

PUERPERAL MALARIAL FEVER.

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BY

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THE title of this paper is one not yet adopted in medical literature in the nomenclature of diseases, but it is so significant a term, as descriptive of the etiology, pathology, and clinical phenomena of a class of affections in late years frequently met with in puerperal women in this city and vicinity, that I have for several years made use of it. I find also that it is now coming into general use by the profession in this city. The disease itself has probably been met with by most who are engaged in obstetric practice in malarial regions. But the period of its development, and its similarity, in many of its prominent symptoms, to other and more grave affections, renders it worthy of careful study. I have thought that I might do the profession a service by calling their attention to this subject, and attempting to clearly define the character of the disease, its pathology, its differential diagnosis from other affections, and its appropriate treatment.

The occurrence of chills, a high temperature, rapid pulse, and great depression of the vital forces, in a puerperal woman, must inevitably cause anxiety in the mind of her medical attendant; and this anxiety must be greatly increased if there be also some indications of a local pelvic phlegmasia, or the foregoing phenomena are followed by such grave complications as mania, secondary hemorrhage, and the development, some days after parturition, of extremely offensive lochia. Hence the great importance of being able to decide whether the symptoms be due to one of the puerperal diseases strictly so-called, such as epidemic puerperal fever, septicemia, phlebitis, or metritis, or whether it be due to constitutional infection from telluric or atmospheric causes, acting upon a system, whose physiological condition is modified by the various changes which are taking place during puerperal convalescence. The success of treatment and the prognosis must greatly depend on

the correctness of the diagnosis. It will be observed that I have not included peritonitis among the local phlegmasiæ, because hitherto it has never happened to me to see puerperal malarial fever attended with symptoms which simulate either septic or traumatic peritonitis.

I propose now to study the chief phenomena of those cases which have come under my observation, now amounting to a considerable number, in order to determine whether it be possible, generally, to decide as to the diagnosis, and select appropriate treatment which shall, in a large majority of such cases, secure recovery. I must, however, remark that only three of these cases have occurred in my own practice, all the rest having been seen by me in consultation with other medical men. By the kindness of these gentlemen, I have full and detailed reports of seventeen cases, which have occurred in this city and its suburbs, but even an abstract of these reports would occupy more space than would be profitable in a paper in a medical journal. I must, therefore, present only a summary of the aggregate results, with the conclusions at which I have arrived, feeling assured in my own mind that they will hereafter be confirmed by the clinical studies of others.

*Period of Invasion.*—Puerperal malarial fever may be developed at any period following parturition, until the physiological changes which constitute puerperal convalescence are completed. The earliest period occurred in a patient of Dr. Howard Pinkney, in less than twenty-four hours after parturition, which was entirely normal in its character.

“She was suddenly attacked with a severe, prolonged chill and acute pain in the left groin and the left thigh. This pain was relieved by opiates, but was followed by fever and perspiration.” Dr. Pinkney regarded the affection as malarial, and gave quinine in full doses, “but this caused headache and ringing in the ears, and was stopped. But the intermittent febrile attack continuing, a distinguished obstetrician was called, who pronounced the case one of well-marked septicemia, the temperature being at this time one hundred and five degrees, and recommended cold water affusions on a special bed for the purpose.” But before this could be procured, the temperature had fallen so much that it was not considered necessary to make use of it. The consulting physician was then called again, when finding the temperature still lower, and the patient perspiring freely, he frankly expressed the opinion that he was mistaken in his diagnosis, and now regarded it as a



malarial fever, and therefore no longer advised the use of the water-bed. The quinine was now resumed, in doses that could be tolerated, but the remissions and exacerbations of fever continuing, I was asked to see the patient on the twelfth day after parturition. I recommended the quinine in large doses combined with the bromide of potassium, to counteract the tendency of the quinine to produce cerebral congestion. The convalescence of the patient after this was rapid. It may be remarked that throughout the whole period of her illness the function of lactation was perfect and the lochia normal in character and quantity.

The latest period of invasion was in one of my own patients.

Her labor was normal in every respect, and her convalescence so perfect that I had ceased attendance, except a weekly visit which I usually make until the end of the month. On the morning of the 21st day, she was awakened by a severe chill, with violent pains in her head and bones. When I saw her, soon-after 9 A.M., she had a temperature of 105.6°, a pulse of 128, and she was decidedly delirious. There was no abdominal tenderness, involution was complete, the lochia had ceased for some days, and a vaginal examination was entirely negative in its results. Twenty grains of quinine were at once ordered, with one grain of codeia to allay nerve irritation. The same dose was repeated in the evening. The following day, after passing an excellent night of sleep, she seemed perfectly well, had a good appetite, temperature and pulse nearly normal, but she complained of feeling very weak. The quinine and codeia were continued in half-doses, that is, ten grains of the former and half a grain of the latter morning and evening. The next morning she was again seized with a violent chill, and when I saw her the pulse was 144, the temperature was 106°, and she was more delirious than on the first day of the attack. The full dose of the quinine and codeia was then given with five grains of calomel. One hour after I left her, she had a profuse and alarming hemorrhage from the uterus. When I saw her again, the pulse was very rapid and feeble, the breathing hurried and gasping, and her surface cold and clammy. Brandy and ammonia were given and a large vaginal injection of water as hot as could be borne was at once administered. The three days following, she took each day sixty grains of quinine and three of codeia, and also three times a day a mixture in which were 25 drops of the tinct. of chloride of iron, 20 drops of Squibb's fluid extract of ergot, and 15 drops of the tinct. of nux vomica. On the 30th day after confinement, she was so thoroughly convalescent as to require no more medicine.

To conclude this part of my subject then, I will say that in one case only has this form of fever been developed so early as the first day, and in none later than the twenty-first of the puerperal period.



*Symptoms.*—The most prominent of these are chills, sometimes very slight, often a temperature one or two degrees higher than is found in the beginning of any other puerperal disease, a rapid pulse, followed by greater prostration than is usual with other diseases during this period. Then in these cases, where the disease first manifests itself by such an explosion of striking and alarming symptoms, there is a remarkable remission on the following day, so that the obstetrical attendant flatters himself that the attack is ephemeral and that his treatment has been most wise and successful, but his delusion is removed one, two, or three days after by a recurrence of the attack, but generally less severe. But the succession of phenomena just described only appears in typical cases. I am disposed to believe that, in a large majority of cases, three or four days before the explosion, the patient finds herself depressed by a general sense of malaise, more or less pain in the head, back, and bones; insomnia, thirst and loss of appetite, and when the disease is developed, the chills are less severe, the temperature not so high, the pulse less rapid, and the remission less marked, and my observation would lead me to the conclusion that the malady is more persistent and responds less readily to treatment. In this form where the disease manifests itself in the early days after confinement, and is ushered in by a chill of moderate intensity, and the patient is dull, heavy, and sleepy, with moderate wandering delirium, and especially if there be diarrhea, the most experienced observer will wait for further developments before he decides whether he has to deal with a case of septicemia or of puerperal malarial fever. But in malarial fever, a fall of temperature of three or four degrees is always attended with a corresponding decline of other symptoms, which is not the fact in septicemia, and the latter is rarely accompanied by pain of the head, back, or limbs. The sensibilities are blunted instead of being morbidly acute. When the disease first manifests itself after the sixth or eighth day, I think, however closely the symptoms may resemble septicemia, the fear of this may, with a considerable degree of certainty, be dismissed. I have never seen a case which would be likely to be mistaken, by a competent and intelligent observer, for pyemia, even when developed late during the puerperal period. I have in several instances seen this affection mistaken for

puerperal fever. But puerperal fever generally appears between the first and third day after delivery, very rarely after the fifth day, while the chills are not recurrent, nor are there marked remissions of the symptoms; while usually with the chills there is a sudden development of abdominal pain, often vague and undetermined in its seat, but generally beginning in the hypogastrium, and the pulse is constantly frequent, with no periods of several hours of remission. So recalling these facts, I feel safe in asserting that I have never been inclined to believe that any case of malarial fever that I have met with might be a case of puerperal fever.

In three or four instances, I have been for a time in doubt whether the case was one of phlebitis or of malarial fever, as they have many symptoms in common; but the absence of the physical signs of the former, and a careful analysis of the symptoms and their order of development, have eventually made the diagnosis clear. This was notably the fact in one of my own cases, where the disease was first manifested on the sixth day after confinement. The cure of this case was finally effected by the administration of quinine hypodermically in very large doses. This caused abscesses in the legs where the quinine was injected, but in no other way could a sufficient quantity of this agent be introduced into the system.

It is unnecessary to say that malarial fever may be developed during the progress of any of the local phlegmasiæ, or may be complicated by them, but I have never happened to meet with such, except in two instances, where mastitis seemed to bring out the full effect of the malarial poison.

In five cases, secondary hemorrhage occurred after the twelfth day, apparently as a result of the malarial fever. I have already alluded to one where the hemorrhage was alarming, and this happened in one other case. This also occurred in a case reported to the Obstetrical Society of New York, by Dr. H. T. Hanks, and published in its Transactions in the *AMERICAN JOURNAL OF OBSTETRICS*, January, 1880. In a note recently received from Dr. Hanks, he states that since the case was reported he has been obliged to resort to quinine and elixir vitriol to reduce a very high fever. In the other three cases, the hemorrhage came on with a gush, but small in amount, and continued in a slight degree for several days. In



these the vaginal discharge became very offensive during the last two or three days of the hemorrhage, which I attributed to the slow oozing of blood in so small an amount that it was retained in the uterine cavity, where decomposition took place before a sufficient quantity was accumulated to force the uterus to expel it. In one case, three days after the hemorrhage, purpura was developed, and there was some oozing of blood from the buccal and nasal mucous membranes. This patient was treated with large doses of quinine, and tinct. of the chloride of iron and chlorate of potash. She eventually recovered, but her convalescence was very slow, demanding nearly three months, and indeed was not complete until after a visit of some months to Europe. I have seen no case in which the urine showed the presence of blood or its constituents, or that form described by Michel, which he proposes to call *hemorrhagic malarial fever*, unless the one last mentioned would come under this category.

In four of the seventeen cases which I have seen in consultation, the most prominent reason assigned for my being asked to see the patient was that she had puerperal mania, but in three of them, I regarded the cerebral disturbances as delirium rather than mania. In one, however, a lady in Jamaica, Long Island, whom I saw with my namesake, Dr. Barker, of that place, it seemed to be mania, as the mental excitement continued through the remissions and in some degree for several days.

In another case, active delirium commenced with the first chill; this was the 11th day after confinement, and the next day when I first saw her, she was in a state almost of semi-coma. She could be roused to some consciousness, but was sullen and taciturn. At first I was certain that it was uremia, although an examination of the urine was wholly negative, and the renal secretion was sufficient and of good specific gravity, 1.020, yet I could not resist the conviction that it was due to this cause, and advised Clutterbuck's elaterium in doses of an eighth of a grain every half-hour, until free catharsis was produced. She took six doses, when she began to vomit, and was purged excessively. The next morning, her condition was very bad, she was extremely feeble, her pulse was very rapid and thready, and she would swallow nothing, even when her mouth was forced open and liquids were placed in it. I now became convinced that the symptoms were due to malaria; but it was with the greatest difficulty that I could persuade my friend and confrere to accept my views. But feeling that the



case was hopeless, he reluctantly consented that the treatment suggested by me should be adopted. In the first place, one-eighth of a grain of morphia with one-sixtieth of a grain of atropia, was administered hypodermically. Then as soon as it could be procured, one drachm of Lente's solution of quinine was given hypodermically, and it was decided to repeat this every third hour until the effects of the quinine were very decided. In twenty-four hours, she thus received into the system hypodermically eighty grains of quinine. After the fifth administration, my friend began to see positive evidences of the effect of the treatment, and became as enthusiastic in its favor as he before had been opposed to it, and administered it twice after I probably would have ceased its use. The next day, when I saw her, she was perfectly rational, readily took nourishment, and her general condition was greatly improved. I saw her again on the following day, when my attendance ceased, but my friend informed me that her convalescence was very rapid.

It is worthy of remark that this patient never complained of headache, deafness, ringing in the ears, or any other symptom of cinchonism. The tolerance of quinine in these cases of puerperal malarial fever is very remarkable, as I have often had occasion to observe.

But one of the cases that I have seen has terminated fatally. This was a patient of Dr. William H. Hall, who died the forty-seventh day after confinement. Dr. Hall has most kindly furnished me with a full history of the case, but time will only permit me to read a brief abstract of it.

The patient had been married a year, but had spent three years before in Rome, where she had Roman fever. Her mother thinks that she had contracted malaria before this while at school. She was delivered of a healthy girl after a normal labor of fifteen hours. For the ten days following, when the doctor ceased to visit her, he writes, "The clinical history was devoid of incident, and as purely physiological as any case that I ever witnessed, and at my last visit, I found her sitting up, and eating with relish a beef steak. On the thirteenth day after confinement, without any premonition whatever, or without any exposure on her part, she was seized with a violent chill. Examinations made with the utmost care and solicitude, revealed nothing abnormal as to her puerperal functions." Dr. Hall gave at first thirty grains of quinine, which was followed by an abatement of the fever. But the chill returning the next afternoon, followed by fever, twenty grains of quinine were given, and the same dose was repeated the next morning and evening. There was, however, no abatement of the fever until the third night,

about midnight. The quinine was continued in ten-grain doses every eighth hour. This was kept up for two days, when the interval between the doses was lengthened to twelve hours. Dr. Hall regarded the case as one of malarial remittent fever, as did also Drs. Thomas, Metcalf, and myself, who at different times saw the patient with him. Dr. Thomas advised, "That the quinine should be given freely and persistently;" and for many days she averaged one drachm of quinine a day, sometimes taking more. At no time were there any puerperal symptoms, except that she had a moderate secondary hemorrhage, and for some days after, the vaginal discharges were offensive, probably due to the retention of small clots in the uterine cavity. A moderate degree of cystitis was also developed, and considerable leucorrhœal discharge. During her illness, the patient received all the auxiliary treatment which symptoms indicated, in addition to the large doses of quinine. In the latter part of the illness, Warburg's tincture was substituted for the quinine, and "for some days this was followed by manifest improvement. There was no chill for three days, and but very little fever, and all took fresh hope;" but this proved illusive, as we have seen.

This patient had evidently for years been saturated with malarial poison, and the puerperal period developed an explosion of its effects which no known anti-malarial agent could overwhelm.

As the treatment of malarial fever is now so well settled, and every physician of intelligence and sound practical sense perfectly appreciates the necessity for and the kind of auxiliary treatment which the symptoms peculiar to each individual case may require, I shall say but little in regard to this. For nearly two years past, in those cases where the stomach will tolerate it, I have found Warburg's tincture much more effective and speedy in producing the results desired than the largest doses of quinine.

My method of giving it is this: I prescribe it in half-ounce doses once in four hours until the fever has entirely abated. It is then continued in doses gradually diminishing to two and one drachms, until convalescence is perfectly established. If there be the least threatening of a recurrence, as shown by malaise, evanescent pains in different parts of the body, headache, helplessness, or loss of appetite, I direct that a full dose should be immediately taken, and that I shall be at once informed of her condition.