

Thorough drainage, irrigation twice daily with antiseptics, splints to insure rest, and a Lister dressing comprise our treatment in these cases.

Original Articles.

PUERPERAL ALBUMINURIA.¹

BY FRANCIS F. BROWN, M. D.

JUNE 12, 1881. Mrs. H., of nervous temperament, and subject to neuralgic headaches, but who has otherwise always enjoyed good health, twelve days before the expected time of her first confinement, became suddenly almost entirely blind. Her urine was found to be loaded with albumen, becoming almost solid on boiling, and the quantity was less than normal. There was œdema, but not a great amount. She did not feel sick at first, and was unwilling to see a physician. On the 18th she had severe pain in her head back of the eyes, and for a short time delirium, — which is not an uncommon thing for her when sick, — but generally she continued comfortable till the night of the 22d and on the 23d, when she suffered^r excruciatingly from headache and pain behind the eyes, and vomited. Urine less scanty, three pints in twenty-four hours, and somewhat less albuminous than when first examined. She had been taking bitartrate of potash and digitalis. Labor commenced on the evening of the 23d, and progressed normally to its termination in seven hours and a half. There was no convulsion. She was kept moderately under the influence of ether, inhaling ten or twelve ounces. Pain entirely left her head and eyes when her labor pains came on, but returned again not long after the birth of the child, and her sufferings from this source for a fortnight were so great as to require twice daily one fourth of a grain of morphia subcutaneously. A severe attack of purulent cystitis came on two days after delivery to increase her sufferings, sometimes causing more than the head trouble. After two weeks she began to mend more decidedly, and was able to get along without opiates.

Her recovery was slow. The cystitis was severe, the pain of it great, and the amount of pus in the urine larger for a fortnight, after which time it rapidly diminished, and in a few weeks more entirely disappeared. The albumen, instead of soon disappearing, as was hoped, persisted in gradually diminishing amount for months. In October it amounted to about one fifteenth of the bulk of the urine. In March and April, 1882, it was tested twice, and none found. In August and September, 1882, it was tested four times, and one specimen contained a small amount, and one merely a trace. At this latter time she was convalescing from an attack of inflammatory rheumatism. No renal casts have ever been found, though careful search has been made by my friend, Dr. S. W. Abbott, of Wakefield, six times at intervals during the year. Frequent and severe headaches, and short and sharp neuralgic pains in her head and face, persisted for months, gradually diminishing. At present I do not think she suffers in this way much, if any more than previous to her sickness. Five months after confinement she called herself well, with the exception of her vision. This returned only in part, and slowly; for a long time she saw things as through a fog, or as if sun-blinded. It was variable also; when her head felt

bad she could scarcely see her own hands, when it felt best she could see to sew and thread her needle. Up to the present time, September, 1882, it has continued to improve, so that she reads and sews as before her sickness, except when she has neuralgia; then her sight is dimmed somewhat. The left eye is poorer than the right.

The result of this case has been both a satisfaction and a disappointment. Her safe delivery without the occurrence of convulsions was a happy relief, but her tedious convalescence and imperfect recovery, instead of a rapid disappearance of the albumen and recovery of her vision, as is usual in such cases, was not all that was hoped for. Her blindness was at first undoubtedly uræmic; what the condition of the retina is is undetermined, for I have never been able to persuade her to have an ophthalmoscopic examination. Bartels says we must distinguish between the sudden and complete blindness of uræmia, which, as a rule, subsides as suddenly as it comes, and those disturbances of vision due to structural alteration of the retina, sometimes the result of chronic Bright's disease. The physical cause of the former is unknown; it may be œdema of the retina.

Puerperal albuminuria is one of the most frequent of the puerperal diseases. Dr. William L. Richardson examined one hundred and fifty-six successive pregnant women admitted to the Boston Lying-in Hospital, and found albumen in varying amount in sixty-four, about forty-one per cent. Others have found it in from twenty to thirty per cent. of the cases examined. It rarely occurs before the sixth month, and more often in primiparæ.

To repeat, from one to two fifths of all pregnant women have albuminuria in the latter part of their pregnancy in greater or less amount. In a large majority it is never discovered because not looked for, giving rise to no noticeable symptoms, and having no unfavorable influence on the mother or child. And yet from this class come some of the most formidable cases with which we have to deal, for puerperal convulsions occur almost exclusively in the subjects of puerperal albuminuria. How may we know which of them are likely to result seriously? They may be divided into three classes: —

The first in order of gravity includes those pregnant women who are already the subjects of chronic Bright's disease.

The second, cases of acute parenchymatous nephritis.

The third, a much larger number than both the preceding, those subjects of albuminuria who, except the albumen, show no evidence of either of the preceding diseases.

(1.) I have put first in the order of gravity those cases of pregnant women who are already the subjects of chronic nephritis. I have seen but little written about this class, as a class, so that what I have to say on this point are inferences of mine from the general behavior of the disease, rather than from my limited experience or from the direct statements of those who are considered authorities. It seems to me that this disease in a pregnant woman must be likely to give rise to very serious if not fatal complications. We know that premature delivery is liable to occur in such cases. If the mother goes to her full term, what is her liability to uræmic convulsions compared with sufferers from acute nephritis, I do not

¹ Read before the East Middlesex District Medical Society.

recollect to have seen stated, but I think it is greater. If she has convulsions, my impression is that they are more apt to prove fatal than in cases of acute nephritis. Should she survive them, she has received an impulse which must accelerate her progress downward, and in some one of her successive pregnancies, if she does not die in convulsions she will be likely to of puerperal anæmia soon afterwards.

(2.) Cases of acute parenchymatous nephritis. How frequently this occurs is uncertain. Of one thing we may be sure, if we consider that we have this disease to deal with every time we find albumen in the urine of a pregnant woman, we commit a blunder of the first magnitude. For, as we have seen, from one to two fifths of all pregnant women are found to have albuminuria in the latter part of their terms. Bartels estimates that acute nephritis occurs in about one case out of one hundred and thirty-six of pregnancy. That is to say, from twenty-five to fifty cases of puerperal albuminuria occur to one of acute nephritis of pregnancy. Of course these figures are only very rough approximations, but they show the infrequency of the latter compared with the former.

Acute parenchymatous nephritis of pregnancy runs a similar course to that from other causes, with some important modifications. It is usually developed without any striking disturbance of the general health. Edema is often absent. Uræmic symptoms are more common than in ordinary nephritis. It may occur in healthy women; Bartels has observed it with special frequency in the robust and plethoric. The amount of albumen is larger than in ordinary acute nephritis. The elements found in the sediment are those found in nephritis from other causes, but hyaline casts are usually not abundant, and blood is rarely found.

The pathological changes found in this disorder are identical with those of other forms of acute nephritis, with the exception that hæmorrhagic extravasation is less frequent.

Prognosis. It is said that one fourth of the cases under consideration have convulsions, and one third of those who have convulsions die. It is claimed, however, that the use of anæsthetics and a better understanding of the disease has of late years lessened its fatality. In those who escape this complication the prognosis is rather more favorable than in nephritis of other origin. Recovery after parturition is usually quick and complete. In either the ordinary or puerperal nephritis the transition from the acute to chronic disease is exceptional.

The most pressing and immediate danger, and the one most likely to be met, is that of convulsions. The more infrequent and remote and insidious one is the transition from the acute into chronic Bright's disease. The latter course is comparatively rare, but it occurs, especially if pregnancies occur in close succession.

(3.) The third class need detain us but briefly. "It is probable that in nineteen cases out of twenty of puerperal albuminuria," Dr. Fordyce Barker says, "the structural lesions of the kidney implied in the term Bright's disease do not exist." It is an interesting fact, for it seems to be one, that so large a fraction of pregnant women have more or less albuminuria in the latter period of their pregnancy. This condition in a majority of cases gives rise to no symptoms, and consequently is suspected neither by the patient nor her physician. There is one point which I do not recollect to have seen distinctly stated, namely, the *quantity* of

albumen usually found in this class of cases; it is, I think, not large.

What are the signs by which we may be forewarned of an explosion of convulsions? Dropsy, albuminuria, granular and hyaline casts, and blood corpuscles, and uræmic symptoms may all be present in a marked degree even, and no convulsions occur; and, on the other hand, all these may be found to a less degree in cases which are severe and even fatal. Dr. William L. Richardson and others suggest that the quantity of urine excreted is a guide as to the probable danger, and Bartels makes the same statement in regard to ordinary acute nephritis. The more scanty it is the greater the liability to convulsions, and *vice versa*. The indication is obvious. Professor Thomas says he rarely sees a case of convulsions where the patient has been under preventive treatment.

When we meet a case of puerperal albuminuria one of the questions that comes up is as to the previous existence of chronic Bright's disease. It seems to me that it is not always easy to determine this at once. It is not an uncommon experience to meet advanced cases unsuspected by the patient, and overlooked, perhaps, by the physician. Robin, as quoted in Barker's *Puerperal Diseases*, and Neubauer and Vogel make statements in regard to the reactions of albumen in the presence of oxide of copper, which convey the impression that a differential diagnosis may be made by chemical tests between the albuminuria of chronic nephritis and temporary albuminuria of pregnancy. But Prof. Edward S. Wood writes me that he knows of no way of distinguishing between the albumen in the two classes of cases.

In every case in which we find albumen in the urine of a woman, it is well not to overlook the possibility of pregnancy. I was once called to a young unmarried lady in convulsions. The urine was loaded with albumen, becoming nearly solid on boiling. She had been in rather feeble health ever since she had scarlet fever, when a child. There had been some slight puffiness of the face and swelling of the feet. My diagnosis was Bright's disease, prognosis unfavorable. Later, after I had expressed my opinion, passing my hand over her abdomen, I found a *tumor* there. This was in the evening. In the night my bell was rung furiously, and her father shouted, "Doctor, come quick, — has got a baby." I went, and found a dead child of about six months, born during the unconsciousness of a convulsion. The girl recovered, the albumen diminished and disappeared in a few weeks, and for about a year she appeared in better health than usual. Fifteen months afterwards she went through a similar experience, minus the pregnancy, and died. Her urine was not examined after the disappearance of the albumen till the recurrence of her fatal sickness. I think now that this girl had chronic Bright's disease previous to her pregnancy. I thought so when I first saw her in convulsions before I found out that she was pregnant, but after she recovered, considering the improvement in her health, the disappearance of the albumen, and vagueness of indications of the disease in her history, I hoped I had been mistaken. Renal casts were found in this case, I think, but when and of what character I cannot say.

I recall in my practice but one other marked case of puerperal amaurosis. Was called in December, 1879, to Mrs. E., age about thirty-five, mother of five children, seven months pregnant. Had no difficulty in

her former labors. Found her on the bed, with her ordinary clothing unremoved, blanched as if with loss of blood, cold, collapsed, pulse 130, and scarcely to be felt. Pupils were widely dilated; she was delirious, and totally blind. For two or three weeks she had had increasing dimness of vision, which she compared to a mist before objects. A week before she had had symptoms of labor, slight hæmorrhage, and pain, which subsided with rest. With it she had had excruciating headache, which continued two days. During the week past she had been comfortable, and about the house, but her eyesight was so bad she had difficulty in seeing to cut her children's food. While alone with her little children she was taken, about five P. M., with hæmorrhage, and lost consciousness, which she did not recover till after my arrival, two hours later. I gathered that she had some sort of convulsive attack, but no severe convulsion. How much external hæmorrhage there had been, I could not ascertain. She rallied, regained consciousness, but not at that time her eyesight. There was no more external hæmorrhage. Drew by catheter two ounces of urine, all that had been secreted in six hours; found it albuminous to one third of its bulk. No convulsion occurred. Labor went on normally to its termination, about nine hours from the first hæmorrhage. A small amount of ether was used. The cord was flaccid, and the child dead. Immediately following the child, and before the expulsion of the placenta, came a dark clot, saucer-shaped, or as if moulded between the child and the uterus, nearly as large as the child, or weighing, I should think, two or three pounds, which explained her collapse when first found. Her recovery was slow. She was anæmic, her skin had a waxy look, and her face was puffy for some time. Albumen diminished, but did not disappear so long as I kept track of the case, that is, about five months. Her vision improved to some extent, but was so poor that five months after confinement I persuaded her to consult Dr. Derby, who found atrophy of the optic disks, vision in one eye one third, in the other one twenty-fifth. Prognosis as to recovery of vision unfavorable. Subcutaneous injections of one fortieth grain strychnia were advised and tonic treatment. Patient did not follow the advice at all, and has left town. I have seen her once since, unprofessionally, during the summer of 1881, and could make only general inquiries. She said she was pretty well, and her vision was improved somewhat. I am sorry to say that no microscopical examination of the urine was made.

Whether this case is one in which nephritis tends to pass from the acute into the chronic form, or whether, as I suspect, there was some disease of the kidneys previous to her last pregnancy, there are not sufficient data to determine.

FOUR CASES OF "PHLEGMASIA ALBA DOLENS."¹

BY HAROLD WILLIAMS, M. D.

I PRESENT to the notice of the Society to-night four cases of so-called phlegmasia alba dolens which have occurred in my practice, not so much because I consider these cases of especial interest in themselves,

¹ Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, November 8, 1882.

as because, taken in connection with each other, they seem to suggest a common cause, upon which I believe too little stress has hitherto been laid.

CASE I. Mrs. A. was confined six days previous to my first visit, after a normal labor. She had been doing well until the night before, when she had a chill, followed by pain in the left groin.

During the following week the signs characteristic of phlegmasia dolens appeared, the thigh and leg becoming enormously swollen, being white and shiny in appearance, and hard, tense, painful, and unyielding on pressure. The pain was most severe on pressure over the popliteal and femoral vessels, which were enlarged and hardened. This case was a typical one, and followed the usual course, the patient recovering in about six weeks.

CASE II. Mr. B., forty years of age. The patient had been suffering from a well-marked case of typhoid fever for two weeks previous to my first visit. He had been treated with cathartics, diaphoretics, and a low diet, and was very much reduced when I first saw him. It was an unusually severe case of typhoid fever, with low delirium and hypostatic pneumonia, but the patient did well on a milk diet with brandy, until the fifth week of his illness, when, after an increase of temperature, a small swelling was detected in the right groin, which increased in size, and on the second day after it was first noticed fluctuation was detected and an incision advised; but to this procedure the relatives would not consent. Two days later the thigh and leg began to enlarge, and although the bubo was spontaneously evacuated, the swelling still persisted. The popliteal veins could be distinctly felt, hardened and enlarged, and could be rolled to and fro under the fingers, and this state of things could be traced upward in the thigh through Scarpa's triangle. The whole limb now became enormously enlarged, was tense and unyielding, and presented the characteristic appearance of phlegmasia alba dolens. The limb continued in this state for two weeks, when it was noticed that the calf of the leg had become œdematous. On the following day there was a second rise in temperature, and deep fluctuation was felt in the calf. Free incisions, with the insertion of drainage tubes, were again advised, but to this the relatives would not consent, and the patient gradually became weaker, and subsequently died of pyæmia.

There was no autopsy.

CASE III. Mr. C., a lawyer, sixty-three years of age. Patient has always been well with the exception of occasional pains, supposed to be rheumatic. One week previous to present attack he had pain of this character in the left shoulder. On my first visit, March 16th, he complained of intense pain in the right ankle-joint. The night before he had had a rigor, and had not been feeling well for some time, being in a much overworked condition. Pulse 48. Temperature 100° F. Ankle-joint slightly swollen, red, hot, and painful. No history of injury. These signs in the ankle-joint gradually subsided, but on March 20th patient complained of intense pain in the calf of the leg. Both foot and leg were slightly enlarged, but neither hot nor red. Pain most severe in popliteal space, where the veins could be felt hardened and enlarged. No change in vessels of the thigh.

March 22d. Thigh began to swell, and there was intense pain on pressure in Scarpa's triangle, where the vessels could now be felt hardened and enlarged.