#### Contributors

Dyce, Robert, 1798-1869.

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# PUERPERAL CONVULSIONS.

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BY

## ROBERT DYCE, M.D., F.R.S.E.,

PROFESSOR OF MIDWIFERY IN THE UNIVERSITY OF ABERDEEN.

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### ON PUERPERAL CONVULSIONS.

THERE are few more frightful accidents which can happen to a pregnant woman than the occurrence of puerperal convulsions. The suddenness of the attack, the alarm of the friends, and, it may be, the indecision of the medical attendant-all give a threatening aspect to the disease. Yet, although puerperal convulsions must always be looked upon as a disease of a most dangerous character, still, in a great majority of instances, happily the patient recovers well. In these days, when we hear so much of the change of type in disease, with the consequent dread of bleeding, the minds of many in the profession may perhaps be startled by my recording the following cases where bleeding and other lowering remedies were so fearlessly carried out in the treatment of this alarming disease. I have the satisfaction, however, of stating that every case without exception terminated favourably. It will be observed that in whatever class of patients the disease occurred-whether in the nervous and irritable, whether in the plethoric and robust female, or at whatever period of pregnancy or labour the attack appeared, the same practice was pursued, and with the same unvarying success. It will also be specially noticed that in some albumen was ascertained to be present, while in others, though not looked for, its existence was strongly presumptive, from the extent of cedema, not only in the limbs, but in the face and body generally, yet no essential difference in the treatment took place.

These cases show not only the value of bleeding as our sheetanchor, but also the great extent to which it may be carried, whatever be the period of the attack, and whatever the constitutional character of the patient; and this, too, without any interference with the rapid convalescence of the patient, and her ultimate usefulness as a nurse to her helpless infant. These facts have strongly impressed me with the belief that there must be some special provision made in the parturient female, to admit of such a great loss of blood, not only when these losses are so enormous as on some occasions follow ordinary parturition, but also in cases where it may be deemed necessary to remove blood, such as in those now under consideration; for assuredly such a loss at any other time, under ordinary disease, could not be borne without entailing serious, almost irreparable mischief.

Whatever may be looked upon as the primary cause of puerperal convulsions, whether blood-poisoning from so-called retention of urea, or solely congestion of the brain, the same remedy I consider to be equally demanded. The chief danger is in the brain. The cerebral circulation must be relieved—lessened in all cases; and it is by this remedy only that the brain can be preserved from serious injury. But, to attain this end, there must be no half measures; the remedy must be fearlessly practised, and repeated as required, from the moment of the attack; and I cannot doubt but that equal success will follow this practice in the hands of others. This is no new observation, it has been strenuously urged by our predecessors, and its success proved ; and, though the use of bleeding is now by many in the profession still admitted, it is also by not a few very eminent men ignored altogether, or to such an extent as to be nearly absolutely useless in saving life. I think that we are too apt to despise antiquated notions, and too ready to adopt novelties, without regard to strict philosophical reasoning, and thus to lose sight of the main point at issue. I think, also, that too much weight has been attached to the mere presence of albumen, if taken as a prognostic of eclamptic fits; for I have detected albumen in pregnant women, and yet they went through all the stages of labour and childbed without fits; and others have met with cases in which albumen has been consecutive upon convulsions.

There is one fact in reference to the following cases worthy of notice ; viz., that the recovery in every case was complete, was rapid, and that in no case did coma, or even a half-conscious state, remain beyond a very short time after a permanent impression had been made on the system by bleeding ; whereas, if the patient be bled sparingly, the coma may be prolonged for days, the convalescence rendered tedious and uncertain ; nay, even death may be the result.

I might refer to numerous cases which have been recently published as strongly confirmatory of these facts. I only mention three recorded by Dr. Donkin of Durham, as strikingly confirmatory of my views and treatment. Two were fatal. One of these, however, seemed more like an apoplectic than epileptic convulsion, as there was only one fit, and consciousness never returned. The second case was bled sparingly, and died. The third case was largely bled, coma was not continuous, and perfect consciousness returned in twelve hours. Dr. Suckling of Birmingham records a case of recovery from convulsions where there was no evidence of albumen, though looked for. The patient remained incoherent on the third day. Another very similar case I met with some months ago, to which I was summoned to the north of England in consultation. The patient, who was in the seventh month of her first pregnancy, was seized with convulsions from eighteen to twenty hours before I saw her. They had continued to recur, and she remained in an unconscious state for

forty-eight hours afterwards. Bleeding was so strenuously objected to by the gentlemen attending, the views of the day in regard to albumen being urged in confirmation, that I was very unwillingly induced to give way. At length, a few leeches were permitted to be applied, not to the head, but to the loins—I presume, on the supposition that pressure upon the renal vessels, and consequent congestion of the kidneys, had been the cause of the convulsions and albuminous urine. As might be expected, little good resulted. She, however, gradually came round, and was delivered of a dead child a week after the first convulsion, and with no untoward symptom. This patient made a very tedious recovery. I think, however, that if she had been more actively treated, even after I saw her, her restoration to perfect consciousness and health would have been more rapid, and I am free to confess that, had the result been otherwise, I would have for ever felt that I had been aiding and abetting in her death.

Although my chief reliance is placed on the free use of the lancet in all such cases, it is not to the exclusion of other very important remedies. Still, all of them, I consider, are but auxiliary and conditional remedies, and only to be employed subsequently to, or in conjunction with bleeding. Thus, the free and immediate use of the cold douche, with purgatives, is essential; so also opium, if given judiciously and with the restrictions so well pointed out by Collins, may often supersede the necessity of further depletion; but, if given injudiciously at the outset, and without previous bleeding, opium in any shape will be absolutely and positively injurious.

Again, chloroform is a very important adjunct, especially if it be necessary to hasten and conclude the labour. Its administration will allay the great restlessness and tossing about of the patient, and thus admit of the application of the forceps without the fear of any injury, a circumstance always to be dreaded in operative midwifery under such circumstances. After bleeding, on any indication of an approaching fit, marked by rigidity of the limbs, a staring fixed expression of the eyes, and increased restlessness, chloroform should be freely given, and the effect kept up until these symptoms subside, and quiet sleep is induced ; the pulse being especially watched (on which I solely depend). But, if it fail in arresting or shortening the fit, it should be discontinued, or given with more caution, and recourse again had to the lancet. By these means, the risk of fatal oppression of the brain or extravasation will be prevented, and the convulsions lessened.

But there is another, and a very important part, in the treatment which remains to be considered. The patient is suffering from a disease dependent upon the state of the uterus, which state, it is believed, can only be got rid of by terminating the labour. What, then, are the principles that should guide us regarding delivery in these difficult cases? In short, will it be proper to interfere with the progress of gestation or parturition? As far as my own

experience goes, I believe that generally interference is prejudicial in whatever stage of the labour the convulsions may occur. Most assuredly, during gestation, and before labour has commenced, it will be universally conceded as admitting of no dispute, that until labour has commenced, any interference on our part would be highly injurious; so that, in convulsions during pregnancy, we have, as Gooch says, " nothing to do with the uterus, but solely to attend to the convulsions." It will also be equally admitted that, in the first or early stage of labour, should convulsions come on, every attempt, by the finger or other artificial means, to dilate the os uteri, ought to be avoided ; as it will be found not only to bring on convulsions, but generally to increase them in violence. Denman assures us, that he "attempted gently during every pain to assist in the dilatation of the os, but he was soon convinced that the convulsions were not only brought on and continued, but increased in violence; he, therefore, desisted, and left the work of delivery to Nature." Thus, then, before labour comes on, or in the first stage of labour, I consider interference wholly inadmissible, and only tending to increase the danger. But, in the second stage, when the head has come well down into the pelvis, and within reach of the ordinary short forceps, if, after free bleeding and the use of the other remedies, the convulsions were not manifestly lessened, provided the restlessness of the patient could be controlled, I would at once apply the forceps and bring away the child ; as this may now be easily accomplished, and is the only expedient left on which reliance can be placed for the permanent removal of the convulsions.

With regard to turning, I consider the operation a very questionable practice under any circumstances; as I should fear that the irritation occasioned by the introduction of the hand would do far more harm than would be compensated by the benefit derived from emptying the uterus. If it be attempted, it ought to be confined to that stage in which the os is fully dilated, while the membranes are unruptured, so that there may be as little increase of irritation as possible ; for, if the uterus closely embrace the child, as it does after the escape of the waters, or the os be not fully dilated, the danger of the operation will be very great. But, unfortunately, the mere emptying the uterus does not always arrest the progress of the disease ; for I have known cases where the fits have continued unabated for several hours after delivery; and a case will be detailed, in which the first fit occurred some hours after a favourable and easy labour, showing some other cause for their continuance than mere uterine irritation. I would much prefer and would recommend watching the result of repeated bleedings; and if it were found that the return of the convulsions had been prevented, or even that they were lessened in violence, I would refrain from immediate delivery, and perhaps this forbearance would be followed by natural delivery, the progress of which, it should be remembered, is always more rapid under convulsions. It hence

requires constant watching, lest, as has happened in many instances, the patient has been delivered unknown to all, and the child lost. This rapid progress of labour under convulsions is an argument in favour of some consideration when so doubtful an operation as turning is contemplated. But, besides these objections, it will be found to be an unquestionable fact, that far more women die when they are officiously delivered by artificial means of whatever nature, than when they are left to their own resources.

I conclude these remarks by giving in detail some cases corroborative of my views; merely observing that, if I had been deterred by the fear of poisoned blood, and had had no fear for my patient's brain, in my treatment of puerperal convulsions, I would have had less favourable results to record.

#### CASE I.—Convulsions during the Eighth Month of First Pregnancy; Mother Saved.

I was requested by a medical friend in this neighbourhood to visit his wife, who was near her confinement of her first child, on the forenoon of May 18th, 1855. He stated that for some weeks past she had been complaining of headache, of occasional faintness, and pain at the pit of the stomach; that during the previous night she could not sleep in consequence of its severity; that she rose early in the morning and walked restlessly about, grasping her head, then lay down, and shortly afterwards became convulsed. He had only applied cold to her head. I saw her at 1 P.M. She was then quite conscious, but her husband did not think her altogether in her ordinary state. Her face was flushed; the pulse full and hard. She complained much of her head, which was hot. The limbs were much swollen, and her face about the eyelids was cedematous. The urine was scanty. She had felt no motion of the child for two or three days past. There was no indication of labour. She was immediately bled to thirty ounces, and ordered to have a smart purgative of senna and salts, with cold application to the head, and to live on gruel and tea.

May 19. The bleeding had completely relieved the headache; and she expressed herself as feeling freer of discomfort than she had done for a long time. The Medicine had acted freely.

May 21. She had a return of headache this morning, but not severe. Towards the afternoon the headache increased, with flushing and restlessness. She was bled again to twelve ounces with immediate relief. The medicine still operated. In the evening labour pains came on, and she was delivered of a dead child in a few hours.

May 22. She had no headache during the labour, nor any uncomfortable feeling. She slept tolerably well. The urine was more abundant, and the œdema less.

In this case the urine was not examined, but it may be fairly

presumed, from the great extent of œdema of the whole body, not excepting the abdominal parietes, that albumen would have been found in abundance. The dropsical symptoms entirely disappeared by the third day, and she made a good recovery. This lady has had a second child, but with no return of these symptoms.

#### CASE II.—Conculsions before Labour in the Ninth Month of First Pregnancy: Mother and Child both saved.

A patient of mine called on the morning of March 5, 1859, to ask me to see his sister, Miss-, aged 21, who had unfortunately become pregnant. and who had, an hour before, had some sort of fit. I saw her at 8 A.M. She was in bed, conscious, yet confused in her manner, and wondered what had brought me so early. She was not aware that she had been ill. I learned that she had had a violent convulsion about an hour before while moving about in her room ; that a medical man had seen her ; that he had ordered an anodyne draught and left her. While I was talking to her she stared wildly, tried to sit up, and immediately became convulsed. Her face was livid, and pulse slow; breathing stertorous, and limbs rigid. I at once bled her until she became sensible; twenty-five ounces were taken. I directed her to have cold applications to the head, and as soon as she could swallow, to have a smart dose of senna and salts. I also requested a consultation in an hour with the medical gentleman who had seen her. We met at 10 A.M. He approved of the treatment, admitted that he had never seen a similar case, believing it to be hysterical, and that he had dreaded bleeding from the weakness of her pulse. There was no cedema.

March 6. There was no return of convulsions, but she had been restless. The bowels were scantily opened; pulse fallen. In the evening she had some headache. The purgative was ordered to be repeated, and cold to be applied to the head.

May 7. She slept quietly the first part of the night. Towards morning labour commenced, and proceeded favourably and rapidly; but, just as the head was about to be born, she had another convulsion of shorter duration. She was again bled, but to a smaller amount (twelve ounces). The placenta came off in a few minutes. The child was alive and healthy. She had no further attack, made a good recovery, and nursed her child the usual time.

In this case there was no œdema. She was a little spare woman, and, as far as I could learn from her friends, she had been in perfect health until the moment of the attack.

#### CASE III.—Convulsions during Pregnancy at the Seventh Month: Delivery by forceps at the Ninth Month, and Removal Piecemeal of a Morbidly Adherent Placenta: Mother saved.

Mrs. S., aged 42, a large-made flabby woman, residing at Cotton, in this neighbourhood, was in her second pregnancy. I was requested

by the late Dr. Gilchrist to meet him as soon as possible on the 18th of April, 1855. On my arrival at 7 A.M., I found the patient just recovering from a convulsion, in which he reported that her features were distorted, swollen, and livid, accompanied with violent agitation of the whole body, foaming at the mouth, and breathing with a hissing noise, as he remarked, frightful to look upon. He stated that she had had a similar attack at 4 o'clock in the morning, which appeared to have left no bad consequences, as, after a few minutes' slumber, she awoke up quite herself. Leeches had been applied to the temples, which were still bleeding. He further stated that he had been treating her for some weeks past for general dropsy, and that every limb was swollen, and the adbominal parietes and both labia were cedematous, and the face had a puffy look ; that the diuretics, of which he had tried several, had produced little or no effect. The urine was scanty, and very albuminous. Within the last few days a suspicion had crossed his mind that his patient was pregnant; but, from the absence of catamenia since she was last pregnant twelve years ago, both he and his patient were in great doubt upon the matter. Having first bled her to the extent of 24 ounces, and consciousness being fully established, I made a careful examination, which satisfactorily proved her to be pregnant, and in the seventh month. She was well purged; and a mild diuretic was ordered. By a continuance of these means, the dropsical symptoms gradually subsided; the urine flowed abundantly, and was free from albumen. I saw no more of this patient until June 24th (two months afterwards), when I was again requested to see her. I then learned the subsequent history of the case. She continued well in every respect until about three weeks previously, when she noticed that the motion of the child was becoming less strong, until it gradually ceased. About the same time a brownish discharge came from the vagina. She, however, pursued her ordinary avocations, until eighteen hours ago, when the labour set in. The pains continued so feeble and distant that Dr. Gilchrist had thought it right to apply the forceps and bring away the child. It was quite putrid, with the cuticle entirely abraded. It was a full-sized female child. My visit now, two hours after delivery, was in consequence of retention of the placenta from what was supposed to be hour-glass contraction of the uterus. It, however, proved to be globular contraction of the whole uterus, the os being the stricture; by dilating this, the hand passed easily within the cavity. The entire placenta was found firmly adhering, and required to be peeled off bit by bit from the uterine wall. As this is an operation requiring care, so as not to injure the loose flocculent mucous membrane of the uterus, in our anxiety to remove the whole placenta, I risked leaving some small portions adhering, and was in no hurry in the operation. The hæmorrhage was moderate. No untoward symptoms followed, and she made an excellent recovery.

This case appears to have been one of acute dropsy, with album-

inuria, which the bleeding manifestly rapidly relieved; while the convulsions occurring so early in pregnancy, and not returning again, while gestation continued to progress healthily for so many weeks afterwards—necessitating as this does a steady increase in the size of the uterus and its contents—would seem to imply that something more that mere retention of urea from pressure had been the cause of the convulsion; in short, that there must have been some other cause simultaneously in operation, or why should the convulsions not have returned, or the urine become again albuminous as pregnancy advanced? May it not be possible that some peculiar condition of the blood existed, which, by interfering with the healthy nutrition of the brain, increased its irritability and proneness to convulsion ?

#### CASE IV.—Convulsions during Labour : First Pregnancy : Mother and Child both saved.

Jane L., aged 25, unmarried, a small-made woman, was in labour on May 19th, 1862. A student was in attendance, who reported to me that the labour was progressing steadily, but rather slowly; but that he feared the cord had come down with the head, and that he did not think it pulsated. Subsequent events (a living child) rather disproved this statement. The head was pressing upon the perinæum, when, without any warning, she had a violent convulsion, marked by incessant shaking, insensibility, and foaming at the mouth. During the fit, the child was unexpectedly born alive. Cold water had only been applied to her head. I saw her within twenty minutes. She was then sensible, but flushed ; pulse calm. She seemed aware that something had happened, but made no complaint. The placenta had just been removed, and the binder put on, when she had another more violent fit. A vein was immediately opened in the arm, and twenty ounces of blood withdrawn from a large orifice. She soon afterwards opened her eyes, and said she was quite well. A senna mixture was ordered every two hours, and cold to be kept applied to the head. Next morning, I found that she had slept a good deal. She had no headache, nor unusual discharge. Pulse soft and calm. Her convalescence was rapid.

This case presents one or two points of importance : first, the rapidity of the birth. The child was born during the fit. This I have found invariably the case, that the labour proceeds more rapidly both during and after convulsions; hence a strong reason for frequent examinations, to ascertain the progress of the labour, lest the child be lost by suffocation amongst the discharges. Secondly, there was no cedema of any part of her body, nor had she been complaining of her head; in fact, she was in perfect health. Yet the urine was found highly albuminous by the ordinary tests. To ensure its freedom from admixture with the vaginal discharge, I drew it off by the catheter on the night of her confinement and every day thereafter. On the fifth day, there was scarcely a trace of albumen to be detected. On the seventh, there was none.

A few months afterwards, I was surprised to see this patient wetnursing a child in a family. She apparently had done justice to the child, as it looked fat and contented.

#### CASE V.—Conculsions during and after labour : Mother and Child both saved.

Mrs. W., living at Broadford, a small-made, rather fat little woman, aged 18, was in her first pregnancy. I was called at 10 P.M. on the night of September 4th, 1846, by my friend the late Dr. Philip. I found that the patient, who had been in labour for twenty-one hours, was first in charge of a midwife; that Dr Philip had been sent for at four in the afternoon, on the occurrence of a convulsion, and had bled her sparingly from the arm. She had had, since that time, three similar attacks; and he had bled her a second The amount of both bleedings did not amount to sixteen time. ounces. On my arrival, I found her apparently sleeping quietly, breathing easily and regularly. The countenance was flushed; the pulse slow and laboured. I was told that she had just had another severe fit. On examination per vaginam, the head was detected at the brim. The os was well dilated, though its circle could all be felt; the vagina was cool and moist, but the external parts were thick. Very shortly, the patient moaned, and seemed uneasy. This was the only external evidence of a labour pain, as the finger distinctly detected the contraction and pressure of the head downwards. When this was repeated two or three times, she gradually became more sensible, and, instead of simply moaning, she rolled herself from side to side, and at length, when quite herself, she bore her pains, audibly, as under ordinary circumstances. The pains continued regular and increasingly strong, and the head making rapid advances. There seemed, therefore, no indication for interference with the labour. The patient's head was kept cold by wet cloths, and weak tea was allowed for drink. Some time afterwards, when everything was going on favourably, she complained of being very sick, and, before anything could be given her, a most violent convulsion come on, which lasted several minutes. A vein was again opened, and allowed to bleed until the fit subsided; about thirty ounces were taken. The fit was marked by great agitation of the body and frightful distortion of the features, which, along with the whole body, were swollen, and of a purple colour. At length the breathing became quieter, the agitation lessened, and she relapsed into a quiet sleep. On examination, a most marked advance had been made during the fit. The head was well advanced into the pelvis; the parts were well relaxed, and the secretion of mucus copious. After this, for a short time, there was little change. The

pains were trifling and distant. So soon as she became in some degree sensible, it became a question as to the propriety of expediting the labour. If so, by what means ? Ergot was decided upon, and given in half-drachm doses every fifteen minutes. After the second does, the pains become very severe, and at length nearly continuous; and, in a quarter of an hour after the second dose, the head was born. Just, however, at the moment of birth, another convulsion, even more severe than any former, came on. The cold douche from a height was used, her head being brought over the edge of the bed ; and the arm was again allowed to bleed to about ten ounces. The child, a full-grown female infant, was expelled during the fit at midnight. The placenta was thrown off in a quarter of an hour. The uterus contracted kindly. No hæmorrhage followed ; and she fell asleep shortly, and continued dozing for an hour and a half. She then awoke in a fright. A fit immediately followed ; it was of much shorter continuance, and was relieved by the cold douche. As soon as she could swallow, a grain and a half of solid opium were given, and rigid quietness and darkness were enjoined. No change of linen was permitted, and the head was ordered to be kept constantly cool.

Next morning she was better; she had slept at intervals, was not conscious of what had happened; she knew she had been ill, but had no recollection of the labour, and would not admit that the child shown was her own. The most unfavourable symptom was severe headache, which she said "shot through her like an arrow." Pulse full, about 90 ; she had much thirst ; cupping on the temple to twelve ounces was ordered. The blood was obtained rapidly and readily ; but she made great resistance, and seemed very averse to the operation. This circumstance seemed to originate the attack, which almost instantly followed the removal of the glass. It was, however, very slight; and, on her recovery from the partial stupor which usually followed the fits, she was more sensible than she had been since their first commencement. From this time she mended rapidly. The milk came on favourably, and she nursed her child for nine months. This patient has had since that time five other children, but no return of convulsions.

This case, which I have given at some length, is of much interest, from the persistence of the fits, notwithstanding the early bleeding. The quantity, it will be observed, drawn was small, and no manifest decrease in their severity and frequency was apparent until after the larger quantity had been taken. The subsequent treatment by ergot, instead of using the forceps, may be questioned ; but as we did not at the time possess that greatest of blessings—chloroform, and knowing the danger of introducing any instrument into the vagina of a woman (safe even as is the forceps) who is writhing in convulsions I preferred the ergot, and happily the end justified the means.

#### CASE VI.—Convulsions during Labour : First Pregnancy : Delivery by Forceps ; both Mother and Child saved.

Mrs. A., aged 22, a tall and rather slim young woman, was taken in labour in the early morning of April 11, 1859. Her medical attendant stated that the labour went on favourably until midday, when, without any warning, he was alarmed by the shaking of the bed, and next by the extreme agitation of the patient. He at once took a soup plateful of blood from the arm, and finding to his surprise that the head had come low down, he applied the forceps and brought away the child. I saw her at his request an hour after the birth. She was then quite comatose, with a flushed face, slow pulse, laboured and heavy breathing. The placenta had not been removed. The vein was at once reopened, and two full platefuls of blood were withdrawn. She soon afterwards opened her eyes and asked us what we were doing, and became immediately quite sensible. The placenta was found lying in the vagina. She knew nothing of the birth of her child, and was so doubtful when told that her trials were over, that she put her hand down to her belly to satisfy her-She made a good recovery, and nursed her child well. self.

#### CASE VII.—Convulsions during Labour; First Pregnancy; Delivery by Forceps; Chloroform; both Mother and Child saved.

I was requested by Dr. Paterson, on the evening of May 5th, 1865, to visit a patient in Old Machar poor-house. The patient, Jessie D., a young plethoric unmarried female, aged 17, had been in labour since 12 A.M. Without any warning she had a violent convulsion. I found her, at 6 P.M. foaming at the mouth, writhing about in bed; her face was swollen and livid; and she was wholly unconscious. Per vaginam, the head was found to be half through the brim, but with the anterior part of the cervix uteri embracing it. She was immediately largely bled, but still the fits returned with every pain. The labour was rapidly advancing. It was remarked that since the bleeding she only writhed when a pain came on, with no distortion of the face ; and Dr. W. Fraser, who had previously joined us, remarked that the swelling of the face had gone. The labour-pains continued frequent ; but she still remained unconscious. I now gave chloform to full anæsthesia to quiet the movements, as it was determined to deliver by the forceps. They were easily applied one under each ilium; and, after some firm traction and turning face to sacrum, the head was born in a few minutes and an hour and a half from the time I first saw her. The child, a female. was alive and strong. The placenta came off shortly afterwards with moderate hæmorrage. Restlessness, however, remained without convulsion; and though she answered questions, she was not quite conscious. Her head was ordered to be shaved, a blister to the nape, and five grains of calomel, with a grain and a half of opium, to be given immediately.

May 6th. She was quite conscious this morning. She made no complaint but of thirst. A senna draught was ordered to be given immediately; the room to be darkened; the head kept cool by cold cloths; and the diet to be gruel and tea. The lochia were moderate. She passed urine freely; it was not examined. There was some milk in the mamma.

May 7th and 8th. She was going on well ; had no headache nor complaint. She had plenty of milk, and was nursing her child.

This patient remained for a longer time in a half-conscious state than any that I have treated; and I am satisfied that had she lost more blood (perhaps a few ounces would have sufficed), instead of the blister, she might have been sooner restored.

#### CASE VIII.—Convulsions Four Hours after Delivery; First Pregnancy; both Mother and Child saved.

Mrs. B., aged 23, a tall, rather robust female, on the evening before her confinement, May 4th, 1853, while out visiting, was suddenly seized with agonising pain at the pit of the stomach, which made her writhe in bed. The spot was tender on pressure, and felt tense; her pulse was calm; she made no other complaint. She wanted three weeks of her full time. Anodynes by the mouth, mustard-poultices, and hot laudanum and fomentations, failed to afford her the slightest relief. She was then bled to twenty ounces, and took thirty drops of laudanum in peppermint-water. The relief from the bleeding, even while flowing, was immediate and permanent, and she slept well. Next morning she took a dose of castor-oil. Soon after its operation, she had pains which she mistook for gripes. I did not, therefore, see her until nearly 2 P.M. At 3 P.M., the child was born alive and well. She slept for an hour after the labour, and was in all respects comfortable ; but at 7 in the evening she complained to her mother that she could not see clearly, and before five minutes she fell into a violent convulsion. I saw her in a few minutes, and bled her immediately to nearly thirty ounces. She gradually recovered consciousness, but remained nearly blind. In an hour afterwards, however, she was quite herself, with the exception of vision, which was still imperfect. I was perparing for a second bleeding, when she fixed her eyes suddenly and became again convulsed. This attack was of much longer continuance. At first, her features and limbs were rigid, swollen, and nearly black ; after a little, she became very restless and violent and could not be controlled, throwing off the bed-clothes, and striking out with her feet and hands. The vein was again opened ; and, when nearly the same quantity had been taken, she all at once became quiet and pale, and the pulse fell so low that a few spoonfuls of brandy were forced down her throat by the nurse, while I tied up her arm. She almost

instantly rallied from the faint, and at midnight she was quite herself, vision perfect. Pulse soft and calm; she had no headache, having slept for nearly three hours. Her head was shaved, calomel was ordered, and a senna draught to be given in the morning. Spare diet was enjoined; exclusion of light from the room and great quietness were enforced. She had no further check; and her recovery was rapid and complete, and she nursed her child for several months.

This patient had no ædema either of her limbs or her face, nor did she suffer from headache; in short, she was in perfect health until the premonitory symptom of convulsions (acute pain at the scrobiculus cordis) attacked her the previous night. Her friends, however, had remarked that she had grown fat and plump during the latter months of her pregnancy. It is not often that any premonitory symptom precedes the convulsion ; but there are some, and this is one, acute pain at the stomach that ought never to be neglected, where, if it be accompanied by a corresponding fulness and corpulence of the system, clearly indicate an overloaded state of the vascular system, and the brain especially, and to save the patient, the free and early use of the lancet must be resorted to. This patient lost, at least, eighty ounces within twenty-four hours, and though during the last bleeding a momentary alarm arose from the faint, there was not a drop taken too much. It seems to me, also, clear that the first bleeding averted for a time the convulsion ; and had the excitement and irritation of labour not come on so soon, and allowed a little time for the free action of the bowels and other lowering remedies to have had effect, the convulsion in all probability might have altogether been prevented.

This patient, in three subsequent pregnancies, had the same tendency to corpulence, but without any indication to the head. During her second pregnancy, I bled her to twelve ounces and enjoined abstinence; but in two subsequent pregnancies, by abstaining from all stimulants, and with a very limited allowance of animal food, with strict attention to the bowels, every untoward symptom was avoided.

