

Merrill (A.P.)

PUERPERAL FEVER.

CHLOROFORM AS AN INTERNAL REMEDY.

By A. P. MERRILL, M. D.



REPRINTED FROM THE AMERICAN PRACTITIONER FOR OCTOBER.

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EDITED BY

DAVID W. YANDELL, M. D.

Professor of Clinical Surgery in the University of Louisville

AND

THEOPHILUS PARVIN, M. D.

Professor of the Medical and Surgical Diseases of Women in the University of Louisville.

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Puerperal Fever.

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The fatality of puerperal fever, which in many parts of the northern states appears to be scarcely less proportionally than that which attends upon yellow fever in the South, invites persevering inquiry into the pathology and treatment of the disease, and the more because of the variety and discordancy of prevailing opinions. The devotion of a life somewhat prolonged to the investigation and treatment principally of periodic diseases, often of the gravest form and character, has enabled me abundantly to verify the fact that the mysterious principle, periodicity in disease, so universally prevalent, besides its existence in much obscurity, may remain latent in the system for an indefinite period of time, always ready to be developed into activity upon sufficient provocation. Proof of this is found in the oft-repeated observation that persons who have resided in malarial districts often carry with them upon their removal to a more healthy locality enough of this principle to subject them to an attack of periodic fever, upon the application of some exciting cause, months and even years after such change of residence. The liability of English people returning home from southern colonies, more than others among whom they live, to attacks of periodic disease has long been observed. The same is true also in regard to persons changing their residences from South to North in this country. Accidents and exposures producing a moderate shock of the nervous system have been

sufficient to elicit the periodic movement in these cases when no such tendency had been observed to exist, and while others similarly exposed have escaped.

Now, to apply this doctrine to the puerperal condition, observation proves to us that during the whole period of pregnancy, while extraordinary powers are exercised to the accomplishment of one great purpose, often holding morbid tendencies in abeyance, there may be no sign of pathologic periodicity in the system, and yet its latent existence become evident from the readiness of its development as the effect of parturition. Surely if wounds and concussions, and even so slight a cause as change of temperature, may so disturb nervous function as to develop periodic disease long after the principle of periodicity has been imbibed, we might reasonably expect a similar result from the violence of child-birth. Accordingly we do find that this event is often followed by well-marked paroxysms of fever at a period too early to allow for an original incubation or to be attributed to the influence of lactation. The susceptibility of the uterus at such a time determines the localization of the disease, and metritis becomes the distinctive local lesion of the fever. This appears to be the more remarkable when we consider that idiopathic inflammation of the uterus, even after parturition, is a rare disease. Hyperæmia, congestion, hypertrophy, and nervous irritability of this organ are common; but inflammation, except as a lesion of fever, is unusual and exceptional.

A difficult complication in puerperal fever is the existence of peritoneal inflammation as its frequent but not invariable concomitant. This is also uncommon as an idiopathic disease, but it must not be deemed extraordinary that a vascular and sensitive serous membrane so closely investing the uterus and contiguous viscera should from sympathy partake of the morbid excitement of that organ. It is the more likely to do this, perhaps, because of the great distension it has suffered during the period of gestation, and its sudden relax-

ation following parturition. Nor should it be a matter of surprise that the increased constitutional disturbance caused by a complication so serious as peritoneal inflammation often gives rise to the opinion that this is the primary and distinctive lesion of puerperal fever. Be this as it may, the fact is ever patent that the uterus is always the organ first to suffer in this disease, than which there is no febrile lesion more serious and more dangerous to life. Under strong epidemic influence, the first paroxysm is sometimes, and the second often, fatal. Remedial measures must therefore be prompt, decided, and skillfully applied, and without regard to the temporizing policy of expectant medicine.

As in all other diseases which have ever proved extensively fatal, it has been contended that puerperal fever is propagated by contagion, and by some that contagion is the sole cause of the disease. The profession has been entertained by earnest and by bitter and vituperative discussions of the subject, contending even for the extreme view, applicable to no other disease, that the infection adheres to the person, and especially to the hands, of the accoucheur, in spite of ventilations, ablutions, and disinfections. It is said of small-pox, which is generally conceded to be the most contagious of all diseases, and believed by some to be the only disease which is uniformly so, that it has never been known to be conveyed from one patient to another by attending physicians. Without any extraordinary precaution, the contagious matter which may adhere to the person and clothing is supposed to be dissipated in the atmosphere. Proof has been given of the preservation of small-pox contagion in textile fabrics, but it has always been among such materials packed up and secured from ventilation. Upon inquiry at the great paper-mills, where imported rags in large quantities are used, I have not been able to hear of an instance of the communication of small-pox by them; and the explanation, several times given, has been that the rags were rendered

innocuous by a process of ventilation and drying, but without the application of the great disinfectant—artificial heat.

This question of contagion must, as in other diseases supposed to be propagated by this agency, be settled by observation and experience. If it can be shown that puerperal fever often occurs without the possibility of contagion, and without a suspicion of a communication of the disease to other puerperal subjects, it affords ground for the presumption that contagion has no agency in its production. Sporadic cases of this character are to be met with everywhere, and especially in cities and districts of country subject to malarial influences, and they excite no apprehension of contagion. It is only when the disease appears as an epidemic that this apprehension prevails, as it does in regard to every other epidemic disease; and men are slow to believe, while great numbers are suffering under similar circumstances, that the disease may be the product of a common cause independent of contagion. In my own judgment it is just as feasible to adduce proofs of the contagious character of common intermittents as of puerperal fever. Under epidemic influence one is not more likely than the other to attack all susceptible subjects, irrespective of intercourse, or the agency of physicians and nurses in conveying contagion.

If my views on the pathology of puerperal fever be correct, it necessarily follows that antiperiodics must be principally relied upon as both preventive and remedial. During the latter months of pregnancy quinine may be given daily to eradicate the principle of periodicity, whether latent or obscurely developed. If judiciously administered it will nearly always prove successful, but in general large and sedative doses are to be avoided as tending to produce uterine contraction and premature delivery; but when the proper period for child-birth arrives this quality of sedative doses may be taken advantage of to facilitate labor, and to guard the woman against the dangerous development of fever. Nothing can be

more appropriate than the production in this case of a condition of quininism which relaxes rigidity while it increases expulsive contraction. Upon the occurrence of *post-partum* fever, however, advantage must be taken of the first sign of remission to administer quinine in full doses to prevent a return of the paroxysm, which in times of an epidemic prevalence of puerperal fever not unfrequently proves fatal. There may be excessive uterine discharge as a consequence of the contrastimulation and the specific influence of the remedy over uterine function, but it is better to incur the risk of this than to forego the important advantage of effective antiperiodic treatment. The bebeerine may also be given whenever the uterine discharges render restraining treatment necessary, and in this there may be also some antiperiodic power to make it an adjuvant to the quinine.

The abortive treatment by chloroform internally is not less important and effective in this than in other forms of periodic fever. Upon this alone can reliance be placed to obviate the nervous derangements upon which the chill depends; but it is important that it be given in the inception of the chill, and in such dose as will produce gentle and healthful sleep. Few things are more difficult, however, than the enforcement of early and abortive treatment in fatal epidemic diseases, or even the preventive measures which might prove successful. I have often thought the puerperal-fever epidemic more liable to this difficulty than other diseases. During pregnancy women are slow to believe in the necessity of preventive measures, and upon the invasion of the chill after parturition it is apt to be attributed to some temporary nervous disturbance. Should the patient survive the first paroxysm, neither she nor her friends are likely to believe in the danger of its repetition; but this kind of infatuation belongs more or less to every epidemic disease, and is one cause of its mortality.

Opium is highly esteemed as a remedy in peritonitis, and

to relieve this complication it has been recommended in puerperal fever; but it often fails to afford the expected benefit, and sometimes, no doubt, it hastens on a fatal termination of the disease. The reason is, I apprehend, that inflammations of the serous membranes, whether they occur as lesions of fever or from other causes, are productive of nervous irritations, which do not prevail to the same extent in the other tissues. For these irritations in the serous membranes opium is a useful and sometimes appears to be an indispensable remedy. In the treatment of pleuritis as a febrile lesion, for example, we find opium to be useful in the very stage of the disease which in gastric fever would preclude its administration. In puerperal fever the close sympathy between the uterus and the stomach gives rise to gastric lesions simulating those of yellow fever, and the resemblance is increased not unfrequently during an epidemic prevalence of the puerperal fever by its culminating in black vomit. In all such cases opium operates unfavorably, and facilitates the fatal issue so common and so dreadful in this class of diseases, involving the disorder of the mucous tissues of the stomach. I am not disposed to deny the efficacy of opium in idiopathic peritonitis, although I have found scruple doses of calomel given with turpentine and without opium, or with opium in moderate doses, to be equally successful; and I know of one remarkable case which was cured by calomel alone, given in very large quantity, the patient being restored to perfect health, and without salivation.

Because of the commonly torpid condition of the bowels during pregnancy, and especially of the large intestines, cathartics are often necessary after confinement, and the more in case of the prevalence of puerperal fever. It is sometimes difficult to dislodge hardened fecal accumulations from the colon, and while they remain the irritations produced are a serious hinderance to successful treatment. It

sometimes happens that watery dejections pass the hardened fæces, and deceive the patient into the belief that the bowels are sufficiently active, causing neglect of this important precaution. In this case mercurial cathartics are valuable as tending to the restoration of impaired secretion, and less than most other remedies of this class to prostration of strength by the production of watery stools. These may be alternated by aloes in aperient doses as operating mainly upon the large intestines, and sometimes by turpentine as conducive to healthy action in the mucous tissues, and also to a proper excitation of the kidneys. Were these women subjected to such intestinal treatment in the latter months of pregnancy, there are good reasons for believing it would save them from the evils of albuminous urine, and the convulsions so often its concomitant.

I need not refer in detail to other remedies employed in the treatment of puerperal fever, all which are of small importance compared with the measures, properly timed, for warding off a returning paroxysm of fever, and without which it is certain to come. The disease, it must be borne in mind, is one of periodicity, and, like other fevers of this class, it manifests its violence in the morning paroxysm. The patient may have one, two, or three of these paroxysms in as many successive mornings, with many encouraging symptoms during the remissions, inspiring high hopes of a favorable result, when, for the want of effective antiperiodic treatment, there is an increase in the violence of the exacerbations of fever, and she unexpectedly succumbs. Such is the fate of many young mothers. Since the revival of the doctrine of debility in fever, contrastimulant measures are seldom used, either before or after confinement. The simile of the overburdened laborer, whose resiliency secures him from oppression when the crushing weight under which he was sinking has been removed, is no longer admissible; but debility is the common watchword, and stimulation the remedy. In no other form

of fever is this revival of an ancient error more frequently illustrated, and in none is it more to be deprecated, than in determining the treatment, both preventive and curative, of puerperal fever. The temporary exhaustion of physical strength by a painful and perhaps tedious parturition is too often met by injudicious measures of invigoration; and it is not uncommon that such errors in practice bring upon the woman a painful habit of vertigo and rush of blood to the brain, from which it is difficult to afford relief.

But women of feeble constitutions are met with, and especially women advanced in life, who have borne many children, in whom the principle of vitality seems to be impaired, with a defective nervous energy, who are benefited by measures of invigoration as the period of parturition approaches, and without which, should puerperal fever follow, we may reasonably expect a tendency to an early collapse, reducing the vital power below the standard of health. The diagnosis is sometimes difficult because of the similarity of symptoms presented by conditions of plethora and debility; but the asthenic condition may generally be determined by observing the exhaustion of strength and labored respiration which follow sudden exertion. The sensation of throbbing of the arteries, and especially of the brain, is also a diagnostic symptom indicating debility. Such cases bear and require tonic treatment, preference being given in general to iron and arsenic. We have no vegetable remedy equally reliable, or safer in respect of its immediate effects.

Chloroform as an Internal Remedy.

CHLOROFORM AS AN INTERNAL REMEDY.

It is now nearly twenty years since I discovered the power of chloroform in congestion and chill, during all which time it has not failed me in practice; nor have I been able to hear of its failure, when properly administered, in the hands of others. I am therefore justified in recommending the treatment with greater confidence than in my earlier publications upon the subject; and I am the more willing to reiterate my former statements in a Louisville journal, because there are many persons in that city who witnessed my exhibition of the remedy to one of its prominent citizens in the public saloon of the Galt House, by means of which he was not only relieved of a violent ague without febrile re action, but permanently cured of a chronic intermittent fever which had resisted an extended course of the common treatment. There is then no good reason to doubt that chloroform, given through the medium of the digestive organs in proper physiological doses, exercises a specific influence over the disordered innervation which causes congestion and chill, enabling us to arrest attacks of fever in the inceptive stage, and prevent the great mortality from this the most common form of disease. My oft-repeated experiments go to prove also that congestion caused by concussion is equally under the control of chloroform as an internal remedy, enabling us to profit by the advantage of primary operations, one of the triumphs of modern surgery.

The proper and effective dose of chloroform given internally ranges all the way from a single drop for an infant to one or two tea-spoonfuls or fluid drachms for an adult subject. I have rarely deemed it necessary to give more than one tea-spoonful, which in case of severe congestion, either with chill or from concussion, may require to be repeated. It may be given in water, milk, or cream; and in case of insensibility and excessive prostration, as in congestion of the brain, sun-stroke, etc., it may be poured into the mouth in a state of purity, when it will be swallowed without danger of strangulation. It may also be injected into the bowels, mixed in mucilage or starch. The mucous tissues suffer no injury from the application of chloroform in its purity. The sign of its full physiological action is sound and healthful sleep, and this is a safe guide in its administration. To secure the most beneficial results, this sleep, which is easily interrupted, should be prolonged as much as possible by rest, quiet, and the exclusion of light. There is no danger in such doses of chloroform in health; but females of excitable constitutions sometimes suffer from undue stimulation, but not when congestion exists in any vital organ, for which it is always a soothing as well as an efficient remedy.

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