Discussion on puerperal fever.

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ON

PUERPERAL FEVER.

Dr. Barker said: One year ago this evening I had the honor of offering to the Academy some remarks on the pathology and therapeutics of puerperal fever. Since that time this body has been mainly engrossed, during four of its sessions, by the consideration of this important subject. The Academy of Medicine in Paris have also been engaged in a most zealous discussion of the same subject for many months past, in which MM. Beau, Cazeaux, Cruveilhier, Danyau, Depaul, Dubois, Guerin, Hervez de Chégoin, Trousseau, Velpeau, and others have participated, a list of names comprising the first talent of that body. Many articles have also appeared in the French medical press, among which I should mention as specially valuable, those by M. Jacquemier, in the *Gazette Hebdomadaire*, and those by M. Behier, in *L'Union Médicale*.

I may also add, that during the last twelve months, my practical experience in this disease has been greatly enlarged both in hospital and in private practice, as we have not only had the misfortune of encountering it in the Lying-in Wards of Bellevue Hospital, but it has also been unusually rife in this city. From October, 1857, to October, 1858, one hundred and seventy-three deaths from puerperal fever have been reported at the City Inspector's office.

The following table gives the deaths from puerperal fever for each month, and it is interesting to note the parallelism between the deaths from this disease and erysipelas:

Disease.	Oct. 1857	Nov 1857	Dec 1857	Jan. 1858	Feb. 1858	Mar. 1858	Apr. 1858	May 1858	June 1858	July 1858	Aug 1858	Sept 1858
Puerperal Fever,.	5	9	14	17	26	21	21	19	13	13	9	6
Erysipelas,.....	4	6	16	13	20	14	23	21	8	13	5	3

In Paris there has certainly been afforded an immense field for studying this disease, as in five years, 1852–56, 644 deaths have occurred, in six of the principal hospitals, from puerperal fever.

I may be pardoned for saying, that I have most carefully and conscientiously read all that has appeared in the French medical journals, and that I have observed, with the most earnest desire for truth, in order that I might correct any error in reasoning or deduction, into which I may have previously fallen.

Before alluding to some points, in regard to the pathology of this affection, I will give a very brief summary of the views of the principal speakers in the French Academy. The discussion originated with M. Guerard, who stated his belief, that so far as the nature of the disease was concerned, we must look for something beyond the mere local lesions, and that its phenomena cannot be explained by means of purulent infection. M. Depaul was the most able advocate of the doctrine of the essentiality of puerperal fever, although, instead of the term puerperal fever, he would prefer calling it puerperal typhus, or puerperal septicæmia. He believes that its essential character consists in a primary alteration in the blood.

In the autopsies which he has made, he has uniformly found the blood in this disease to possess a peculiar fluidity, and to be generally of a violet red color, easily impregnating and coloring the tissues. It often also presents a remarkably oily appearance, and coagulates with difficulty. He quotes from Vogel, (in Virchow's Handbuch,) who states that lactic acid confers an acidity upon the blood in this disease, and that in some cases carbonate of ammonia, in others the hydrosulphate, is found in it. The fluid loses its aptitude for coagulation, as do the globules to redden on the contact of air, and therefore their fitness for the respiratory act. The globules are in part decomposed and dissolved in the serum, giving it a reddish or dirty brown color. Scanzoni asserts that in some cases there is an increase of fibrin; in others, a true pyæmia, the constituent elements continuing in their normal proportions, and in others, again, a true putrefactive dissolution or septicæmia. M. Depaul regards the epidemic occurrence of this disease as presumptive proof of its essentiality. He, also, as do several of the

other speakers in the French Academy, refers to the fact, that the lesions of the solids are of the most varying character, and that in some fatal cases these do not exist at all, nothing being appreciable, save alterations in the blood. M. Beau considers puerperal fever as due to local inflammation (most frequently of the peritoneum,) united to an inflammatory diathesis depending upon an alteration of the blood—this alteration being an increase of the fibrin, a characteristic of inflammation. In the opinion of M. Piorry, the disease in question is primarily a metritis phlebitis or peritonitis, septicæmia or pyæmia. M. Caseaux also believes that it belongs to the phlegmasiæ. Jacquemier, Legroux, and Behier hold similar views. M. Bouillaud considers it due to purulent or putrid infection with an inflammatory element. Velpeau holds that it is a metro-peritonitis, a lymphangitis, or phlebitis (purulent infection,) modified by the puerperal state. Trousseau considers it as a phlegmasia of a peculiar kind due to a specific cause. Hervez de Chégoin sees in puerperal fever only the results of purulent or putrid infection. Dubois, Depaul, Danyau, and Guêrard were the only members of the French Academy who advocated the opinion that puerperal fever is an essential disease, not dependent at all upon local inflammation. M. Cruveilhier considers this disease as both a fever and an inflammation, and expresses his opinion in nearly the same words as Dr. Clark used in this Academy six months before. In common also with Dr. Clark, he regards the anatomical lesions as an essential feature in the disease. The following are his conclusions:

1. Puerperal fever is essentially a traumatic fever.

2. The special conditions in which the uterine and the entire organism of the woman who has just been in labor constitutes what may be called puerperal traumatism.

3. The essential anatomical characters of puerperal fever are peritonitis, sub-peritonitis, or purulent lymphangitis. Purulent uterine phlebitis is incomparably more rare than suppurative lymphangitis.

4. It is extremely probable that purulent inflammation of the lymphatic vessels is a cause of the intoxication of the blood in puerperal fever—but this intoxication does not manifest itself by visceral abscesses, as happens in purulent phlebitis.

5. The possibility of purulent infection of the blood by suppurative lymphangitis is not decided in a positive manner.

Now I do not propose to go over the ground of my former remarks, and give my reasons for believing that puerperal fever is an idiopathic fever, which originates from a poisoned state of the blood, and that the quasi inflammatory processes which generally occur in this disease are

in reality the results of poison, stirring up its peculiar excitement wherever it finds the proper amount of combined irritation and exhaustion to insure it a nidus, just as the poison of typhus fever awakens its pseudo-inflammations in the intestines, the lungs, and the brain. I will only express my belief parenthetically, that the lesions commonly found in puerperal fever are not due at all to inflammation, but to a pathological process entirely dissimilar and in many respects antagonistic to inflammation.

The whole doctrine of inflammation is now in a transition state. Whether the essential characteristics of inflammation be, as Professor Bennett says, an exudation of the normal liquor sanguinis, or in the words of Professor Alison, inflammation is altered nutrition, it seems to me that the lesions found in puerperal fever, indicating destructive disorganization, are of an entirely different character. I should not allude to this point were it not for a strong conviction that pathological errors in these particulars have led to grave therapeutical errors. There has been one striking difference between the discussion in the Academy of France and this body, and that is, that in the former the great majority who have spoken have advocated the doctrine that the phenomena characteristic of puerperal fever are the results of a local phlegmasia, while this view has not found a single advocate here. Holding the views I do, I must regard this as a matter of mutual congratulation. But there is another point which has not only an important bearing on this question, but on general pathology, and is equally interesting to the obstetrician, the surgeon, and the physician, on which I beg leave to dwell for a few moments—and that is the question of purulent or putrid infection, or of pyæmia and of septicæmia.

As regards this subject, there is a great harmony of view between one of our members, who has taken the most prominent part in this discussion, and several of the distinguished speakers in the French Academy. In order that I may do full justice to Dr. Clark, I quote from the *New York Journal of Medicine.* Dr. Clark said, "It was his object, on a former occasion, to show that these cases" (the cases which, in the belief of Simpson, Gooch, and others, were without lesion of any kind—a simple fever, the poison of which overwhelmed the vital powers,) "were no exceptions to the general rule, but that they were really marked by inflammation, like the others, but that the inflammation was one that had escaped detection; that it was an endometritis, and that the inflammation affecting the inner surface of the uterus involved the open or valvular mouths of the uterine veins, and might produce purulent contamination of the system, while no pus was found

in the veins themselves after death. The evidence of this was in the inflammatory exudation on the inside of the surface of the uterus; the redness of the uterine structure, penetrating a minute distance from within outward; the symptoms of pyæmia and the discovery of pus in distant organs. To present this idea was the chief object of his former remarks, and to give it distinctness he had referred to and recognized the then commonly described inflammatory lesions, viz., the peritonitis, the purulent phlebitis in the uterine sinuses, and the purulent inflammation of the uterine lymphatics. These, together with endometritis, he had stated were the primary *inflammatory* lesions, and that there were other organs subject to inflammation in a subordinate and secondary degree." In another place he asks, "whether the shortest time" (in which the most malignant form of puerperal fever destroys life) "is not long enough for endometritis to produce fatal contamination of the blood? or, in other words, in what time purulent infection can overwhelm the vital forces?" After giving a condensed summary of the experiments of Sedillot, in injecting laudable and fœtid pus into the veins of dogs, Dr. Clark remarks, "the import of these experiments, and their relation to the disease we are considering, hardly require comment, especially when it is remembered that the uterine cavity is open to the ready access of air; that when inflammation is recognized on its inner surface, it has often been of a character most likely to furnish a sceptic agent, healthy or degenerated pus, in an augmented, and consequently accumulated stream." These extracts show the importance with which Dr. Clark regards purulent contamination and putrid infection in developing the phenomena of puerperal fever. In the French Academy, M. Velpeau endeavored to prove that it results from purulent infection, and Hervez de Chégoin, that it is due to putrid infection. In my former remarks I expressed a doubt whether pus, the product of simple ordinary inflammation, if absorbed or washed into the circulating blood, will produce the symptoms which we call pyæmia, or whether, in fact, another element besides laudable pus is not essential for the production of these phenomena. As to the effects of putrid pus when mingled with the circulation, there is no doubt, for this has been demonstrated by the experiments of numerous competent observers. But with Dubois, I hold that neither purulent contamination nor putrid infection have anything to do with the development of the disease, but that it results from a special poison of the blood, the essence of which is unknown, but the effects of which are very manifest. I believe this to be true of all that class of cases called pyæmia, whether puerperal, traumatic, or idiopathic, and that the

extensive and disseminated suppuration are a result of this poison, and not a cause of the disease. The doctrine generally accepted, is, that purulent contamination originates in a phlebitis. Now, simple phlebitis alone is not a disease of great severity. It is often met with wherever there is a traumatic injury or solution of continuity, and it may involve the whole extent of a limb without any great danger, and very rarely has a fatal termination. But sometimes comparatively trivial causes, very slight injuries, are followed by a train of symptoms, the aggregate of which constitute pyæmia, and terminate fatally. Trousseau mentions, that at the Hôpital Clinique, in the service of M. Cloquet, four patients died after the following slight operations, one resulting from forced catheterism, another from depressing a cataract, a third from a slight incision for fissure of the anus, and the fourth was a woman who had a slight incision made in the arm for the extraction of a needle.

Puerperal fever was prevailing in the hospital at this time in the service of M. Dubois. Parallel facts have long been observed by surgeons, and I think I may safely refer to the surgical members of this body to confirm the statement, that during the past winter and spring there has been an unusual tendency to the development of pyæmia. How can such cases as the above be explained by the doctrine of purulent contamination? It is a matter of common observation that large abscesses are absorbed and eliminated without occasioning so-called purulent infection. Dr. Bennett relates a very interesting case of pyæmia, terminating fatally, following acute articular rheumatism. Pus was found in the head, the chest, and the joints. There was no phlebitis. Dr. Watson, in his lectures, relates two cases, in which the autopsic results were strikingly like this, but the constitutional disease was preceded by otorrhea and abscess in the ear. Pyæmia is a very rare and exceptional result of the traumatic lesions above mentioned, and equally or more so of the diseases referred to, viz., acute articular rheumatism and otorrhea. Neither is it one of the natural terminations of endometritis, uterine phlebitis, or suppurative inflammation of the uterine lymphatics, nor is there any reason for believing that these diseases are liable, when not associated with some other morbific element, to produce fatal contamination of the blood. I cannot, therefore, see what bearing the anatomical structure of the uterine sinuses, on which Dr. Clark laid so much stress in his remarks on the first evening in which he discussed this subject, has upon puerperal fever. Even if those cases described by Gooch, Locock, Simpson, and others, as without lesion, were cases of pyæmia, it does not follow that the pyæ-

mia had its source in the inflammation of the inner surface of the uterus. If the more careful and microscopic examination of modern times had been able to reveal the existence of pus in minute quantities in the uterine sinuses, it does not follow that this pus was the source of the fatal contamination of the blood. It must be remembered that these sinuses constitute a special vascular apparatus, pertaining to the utero-placental circulation, and disappearing when complete involution of the uterus has taken place. Admitting, then, the doctrine of purulent contamination as ordinarily received, pus found in these uterine sinuses must have a very trivial influence on the general system as compared with pus found in the crural, the ovaric, or the iliac veins. Furthermore, microscopic investigations have proved, as Trousseau asserted, and Dr. Clark the other evening admitted, that the absorption of pus is a physical impossibility, the pus globules being larger than the calibre of the capillaries. In the cases of absorption and elimination of the pus of large abscesses before alluded to, the pus corpuscles must first be disintegrated and reduced to a fluid condition. The doctrine of putrid infection is equally untenable. If the retention of a certain quantity of liquid or coagulated blood can produce toxæmia and the effects supposed to be due to this, then a natural, constant, and inoffensive condition would be converted into a permanent and formidable danger, for there is no hæmorrhage attending labor which is not followed by putrid infection, as there are always some clots retained and altered in the genital passages. These are briefly my reasons for rejecting the doctrine of purulent contamination as the source of puerperal fever. I do not, however, wish to be understood as asserting that there are no cases of putrid infection which destroy the life of the puerperal woman, for the contrary is my belief. It does sometimes occur from the retention of a portion of the placenta, or of clots which are decomposed within the cavity of the uterus, and in some rare instances from gangrene of the internal surface of the uterus. One case of the latter occurred in my service at Bellevue Hospital. But these cases are quite distinct from puerperal fever, and the differential diagnosis is very easily made out. No one practically familiar with puerperal fever as an epidemic or a sporadic disease, would confound them. In putrid infection the chills are very slight, and recur irregularly and frequently. The tongue is dry and cracked, the teeth and lips are covered with sordes, the countenance exhibits a peculiarly haggard and frightened expression, and hectic fever and colliquative diarrhœa appear at an early period. There is also usually marked subsultus, insomnia, muttering dilirium, and abdominal meteorism without pain.

The lochial discharge is always extremely offensive. It sometimes is absent, but when this happens, a vaginal examination will give unmistakable proof of the odor of putrescence.

Any or all of the above symptoms may be absent in puerperal fever, and they are never found combined in them entirely. The lochia, for example, is sometimes suppressed suddenly without producing any symptoms, or it may continue unchanged in quality or quantity. It may, to be sure, be very offensive, but this is unattended with the symptoms above enumerated as pertaining to putrid infection.

Puerperal fever, then, is something more and something different from purulent contamination or putrid infection. It is a constitutional disease, primarily acting on the blood. To parody the words of Dr. Meigs, "the constitutional affection leads the train, and brings on the topical lesions after an indispensable preliminary incubation." There is a uniformity and constancy in its symptoms which bears no relation to its local lesions, which are infinitely varied, and in some well-authenticated cases no palpable lesions have been found. If they existed, they were too trivial to explain the severity, and intensity, and rapid progress of the constitutional reaction. Pus is found in the veins, the uterine tissue, the lymphatics, the peritoneum, the pleura, the pericardium, the articulations, the muscles, and the cellular, and even the epidermic tissue. M. Charrier describes one epidemic at the Hôpital Lariboisiere, in which the first half were characterized by the peritoneal lesion, in the second half lesions of the pleura were the uniform rule, and it was rare that lesions were found of any of the organs specially associated with parturition. Each epidemic has its special characteristic as regards the topical lesions. M. Dubois observed one epidemic, in which all who died were found to have perforation of the intestines. M. Danyau, in another epidemic in 1829, found a constant alteration of the mucous membrane of the large intestine in its whole extent, the lesion being a solution of continuity, as if made by a punch. A careful study of the history of the numerous epidemics which have been described, proves that the variety of local lesions predominating in each is exceedingly great, while there has been sufficient uniformity in the symptoms, as a whole, to characterize it as being different manifestations of the same disease.

I now pass to a consideration of the therapeutics of this disease. This is the cardinal end of the study of all diseases. The discussion in the Academy of France has been utterly fruitless as regards this point, as they have added literally nothing to our knowledge of the proper mode of treating puerperal fever. In this respect I think it is not too

much to say, that the discussion in this body contrasts most favorably with that of our foreign namesake. The heroic use of opium and its preparations, in that variety of puerperal fever characterized by the peritoneal lesion, first signalized by Dr. Clark, and the use of the veratrum viride as an arterial sedative, has and will, I do not hesitate to say, diminished the fatality of this terrible disease by a marked per centage.

Most of the French speakers distinctly avow their skepticism as to the value of any treatment for the cure of puerperal fever. The exceptions are M. Depaul, who has found his most favorable results from the free use of mercurials; M. Velpeau, who has strong faith in the value of mercurial inunctions; and M. Beau, who is enthusiastic in his encomiums in regard to the value and importance of the sulphate of quinine in the treatment of this disease.

Now it seems to me that each school of the French—those who have advocated the essentiality of the disease, and those who consider the fever as symptomatic of local inflammation—have equally failed in their therapeutic efforts for obvious reasons. The first have apparently been seeking for some specific in puerperal fever, some antidote for the blood poison, which they would use in an analogous way with the use of the hydrated peroxide of iron in poisoning from arsenic, while the other school are vainly seeking some antiphlogistic course which will overwhelm the imflammatory action. Now there are no specific therapeutics for puerperal fever, any more than there is in yellow fever or in typhus fever. The type of the disease varies to an extraordinary degree in different epidemics. Sporadic cases require very different management from epidemic cases, and the constitution of different individuals attacked, and the tolerance of diseases, differs to a still more extraordinary extent. There is no disease which requires such acute discrimination in the adaptation of means to an end, none which requires a sounder judgment or more incessant watching to combat every assault which exhausts vital power.

On a former occasion, I very briefly alluded to the principal indications in the treatment of this disease. I propose now to examine more in detail the agencies we have the control of in fulfilling these indications. The first indication is to eliminate from the system as much of the morbid poison as possible, by means of depletion and the other evacuants, as purgatives, emetics, diuretics, etc. I said that unfortunately this indication, owing to the peculiar character of this disease, can rarely be fulfilled, except to a limited degree. The effects of the poison are developed so rapidly, that the patient will not bear the use

of such means, and it is the effects that we are obliged to combat. Within the past year I have twice resorted to venesection in puerperal fever with most satisfactory results. Both patients were young and plethoric, and the toxæmic influence was strikingly evident in producing great cerebral disturbance. I bled for the same reason that I would bleed similar subjects in uremic convulsion. I would here incidentally suggest the inquiry, whether the type of disease is not again becoming more sthenic, or whether there has not been an epidemic tendency to cerebral congestion. Within the past twelve months I have bled thirteen pregnant or parturient women—more in the aggregate than I have bled for the seven years before. I may also add that I believe I have had authentic accounts of the death of twenty-one from this cause in the same period of time. I will add nothing to my former remarks in regard to venesection in puerperal fever.

Purgatives I have rarely used in this disease, for I have regarded tympanites as a contra-indication for their use, and in many cases there has been a remarked tendency to diarrhœa, which sometimes has been difficult to control. In some few cases, where there was evident obstruction of the portal circulation, or there was reason to believe that there was intestinal irritation from previous constipation, I have given an active cathartic of calomel, rhubarb and nux vomica In a later stage of the disease also, when the patient has been supported by a liberal use of beef tea and alcoholic stimulants for some days, there sometimes comes a period when the digestive apparatus refuses to take up what is put in the stomach, a mercurial laxative has had a most happy effect in unloading the portal system, and relieving the congestion of the capillary circulation of the mucous membrane of the alimentary canal, and the patient at once is able to assimilate what is taken into the stomach.

Emetics were at one period regarded as a specific for puerperal fever, but now they are rarely used. In three cases I have decided on their use. The disease was ushered in by recurring chills, nausea and bilious vomiting, with a marked icterode hue of the skin and conjunctiva. The agent selected was the Turpeth mineral in five-grain doses, which acts very promptly without producing prostration. But, on the contrary, in these cases they professed to feel less weakness after vomiting, and the symptoms which induced the selection of an emetic were at once relieved.

The second indication mentioned was to control the vital disturbances resulting from reaction. These are principally vascular excitement and nervous irritation. The value of veratrum viride in reducing vascular

excitement has in this disease been confirmed by many observers in this city, and my own additional experience. It will most surely reduce the quickened pulse of inflammation and irritation. Its use is not incompatible with that of stimulants. Experience has abundantly demonstrated the truth of this apparent paradox. One patient who recovered took, every hour for two days, one ounce of brandy and three to ten drops of the tinc. veratrum viride, the quantity of the latter being determined by the frequency of the pulse, which was never allowed to rise above 80 per minute, although it sometimes fell down to 40. In another case the veratrum viride did not seem to produce any effect on the pulse, which remained steadily above 130, until the condition of the patient was such that I decided to give brandy. After the first ounce was given, it fell to 108; after the second, to 86. Continuing the brandy, the veratrum viride was suspended for a few hours, and the pulse again rose to 130. After this it was curious to note the fact, that if either agent was suspended the pulse would rapidly increase in frequency, while under the combined influence of the two it was kept below 80 per minute. I have little to add to what has already been said on the use of opium in puerperal fever. In all cases it should be given to the extent of entirely subduing the pain. When the peritoneal lesion predominates, it is the principal agent on which we must rely, and the quantity in which it is to be administered is only to be determined by the effect which it produces.

Third, to combat the local secondary lesions which may be developed. This indication implies the use of a great variety of means, which will often tax the resources of the medical attendant to the utmost. I have already spoken of the value of opium in the peritoneal lesion. The tympanitis is often the most striking and distressing symptom, and I regret to say that I know of no treatment by which we can always be sure of relieving it. I rely, however, mostly on the use of turpentine, internally and endemically. In some cases I have seen good results from the use of the acetate of lead, and in others I have seen all means fail. In those cases where the secondary lesions are developed in the uterus, its veins, or its lymphatics, I have seen no advantage from leeching or blistering. The exposure of the abdomen to the air more than counterbalances the problematical advantages resulting from the former, while the latter only adds to the nervous irritation already existing. In these cases, the only local treatment I make use of is chlorinated vaginal injections repeated several times a day, and hot linseed meal poultices kept constantly applied over the hypogastrium.

Fourth, to sustain the vital powers of the system. I believe more

patients die from the neglect of this point than from any other error of treatment in this disease. The patient is often sacrificed by a contest between the doctor and the disease, both contributing to exhaust the vital powers. In very many cases remedies are utterly powerless in combating the disease, and the province of the physician is to keep the patient alive until the disease is exhausted. This can only be done by proper nutrition, and the prevention of waste, and the restoration of nerve power by the use of alcoholic stimulants. I will not enlarge upon this point; but I still believe that when a patient with puerperal fever has lived for forty-eight hours, there is a constant encouragement for effort, and that the danger is in a certain sense diminished in proportion to the duration of the disease. I will only allude to two points of practice which seem to me of some importance. The first I have already mentioned—the value of a mercurial laxative when the patient has been supported for some days by the liberal use of beef tea and alcoholic stimulants, until the stomach loses the power of taking care of what is put into it, apparently from obstruction of the circulation and congestion of the capillary circulation of the mucous membrane of the alimentary canal.

There is another class of cases where the stomach seems to give out all at once from another cause, which I will not undertake to explain. Everything is rejected in a few minutes after it is swallowed, with a painful feeling of burning and excoriation. Now, if the condition is not changed the patient will soon die, as she can no longer be sustained. I have in several instances been able to persuade the stomach to resume its functions, by adding to each tablespoonful of beef tea one drop of nitro-muriatic acid, the proportion of the mixture being one part of the nitric and two of the hydrochloric acid. I will no longer ask the attention of the Academy, but will conclude with the expression of the hope that other members will give us the benefit of their clinical experience.

Dr. Gardner then made the following remarks:

Mr. President—In common, I doubt not, with you and the members of the Academy generally, I have listened with great satisfaction to the Professors Smith, Clark, and Barker, in their full and lucid statements respecting the etiology, pathology and therapeutics of puerperal fever; I have read, too, the full resumé of kindred debates upon this same subject at the meetings of our illustrious namesake, the Academy of Medicine at Paris; and I may, perhaps, be pardoned *here*, Mr. President, if I state that I have felt no little access of national pride in instituting a comparison between these debates ; for here the anatomical facts and the pathological deductions of Prof. Clark, and also his heroic opium treatment, and the more novel treatment of Prof. Barker with the veratrum viride, have at least added something to the sum of knowledge on these points, given us food for thought, and a stand-point (even if a little boggy and uncertain) from which to start for fresh investigations in a somewhat different direction from that which we have been following. The debates of the French Academy have been truly flat, stale, and unprofitable, without a new point made, unless I include the mention there of the opium and veratrum viride treatments.

Still, Mr. President, it seems to me, that even when so much has been done, more might still be effected, and I venture to intrude my few remarks upon the attention of the Academy, not with the expectation of personally adding to the common fund, but in hopes by drawing attention to another side of the question, to elicit new opinions, perhaps, upon old matters. We have heard but little said of the treatment of puerperal fever, except by new methods. Puerperal fever is no new disease; it dates far back in time, for we have monographs upon this subject dated as early as 1659, by Willis, Hake, and Berger. In 1746 puerperal fever prevailed in Paris, chiefly at Hotel Dieu, where scarcely any recovered from it, as might be supposed by any one who has ever seen the ill-ventilated wards of this renowned hospital. The post-mortem examinations there revealed large amounts of albuminous exudations in the peritoneal cavity, appearing like coagulated milk on the surface of the intestines, with a copious effusion of whey or milk-like serum; wherefore effusion was viewed as a metastasis of milk, and hence it was for a time considered as milk-fever, although a closer attention would have shown that the milk is rarely entirely arrested.

But, as I was proceeding to remark, little has been said in this

Academy respecting the treatment of this disease, except to suggest novel methods of treatment. It cannot be possible that there is nothing good in the prophylaxis and therapeutics in general use for the last two centuries! The results may not have been what is desired, but certainly there must be something good in it all! For my part, I do not believe in the opium treatment or the veratrum viride treatment as treatments, while I am willing to accord to both of these powerful remedies a place in the list of medicaments appropriate to some of the ever-changing symptoms of this, in certain situations, very fatal disease. I see in opium a powerful narcotic, efficient in relieving the intense pain often present, and for this I would administer it till the pain is overcome, even if compelled to exceed the immense doses which Dr. Clark, as well as Dr. McNulty in his paper on opium lately read here, has proved the human constitution is able to safely withstand. I see in both opium and veratrum viride an agent effectual in calming the vascular excitement, but not to cure the *cause* of this excitement, for this is still found to be present when the calming potion is removed. Veratrum viride I am ready to give experimentally, empirically, but not with any idea of its specific qualities, as a curative agent. They both act as palliative to inflammatory symptoms; they serve to remove the *vis a tergo*, to restrain the action of the heart from sending more blood to the already gorged and diseased tissues.

For specific remedies I am compelled to stick to the old treatment, notwithstanding my dissatisfaction with it—my unwillingness to follow a course that will not save *every* patient. I am obliged to hold on to it until something better is offered for my adoption. Calomel is the only reliable sheet anchor that I have found. It is the mercurial only that will defibrinate the blood, when the inflammatory symptoms are the most serious. It is the mercurial alone that is powerful to eliminate the subtle *materies morbi* in those less fearful looking, but more dangerous forms of this disorder where the springs of life are destroyed by secret and hidden disease, traced by Dr. Clark to its lurking places in the obscure ampullæ of the internal uterine sinuses. Theoretically, calomel is the remedy demanded; no medicine acts so efficaciously upon all inflammatory affections of all serous membranes, whether it be of the brain, the lungs, or the peritoneum; no medicine more surely destroys morbific poisons than the mercurial; no treatment is more potent to diminish the abnormal plastic elements of the blood, or to restore the hyperæmic tissues and organs to their proper, healthy condition. Still I do not consider that calomel is a positive agent. As in scarlatina, the invasion of the disease is sometimes

signalized by such terrific aggravation of every and all symptoms united, that before the system can be brought under the influence of any form of treatment the patient is lost—so intense occasionally become the inflammatory symptoms, that the most vigorous treatment will not overcome them; for I have seen women after several days' sickness die, when profusely salivated—a fact denied by some, but which I have seen, though in but one instance that I can recall with distinctness.

The mercurial treatment, then, is in no wise to be neglected; combining, as may be necessary, opium, or the veratrum viride, to any desired extent, yet remembering that in so doing you are administering no curative agent; that the opium but imitates the treatment of the surgeon, who applies splints to a broken leg, producing quiescence and relieving pain—the puerperal poison is still there, and till that is eliminated, you have only made your patient comfortable, and perhaps but soothed her passage to the grave.

But before any action can be expected from mercurials, there is time and occasion for other treatment. The disease sometimes is apparent before or during parturition. In the case of a woman whom I delivered by craniotomy, after several days' labor, there was no subsidence of the abdomen after the removal of the child, weighing 8½ lbs., and the secundines, but it remained tumid, tympanitic, and the woman was finally enumerated as one of the unsuccessful of Dr. Clark's cases of treatment by opium; the woman dying of hæmorrhage on the sixth day after.

Topical depletion, when severe inflammatory symptoms are present, I have great faith in. Forty or sixty leeches upon the abdomen, with perhaps a repetition of half that number in from 12 to 48 hours, I have known beneficial, but I have no faith in general bleedings to any amount, or in the application of ten or twenty leeches. If any benefit is to be derived from them, they must be sufficiently numerous, if not to overwhelm the disease, at least to markedly affect it.

I attach more importance to turpentine than to any remedy after calomel. What the extent of its therapeutical powers may be I am not prepared to fully define. I believe them to be very great, and very little appreciated by the profession. In one case of ruptured uterus, I consider the life was saved by application of this agent alone. Whether administered by the mouth with the yolk of an egg in ten minim doses every hour, or applied constantly for forty-eight or seventy-two hours to the abdomen, or internally and externally

united, I have seen results forcing me to believe in its specific properties.

The secondary affections, the results of pyæmia, are not peculiar to puerperal fever, and need not be especially considered in this category.

Considering it both desirable and becoming that all who have any especial interest or experience in this class of diseases should lay their views before the Academy, I have offered these few remarks.