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ANÆMIA, AS CONNECTED WITH THE PUERPERAL STATE.

[Read before the Bristol District Medical Society, September 25, 1849, by B. CARPENTER, M.D., Pawtucket, Mass.]

DR. CARPENTER. Dear Sir,—You are requested, by the members of the Bristol District Medical Society, to send a copy of your very excellent address, delivered before the Society on the 26th of September, to the Editor of the Boston Medical and Surgical Journal for publication.

E. Attleboro', Dec. 19, 1849.

Respectfully Yours,
WM. F. PERRY, Sec'y.

GENTLEMEN,—We meet to-day, for the first time, as an organized body. Our object is two-fold. First, the promotion of social improvement; and, second, enlargement and improvement in the varied branches of knowledge connected with the medical profession.

Men can never well know each other, but by commingling together. Vague notions of the characters of our fellow men may be formed, either by oral or written testimony. Authors may be imperfectly known, by their works; something may be learned of men, by the reports of others. Yet this is a kind of knowledge upon which little reliance can be placed. Books do not, nor can they, truly represent the *whole character* of their authors. Nay, it is obvious, that very little can be known of the true character of an author from having read his book. Oral testimony is still less deserving of credit. If we form our opinions of men's characters from oral representations, we are quite as liable to be in the wrong as in the right. Calumny and slander are no more likely to be silent than are truth and justice. It is only by commingling together, by social meetings and conversation, by the personal interchange of ideas, that we can form true estimates of character.

Associations like this afford opportunities and facilities for studying each other's character, for removing previously-formed opinions (if erroneous), for allaying asperities, and enabling us to form such estimates as shall give every man his true level, and promote harmony, friendship and good feeling amongst the different members of the profession.

But, again, there is in our profession a want of those *strong incentives to action*, which, alone, lead to excellence. Men love their ease too well, to make any extraordinary mental effort, except there be an emer-

gency sufficient to call it forth. The business of medical men is such as leads the mind in very much the same train of thought. True, we see all the variety of disease to which flesh is heir. But, after all, it is the investigation of disease, and its causes, and the means by which it can be overcome, that make up the sum total of the physician's daily mental effort. He rarely meets with those great and important emergencies, which are often presented to other minds. The lawyer, the politician, the statesman, the divine, scarce live a day without some new subject for mental contemplation. Besides, they have their opponents or critics openly before them, and they must succeed or fall in the contest. To them, the stimulus for mental effort is great, and it is not without its effects.

Not so with the physician. His walks in life are silent and unobtrusive. His language must be spoken in an under tone, and in the words of encouragement, sympathy and consolation. He rarely meets with those who are qualified to judge of his merits or deserts; and while so little is known of the laws of vitality, and so uncertain and diverse is the operation of medicinal agents upon the human system, the veriest empiric is quite as likely to receive the *vox populi* as the most scientific physician.

Some agencies are therefore needed to bring out the energies of the profession, other than those occurring in the ordinary routine of practice. Such, in some degree (as we believe), are to be found in bodies organized like this. We here meet, face to face. Ideas are advanced and criticized; cases are reported, and the treatment of them thrown open to debate; dissertations are read, upon which remarks are elicited and freely given; and in this way, are developed those mental energies, which otherwise would have remained latent and unknown, perhaps through the entire period of life. And let it never be forgotten, that those who perform most of this associated labor reap the richest fruits.

With these preliminary remarks, gentlemen, you will allow me to ask your attention for the hour, in following me, in the investigation of a subject, concerning which little has been said, and less written; knowing that your good practical judgment will supply all errors and deficiencies which may occur on my part. I feel willing to expose my ignorance, if by so doing sparks of intelligence can be elicited from others, and light thrown upon what seems to me, in the present state of medical knowledge, a dark and obscure subject. And you will not, I am sure, charge me with egotism, if I should seem to draw largely upon my own resources and experience, in endeavoring to investigate a subject, upon which writers, ancient as well as modern, are almost entirely silent.

Our subject, then, for the present dissertation, is *anæmia, as connected with the puerperal state.*

The definition given by writers to this disease, is exsanguinity, or bloodlessness. Now this term may mean too little or too much. If it is intended to mean, that there is no blood in the system, when death ensues, then it evidently means too much, for it is not supposable that the vital spark can burn until every particle of blood is exhausted. If, on the other hand, it is intended to convey the idea that blood remains in the system, pure and unchanged, until death, then does it equally

fail of giving the true definition. The truth is, that in cases of death resulting from anæmia, a very small quantity of blood still remains in the large bloodvessels, while the capillary system and the smaller bloodvessels are entirely without it. But even that which does remain is dissolved, and broken down, containing scarcely any crassamentum, or coloring matter. It resembles water, in which bloody meat has been rinsed, more than pure blood. If John Hunter was right in supposing that the blood contained vitality, then we think the deduction is fair, that this disease progresses just in proportion as the vitality of the blood is lost, and that death ensues when there is not enough left to sustain the vital economy.

We propose treating our subject, very briefly, in the following order.

First, its History.

Second, its Diagnosis.

Third, its Nature, or Causes.

Fourth, its Symptoms.

Fifth, its Prognosis.

Sixth, its Treatment.

And, *First*, in relation to its History. In looking into the early writers on medical subjects, we find them *entirely* silent on this *particular disease*. They speak of anæmia as the result of excessive phlebotomy, of hæmorrhage from various organs, of starvation, and as resulting from long-continued confinement in some of the European mines. Also Leutard, and some others, attempted to classify anæmia, by dividing it into anæmia chlorosis, anæmia consecutiva, anæmia vera et spuria, &c. &c.; but they do not, in a single instance, even allude to this disease as connected with the *puerperal state*.

More recently, Prof. Hall of Paris, Dr. Combe of Edinburgh, and many other distinguished pathologists, have thrown some light upon the general disease; but not one of them has made the least allusion to it, in the *peculiar* form now under consideration. The cases which occurred in coal mines, some of which were transferred to the medical schools of Paris for treatment, differed materially, in many of their symptoms, from puerperal anæmia; and were doubtless the product of a specific malaria generated in the deep sunken pits of those mines. Besides, the subjects were all males. The case reported by Dr. Combe, and quoted by almost every medical writer on this subject, is more nearly in point, and yet fails, in many important particulars, of being a parallelism. The subject of his case was also a *male*. Still later, Drs. Good, Macintosh, Eberle, Watson, and a host of others, have noticed anæmia mainly in a physiological point of view, but not one of them in connection with the puerperal state.

We are, therefore, compelled to believe, after careful observation, that this disease, as connected with the puerperal state, is of recent origin, and probably limited to certain localities bordering upon the sea, and has not yet become *extensively* a subject of observation to medical men. In writing on this subject, therefore, we fail entirely in drawing aid from the observation and experience of others, and are thrown mainly upon our own resources.

Second, Diagnosis. Little need be said under this head. The disease is so well marked, and so unlike almost every other disease, that the careful observer need not mistake it. The cadaverous appearance of the whole surface, with the pain in the head, and the universal lassitude, are as striking features in this disease, as are the peculiarities in respiration and the shrill brazen cough in croup; and the practised eye would as soon mistake the one, as the practised ear the other.

But notwithstanding the strong and well-marked features in this disease there is in its early stages, and in the milder cases, a striking resemblance between anæmia and bad cases of chlorosis. Hence Leutard made in his classification a marked form of the disease, under this head. The *waxy, pallid* hue in the two diseases is very similar. The prostration existing in bad cases of chlorosis, is not strikingly dissimilar to that in anæmia, except that it is very much less. With the two exceptions above given, the parallelisms cease, and even there the *strongly-marked cadaverous features* in anæmia, are wanting in chlorosis. The tense, wiry, quick pulse; the beating in the head, the constant tendency to syncope, the disposition to hemorrhage from various organs, always present in anæmia, are, we believe, wanting in chlorosis. Besides, the one usually occurs in delicate unmarried females; the other, with married ladies, in the puerperal or lacteal state. It is of the greatest importance, however, that these two diseases be not mistaken, since (as we shall endeavor to show under another head) the treatment applicable to the one, fails entirely with the other.

With the above exception, we believe there is no disease for which anæmia is liable to be mistaken.

Third, Cause. How far atmospherical and meteorological causes operate in inducing this disease, we confess ourselves entirely unable to determine; yet it is not improbable that causes of this kind do exist. So far as our own observation has extended, it is confined mainly to the districts of country bordering on the sea-board, exists in all seasons of the year, and with all varieties of constitution and temperament.

But what are some of the physiological causes which induce anæmia? All the nutritious portion of the aliment which is taken into the system, after having passed through certain processes, is ordinarily converted into blood; and that blood, in order to be healthy, must contain a relative proportion of all its constituent materials, as serum, crassamentum, iron, &c. &c. Whatever tends to abstract or deteriorate any one of these constituent materials, must tend also to destroy its vital principles. Now in the disease under consideration, nearly all the constituent materials are wanting, except the serum, and therefore is the blood wanting in its vital and nutritious properties. A diseased action must exist somewhere; either in the digestive apparatus, or in the lacteal and absorbent system, or in the bloodvessels themselves. But the digestive organs do not fail of doing their duty, to a considerable extent, until after the characteristic symptoms of the disease are well developed. The cadaverous skin; the pallid lips and tongue; the quick, frequent and tense pulse; the peculiar beating in the head, are all clearly visible, before the digestive organs materially fail. And although the dis-

case be fixed, and so well marked that a practised eye cannot mistake it, the patient will still aver that her food relishes, that there is no trouble at the stomach, and that the bowels are in a natural state; she only complains of excessive debility. True, gastric and enteritic symptoms always appear later in the disease; but if the proximate cause existed in the digestive apparatus, ought not those symptoms to precede, and not follow, the clear development of the disease. And yet, in those cases where the stomach continues vigorous and retains its contents, although the symptoms in other respects may be anything but promising, there is hope of a favorable termination. *Post-mortem* examinations have developed no structural disease in the stomach, bowels or liver, but a condition of those organs perfectly bleached and colorless. Nor are the functions of those organs disturbed until the disease has made fixed and deep traces upon the entire system. The above facts would seem to indicate that we must look elsewhere for the proximate cause of this disease.

Is the proximate cause of the disease, then, to be found in the digestive apparatus? Or does it suffer sympathetically, or secondarily?

But again—after the food has passed the process of digestion, the nutritious portion is taken up by the absorbents, and converted into blood, while the ingesta is thrown out of the system. Here it is that the separation takes place; and if there be diseased action here, diseased consequences must of necessity follow. May there not be a diseased state of the formative vessels? (and by this term we will designate those vessels which absorb the chyle and convert it into blood). Now it is evident that these vessels perform certain changes, in and of themselves. The chyle is taken into the formative vessels, a limpid fluid; it next appears in the bloodvessels, converted into a deep sanguineous fluid, or blood. It has come in contact with no other agents, or agencies, except those existing in the formative vessels; and yet, a very striking change has been produced, quite as striking as the change of the food into chyme, and the chyme into chyle. Hence it is evident that these vessels perform an important function in the vital economy, and a function which can be performed by no other set of agents or organs. Why may not disease affect the function here performed, as well as those of any other organ or set of organs?

The liver performs certain unhealthy functions, when there is no disease of its structure; so of the brain, stomach, kidneys, &c. &c. In *albumentia*, all the albumen, which is an important ingredient in the living economy, is thrown off through the emunctories of the kidneys. In *diabetes*, the saccharine matter is disposed of in the same manner. No matter whether the separation of these materials takes place here or elsewhere; these organs are the emunctories through which those nutritious principles are carried out of the system. They are of themselves, or are compelled to be, the recipients of a material, not to be found in their secretions in a healthy state; and must therefore, of necessity, be the product of disease. And yet dissection of persons having died of either of these diseases, develops no evidence of structural derangement. Nor is it at all certain where the proximate cause of the disease existed.

Some pathologists place it in one organ, or set of organs, as the brain, stomach, &c. &c. ; others, in other localities ; while others give it neither a habitation nor location.

Now since it is the formative system which gives to the blood its peculiar characteristics ; changing its color, its consistence, its vitality, or rather giving it vitality ; and since it is in the paucity of the blood that this disease exists, is it not just to conclude that these organs, or that system, is diseased, whose office it is to give the blood its peculiar characteristics and properties. If so, it seems to us that the formative system must of necessity be the seat of diseased action in anæmia puerperal. What that diseased action is, we confess ourselves entirely unable to determine.

But again, are we to look for the proximate cause of the disease in the bloodvessels themselves ? We are accustomed to view the arteries and veins as mere conduits, through which the blood is propelled by a force not their own. Certainly this is believed to be true of the arteries. Dissections have revealed no secreting, absorbing, or forming power, or property, as connected with the coats of the bloodvessels. The office of the connecting link, between the arteries and veins, or the capillary system, may not be so well known. The changes which there take place, may not all be revealed. Yet it is quite certain, that the blood, while in the capillary vessels, retains its arterial color. Any stimulating application, gentle friction, or the blush of shame, immediately brings it into view. The florid hue is seen at once. Now it is the absence of this very florid color, which first indicates, to a practised eye, the existence of puerperal anæmia. There is an entire absence of this florid tinge in the whole capillary system. The blood must have lost its peculiar arterial hue, before its arrival at the capillary system, else the peculiar waxy, cadaverous, anæmic appearance, would not be present.

Is it not probable that the nutritious properties of the blood are destroyed, or separated from the aliment, by some diseased action of the formative system, and that here is to be found the proximate cause of this disease.

[To be continued.]

FOURTH, Symptoms. Anæmia makes its appearance with different degrees of severity; the symptoms sometimes following each other in rapid succession, while in other cases their development is slow and obscure. The first appearance which strikes the practitioner, on entering the sick room, is the peculiar cadaverous *countenance* of his patient. This peculiar waxy, death-like appearance, can never be mistaken, after having once been seen. It is entirely unlike anything else seen in disease. The skin is usually hot and dry, resembling to the eye more nearly a recent corpse than a living person. If the disease progresses to a fatal termination, night sweats ensue, with great prostration of the vital powers, and death closes the scene. If, on the other hand, the disease tends to convalescence, the skin has at times a gentle and healthy glow of perspiration; but during the whole time as white as alabaster, and without the least appearance of blood in the smaller vessels. Nor is it possible, in bad cases, to produce the least sanguineous appearance. Neither frictions, nor stimulating applications, although the cuticle should be abraded, will develope the least appearance of blood. The pulse frequent, from 100 to 150 in a minute, quick, tense, wiry, and, to a casual observer, may appear full, but will not bear pressure, and indicates debility. The heart acts with great intensity. The tongue is usually clean, until towards the termination of the disease, fatally, when it takes on an aphthous appearance. But in all cases, the tongue, together with the lips and mouth, are perfectly bleached and colorless. The tongue and mouth may, or may not, in the earlier stages of the disease, have a peculiar aphthous appearance. Respiration usually hurried, short, and labored; much dyspnœa after the slightest exertion; constant disposition to faint on rising; sometimes evidence of effusion in the chest, in other cases none. Œdema general, partial, or none at all. Throbbing in the head, with vision dim or blurred. This symptom is peculiar, and deserves a passing notice. The patient will not admit that the head aches, as ordinarily, but has a *beating* or *throbbing* in it, and will invariably compare it to the sound produced by a smith's hammer upon the anvil, or to that of a trip hammer. It is a source of greater annoyance to the patient than any other connected with the disease, and I have never known it wanting in a single case. The eyes are glassy, with a bluish-white tinge; little sleep, and that disturbed with much dreaming. Anxiety of mind great, with much tossing and rolling in the bed. Spirits greatly depressed and desponding, with a premonition that death is inevitable. Constant sighing, or efforts to fill the lungs with air, as if to supply the want of the natural stimulus, by increasing the oxygen. Stomach irritable, with nausea, often rejecting its contents, with loathing of food, and towards a fatal termination will retain nothing. Bowels loose, with dark-green stools; may, or may not, be pain, usually none; lassitude great, and sometimes bleeding from the nose or other organs. Urine scanty and high colored; secretion of milk usually small, and in no instance (so far as I know) is there an excessive lochial discharge.

Such are the symptoms of puerperal anæmia. Perhaps their true

appearances can be more fully presented by relating cases of actual occurrence. And in doing this, the writer must rely partly upon memory, as his notes are not as full as he could wish; nor could he obtain a single *post-mortem* examination, in all the fatal cases. For the purpose of brevity, we will report one or two of the first cases, and afterwards use them as references; describing only the peculiarities in each individual case as they occurred.

CASE I.—Feb. 22d, 1841. Called to see Mrs. B. Found her pregnant with her third child. Age 25. Sanguine temperament, robust and vigorous constitution, weighing 150 pounds. General health good. Great depression of spirits, with a premonition that she should die in labor; throbbing in the head; red canker; œdema; cadaverous skin; dyspnoea on motion; stomach irritable; bowels loose; loss of appetite; pulse 100. She was now about house. Treatment—chalybeates and nit. argenti.

March 24.—Saw her again, with all the former symptoms aggravated, and the following in addition. Pulse now 120 to 150, quick, wiry, very tense. Intense throbbing of the heart. Great tendency to syncope, with a constant desire to be fanned. Great restlessness and inability to sleep. Urine scanty and high colored. Tongue, lips and mouth perfectly bleached, and without coat or sordes. Blood constantly oozing from the nose, but without crassamentum or coloring matter, scarcely tinging the linen upon which it fell. Treatment—chalybeates and nit. argenti, topical and general, with morphia.

On 29th, Dr. W. saw her in consultation. Treatment continued, with wine.

On the night of the 31st, confined, giving birth to a dead child, of full growth. Labor easy, and without hemorrhage, after which she sank rapidly, and died April 2d.

CASE II.—June 8th, 1841. Called to see Mrs. P., who desired to be bled. Age 21. Size average. Temperament sanguineous. Previous health good. Pregnant with her first child. She had all the symptoms of Case I. except usual hemorrhage and the aphibous mouth additional. She evidently had effusion in the chest. Her friends attributed her disease to her having lived in a house recently painted. She insisted on being bled to relieve her breathing; nor could any remonstrance of mine dissuade her from it. I bled her 8 oz., and on separation there could not have been one ounce of crassamentum. The serum almost without color. No other treatment. Delivered of a dead child, of full growth, on the night of the 14th. Labor easy, no hemorrhage, but she sank rapidly, and died before morning.

CASE III.—April 22d, 1841. Called to Mrs. E., in labor with her first child; and although the distance was short, she was delivered of a weak living child before my arrival. Child lived but a few days. Never saw the patient before. Age about 25. Nervous temperament and delicate constitution. No uterine hemorrhage. And here I would observe, that no excess of this kind occurred in any one of the cases. On the other hand, the lochial discharge was unusually scanty and of a light color. She had all the symptoms of Case I., except the hemor-

rhage and œdema. Bad nursing, small room, and unwholesome air. She was put upon the same treatment as Case I., with a nutritious diet. Stomach soon became capricious and would retain nothing. The patient sank, and died June 9th, much emaciated.

CASE IV.—May 6th, 1841. Called to see Mrs. F., in labor with her fourth child. Child born before my arrival. Age 31. Previous health good, except canker in the mouth. Temperament nervous. Size average. No appearance of anæmia. Good getting up, for the first two or three weeks. Called again on the 29th, when the anæmic symptoms were distinct. So strong are the indications for the chalybeate treatment in this disease, that they were again resorted to in this case, in the varied forms of the carbonate, the sulphate, the muriate and iodate, but with no good effect. The nit. argenti was also used; yet the patient sank and died, July 29th, apparently bloodless.

CASE V.—Oct. 2d, 1842. Called to see Mrs. W. W. She desired to be bled for pain in the head. No symptoms of anæmia. Bled her 12 oz., with relief. No peculiar appearances in the blood when drawn. Did not see it afterwards. Age 22. Pregnant with her first child. Size average. Temperament nervo-sanguineous.

Nov. 19th confined, with a healthy child. Getting up good; afterwards healthy.

Dec. 20th, found her far advanced in anæmia, but without œdema, effusion or hemorrhage. Treatment—morphine, brandy and quinine, with a nutritious diet. On the 25th, in consultation with Dr. M., and at his earnest recommendation, changed the treatment to chalybeates. The patient died on the 31st.

CASE VI.—June 25, 1842. Called to see Mrs. A. She had been put to bed some four weeks previous by Dr. P. with her first child. Child living. Age of mother 21. Temperament nervous. Size small. Previous health good. There was no effusion, canker or hemorrhage; all the other characteristics of the disease strongly marked. The woman's mother, who was the nurse, insisted that there was laceration of the perineum, and desired me to examine. This enabled me to examine the organs of generation during life, which I found entirely bloodless and colorless as wax. Treatment—morphine, wine and quinine. Saw the patient but three times. Another physician was called, under whose care she soon died. I mention this case more particularly to present the state of the organs of generation in life.

CASE VII.—July 10, 1842. Called to attend Mrs. T. in labor with her first child. Age 20. Temperament nervo-sanguineous. Size less than average. Previous health good. Labor easy. Child living, but slender. The anæmic symptoms strongly developed. Great prostration, and constant disposition to syncope after confinement. Treatment a vigorous use of morphine, wine or brandy, and quinine. The patient rapidly rallied, and was dismissed cured on the 31st. She has borne several children since, with none of her former trouble.

CASE VIII.—March 10, 1843. Called to see Mrs. W. She had been put to bed about four weeks previous, by a midwife, with a living child. Had kept about house until a few days previous to my seeing her.

Found her suffering with nearly all the symptoms of the disease, and having a greater disposition to syncope than I had ever seen. Age 24. Size large. Temperament leuco-phlegmatic. Previous health strong. First child. Stomach, from the beginning, extremely irritable, with much nausea. Bowels loose, stools a dark green. Strength failed rapidly. On the 18th, Dr. W. saw her in consultation. She sank, and died on the 27th. Treatment, a mixture of Cases I. and VII., together with a trial of the alterative plan. Under the latter, she sank rapidly.

CASE IX.—May 5, 1843. Saw Mrs. E. N., some weeks after confinement with her first child. Age 27. Size larger than average. Temperament nervo-sanguineous. Previous health good. Child living. All the symptoms grave. The stomach at the time I saw her, and had, for several days previous, rejected every thing. Bowels, as in Case VIII. Prognosis unfavorable. Death almost certain. Stomach, bowels and nervous system quieted by morphine; after which, the treatment was wine and quinine in large doses, and the most nutritious diet the stomach would bear. The patient rapidly recovered, and was dismissed well June 6th.

CASE X.—May 30, 1843. Called to attend Mrs. G. in her fifth labor. Labor easy. Child living, but feeble and soon died. Mother's age 31. Size large. Temperament bilious. Previous health good. Anæmia far advanced. Great debility, and dispnoea. Stomach irritable. Bowels loose, with green stools, and griping. The appearance of the body a perfect cadaver. Prognosis bad from the beginning. Treatment as in Case IX. Diet new milk with eggs nicely beat, with wine or brandy and loaf sugar. This course was continued for 10 or 12 days, with little alteration, when Dr. B. was called in consultation, who most strenuously urged the chalybeate course, which was adopted in the varied forms of the muriate, sulphate, and iodate. Under this course the stomach rejected every thing; the patient sunk rapidly, and the old treatment was resumed. A second consultation with Dr. P., but the treatment not altered. The patient gradually improved, and was dismissed well on the 17th of July. It is worthy of remark, that for weeks together this patient could not retain anything nutritious upon the stomach except new milk. She has borne several children since, with none of her former trouble.

CASE XI.—Called June 25, 1845, to see Mrs. S., aged 28. Size small. Temperament sanguine. Original health good, but had been sick several weeks, and treated for puerperal canker, the effect having been mistaken for the cause. Some few months previous, put to bed by Dr. B. with her first child, which is still living. She had all the symptoms of Case I., and many of them more aggravated. Treatment, that of Cases IX. and X., but still the disease gained. The stomach would retain nothing nutritious from the day I saw her. In consultation with Dr. W. it was determined to try the iodides with the chalybeates, but all to no purpose; the patient died, February 28, as white and cadaverous before death as after.

CASE XII.—May 29, 1845. Attended Mrs. B. in labor with her first

child. Age 19. Size small. Temperament nervous. Previous health good. Child living, but weak, and soon died. Labor easy. Great disposition to syncope; anæmic symptoms clearly developed. Treatment, as in Cases IX. and X. pushed as hard as the stomach could bear.

June 23rd, dismissed the patient, cured.

CASE XIII.—May 15, 1846. Called to see Mrs. F. Found her laboring under severe puerperal anæmia. Age 45. Old when married. Nervous temperament, weak constitution. On the 17th confined with a dead child of 7 months. Prostration great, with constant fainting. Inability to turn in bed. Treatment, as in Cases IX. and X., vigorously persevered in, until June 4th, when she was dismissed; although it was months before she gained her wonted strength.

CASE XIV.—September 26, 1846. Called to visit Mrs. S. Age 21. Size above average. Temperament sanguine. Previous health strong. The history she gave of herself was, that she was put to bed by Dr. H., of Bristol, R. I., some two months previously; that the labor was difficult, and attended with hemorrhage and convulsions. When I saw her she had all the symptoms of Case I. except the aphthous mouth.

The peculiar throbbing in the head (of which I have spoken as being always present) was in this case very remarkable; so much so, that the patient, although unable to raise herself in bed, begged to be bled. I assured her that in her case there was death in the lancet. She was put upon the treatment of Cases IX. and X., but the stomach would not bear it; and the tonics and stimulants were omitted, and small doses of morphine given every three hours, until the irritability was allayed, when the other remedies were resumed and proceeded with, until November 19th, when the patient was dismissed, although debilitated for months.

CASE XV. and last, was that of Mrs. B., aged 24. Robust constitution. Leuco-phlegmatic temperament. Previous health good. December 26th, 1847, called to attend her in labor with her first child. Labor not severe. No unusual hemorrhage. Child living, but puny, and short lived. Symptoms of anæmia perfectly obvious. At first sight she was immediately put upon the treatment of Cases IX. and X.; but the stomach failing, as in the previous case, the treatment was twice suspended, and the morphine given as above, until the stomach was quieted, when the tonic and stimulant treatment was resumed and persevered in until February 21st, 1848, when the patient was dismissed well. In consultation with Dr. A., muriated tincture of iron was added, in small doses, to the above treatment. She has recently been confined with a healthy child, and no appearances of anæmia.

In every instance where the child was living, it was taken from the breast as soon as the disease was discovered.

Fifth, Prognosis. The favorable or unfavorable prognosis in this disease, will depend very much upon the length of time it has existed previous to being seen. If the disease be of recent origin, the constitution vigorous, and neither effusion nor hemorrhage exist, there is a fair chance of recovery, under a judicious treatment. But if the disease has been of long standing, and evidences of effusion in the chest exist, respiration short and labored, constant disposition to syncope, with a pale

bloody fluid oozing from the nose, the prognosis should be unfavorable. Yet even with this array of bad symptoms, the disease is not necessarily fatal. If by a judicious and vigorous treatment the vital energies of the system can be aroused, the absorbents will again act, the formative vessels may rally anew, and the patient may recover. But if, in addition to the bad symptoms above described, the bowels become loose, discharging a dark green offensive fluid, and the stomach persists in rejecting every thing which it receives, both medicinal and nutritious, the prognosis must be fatal. Recovery is out of the question. In fine, we never would pronounce a case of anæmia entirely beyond the hope of recovery, until the stomach had become so irritable that nothing could be retained. When this state of things exists, all hope of recovery is at an end, the whole array of symptoms grow worse, the patient sinks rapidly, and death closes the scene.

Sixth, Treatment. In entering upon the treatment, our first care should be, not to mistake the *nature* of the disease. The intense action of the heart, with the quick, tense, wiry pulse, and the severe beating in the head, might lead a novice to suppose anæmia was a disease of excess, instead of debility; and cases have, more than once, been treated on this assumption. Nothing, however, can be farther from the truth. The tense, wiry feel of the pulse, is the result of the extreme nervous irritability of the system; and the peculiar throbbing in the brain, is because that organ does not receive its proper amount of stimulus from the blood. In other words, there is not blood enough thrown to the brain. Anæmia is emphatically, then, a disease of debility; and one whose every appearance (at first sight) indicates the chalybeate treatment.

The appearance of the disease, as before observed, approximates more nearly to a bad case of chlorosis, than to any other, in all its varied forms. And hence, the practitioner is led to believe (at first thought) that, as the chalybeate treatment is successful in the one case, so it ought to be in the other. The chalybeates are so strongly indicated (analogically) in this disease, that it may be questioned whether a physician ever failed of giving them a trial in his first cases. So strong were my convictions that the chalybeates were the proper remedies, that I did not abandon them, until convinced that they not only did no good, but that they were productive of positive evil. In every case where they were fully persevered with, the stomach soon became irritable and nauseated, rejecting every thing it received. The bowels became loose, with frequent discharges of green, foetid stools. Languor and debility rapidly increased; no nourishment could be taken, and the patient would sink and die. The chalybeate treatment was therefore abandoned, as worse than useless. But, what was to follow?

It was evident that the whole system, but especially the digestive, formative, and capillary systems, must be rallied and sustained; and also the nervous irritability, particularly of the stomach, quieted, and the bowels sustained. To accomplish the first indication, alcoholic stimulants were resorted to, either in the form of brandy, or wine, as best suited the stomach of the patient. The quantity was also measured by the ability of the stomach to take care of it, and the effect upon the system.

Quinine, as being a powerful tonic, and at the same time stimulant, was indicated to sustain the system. This was also used (*ad libitum*), if the stomach would bear it, usually commencing with $\frac{1}{2}$ gr. to 1 grain, every two or three hours, and increasing as the stomach would endure.

To allay that peculiar irritability of the system, which is never absent in this disease, and to quiet the stomach and bowels, morphine was used in such doses as the case required, and always with good effect.

The sick room should be large, airy, and well ventilated; bed and body linen often changed; friction upon the surface, with some stimulating application, or flesh brush. Diet, the most nutritious the stomach will bear. Eggs, in some form; beef steaks, beef tea, animal broths, and new milk, are among the best, if the stomach will bear them. If not, resort to less stimulating food. The child, if living, should be taken from the breast at once. Might not blood be injected from a healthy person into the arteries of the diseased, with advantage?

By referring to the cases above reported, it will be seen that every case of recovery was under the above described treatment, and that but one or two cases were lost where it was persevered in vigorously; and it is more than probable that those might have been saved, had the treatment been commenced at an earlier period in the disease.

Reflections.—The first important inquiry which presents itself, in relation to this disease, is, as to its novelty. Were it a common and well known disease, we should not search authors, both ancient and modern, for it, and search in vain. After close research, I have failed entirely in finding any treatise on this *particular* disease, except an able article by Dr. Channing, of Boston, published in the *New England Medical Journal*, in 1842; and that, so far as the treatment was concerned, is entirely unsatisfactory. Some twelve or fifteen cases were reported, some of which came under his own observation, others were reported to him by other physicians, nearly every one of which proved fatal. They were not all connected with the puerperal state, a part of them being males, and in a part of the females the disease had its origin in other causes than gestation or lactation. If a disease of so grave a nature, and so important and momentous in its consequences, always involving the lives of the individuals, had been preying upon the human family for any considerable length of time, it must long since have attracted the attention of medical men. But so far is this from being true, that the most recent works on *Theory and Practice of Medicine*, as also on *Midwifery and Diseases of Women*, do not give it even a passing notice.

Neither do the professors in the medical schools introduce it into their catalogue of diseases upon which instruction is needed. We are therefore induced to believe that it is one of those diseases, dependent upon, and induced by, more recent atmospherical, meteorological and physiological causes, not yet well known to the profession. But again, why is this disease connected with the puerperal state? True, a portion of the nutriment of the parent goes to sustain the fœtus, and is therefore abstracted from the mother. But this is a process perfectly natural, and does not of necessity affect the health or strength of the mother. This, therefore, cannot be a producing cause of the disease; if it were so,

why should a part suffer while others are exempt? Besides, it is evident that the child suffers in the direct ratio with the mother, being always *weak* (where the disease appears before parturition), and in bad cases *dead* at birth. The cases above given were all good livers, and could not have been affected by bad diet. They also contain all varieties of temperament, health, strength and vigor of constitution. Another remarkable fact is, that most of them were young women, vigorous and athletic, and at the very age of life when there is a redundancy of the sanguineous fluid, of vivacity and the vital powers; most of them being pregnant with their first children.

Such, gentlemen, are my views, and such has been my experience, in puerperal anæmia; and if I shall have succeeded in directing the attention of the profession to the subject, so that those suffering under it may be benefited, I shall have accomplished my entire purpose.