well expressed by Vogelius in the following words: "Agitatio convulsiva universalis, cum oppressione sensuum exituque spumæ ex ore". But in other cases, instead of the senses being restored, the patient goes into a comatose condition, from which she cannot be roused. The palpebræ are more or less open; the pupils are dilated and involuntarily drawn out of their normal position in the orbits, and the symptoms terminate either in paralysis or death.

It is now time to inquire into the state of the uterine functions.

In some cases the uterus is found not to have commenced its parturient action, or to remain stationary; whilst in others the child has been rapidly expelled either in part out of the uterus, or wholly from the vagina.

The prognosis in this kind of puerperal convulsion, when met by proper and decided treatment, is favorable; but if the attack be left to itself or treated with medicine only, or a want of decision, the prognosis will be in a great majority of cases unfavorable, and the patient will die apoplectic.

Treatment. If the cause of the plethoric convulsion has been correctly stated, the indications of cure are at once manifest, and their fulfilment in most cases readily accomplished. The first thing to be done is to relieve the vessels of the brain by copious blood-letting. The second is, to diminish the volume of the uterus, if the convulsions continue, by the artificial delivery of the child; but should the convulsions yield to the abstraction of blood, the uterus may be left to its natural course. Again, should the convulsions occur after the labour has been completed, then our chief reliance must be placed on repeated abstractions of blood.

Twenty ounces may be taken away at once, and the same quantity abstracted at short intervals, should the fits continue unabated. At the same time, the bowels are to be purged by a full dose of calomel and the ordinary black mixture; the diet is to be low; the head must be raised, and its temperature diminished by the application of cold.

CONVULSIONS BEFORE DELIVERY.

CASE I. A woman of middle age, residing in Bedford Terrace, the wife of an excise officer, was seized with a convulsion at the commencement of labour with her third child, and I was requested by her medical attendant to visit her. I found her in a state of insensibility, with stertorous breathing. Her aspect was sanguine, and her pulse slow and full. There were no labour-pains, and the os uteri was dilated to the size of a shilling, with the head presenting within the membranes. I advised that she should be copiously bled from the arm, and immediately afterwards delivered by turning. Accordingly, 3xx were abstracted; and, at the request of the medical gentleman, I turned the child, and delivered it by the feet. There was no difficulty, either in the dilatation of the os uteri, or in the delivery of the child. No other convulsion followed; the woman soon became conscious; and she recovered without a bad symptom.

I would here observe that, unless the os uteri be hermetically sealed, dilatation may always be accomplished: but our proceedings must be gently and gradually performed; otherwise, by being in too great a hurry, instead of preserving entire the smooth and delicate margin of the uterine orifice, we may tear it into a ragged circle, and thereby induce inflammation, and perhaps death—a result which I once saw take place, and which will by and by be alluded to. The mode of dilating the os uteri, which I have usually adopted, is as follows. The woman being properly placed on her left side, with her head and shoulders somewhat raised, her thighs flexed towards the abdomen, and the pelvis brought quite to the edge of the bed (a point of the greatest importance in obstetric operations), the hand of the accoucheur, well lubricated with some unctuous matter, is to be carried into the vagina, and the apex of the fingers, gathered into a conical form, gently introduced within the uterine orifice. The dilatation is now to be commenced, and continued by cautious semicircular motions, till the hand has found its way into the cavity of the uterus, when the membranes are to be broken, and the child grasped by the feet, which commonly lie in front. But sometimes the affair is far more complicated. The convulsions may be associated with abnormal presentation, or by a disproportion between the dimensions of the head of the child and the pelvic space of the mother. Under these circumstances, the delivery of the child must be accomplished by such other means as the nature of the case might require—either by the forceps, which is the happiest of all obstetric instruments, as it is compatible with the life of the mother and her offspring, or by the perforator and hook, which are destructive of the life of the child.

CASE II. I was requested by a gentleman now practising in this town, to meet him in consultation on a case of puerperal convulsions. The lady was about thirty years of age, of full habit, of stout conformation, and in labour with her first child. The convulsions were most vehement, and returned at short intervals. She had been already bled twice, to at least forty ounces; and, on my arrival, it was agreed to repeat the bleeding to twenty ounces more. After this, the convulsions ceased for a considerable time, and it was hoped that the labour might be left to take its natural course; but, notwithstanding the large quantity of blood that had been taken from her, the fits returned. It was then decided that the accoucheur should at once proceed to deliver her artificially, by dilatation, and by turning and bringing down the child by the feet, for the os uteri was found to be dilated to the size of half-a-crown, and the head presenting. Under these circumstances, the operation appeared to be one of easy accomplishment; but it turned out to be one of no small difficulty; for the patient, not being conscious, could not be retained in a proper position

for an instant, but was constantly drawn away from the accoucheur into a straight and rigid posture, by the tetanic force of the muscles, so that it was with the utmost difficulty his hand could be kept at work in the vagina. However, by a cautious and steady perseverance, which characterised the whole of his proceedings, the difficulty was overcome, and the delivery safely accomplished. No other fit followed; and her recovery was rapid and complete.

An ancient author has left an excellent maxim to be observed by medical men, when anxiously engaged in operative practice where the life of the patient is confided to, and almost required at, their hands. This maxim emphatically applies to operations in midwifery, when the operator is called upon—often on his own responsibility, and at a distance from all support—to act immediately, and in the presence only of those who are too prone to attribute every untoward result to a want of skill on his part, whether the charge be merited or not. The maxim consists of three words—“*Tutò, citò, et jucundè*”; which may be thus rendered—“Safely, speedily, and with self-possession.”

CONVULSIONS AFTER DELIVERY.

CASE III. A farmer's wife, aged 30, of rotund form and plethoric aspect, was delivered of her third child after a natural labour of short duration. I had not left her long before I was overtaken by a messenger, requesting me to return with as much haste as possible, as she was in convulsions. It appeared on my arrival that she had had several severe fits, to the great alarm of her friends. I bled her largely from the arm twice; after which the convulsions ceased, and she became conscious. Having remained in the house some time, I went home, requesting that I might be again summoned, if the fits should return.

When I saw her the following morning, her relatives received me with desponding looks, and reported that she had had more convulsions during the night, that she was insensible, and that they expected her death was at hand; in short, they had evidently made up their minds that she was past all remedy, and therefore had not deemed it necessary to send for me again. On entering her apartment, she was lying on her back, insensible and breathing stertorously. Perceiving that she was still labouring under symptoms of cerebral oppression, and as her pulse was firm and regular, I bled her again from the arm, to the astonishment of, and in opposition to, her relatives, who declared that another bleeding would extinguish the little life that remained. In this, however, they were mistaken, for soon after the third abstraction of blood she became sensible; there was no return of the convulsions; and under the use of purgatives and a spare diet her recovery was complete.

It sometimes occurs that puerperal convulsions will more readily yield to the abstraction of blood from the external jugular than from the brachial veins, especially when the former appears full and distended.

CASE IV. A publican's wife, of middle age and sanguine aspect, having been delivered of her third child after a normal and easy labour, was seized with convulsions. I immediately bled her from the arm copiously, and shortly afterwards repeated the bleeding; but, as the convulsions continued notwithstanding, I opened the right external jugular vein, and abstracted a considerable quantity of blood from that vessel, which at once succeeded in subduing the convulsive actions, and restoring her to consciousness. She recovered from the attack without any interruption.

It is perhaps a matter of doubt whether blood drawn from the external jugular vein is more efficacious in relieving a plenary condition of the cerebral veins than blood abstracted in a full stream from the brachio-cephalic vein, as the blood drawn from the latter must cause a vacuum to the same extent in the subclavian vein, and thus allow of a more facile descent of the blood through the jugulars. Nevertheless, it appears reasonable that, in order to relieve a local plethora in any part of the body, we should, if possible, take blood from a vessel that issues directly from the seat of that plethora. In support of this practice, I have

seen it attended with the happiest effects in children, when seized with what Dr. Cullen denominates "cerebral convulsion"; and I am persuaded that in such cases the opening of the external jugular vein ought to take precedence of the more common and more tardy practice of hirudinous bleeding.

It has been stated above, that the application of cold to the head is an adjuvant to the abstraction of blood; but it will be found most efficacious when used at a temperature of not more than 32° Fahr.

CASE V. In the early part of my obstetric practice, in the month of February, I was hastily summoned by an old established midwife to visit a primipara, about twenty-four years of age, in strong convulsions, whom she had just delivered of an illegitimate child. I accordingly did so, and found her statement to be correct. I immediately bled the patient from the arm to a considerable amount; and as there was a deep snow on the ground, I ordered the midwife to put a good quantity between some cloths and apply it over the head. I then went home, which was only in the adjoining street, and promised to return in a short time. On my second visit, the patient was still insensible, though not at all convulsed; and perceiving from the dryness of her hair that the snow had not been effectually applied (the midwife having only rubbed a little over the forehead with her fingers), I ordered a large quantity of snow to be brought, which I immediately enveloped in a cloth, and applied to the whole of the head, well raised upon the pillow. On my third visit, I found her quite conscious, and learnt that her senses were restored soon after the snow was laid on. From that time the convulsions subsided; no repetition of the bleeding was required; and by the aid of calomel and the black mixture she perfectly recovered.

The facts above stated prove, I think, that the puerperal plethoric convulsion is a curable disease by the means which have been recommended. At any rate, my own experience can bear testimony of their efficacy, inasmuch as I have never met with an unfavourable result.

But this treatment does not bear the stamp of novelty. All the most respectable obstetric authorities are agreed upon the subject, since its pathology has been better understood; but previously to that, as has been before observed, we find the treatment far less defined and efficacious.

Lamotte, who practised in the latter part of the seventeenth and early part of the eighteenth century, adduces, in his chapter on "Convulsions", six cases; and although in the sixth case he bled his patient eighty-six times, in various quantities, during the last five months of her gestation, in the five former cases bleeding was not employed at all. Of these, three appear to be of the plethoric kind, and one consequently became paralytic.

But to show the danger of neglecting so important a remedy, many deaths have taken place suddenly at the advanced periods of pregnancy in women predisposed to plethoric convulsions.

Several instances of the kind are mentioned by Dr. Denman; and he observes, that although "in the examination of many women, who have died in convulsions, I have never seen an instance of effusion of blood in the brain, though the vessels were extremely turgid." He goes on to say:—"Yet the late Mr. Hewson informed me of a case of convulsion, in which, on examination after death, he found an effusion of blood in small quantity on the surface of the brain. In a case of convulsions, in which the patient died about eight hours after delivery, Dr. Hooper found a coagulum of blood, weighing near four ounces, lying between the dura and pia mater. It is probable that, by more careful attention, instances of effusion of blood might be found to occur more frequently than has been presumed."

PUERPERAL IRRITABLE OR NERVOUS CONVULSIONS.

The assertion of Burns, in the quotation before made, as to the very rare occurrence of the irritable convulsion, compared with that of the plethoric, would almost imply his disbelief in its occurrence at all; but the best authorities

in midwifery have laid it down as a fact, that such a convulsion does occur in the later period of utero-gestation from other causes than cerebral plethora, and requires so different a treatment, that what will save the patient in the one case may help to destroy her in the other.

In entering, therefore, upon the subject of this kind of puerperal convulsion, the great importance of accurately distinguishing between the two becomes at once manifest; and in order to qualify us for a correct diagnosis, it will be necessary briefly to consider its exciting causes. It will be right first to inquire, whether a morbid or disordered condition of the renal function might not be a predisposing cause of the eclampsia in advanced utero-gestation? For we know that such a condition often occasions epileptic convulsion, either directly from unfiltered blood, or indirectly from serous infiltration, of which I have myself seen many instances.

It is abundantly proved by several writers, both English and foreign, that in puerperal eclampsia the urine is often found to be albuminous, showing either a granulated or merely a congested state of the kidneys. The former must be viewed as quite apart from utero-gestation, and permanent; the latter as probably the occasional result of physical obstruction by the gravid uterus, and therefore temporary. Professor Simpson calls this "a transitory morbid condition, from which the patient recovers within the course of a few days after delivery."

When there is a morbid structural change in the kidneys, the patient would be liable to convulsions under any circumstances, and this is indicated by a uræmic aspect, anasarca, etc. But how are the convulsions, associated with an albuminous state of the urine from renal congestion only in an advanced period of utero-gestation, to be connected with the uterine function, and thus entitled to be termed puerperal?

I think the connexion may be traced through the medium of the blood in the following manner. When the kidneys, either from structural disease or functional causes, are so disordered as to allow the albumen of the blood to pass with the urine, the blood becomes disintegrated by the loss of considerable quantities of one of its principal supplies to the nervous system, and thereby disqualified to maintain it in a healthy tone. Under these circumstances, the incident nerves and the cerebro-spinal centres become weakened, morbidly sensible, and liable to be acted upon by exciting causes, which, in a normal state, would not affect them; and there is no cause more likely to act upon them and bring them into convulsive action than an irritated condition of the os uteri at the full period of gestation.

I have been led to hazard this opinion from what Professor Simpson has stated upon this subject in his valuable *Contributions to Obstetric Pathology and Practice*; and his view is probably the more correct one, viz., that the convulsions are "connected with that condition of blood-poisoning or uræmia which is the result of albuminuria—whether that condition consists in a morbid accumulation of urea, or is produced, as Frerichs supposes, by the presence of carbonate of ammonia in the blood; or is, as is more probable, the effect of some other morbid agent in the circulating system, capable, like strychnia, of increasing the centric irritability or polarity of the spinal system to such an excessive degree that, under this super-excitability, comparatively slight eccentric causes of irritation in the stomach, intestines, uterus, bladder, etc., readily induce convulsive attacks of a general form, like those of puerperal eclampsia."

But, although it is admitted that albuminuria is often found in pregnancy associated with convulsions, this must be looked upon in the light only of an exception to a general rule to the contrary in pregnancy without such an association. Dr. Golding Bird observes: "None of the specimens of urine voided by pregnant women, that I have examined, were coagulable by heat, nitric acid, or, with but two or three exceptions, by acetic acid; and therefore could not contain any considerable portion of albuminous

or gaseous matter. The addition of ammonia almost invariably produced a dense deposit of earthy phosphates; and, with the exception of this proof of the existence of an excess of earthy phosphates in the secretion, no appreciable portion of any abnormal ingredient could be detected."

We now come to those exciting causes, stated at the commencement of this paper, to which this kind of eclampsia is most probably due, viz., reflex nervous action.

As the full period of pregnancy approaches, it may be reasonably supposed that the sensibility of the filaments of the sacral nerves distributed upon the os uteri is normally increased; but when, either from the force of the natural efforts, or an undue artificial interference, that sensibility is morbidly augmented, an abnormal excitation is communicated through the centripetal sensitive branches to the posterior columns, and through them to the anterior motor columns of the spinal centre, whence it is reflected and radiated with electric rapidity to all their centrifugal branches that govern the muscular system, throwing almost every muscle of the body into vehement involuntary actions.

From this statement, it is clear that, to enable us to distinguish this kind of eclampsia, we are to be guided more by the nervous than by the vascular system, and more by the uterine than the cerebral function. What, then, are the diagnostic marks of the irritable or nervous convulsion? The absence of the symptoms of plethora; an irritable temperament, with rapid pulse; liability to epilepsy; abnormal intolerance of uterine pain and vaginal exploration; distended bladder; an inflamed condition of the os uteri; agonising pain through the hypogastric region, as if a sword had passed through it (which may always be considered as a forerunner of an immediate convulsion); and gastric disturbance. These are the signs and symptoms which will help to distinguish an irritable from a plethoric convulsion.

Lamotte's fourth case was evidently the result of reflex action, caused by irritation of the neck of the bladder, pressed upon and obstructed by the head of the child; for, as soon as the pressure was taken off, the urine flowed in immense quantities, and the convulsions ceased.

CASE VI. Some years ago, I attended a lady with her first child. She was forty years of age, and of very short rotund form. The parturient action commenced early on the Monday morning. The presentation was normal, and the pains returned regularly at intervals of about seven minutes; but the process of dilatation was more tedious than I ever remember before or since, and the uterus most intolerant of pain. After six days' suffering, as the uterine orifice was not more than half dilated, I requested a consultation with a neighbouring experienced obstetrician as to what had best be done. He advised artificial dilatation, which he soon accomplished with his index finger acting as a revolving wedge between the vertex and the os uteri during every pain. The dilatation gave intense suffering; and, from the force required to stretch open the rigid structure of the os uteri, its defined margin was rubbed into a ragged fringe. The head soon dropped down upon the perinæum; and, as her strength was exhausted, I at once delivered her with the forceps. The placenta was expelled, and, as was expected, such a hæmorrhage ensued as threatened to sweep away her life. This, however, was restrained; but the following day agonising pain of the hypogastric region and puerperal convulsions supervened, which terminated her existence.

Here was an example of irritable convulsion caused by inflammation of the os uteri.

With regard to gastric disturbance: it is a well known fact that, during pregnancy, there exists a remarkable excitability of the gastric function. When this is aggravated in the advanced stage of utero-gestation by crude and indigestible food, the pneumo-gastric or the ganglionic nerve may become the excito-motory cause of convulsive actions. The late Dr. Clark of London, one of the most talented teachers of his day, had seen several instances of eclampsia from oysters, and always warned pregnant women against eating them; and it is somewhat singular that, only a few days ago, I met with a case which demonstrated the cor-

rectness of his observation, although it occurred in a male patient.

CASE. An elderly gentleman of fine stature, and living in the downs of Dorset, suddenly felt a numbness of his right side. After a few seconds it ceased, but returned in the same manner several times in twenty-four hours. Never having felt so before, he became alarmed, and sought advice. His aspect was healthy; there was no headache nor vertigo, and no loss of muscular power. His pulse had been irregular for many years, without in any way interrupting his general health, which had been remarkably good. As it was quite clear that the symptoms were not due to cerebral extravasation or infiltration, I sought for the cause in some disorder of the gastric function, and asked if he had eaten anything that might account for his feelings. He replied in the negative, except indeed that the day previously he had eaten two dozen oysters, and drank a few glasses of strong beer! This, to my mind, was a sufficient cause. The shell-fish had disordered the sensitive function of the nerves above mentioned; the posterior or sensitive column on the right side of the spinal cord had become involved; and it is probable that, had the gastric nerves been in a more exalted state of excitability, the excito-motory action would, through the anterior column, have become reflecto-motory, and resulted in epilepsy. The symptoms yielded at once to calomel and the compound extract of colocynth, followed by a dose of rhubarb and sulphate of magnesia.

The prognosis in this kind of puerperal convulsion will depend upon the nature of its causes. Should it arise from uterine inflammation, or be associated with organic disease or profuse hæmorrhage, the result will be unfavourable. On the other hand, should it be excited by local and general irritability of the nervous system, without any other complication, it may be pronounced as favourable.

The treatment of this case is far less defined than in the former. The first thing to be done is to pass the catheter, not only to empty the bladder, but to *examine the condition of the urine*. If this secretion be found healthy, we may adopt one full bleeding, and afterwards give an heroic dose of laudanum; then, should the convulsion have taken place at the early stage of labour, we are at once to proceed to deliver by art, and by such a method as circumstances shall require; and, should the convulsive actions continue after the delivery, we have an admirable remedy in the controlling power of chloroform, which has been found by Professor Simpson to be highly efficacious in subduing this kind of fit. In the *Monthly Journal of Medical Science*, January 1852, p. 40, after giving a most remarkable instance of its complete success by inhalation in an infant ten days old, after having been in convulsions during ten days, he observes: "I have known the inhalation of chloroform similarly useful in other cases in arresting infantile convulsions; but I am not acquainted with any instance in which the patient was so young as in the above instance. In the adult also, especially in cases of puerperal convulsion, I have now repeatedly seen the inhalation of chloroform as signal and satisfactory in its antispasmodic power over the convulsive fits, as it was in the little patient whose case I have described."

As soon as the patient becomes sufficiently conscious, the bowels are to be cleared with a smart dose of calomel given in jelly, honey, or something easy to be swallowed, and with repeated doses, if necessary, of castor oil, or the following mixture:—

Rx Magnesiæ sulph. ʒiiss.
Tinct. jalapæ, syrapi zingib. aa ʒss.
Infusi sennæ comp. ad ʒvj. M.

Capiat 4tam partem 2dis horis donec alvus satis respondeat.

This mode of treatment, varied of course according to circumstances, will sometimes succeed in subduing puerperal eclampsia of an irritable character; but it must be confessed that it is not entitled to that amount of confidence which the treatment of the plethoric convulsion so justly deserves.

Southampton, March 1854.