**Successful cases of puerperal eclampsia / by Robert Emmet Coughlin.**

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# SUCCESSFUL CASES OF PUERPERAL ECLAMPSIA.[1]

BY

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A few months ago a young married woman was suddenly seized with convulsions consequent upon her pregnant condition. Her family physician was sent for and after she had a series of convulsions the family decided to call in another physician in the neighborhood. The second physician seeing at once the gravity of the situation, advised heroic measures, but also asked the first physician what he had done in the case. The reply was: "Well, doctor, I have been treating her expectantly." "Well," said the other physician, "you know what to expect, do you not?" And, sad to relate, what they expected occurred.

At the outset let us understand that there

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is no expectant treatment in puerperal eclampsia. A very grave condition confronts us and we must act and act quickly or repeated convulsions will take our patient away from us.

In order to terminate pregnancy promptly without undue delay we must, of course, pay little heed to the life in utero. This, as you all know, is in direct opposition to the teaching of the Roman Catholic Church, which says that under no circumstances are we justified in destroying the child's life to save the mother. (To quote from "Moral Principles and Medical Practice" by the Rev. Charles Coppens, S. J., Professor of Medical Jurisprudence in the John A. Creighton Medical College, Omaha, Neb).

We are now ready to consider the chief question, viz., whether there can be any cases in which a physician is justified in bringing about an abortion, or in prescribing a treatment from which he knows an abortion is likely to result.

1. It is evident that if he acts with due prudence, and yet from some cause which he did not foresee, and which could not have been foreseen, his treatment brings about a miscarriage, he cannot justly be held accountable for what he could not help.

2. But what if he foresees that a drug or treatment, which, he thinks, is needed

for the mother's health, may perhaps bring on a miscarriage? Can he still administer that drug or prescribe that treatment? Notice the question carefully. It is not supposed that he wants to bring on the miscarriage. He does not; he will do all he can to prevent it. Nor will his treatment or drug directly destroy the life of the organism of the embryo; but is intended to affect favorably the system of the mother, and it is applied to her own organism. Still the doctor knows that the prescription may indirectly bring about abortion. Can he prescribe the drug or treatment from which he knows the death of the foetus may indirectly result, the direct purpose being to remove an ailment of the mother?

There is a sound moral principle bearing on such cases: "He who wilfully puts a cause is answerable for the effect of that cause." Therefore, if the effect is evil, he is answerable for that evil. This supposes that he could foresee the danger of such evil effect.

The evil effect is said to be indirectly willed; for it follows from a cause which is directly willed. If, then, you should give a dose to a pregnant mother which is intended to stop her fever or other ailment, but may also bring on an abortion, the stopping of the fever is indirectly intended, and the abortion is said to be indirectly intended or willed. Those are the received terms in

moral science. That which is permitted to result from our acts is said to be indirectly willed.

Are we then always responsible for evil effects permitted or indirectly willed? The principle laid down seems to say so. But then that principle admits of important exceptions. If we could never do an act from which we know evil consequences may follow, then we would scarcely do anything of importance; a young man could certainly not become a physician at all, for he is almost certain to injure some of his patients in the course of his professional life. But if we had no doctors, such a loss would be a much greater evil to mankind than their occasional mistakes. Here then we seem to be in a dilemma, with evil on both sides of us. And then we are reminded of that other principle of which we spoke before, that we may never do evil at all that good may come of it. The solution of this: we should never do evil, but we are often justified in permitting evil to happen; in other words, we can never will evil directly, but we can often will it indirectly; we can do what is right in itself, even though we know or fear that evil will also result from our good act.

This conduct requires four conditions:

1. That we do not wish the evil itself, but make all reasonable effort to avoid it.

2. That the immediate effect that we wish to produce is good in itself.

3. That the good effect intended is at least as important as the evil effect permitted.

4. That the evil is not made a means used to obtain the good effect.

Now let us apply these principles to the case in hand.

1. If the medicine is necessary to save the mother's life, and it is not certain to bring on abortion, though it is likely to do so, then the good effect is greater and more immediate or direct than the bad effect; then give the medicine to save the mother, and permit the probable death of the child.

2. If the medicine is not necessary to save the mother's life though very useful, for the sake of such an advantage, you cannot justly expose the child's life to serious danger.

3. But if the danger it is exposed to is not serious but slight, and the remedy, though not necessary, is expected to be very useful to the mother, you may then administer the medicine; for a slight risk need not prevent a prudent man from striving to obtain very good results.

4. But what if the drug is necessary to save the mother and as dangerous to the child as it is beneficial to her; can you then give the medicine with the moral certainty that it will save her and kill her

child? When we show principles clearly we can apply them boldly. I answer then with this important distinction; you can give such medicine as will act on her system, her organs, in a manner to save her life, and you may permit the sad effects which will indirectly affect the child; but you cannot injure the child directly as a means to benefit her indirectly; that would be using a bad means to obtain a good end.

Suppose, then, what is said to be a real case of occasional recurrence in obstetrical practice, namely, that a pregnant mother is seized with violent and increasing attacks of vomiting, so that she must die if the vomiting be not stopped; then you, as well as the consulting physician called in, can discover no means of relieving the vomiting except by procuring an abortion, by relieving the womb of its living burden. Abortion is then the means used to stop the vomiting. Are you justified in using that means? Abortion is the dislodging of the child from the only place where it can live and where nature has placed it for that purpose. Therefore abortion directly kills the child, as truly as plunging a man under water kills the man. Can you thus kill the child to save the mother? You cannot. Neither in this case nor in any other case can you do evil that good may come of it. The end can never justify the means.

Like the sailor boy who lay helpless at the bottom of the boat after a ship-wreck and who was killed by his comrades to save their own lives, the child is not an unjust aggressor against the mother. It is placed in the womb without its consent and is defenseless. It is the mother who is, as it were, the aggressor from obstacles caused by deformed pelvis, tumors, etc.; and she has not the right to ask or consent to the killing of the child who does not attack her.

In dealing with the following cases of Puerperal Eclampsia no particular attention was paid to the foetus, the idea being to save the mother in the case, and if the child lived so much the better, but if the child was born dead, as occurred in the majority of cases, there were no regrets as everything had been done to save the mother directly and the child indirectly.

The following cases were admitted to the Norwegian Hospital during a period covering nineteen months of interrupted service. This medical service was presided over by Dr. E. E. Cornwall, assisted by the writer.

The cases were seven in number; three occurred in the month of March, and the others in the months of April, May, October and January.

Nationality: Norwegian, two; United States, two; Germany, one; Finland, one; and Italy, one.

Mortality: All the mothers recovered and left the hospital perfectly well. Three infants were born alive, four infants were born dead.

The ages of the patients were twenty years, 24 years, 30 years (2), two at 33 years, and one at 39 years.

Physical build of women. Three were large, well nourished women; four were slight, anaemic, and rather poorly nourished.

Four were of the blond type while three were brunettes.

Four were primiparae while three were multiparae; one was unmarried.

Family history was negative in each case, except that a parent in one of the cases had died of epilepsy; another of kidney disease while another had died of liver disease. The father of still another case had died of general paralysis.

Previous history was also negative in each case except one patient who had had an attack of kidney trouble before but not during pregnancy, while one patient gave a history of a severe attack of scarlet fever when a child.

Premonitory Symptoms:—In two cases there was a severe headache. In one there was marked dizziness. In four, swelling of the feet, hands and eyelids. In three there was loss of vision and in one instance the patient became so blind that she had to go to bed. In two there was great diminu-

tion in the amount of urine. In one irritability. In another the greatest suffering was from insomnia. Only one complained of pain in the back.

In six of the women there was sudden unconsciousness with convulsions and coma.

Cases No. 1 and 2 had three convulsions before delivery and none afterwards.

Case three had five after delivery and a good many before, the exact number could not be ascertained for the reason that no one in her home could talk English to the ambulance surgeon.

Case 4 had eighteen convulsions before delivery and none afterwards.

Case 5 had five before delivery and none afterwards.

Case 6 had four before delivery and none afterwards.

Case 7 had five before delivery and none afterwards.

The blood pressure was high before and after delivery except in case 6 where the pressure was only 125 before delivery and fluctuated between 145 and 115 after labor.

In case 7 the blood pressure was 200 plus before and after delivery but gradually became lower on each succeeding day as the following will show:

Oct. 25th; systolic 200 plus, diastolic 195.

Oct. 27th; systolic 195, diastolic 180.

Oct. 29th; systolic 185, diastolic 150.

Oct. 31st; systolic 160, diastolic 140.
Nov. 1st; systolic 155, diastolic 140.
Nov. 2nd; systolic 135, diastolic 125.
Nov. 3rd; systolic 140, diastolic 120.
Nov. 11th; systolic 110, diastolic 85.

The urine in all the cases contained albumen from a slight trace to a solid mass on boiling. As time went on in convalescence the albumen gradually disappeared in every instance.

The specific gravity varied in each case at different times from 1,010 up to 1,028.

Microscopical examinations of the urine showed the presence of granular, epithelial and hyaline casts; also leucocytes, blood cells, pavement epithelium, mucus, pus cells, urates and flocculent sediment.

The urine varied in amount in the different cases at different times but was always suppressed before delivery. The largest amount voided in twenty-four hours was one hundred and twenty-nine ounces; the smallest twenty-four ounces.

The temperature per rectum varied from 99.8 to 104 which was the highest temperature recorded in any of the cases at any time. The highest temperature was always before delivery; in fact there was a little rise in temperature in every case before delivery.

The pulse ranged from 120 in the different cases up to 160. The pulse rate was in each case more rapid before delivery

than subsequently. Abnormal tension or hypertonia was always present at some time or another in each case.

The respirations varied from twenty-five per minute up to thirty-three. The respirations were also highest in each case prior to labor.

It might be of interest to compare the foregoing figures with other statistics mentioned from time to time.

Harrar states that beginning with February, the number of cases increases during March, reaching the highest point in April and then steadily diminishes, finding the lowest level in November. The curve of this rise and fall nearly corresponds to the curve of the rainfall, which fact he states, might explain the well known theory that climatic conditions have something to do with the disease, although it is not clear why periods of unsettled weather should have the effect of producing a convulsive toxaemia in pregnant women.

Regarding the frequency of the condition, McPherson states that it occurred in 1.7% of all labors in the wards of the New York Lying-in Hospital. The high percentage was due to the fact that a hospital is the clearing house for so many of the cases occurring in the city and the probability is that it is about eighteen times as frequent in hospital as in private practice.

The condition is twice as common in primiparae as in multiparae, being 64.4 in the former and 35.6% in the latter.

Regarding the age of the patient in 250 cases the greatest number of cases occurred between the ages of 20 and 25 years which is in accord with the fact that the greatest number of eclampsias occur in primiparae.

The maternal mortality of eclampsia is given by various authors as ranging from five to fifty per cent.

The foetal mortality is usually from 33 to 50%.

*Treatment.*—The treatment pursued was first the employment of certain drugs to ameliorate the symptoms, and the use of the hot pack. Cathartics were also given but the main idea was at all times to bring on labor and terminate pregnancy no matter what the period of utero-gestation. The idea was always kept in mind that the longer the patient was left in the condition of toxaemia of the convulsive type the slighter were her chances for life with each convulsion. Likewise the child, for the more convulsions the greater are the risks to the life of the foetus.

Labor was induced by means of the catheter and forcible dilatation in five cases, two of which were delivered with forceps. In case 2 delivery occurred without interference shortly after she

reached the hospital. In case 3 delivery occurred before the arrival of the ambulance though she continued to have convulsions for some time afterwards.

The drugs used in their order of frequency were veratrum viridi, diuretin, morphia sulphatis, atropine, sulphatis nitroglycerin and potassae citratis. In one case, namely No. 7, the tincture of aconite worked well. In case 4 the patient was in a condition of pulmonary oedema; atropine in 1/100 grain doses combined with fluid extract of veratrum viridi appeared to pull her through. She was also given a ten gallon rectal irrigation, and digitalis leaves sprinkled over a mustard plaster were applied over the kidney region. This patient was delivered of her child prior to the attack of pulmonary oedema.

Of all the drugs, however, veratrum viridi stands at the head of the list in our experience when given in fifteen minim doses hypodermically every two or four hours till it slows up the pulse perceptibly, sometimes bringing it down as low as seventy per minute.

For failing heart conditions consequent upon the toxaemia we have had to fall back on strychnine, tincture of strophanthus, and spiritus frumenti. For the extreme nervousness and irritability bromide of soda was given in almost all the cases.

Chloral by rectum was used in three cases but only a few doses were given in each instance.

The diet consisted of milk diluted in different forms, cereals, gruels, toast, oatmeal jelly, rice and prepared buttermilk.

## CONCLUSIONS.

From our experience in these cases we are led to believe:

1. That there is no expectant treatment in a consideration of Puerperal Eclampsia.
2. That early emptying of the uterus will bring about the best results.
3. That veratrum viridi is a very important drug in the treatment of convulsions due to the toxaemia of pregnancy.
4. That atropine sulphate should be tried in desperate cases especially where there is a tendency to pulmonary oedema.
5. That while careful nursing, hot pack applications to kidney region, and diet, are important, the prime indication for treatment is the early evacuation of the uterus, thus bringing about improvement in the metabolism, improvement in the circulation by reducing blood pressure, improvement in the condition of the urine, improvement in the temperature, pulse and respiration, saving the heart and the cardiac muscle from unnecessary strain, in a word the bringing about of metabolic changes so that the balance between absorption and elimination has been increased in favor of elimination.

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