BARROWS (C.C.)

PUERPERAL ECLAMPSIA

TREATED BY DUEHRSSEN'S INCISIONS AND VERATRUM VIRIDE.

GANGRENE OF THE APPENDIX VERMIFORMIS.

BY

CHARLES CLIFFORD BARROWS, M. D.

REPRINTED FROM THE

New York Medical Journal

for November 23, 1895.

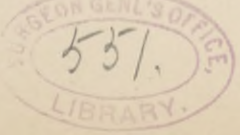
Reprinted from the New York Medical Journal
for November 23, 1895.

PUERPERAL ECLAMPSIA

TREATED BY
DUEHRSSEN'S INCISIONS AND VERATRUM VIRIDE.
GANGRENE OF THE APPENDIX VERMIFORMIS.

By CHARLES CLIFFORD BARROWS, M. D.

At a meeting of the Society of Alumni of Bellevue Hospital, October 2, 1895, Dr. Barrows reported two cases of puerperal eclampsia. The first case was that of Bertha J., a German, twenty-two years old, and a primipara. She had been admitted to Ward 23, Bellevue Hospital, on July 29, 1895, at 10.45 A. M. She had always been strong and healthy until that illness. She had menstruated last on December 10, 1894. About June 15th it had been noticed that she was passing a large quantity of urine and was obliged to get up a number of times each night to empty her bladder. No examination of the urine had been made. Her feet and legs had become swollen a week prior to her admission to the hospital. Her illness had begun on Sunday evening, July 28th, at eight o'clock. A half hour before this her husband had left her after a quarrel. She had become much excited, and had felt a peculiar sensation in her head—more confusion than pain. She had started to visit her physician, but had fallen before reaching the door of her room. She had then become unconscious and



had had convulsions at intervals of twenty minutes until twelve o'clock. She had vomited freely, and from this time until six o'clock the next morning, July 29th, the convulsions had occurred every five minutes. She had passed no urine.

She had been brought to the hospital from her home in an ambulance and had had a severe convulsion on her way. This had been controlled by chloroform. She had been admitted to Ward 22 at a quarter to eleven o'clock, fifteen hours after the first convulsion, in coma. Her face at that time had been deeply flushed, the respiration stertorous, the pulse tense and bounding. The temperature was 105·4°, pulse 126, respiration 40; the pupils contracted in size to a pin point. Magendie's solution, seven minims, and two minims of a one-per-cent. solution of nitroglycerin, had been given hypodermically, and an ounce of urine had been drawn with a catheter. This had been found to contain albumin, ninety per cent., with granular and hyaline casts. A simple enema had been given with a good result. At twelve o'clock the patient had been etherized for delivery. The head of what had evidently been a seven or eight months' fœtus was presenting in the lateral occipito-anterior position. The internal os uteri had been well dilated, but the external os would just admit the tip of the index finger, and had been rigid and evidently difficult of dilatation. With a pair of angular curved scissors incisions had been made up to the utero-vaginal junction—laterally, anteriorly, and posteriorly. These incisions had been made freely, and had given ample room for the passage of the child without further dilatation. As the head had engaged, delivery had been accomplished with the forceps in eight minutes. A careful examination had shown that no tearing had taken place into the uterine tissue beyond the point of incision. There had been some bleeding from the left lateral incision, and a single catgut suture had been introduced to control this. The uterus and vagina had then been packed with iodoform gauze. The patient had then been put to bed and had done well until two hours after the operation, when she had again been seized with a violent convulsion

Two drops of croton oil had been given on the tongue, and Norwood's tincture of veratrum viride had been ordered hypodermically, five minims every hour, until four doses had been given. Four hours later—*i. e.*, six hours after the operation—her pulse had been 88 and soft, her respirations 22, and the temperature 100° F. There had been no secretion of urine up to the time the veratrum had been given. During the following twenty-four hours there had been no more convulsions, and there had been drawn by catheter urine to the amount of ninety ounces. The patient had been delirious during this period, but had then become rational and had slept quietly. During the next twenty-four hours a hundred and eight ounces of urine had been drawn. This had had a specific gravity of 1·015 and had contained a trace of albumin, with hyaline and granular casts.

The gauze packing had been removed on the fifth day. The patient, from this time on, had made an uninterrupted recovery, and been discharged from the hospital on August 17th. The cervix had then shown very little evidence of the incisions that had been made in it, slight notches on the four sides being all that was left.

The second case was that of Helen Z., a German, thirty-five years old, who had been admitted to Ward 23 at 11.30 P. M. of the same day on which the patient of the previous case had been admitted. Her family and personal history up to the date of her marriage at nineteen had been good. She had been delivered of seven children, and her labors had been easy, with one exception, when the child had weighed sixteen pounds. All her deliveries had been without instruments. The patient had nursed her seventh child and, not menstruating, had not realized that she was pregnant until about June 1st, when she had felt quickening. Three weeks before her coming to the hospital her feet and legs had become swollen to an enormous size. She had had headache constantly, and had passed a large amount of urine. She had been seized with a convulsion, and had become unconscious on the evening of July 30th. She had been brought to the hospital in an ambulance soon afterward. She had had a convulsion before reaching

the hospital. In order to control this seizure, chloroform had been administered by the ambulance surgeon.

When she was admitted seven minims of Magendie's solution were given hypodermically, and croton oil *per os*. A small quantity of urine drawn from the bladder had been solid with albumin. Her temperature on admission had been 100·2°, pulse 120, and respirations 30. She had been etherized and the os dilated by rapid manual dilatation. A small child had been extracted by version at 2.30 A. M. by the house physician, Dr. James. She had had two severe convulsions following delivery, and two hours later her temperature had been 102·4° F., her pulse 140, and her respirations 24. She had then been given tincture of veratrum viride, five minims, every half hour, hypodermically. During the first eighteen hours after her admission she had passed by catheter seven ounces of urine. In the following twenty-four hours after the use of the veratrum viride she had passed by catheter ninety-six ounces of urine containing ten per cent. of albumin, with hyaline and granular casts. Her pulse had dropped to 80, her temperature to 96·4°, and her respirations to 12. The patient up to that time, thirty-six hours after her delivery, had remained unconscious. She had then regained consciousness, and from that time on had made a perfect recovery, having been discharged from the hospital on August 17th.

Dr. Barrows said that in reporting these two cases occurring in his hospital service in the same day, in addition to the rapid method of successfully emptying the uterus—the one by Dührssen's deep incisions, the other by *accouchement forcé*—he desired to call attention particularly to the action of veratrum viride in these cases. This drug had been largely employed with great success throughout the Southern States for a number of years in such conditions as those described, but had not, he believed, met with the proper recognition among us here. It would be noticed that each of these two patients had had several convulsive seizures after the uterus had been emptied. The delivery in either case had not been followed by any urinary secretion until after the administra-

tion of the veratrum, when it had become very copious, and the patient had immediately begun to improve.

Some two years ago he had seen in consultation at Short Hills, N. J., a case of eclampsia occurring six hours after delivery, with total suppression of urine. The usual remedies, including the free use of nitroglycerin, had been tried without success, and the patient had seemed in a fair way to die at the time he had first seen her. Under the hypodermic use of veratrum, however, the kidneys had begun to act at once, and the patient had shortly become conscious, there had been no more convulsions, and she had made an excellent recovery.

Dr. J. Clifton Edgar said that about five years ago Dührssen had first published his article advocating the use of deep incisions into the cervix. About two years later, after further experience with the incisions, and also some experience with manual dilatation, Dührssen's enthusiasm had become considerably dampened, and he had then advocated these incisions only in cases of extreme emergency. The speaker said that he had recently reported three cases of his own. His experience with them had led him at first to be enthusiastic over the deep incisions, but since then he had also learned that this method was more limited than he had at first thought. He now believed that it was only in very exceptional cases that the obstetrician was justified in dividing the lower uterine segment from the external os to the utero-vaginal junction. Out of a large number of eclamptic cases seen in the past five years, he could not recall more than two or three in which it had seemed to him that such a method was applicable. In cases suitable for the operation, as the patients came into our maternity hospitals, they were apt to be already infected, and consequently the method was not by any means free from danger. The cases of puerperal eclampsia received at Bellevue Hospital were almost all virulent and desperate, and hence the method was oftener resorted to there than in other institutions. In the cases in which he had employed it the method had been elected simply to save the forty-five or sixty minutes which would be consumed in

dilating the cervix manually. The operation was extremely limited in its usefulness, as it was only applicable to cases in which the internal os was already dilated; there must be this preliminary dilatation. Unfortunately, this preliminary dilatation consumed much time. When this amount of dilatation had been accomplished, there was no longer any true cervix left, and manual dilatation could be effected in about forty-five minutes.

He had been greatly interested in the remarks about the administration of veratrum viride in puerperal eclampsia. Personally, he did not believe any drug, except possibly chloroform, was of as much value as veratrum viride in eclampsia. He had not dared to use it in cases in which the pulse was intermittent or soft, but he had employed it freely in those where the pulse had been tense and rapid. The action of the veratrum viride on the skin should not be overlooked. This was almost as prompt as its action upon the heart and kidneys, and by the free excretion through the skin the kidneys were greatly relieved. This, in his opinion, was much better than exciting the skin to action by using the hot-air bath. Dr. Mann had quoted before the American Gynæcological Society last May a case in which a teaspoonful of the plain tincture of veratrum viride had been given by mistake, and yet the woman had survived. Dr. Edgar said he recalled a case in which he firmly believed the life of the patient had been saved solely by the veratrum viride. This case had been seen in consultation with Dr. Haines. The plain tincture had been given hypodermically in ten-minim doses until the pulse had been reduced to sixty, and this had been continued until the pulse had shown a disposition to remain at this point without the help of the drug.

Dr. W. J. Chandler, of South Orange, N. J., said that he was surprised that the use of veratrum viride in these cases should be looked upon as a new treatment. Many years ago it had been a common treatment in the Orange Memorial Hospital. At one time a brother practitioner had told him that he was treating cases of puerperal eclampsia with tea-

spoonful doses of Norwood's tincture of veratrum viride, and that all the patients recovered. This physician had also said that he was not at all afraid of this heroic treatment, because if the patient received too much of the drug it would at once be rejected by the stomach. Influenced by this statement, the speaker said, he had decided to try the method. In 1879 he had been called to see a woman who had had convulsions before delivery. At the time he had first seen her, after delivery, the convulsions had been present, and she had been somewhat maniacal. As the patient had been unable to swallow, twenty-five minims of Norwood's tincture had been given hypodermically. About an hour afterward he had been hastily summoned to the bedside, and had found the respirations reduced to four and the pulse to forty. As the drug had been given subcutaneously, of course no relief could be expected from vomiting, as was usually the case. Under stimulation and appropriate treatment she had eventually recovered. In this case the excretion of urine had been increased, and the skin had been bathed in perspiration. This action of the drug he had noticed in all these cases. Since this time he had often used the drug very freely by the mouth, but he would warn against using it hypodermically.

Dr. Barrows said that his two cases seemed to him to illustrate very well the points that had been so well brought out by Dr. Edgar. As in the first case the patient had been *in extremis*, very rapid delivery had been essential, and hence the deep incisions had been employed. The other case, not having been so serious, had been an excellent illustration of a class in which these incisions should not be employed. In this case the whole cervical canal had seemed to be dilatable, although not dilated. No mention had been made of the effect of the veratrum viride on the skin in these cases, because prior to his reaching the hospital the house surgeon had applied the hot-air bath. The treatment, of course, was not at all new; he had been familiar with it long before he had begun the practice of medicine; nevertheless, with the exception of the enthusiastic advocacy of this treatment by

the late Dr. Fordyce Barker, he had not noticed that it had been commonly adopted except in the South. It seemed to him that recently nitroglycerin had been relied upon too much in these cases.

Gangrene of the Appendix Vermiformis.—Dr. Barrows then presented two specimens from cases of gangrenous inflammation of the vermiform appendix. The first one had been removed thirty-six hours after the beginning of the attack. It had contained in a pocket a fæcal concretion about as large as a cherry stone, and there had been a perforation at this point. The patient had made an excellent recovery, and was to-day well.

The second specimen was of special interest, and was presented with the following history: Miss P., a trained nurse, while on duty during the night of August 5th had felt some discomfort about her abdomen, but she had continued on duty until ten o'clock the following morning. At this time she had had considerable pain in the right iliac region, with some tenderness and more or less nausea. Her bowels had been constipated. She had been seen by Dr. Carlisle, who had asked the speaker to see her with him at three o'clock in the afternoon of the 6th. Her temperature at that time had been 101·4° F., and the pulse 80. Examination had shown the abdomen slightly tympanitic and, in the right iliac fossa, tender to the touch. An ice poultice had been applied, and the patient had been given one fourth of a grain of morphine and one one hundred and fiftieth of a grain of sulphate of atropine hypodermically. The speaker had seen her at ten o'clock of the same evening, and had found the tenderness and tympanites to be increasing; the temperature had been 100°, and the pulse 74. At eight o'clock the following morning, about twenty-four hours after the beginning of the attack, the temperature had been 99° F., and the pulse 95; the abdomen quite tympanitic and tender, and the vermicular action of the intestines apparently absent. There had seemed to be more tympanites in the region of the appendix than in other parts of the abdomen. The patient had slept less than an hour during the night. Her facial expression had been anxious,

and she had evidently been suffering acute pain. Preparation had been made at once for an operation, and at 10.25 the abdomen had been opened. There had been a slight escape of serous fluid. The small intestine had been distended, and its peritoneal coat in the cæcal region brightly injected. No lymph or pus had been found, and the appendix, somewhat enlarged and perfectly black, had been found free in the peritoneal cavity. Its mesentery had been tied off with catgut and the appendix removed. The mucous membrane had been gangrenous. The mucous membrane of the stump had been thoroughly cauterized with pure carbolic acid, followed by the actual cautery.

As the gangrene had extended well down to the cæcum, it had been turned in and the serous coat closed over it with catgut. The stump had been inclosed in an iodoform-gauze drain, thus shutting it off from the general peritoneal cavity, and the wound had been closed. The gauze had been removed on the fourth day. The patient had made an excellent recovery.

These cases, the speaker said, were interesting as illustrating that peculiar type of inflammation in which there was rapid gangrene of the appendix. As a rule, these patients showed but slight disturbance of pulse and temperature, and operations upon them were rarely successful, because they were postponed until it was too late, while the attending physician waited for the pulse and temperature to rise. In the first case there had been a fæcal concretion which had been supposed in some way to have interfered with the circulation and caused the death of the structure. But in the second case there had been absolutely nothing in the appendix; its lumen, of the size of a slate pencil, had been perfectly patulous, there had been no adhesions or constricting bands about it, and in no mechanical way had its circulation been interfered with; and yet within twenty-four hours from the first sensation of pain it had been found completely gangrenous!

Dr. Robert T. Morris said that he thought if Dr. Barrows would examine the arteries in the specimen he

would find that a very rapid proliferating endarteritis had closed them. Rapid gangrene from this cause he had found to be quite common. A factor often overlooked was a gross cause of gangrene—the appendix becoming dislocated and twisted upon its mesentery and its circulation in this way cut off.

Dr. Barrows replied that he had intended to state that there had been no evidence of gross mechanical obstruction in his case.

Dr. J. F. Erdmann referred to a recent case of inflammation of the appendix that he had seen. A boy, while playing late one afternoon, had been suddenly seized with severe pain in the right iliac region. He had gone to bed, and on the following day the family physician had diagnosticated inflammation of the appendix and had sent for Dr. Joseph D. Bryant, who had referred the case to Dr. Erdmann. The temperature had been 102·5° and the pulse 144; there had been no abdominal distention whatever, and he had been apparently in good physical condition. Palpation had shown a small mass about as large as the end of the finger, and another mass leading from it of about the size of the little finger. On opening the abdomen, about a pint and a half of seropurulent fluid had escaped. At the operation it had been found that there was mechanical obstruction from twisting of the appendix upon itself at its distal extremity, and that at about half an inch from the cæcum there was a fæcal mass of about the size of a large pea. Between these two points a perforation had occurred, and through this fæcal matter was escaping. Drainage and counter-drainage had been established. Some improvement had been noticed for a few hours; then changes for the worse had set in rapidly, and in fifty-six hours from the time of operation he had died.

Dr. Chandler said that last month he had seen at the Memorial Hospital in Orange a young man who had been taken sick with inflammation of the appendix twenty-four hours previously. There had been considerable diversity of opinion among the hospital staff regarding the advisability of operating. The point which could not be decided had been

as to whether or not the appendix was gangrenous. Notwithstanding the mildness of the symptoms, the appendix had been found to be gangrenous at its tip, although there had not been any perforation. Another case of gangrenous inflammation had been seen with a colleague a few days later, and in this one a perforation had been found, although the illness had only lasted two days.

Dr. IRVING S. HAYNES, in illustration of the rapidity with which perforation sometimes occurred, referred to the case of a young man who in the evening had been taken with severe pains in the right iliac region, had been sick all night, and who had in the forenoon of the next day walked a considerable distance to enter the Harlem Hospital. On the afternoon of the same day he had been in a condition of marked shock. He had been operated upon at this time, and the abdomen had been found full of liquid fæces and serum, and the appendix bent upon itself and perforated about half an inch from the cæcum. The appendix had been removed, the abdominal cavity freely washed out with sterilized water, and a wick of iodoform gauze left in the lower angle of the wound. The man had made an excellent recovery. The interesting point was that the illness had begun in the evening and the perforation had occurred before two o'clock the next afternoon.

Dr. MORRIS said that the complete absence of pain, after there had been pain at "McBurney's point," was a most important symptom of the occurrence of gangrene.

Dr. ERDMANN said that he had shortly before seen a case in which there had been only slight pain in this region, and yet there had been extensive gangrene and perforation, with discharge of a fæcal mass of the size of a hazelnut into the peritoneal cavity. In this case there had been constant but very slight pain at the point referred to.

Dr. BARROWS said that he had personally experienced the pain of gangrenous inflammation of the appendix. He had never felt any pain which could compare with that which he had suffered from the very beginning of the attack up to the time of the operation. At the operation the appendix had

been found gangrenous and perforated. In his opinion, one of the best guides to the occurrence of gangrene of the appendix was the fall of temperature and the rise of the pulse, associated with an anxious expression, and the other signs of that condition of shock seen in grave abdominal disease.

The following editorial was published in the same issue of the *New York Medical Journal* in which the foregoing reports and discussions appeared:

THE TREATMENT OF PUERPERAL CONVULSIONS WITH VERATRUM VIRIDE.

It was an interesting and profitable discussion that followed Dr. Charles Clifford Barrows's recent accounts of two cases of puerperal convulsions in the treatment of which the use of veratrum viride had played an important part. It took place at a meeting of the Society of Alumni of Bellevue Hospital held on October 2d, and a report of it is presented in this number of the *Journal*. Dr. Barrows properly laid stress upon the use of veratrum viride in the treatment of puerperal convulsions—not that he fancied it was new, but rather, we presume, that it seemed in danger of being forgotten, for, he says, except for its enthusiastic advocacy by the late Dr. Fordyce Barker, he had not noticed that it was generally appreciated except in the Southern States. The discussion shows at least that the gentlemen who took part in it had not ignored the title of the remedy to be ranked high among the means of controlling the convulsive disorder under consideration.

Dr. Edgar's declaration that he did not believe there was any drug, with the possible exception of chloroform, that was of as much value as veratrum viride in eclampsia, coupled with Dr. Chandler's testimony to its efficiency, goes far to show that experienced obstetricians in general are less forgetful of the virtues of veratrum than its comparative inconspicuousness in current literature might lead one to suppose was the case. It is very sure that an overwhelming preponderance of our therapeutical resources does not reside in the

novelties that have been introduced so profusely within the last few years—perhaps no preponderance at all. Although, not to mention the wholly novel medication to which bacteriological study has given rise, all our pure hypnotics and all our pure antipyretics have been known but a few years, it is much to be doubted if we have come to a knowledge within the last twenty-five years of a greater number of potent curative medicinal agents than were known before. It is natural and inevitable that the new drugs should figure more prominently than the old ones in periodical literature. We would not have it otherwise, for that would be a poor literature that should keep on reiterating well-known facts. There is room for discrimination, however; it is hardly to be gainsaid that occasionally a particular use of an old drug is in danger of being forgotten, and when that is the case a distinct service is rendered by whoever calls attention to it so pointedly as Dr. Barrows has to the value of veratrum viride in combating so fatal and frightful a disease as puerperal eclampsia. Such a course sets those who may have been forgetful or skeptical to making new trials of the agent in question, and may lead either to an undeniable confirmation or to a wholesome refutation of the convictions of our predecessors. It tends to certainty in therapeutics, which is the grand aim of medicine.

The New York Medical Journal.

A WEEKLY REVIEW OF MEDICINE.

EDITED BY

FRANK P. FOSTER, M.D.

THE PHYSICIAN who would keep abreast with the advances in medical science must read a *live* weekly medical journal, in which scientific facts are presented in a clear manner; one for which the articles are written by men of learning, and by those who are good and accurate observers; a journal that is stripped of every feature irrelevant to medical science, and gives evidence of being carefully and conscientiously edited; one that bears upon every page the stamp of desire to elevate the standard of the profession of medicine. Such a journal fulfills its mission—that of educator—to the highest degree, for not only does it inform its readers of all that is new in theory and practice, but, by means of its correct editing, instructs them in the very important yet much-neglected art of expressing their thoughts and ideas in a clear and correct manner. Too much stress can not be laid upon this feature, so utterly ignored by the "average" medical periodical.

Without making invidious comparisons, it can be truthfully stated that no medical journal in this country occupies the place, in these particulars, that is held by THE NEW YORK MEDICAL JOURNAL. No other journal is edited with the care that is bestowed on this; none contains articles of such high scientific value, coming as they do from the pens of the brightest and most learned medical men of America. A glance at the list of contributors to any volume, or an examination of any issue of the JOURNAL, will attest the truth of these statements. It is a journal for the masses of the profession, for the country as well as for the city practitioner; it covers the entire range of medicine and surgery. A very important feature of the JOURNAL is the number and character of its illustrations, which are unequaled by those of any other journal in the world. They appear in frequent issues, whenever called for by the article which they accompany, and no expense is spared to make them of superior excellence.

Subscription price, $5.00 per annum. Volumes begin in January and July.

PUBLISHED BY

D. APPLETON & CO., 72 Fifth Avenue, New York.