

ART. V.—*Observations on Puerperal Convulsions*. By ROBERT JOHNS, A.B., M.B., T. C. D., Licentiate of the Royal College of Surgeons in Ireland; Vice-President of the Obstetrical Society; and Assistant Physician to the Dublin Lying-in Hospital.

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AMONG the diseases incident on the parturient state, few are fraught with more danger, or more liable to an unhappy termination, and certainly none more calculated to create alarm, and even terror, in the spectator, than puerperal convulsions. Yet, important as this affection confessedly is, it is not my intention to enter extensively into details upon it (particularly as Doctor Dwyer so recently directed the attention of the Society to it), but rather to notice some practical facts, which have not been dwelt upon with sufficient impressiveness by authors, and others that have been altogether overlooked. Perhaps most of these facts, if not all, are already known to every experienced practitioner, for it cannot be denied that the mortality in puerperal convulsions has decreased considerably in later years; a circumstance that can only be explained by the disease being better understood, and of course its treatment improved; but with the junior practitioner it may not be so, and to such I hope these observations may prove not only interesting, but useful, being taken from the book of Nature, the only instructress that can be implicitly relied on.

The first important fact, then, to which I would direct attention is, that this fearful affection comes not upon us without due and sufficient warning, but that there are premonitory symptoms, by a proper attention to which the convulsions may be altogether prevented. Of this fact I am, by experience, perfectly convinced, and I am, moreover, enabled to prove it satisfactorily by cases, which, through the kindness of Dr. Johnson, I have been permitted to extract from the ward book of this hospital.

It is familiarly known that during the last months of pregnancy swelling and œdema of the inferior extremities very frequently occur, and these symptoms are justly considered as a harmless complication; but if a similar affection is observed to attack the superior parts of the body, as the hands and arms, the neck and face, the case will then require a more close and accurate examination: for if in combination with this symptom there exist headach, weight, or giddiness in the head, ringing in the ears, a temporary loss of vision, severe pain in the stomach, with flushed face, there will be risk of convulsions,—a risk that will be converted into certainty, if—1. The woman is pregnant for the first time, or had similarly suffered in former pregnancies; 2. Where the head of the child presents as in ordinary labours; and 3. Where the woman is of a full and plethoric habit.

I. I am quite aware that there are some few cases on record of women having suffered from convulsions in after pregnancies for the first time; yet without impugning their correctness, they are so few that they cannot interfere with the general principle which I seek to establish,—being, in fact, but exceptions, and not the rule. And this rule, I think, can be sustained by evidence sufficient to satisfy any candid or impartial inquirer. I attach but little weight to my own experience, being as yet but limited, yet such as it is it bears directly upon the point, for I have never seen convulsions in any but first pregnancies, or in those who had previously suffered. Thus you will see—

1. By the cases taken from the ward book of this hospital, that nine women who had convulsions, and twelve who were threatened with this disease, within the last two years, were *all* pregnant for the first time, with the exception of *two*, and each of those two females had the disease in her former labour.

2. Doctor Collins, in his valuable practical treatise on Midwifery, relates thirty cases of this affection, which occurred in this Institution during his Mastership, in twenty-nine of these the female was pregnant for the first time; and the subject of

the remaining one was in labour of her second child, but she had convulsions during her first pregnancy.

3. Of nineteen cases recorded by Dr. Clarke, sixteen were first pregnancies.

4. In thirty-six of forty-eight cases enumerated by Dr. Merri-
man, where convulsions were present, it was the female's first
pregnancy.

5. And of forty-six cases published by Dr. Robert Lee of
London, thirty were first children.

6. And in none of those cases given by Drs. Clarke, Merri-
man, and Lee, in which they were present, are we told, whether
or not, the females, the subject of them, had the disease in their
former labours.

II. Convulsions so very rarely occur when the presentation
is preternatural, that when any other part except the head pre-
sents, there need be very little apprehension of their superven-
tion. Thus in each of the twenty-one cases which I have met in
the hospital, the head was the presenting part, and in short, ac-
cording to my observation, it is so invariably.

In twenty-nine of the thirty cases recorded by Dr. Collins,
the presentation was natural, and in the remaining one the feet
presented.

In all Dr. Lee's cases the head presented; in fact the Doc-
tor told me he never met convulsions in a preternatural labour.

Dr. Johnson has informed me he met once, and once only, a
breech presentation, complicated with convulsions.

But besides the position of the child, the length of the la-
bour seems to have a considerable influence on the production
of convulsions; for a patient may have exhibited all the pre-
monitory symptoms, and yet escape if the labour runs a very
rapid course; whereas if it is protracted, she has but little
chance, unless active measures have been previously adopted for
their prevention. Thus it is observable, from the cases which
occurred in the hospital, and also from Dr. Collins's tables, that
they rarely arrive before the female has been several hours in

labour. Here are two important points, in which I have arrived at conclusions different from Velpeau, for he states, that malposition of the child is a cause of this affection, and enumerates a quick labour amongst its exciting causes.

In confirmation of these views it may be observed, that in most, if not all the cases which I state as having occurred under my own observation, these very premonitory symptoms had been present before labour, and I argue, that had they attracted the requisite attention at that period, the subsequent convulsions might have been avoided; because in the cases of other females who exhibited the same symptoms, the adoption of preventive treatment in the last month of pregnancy evidently produced the desired effect. This treatment consists (in mild cases) in the administration of purgative or laxative medicines, to the extent of regulating the bowels, and keeping them moderately open, which, in conjunction with diuretics, and the free exposure of the female to the open air, may, in such, prove sufficient; but where the case is urgent or threatening our reliance must be on general bleeding. As a general rule, this evacuation must be made with considerable freedom, but of course regulated, as in every other case, by the strength, habit, and constitution of the patient, and perhaps also by the period at which our assistance is sought. It may be moderate in proportion to the remoteness of the labour, but when that has arrived there is no time to lose, and the treatment must be active, energetic, and decisive; at this period the administration of tartar emetic, in nauseating doses, is a valuable adjunct.

Convulsions, under the present system of management, rarely prove fatal of themselves, but they frequently seem to predispose to inflammation of the peritoneum or uterus, which may appear about the second or third day after delivery, and generally runs a rapid course. Thus having escaped the convulsion, she has another danger to encounter, and the necroscopic appearances of persons that have died after the fits, explain the occurrence of death as having been caused by metritis or peritonitis. In the

two females who died in this hospital it will be shown that peritonitis set in very early, and proved fatal in a very short time, and in many that recovered a similar disease occurred, though not in an equal degree of severity. In three of the five cases recorded by Dr. Collins also there were evidences of abdominal inflammation. A knowledge of this fact may have the effect of diminishing the mortality of this fearful disease, if it leads to the adoption of a prophylactic plan of treatment, and the administration of small doses of mercury; and if this fails, and the disease occurs notwithstanding, we have then the advantage of having a certain quantity of the medicine taken by the patient, a circumstance of the greatest importance when the rapid progress of such cases is taken into account.

From these facts which I have just brought forward, I should conceive the importance of every medical man seeing his patient, and attending to her general health, during the latter months of utero-gestation, and more particularly if she were pregnant for the first time, too apparent to require any comment from me to increase it.

The late Dr. John Clarke of London, in his *Practical Essays on the Management of Pregnancy and Labour*, has given some highly valuable remarks on this subject, from which I extract the following:

“With regard to the general management of women with child, we ought always to remember, that the progress of the future labour and its consequences will depend very much upon the previous state of the patient's health. In every thing, therefore, which we recommend to pregnant women, we should consider the effects which may be thereby produced upon the labour, and upon the health of the woman afterwards.

“The natural disposition of pregnant women verges towards plethora, and those diseases which have been denominated diseases of increased action. If this plethoric disposition and increased action be kept up, or aggravated by improper or heating food, by violent exercise, or strong liquors freely and imprudently

drunk, it must be apparent that the stimulus arising merely from the exertions of labour will be sufficient, in a constitution so predisposed, to produce a fever. To guard against this, women, during pregnancy, should carefully and industriously avoid all excess of the table, and should confine their diet to such kinds of food as neither stimulate during their digestion nor afterwards. Fruits, therefore, vegetables, and milk diet, are particularly proper, with a sparing use of animal food, strong liquors, and spices. Exercise should be taken, but it should be moderate in its degree, and, if possible, should be in a pure air.

“ By paying a constant attention to these points, we shall so conduct a woman through the state of pregnancy, that she will fall into labour in perfect health, and with the constitution prepared to sustain the violence of the exertions employed during the progress of it, and this without the most remote danger of disease being produced afterwards.”

I have now only to repeat the conviction I have already expressed, that puerperal convulsions scarcely ever occur except in cases of first children, or where the presentation is natural; and the practical inference is, that the same class of symptoms which, obtaining in a female with her first pregnancy, the head of the child being the presenting part, would lead to an apprehension of an attack of convulsions, and require the most active prophylactic treatment, might be almost entirely disregarded if the patient had previously borne children without such attack, or if the presentation was preternatural. But where these premonitory symptoms give indication of threatened mischief, it is of the utmost importance to prevent the convulsions if possible, not alone on account of the danger immediately and directly attendant on them, but that they may lay the foundation for formidable disease at a later period of life, as proved by the following case :

A lady about 40 years of age, got an attack of apoplexy, in consequence of which she is paralysed on one side, and is lin-

gering out a miserable existence, her intellect being nearly destroyed. From the history of the case it appears that she had swelling of the face and upper extremities (which I have described), accompanied by headach in her first pregnancy. These symptoms were disregarded by her medical attendant, and when labour set in she had a violent attack of puerperal convulsions. From their occurrence till the intervention of the hemiplegia, she suffered occasionally from headach, which was considered by herself and friends as the consequence of the puerperal convulsions, she never having previously suffered from any of those symptoms.

One other fact remains to be noticed, in connexion with puerperal convulsions, that may be of some importance. If a female, subject to habitual epilepsy, marries, and becomes pregnant, a question may arise whether it will be likely to produce any unfavourable effect upon her pregnancy or labour. Now although epilepsy has been laid down by some as a predisposing cause of puerperal convulsions, and the two diseases seem to partake of a similar character, still, I think, it seems to operate in a different direction, as women who suffer from falling sickness appear to be less prone to its attacks during pregnancy than at any other time.

Bandelocque says, that when epilepsy is a constitutional disease its attacks may be supported during pregnancy without any manifest injury to gestation. Velpeau thinks that pregnancy seems to suspend epileptic attacks altogether. But I am not prepared to go to this extent, for females occasionally have returns of this disease during gestation, a remarkable instance of which occurred not long since in this hospital. A female was admitted into the labour ward with her face extensively burned, and not yet healed, and on inquiry it was found that the injury had been caused by her falling in the fire during an epileptic attack some days before her labour set in. She, nevertheless, went on well through her accouchement, not having had any convulsion or tendency to it whatever.

But I believe there can be no doubt that epileptic women often have a respite from the disease, or at least that its severity is mitigated during pregnancy. This observation I have heard made by Dr. Johnson in his lectures, and I have had abundant opportunity of verifying it since. In not one of the numerous cases which this hospital afforded me the opportunity of seeing, did convulsions occur either during pregnancy, labour, or immediately after; but some of the females experienced a return of the epilepsy some days after delivery, which subsided without any treatment. One remarkable case occurred in the hospital within the last year, which ought to have terminated in convulsions, did any connexion exist between the two diseases. A female, subject to epilepsy from infancy, of diminutive stature, with an undersized pelvis, pregnant for the first time, and who had a tedious and difficult labour, nevertheless went through her confinement well, and left the hospital, never having had a single symptom of convulsions.

CASE I.—Mary Horan, æt. 26, pregnant for the first time, was admitted into the Lying-in Hospital on the 15th February, 1841. When twenty-seven hours in labour she gave birth to a living male child. As its head, the presenting part, was being expelled, she was attacked with convulsions, which yielded to venesection and tartar emetic solution. It appears that she suffered very much from headach, dimness of vision, and paralysis of right arm, during the latter months of utero-gestation. She recovered quickly, and left hospital on the eighth day after her confinement.

CASE II.—Mary Anne Dunne, æt. 21, pregnant for the first time, on the 19th April, 1841, was admitted into the Lying-in Hospital whilst in convulsions, which set in when she was sixteen hours in labour. All the children (triplets, stillborn, two boys and a girl) presented naturally, but were delivered instrumentally. The convulsions were subdued by the usual treatment, venesection, purging, and antimonial solution; but on the second day after delivery peritonitic symptoms exhibited themselves,

and she died in thirty-six hours from their attack. The following are the appearances which presented themselves on examining the body, twelve hours after death :

The peritoneum generally inflamed, mostly so in the region of the ovaries ; some serous and lymphic effusion into the cavity of the abdomen, the lymph being of a very soft consistence ; the ovaries enlarged to thrice their natural size, and infiltrated with serum to complete disorganization ; very many vascular-like bodies were scattered through them. The broad ligaments and fallopian tubes were highly vascular.

This female suffered very much during the latter months of pregnancy, from swelling and œdema of the hands, face, and feet, and occasionally severe headach.

CASE III.—Maria Galbraith, æt. 25, pregnant of her first child, a girl, which presented with the head ; was admitted into the Lying-in hospital on the 11th June, 1841. When forty hours in labour she was seized with convulsions, which yielded to venesection, purging, antimonial solution, and delivery by the crotchet. She recovered slowly, and left the hospital on the 3rd of July. She since, in her second labour, had convulsions, followed by peritonitis, of which she slowly, but eventually, recovered.

CASE IV.—Catherine Skelly, æt. 19, was admitted into the Lying-in Hospital on the 29th July, 1841, pregnant of her first child, a girl, which presented naturally, and was born alive, after a labour of five hours' duration. Immediately after delivery she was seized with convulsions, but recovered quickly, under the use of tartar emetic solution, and left hospital on the 5th of August, eight days after her confinement. During her pregnancy she suffered very much from headach, complicated with swelling and œdema of the superior extremities.

CASE V.—Sarah Maypowdre, æt. 17, was admitted into the Lying-in Hospital on the 28th of October, 1841, pregnant of her first child, a female, which presented naturally, but was still-born. When fourteen hours in labour she was seized with con-

vulsions, which ceased on venesection, purging, and antimonial solution being had recourse to. On the fourth day after delivery peritonitis set in, which yielded to treatment, and she left the hospital quite well on the 31st of the month, twelve days after delivery.

It subsequently appeared that she had suffered from severe headach and some convulsive attacks during the last month of utero-gestation. She was since delivered in the hospital of her second child, without having had any convulsion.

CASE VI.—Rosanna Capper, æt. 20, was admitted into the Lying-in Hospital on the 19th of February, 1842, pregnant for the first time. When ten hours in labour she was attacked with convulsions, and shortly after gave birth to a living female child, which presented with its head. The paroxysms abated, and finally ceased, under treatment, such as venesection, purging, and antimonial solution. On the fourth day after delivery metritis presented itself, of which she recovered, and left the hospital quite well on the 15th of March. This patient suffered very much from headach, considerable œdema of hands and face, with flushings, and fixed pain in the centre of the forehead during the latter months of her pregnancy.

CASE VII.—Eliza Lawrence, æt. 25, was brought into the Lying-in Hospital on the 18th May, 1842, during a paroxysm of convulsions, which first exhibited themselves when she had been seventeen hours in labour of her first child, a female, which presented naturally, and was still-born. The convulsions ceased under treatment by venesection, purging, and antimonial solution. On the third day after delivery she was attacked with peritonitis and metritis, of which she died on the following day. The necroscopic appearances were as follow:—A large quantity of straw-coloured serum, with lymph floating in it, was effused into the cavity of the abdomen; some lymph also adhered to the intestines, which were much paler than natural, and very much distended with gas. The uterus soft, and badly contracted; its external surface pale, and its internal coated with a

dark mucous secretion from its parietes; the substance at the cervix for about a line internally, together with the os, was very dark coloured, and in a sloughy state. The ovaries flabby, and containing a serous fluid. Corpus suteum existed in the right ovary, but with great difficulty was discovered, being nearly quite disorganized. This female suffered greatly from headach, together with swelling and œdema of the face, and of the upper and lower extremities, during the latter months of gestation.

CASE VIII.—Anne M'Fadden, æt. 22, was admitted into the Lying-in Hospital on the 7th of June, 1842, pregnant of her second child, a girl, which was born alive, after a natural labour of eight hours' duration. She was seized with convulsions eight hours and a half after delivery, which ceased under treatment, by venesection, purging, and antimonial solution. On the day after her confinement she was attacked with peritonitis, of which she recovered, and left the hospital quite well on the eighth day from her accouchement. This female had severe headach, complicated with swelling and œdema of the superior extremities, during the latter part of this pregnancy, and suffered from this same disease with her first child. She is at present pregnant for the third time, and is adopting measures to prevent the occurrence of convulsions, having most, if not all, of their premonitory symptoms.

CASE IX.—Mary Callaghan, æt. 21, was admitted into the Lying-in Hospital on the 7th of June, 1842, being then pregnant of her first child, a boy, which presented naturally. When fifty hours in labour, she was seized with convulsions; which yielded to treatment by venesection, purging, antimonial solution, and finally delivery by the crotchet. Peritonitis set in on the third day after her accouchement, of which she recovered, and left the hospital perfectly well on the twelfth day after delivery.

This patient suffered acutely from headach, combined with swelling and œdema of the superior extremities, during the lat-

ter months of gestation. Convulsions threatened, but prevented by treatment.

CASE X.—Mary Rynd, æt. 20, pregnant of her first child, was admitted into the Lying-in Hospital on the 19th of November, 1841, suffering very much from headach, complicated with swelling and œdema of face and superior extremities. She was bled, purged, and had antimonial solution, and passed through a natural labour of five hours' duration, giving birth to a living male child. On the day after delivery peritonitis set in, which yielded to treatment. On the 27th of the month, eight days after her confinement, she left the hospital quite well, never having had a single paroxysm of convulsion, nor any return of the premonitory symptoms.

CASE XI.—Maria Carroll, æt. 24, pregnant of her first child, was admitted into the Lying-in Hospital on the 17th of October, 1841. When forty hours in labour some of the premonitory symptoms of convulsions, such as intense headach, complicated with swelling and œdema of the superior extremities, were present; however, soon after venesection, together with purging and antimonial solution, were had recourse to, she gave birth to a still-born female child, and left the hospital quite well on the tenth day after delivery, never having had a single convulsion, nor any return of the premonitory symptoms.

CASE XII.—Honora Reilly, æt. 30, pregnant for the first time, was admitted into the Lying-in Hospital on the 17th of December, 1841. When twenty-two hours in labour she complained very much of headach, and was extremely restless. Shortly after venesection, purging, and antimonial solution were had recourse to, she brought forth a living male child, which presented naturally, and she left the hospital quite well on the eighth day after delivery, never having had a single convulsion, nor any return of the premonitory symptoms.

CASE XIII.—Anne Smith, æt. 18, pregnant of her first child, was admitted into the Lying-in Hospital on the 23rd of December, 1841, complaining very much of headach, complicated with

swelling and œdema of the superior extremities. She was bled, purged, and had antimonial solution, and passed through a natural labour of four hours' duration, giving birth to a living female child. She left the hospital quite well on the eighth day after delivery, without having had any convulsion or return of the premonitory symptoms.

CASE XIV.—Mary Conway, æt. 23, pregnant of her second child, was admitted into the Lying-in Hospital on the 8th of March, 1842, having intense headach, in combination with swelling and œdema of the superior extremities. She was bled, purged, and had antimonial solution, and passed through a natural labour of eight hours' duration, giving birth to a living male child. She left the hospital quite well on the eighth day after her delivery, not having had any convulsion or return of the premonitory symptoms. This female had convulsions with her first child.

CASE XV.—Elizabeth Barnes, æt. 24, pregnant of her first child, was admitted into the Lying-in Hospital on the 10th of August, 1842, complaining very much of headach, combined with swelling and œdema of the superior extremities, which symptoms had existed during the latter months of pregnancy. She was bled, purged, and had antimonial solution, and passed through a natural labour of twenty-two hours' duration, giving birth to a living female child. She left the hospital on the eighth day after her confinement, not having had any convulsion or return of the premonitory symptoms.

CASE XVI.—Sarah Pepper, æt. 24, was admitted into the Lying-in Hospital on the 21st of March, 1842, suffering from intense headach, in combination with swelling and œdema of the superior extremities. She was bled, purged, and had antimonial solution, and passed through a natural labour of eight hours' duration, giving birth to a living female child, not having had any convulsion or return of the premonitory symptoms. Peritonitis set in on the third day after delivery, which yielded

to treatment, and she left the hospital quite well on the eighth day after her confinement.

CASE XVII.—Ellen Kelly, æt. 19, was admitted into the Lying-in Hospital on the 13th of May, 1842, complaining of severe headach, complicated with swelling and œdema of the superior extremities, paralysis of the right arm, and great pain down the shoulder. She was bled, purged, and had antimonial solution, and passed through a natural labour of eight hours' duration, giving birth to a living female child. She left the hospital quite well on the eighth day after her accouchement, not having had a single paroxysm of convulsion, nor any return of the premonitory symptoms.

CASE XVIII.—Margaret Reynolds, æt. 21, presented herself at the Lying-in Hospital, during the last month of her first pregnancy, for medical relief, in consequence of her suffering from intense headach, complicated with severe pain in the stomach and swelling, with œdema of the face and superior extremities. She was then purged, bled, and kept constantly in the open air; and on returning to the hospital on the 10th of June, 1842 (about a month after) she passed through a natural labour of twelve hours' duration, giving birth to a still-born male child, and left the institution quite well on the eighth day after delivery, never having had any convulsion or return of the premonitory symptoms.

CASE XIX.—Ellen Robinson, æt. 20, pregnant for the first time, was admitted into the Lying-in Hospital on the 8th of June, 1842, whilst suffering from severe headach, complicated with swelling and œdema of the superior extremities. She was bled, purged, and had antimonial solution, and passed through a natural labour of fifteen hours' duration, giving birth to a living male child. She was discharged from the hospital, quite well, on the eighth day after her accouchement, not having had any convulsions, nor a return of the premonitory symptoms.

CASE XX.—Esther Boyle, æt. 25, applied at the Lying-in Hospital, during the last month of her first pregnancy, for me-

dical relief, in consequence of her suffering from severe headach, complicated with swelling and œdema of the face and superior extremities. She was then bled, purged, and kept in the open air; and returned to the hospital at the end of the month (on the 4th of July, 1842), passed through a natural labour of six hours' duration, giving birth to a living female child, and left the institution quite well on the eighth day after delivery, not having had a single convulsion, nor any return of the premonitory symptoms.

CASE XXI.—Joan Moore, æt. 22, pregnant of her first child, was admitted into the Lying-in Hospital on the 10th of August, 1842, whilst suffering from intense headach, complicated with swelling and œdema of the superior extremities. She was bled, purged, and had antimonial solution, and passed through a natural labour of twenty-four hours' duration, giving birth to a living male child. She left the hospital quite well on the eighth day after her confinement, never having had any convulsion, or a return of the premonitory symptoms.