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ON

Puerperal Convulsions

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To

John. M. Watson. M.D. & W.S. Briggs. M.D.

This dissertation, is respectfully dedicated by a grateful, and humble Student,

The Author

Puerperal Convulsions.

Among the many diseases which appear in women during the puerperal state, there is none that would seem to awaken so much interest and anxiety with the practitioner of medicine as the one under consideration, and from the horrid scenes it presents and its characteristic tendency to death, should demand his strictest attention and investigation, so that when summoned to attend such a case, may at all times be prepared to alleviate and abridge as much as possible the suffering consequent on such occasions.

The convulsions may appear during pregnancy in parturition or after delivery They hardly ever occur prior to the sixth month of pregnancy are more frequent in parturition, and somewhat more often after delivery than during the gravid state. There is no stated time to which they may occur after delivery though as a general rule a few hours afterwards, but records are not wanting where several days have elapsed before they appeared.

Causes. The causes are divided into predisposing and determining causes. The

predisposing cause is pregnancy and the various changes it produces throughout the economy. From the observation of some authors, the only known predisposing cause is due albuminuria, which they consider as being almost a physiological condition of the pregnant female, but if the elimination of albumen from the blood be excessive, it becomes pathalogical, and forms albuminous nephritis, which they think is necessary to the production of eclampsia. This elimination of albumen from the blood, through the Kidneys, according

to their theory, renders the spinal cord more susceptible to any irritation that may be conveyed to it, and causes it to take on action much sooner than it otherwise would do. Other authors mentions two clases of females, which are peculiarly liable to eclampsia, to wit, that of the plethoric and irritable. The irritability which most predisposes to it, is more comonon in fashionable ladies, whose nervous systems are very susceptible. Many other predisposing causes have been enumerated, as a first delivery, want of exercise, oedema of the

lower extremities, general infiltration, peculiar conditions of the atmosphere and individual idiosyncrasies, all of which, have been mentioned as being so many predisposing causes to the production of Convulsions.

The determining cause, resides in the spinal Cord itself or may be produced by some irritation in some distant organ, which when transmitted to it, by the sensitive nerves, is calculated to awaken the reflex action of the motor nerves, and thereby produce, eclampsia, By this means, we can

account That an irritation
of the nerves of the uterus,
vagina, rectum, or Stomache,
may be considered, as being
so many determining Caus-
es To Convulsions,
Any Thing Thats calculated
to produce great irritation
of The uterus, as a consqu-
ence which tends all diff-
icult labors, Such as a
malformation of the pelv-
is, obliteration of The vagina,
deformities and unfavorable
presentations of the foetus,
&c, are so many sources of irri-
tation, and may at times
give rise to eclampsia,
At Times an over distention of
the intestinal canal, by any

foreign body, such as a large accumulation of gas, fecal matter &c, may produce like phenomena, The same may be said by the irritation of the bladder, from whatever cause, all of which is sometimes so many determining causes to general Convulsions,

Symptoms. These are divided into precursory symptoms, those which manifest themselves during the attack, and those that are developed in the intervals. There is no disease scarcely but what we have some premonitions, which foretells their invasion, So it is with eclampsia, and

in the majority of cases, those premonitions, enable us in most instances to foretell its speedy invasion, For several days before an attack, though occasionally a few hours, the patient becomes more or less irritable, is easy excited, Complains of an intense cephalalgia, The pain in the head is accompanied with nausea, sometimes vomiting by vertigo, dimness of vision, tinnitus auriam, and often pain in the epigastrium, After these paemonitory phenomena have lasted some time, they still become more intensed, with diminished activity of the intilectual faculties,

The countenance shows an unusual dullness. The patient sinks into a deep abstraction, from which she can be aroused with difficulty. In plethoric patients the face is flushed and animated, the pulse full and slow, while on the other hand, if the patient is of an irritable or nervous constitution, the face is pale, the skin cold, and the pulse hard and contracted. These symptoms last an unlimited time when an attack makes its appearance, the patient is thrown into violent convulsions affecting first the muscles of the face, producing a most hideous countenance, the

eyelids are in a State of agitation, and the eye balls roll in their sockets in every direction, Ab^t first the Jaws are repeatedly openened and shut, and sometimes the tongue is thrust out and severely bitten, Subsequently they become forcibly closed, The Convulsions affect mostly the extensor muscles, which overcome those of the flexors, The body is permanently extended, and the arms forcibly stretched along the sides, and the fists clenched, The lower extremities are in like manner extended, The urine and faeces are not unfreqaently discharaged involuntarily

There is foaming at the mouth, The respiration is difficult and performed with a peculiar hissing noise, The face presents a purple turgid condition, owing to an imperfectly decarbonized blood circulating through the system, produced by convulsive movements of the diaphragm and spasm of the glottis, which prevents the lungs from receiving their due amount of oxygen, The pulse at first is full and hard, but afterwards becoming smaller and hardly perceptible, The skin is hot and dry but is soon bathed in profuse perspiration, The Sensorial and intellectual

faculties are wholly extinct, the patient being altogether unconscious of all external objects. The duration of the fit is from one to ten minutes, and then gradually subsides, the pulse frequently becoming calm, and the patient conscious, but is soon succeeded by a fresh attack.

During the intervals of the first two or three attacks, the patient seems very much prostrated, but may retain her right mind, though as the paroxysms are renewed, the intellectual moments become shorter, and shorter, and finally she sinks into a state

of complete coma, from which she cannot be aroused, only by the invasion of a fresh attack. The coma is accompanied with sterterous respiration, a strong and well developed pulse. The face is injected, the pupils dilated. Sometimes the sensibility is not altogether lost, without the coma is very profound, when all sensibility is suspended. As the coma passes off it leaves the patient in a state of drowsiness, from which she can be aroused by speaking to her, and consciousness gradually returns.

Terminations. The terminations of eclampsia is recovery, death, or may produce some other disorder. When recovery is the result, the paroxysms are not near so intense, are less frequent and of shorter duration, while to the contrary, when death ends the scene, the paroxysms occur in rapid successions, of longer duration and much more intense succeeded by profound torpor, from which the patient cannot be aroused. Death generally ensues from twelve to forty eight hours after the first attack. The patient may

escape death and yet the Convulsions give rise to some other disorder. The Convulsions may come on during parturition, producing violent Contractions of the abdominal muscles, with strong Contractions of the uterus, and if the Os uteri is not sufficiently dilated, nor dilatable to admit of the expulsion of the fœtus, may produce a rupture of the cervix, and by this means, prove a considerable injury. And secondly, the cerebral Congestion may be so great, as to produce apoplectic effusion and, as a consequence hemiplegia is the result, and in like manner a determination

of blood to the lungs may produce a congestion of those organs. According to the best authors on the Subject, meningitis, and puerperal peritonitis, is frequently the result of eclampsia.

Diagnosis. There are many diseases which may be mistaken for eclampsia. During the paroxysm, it may be confounded with hysteria, epilepsy, catalepsy or tetanus, while in the comatose stage, it may be mistaken for apoplexy, concussion of the brain, and the coma of drunkenness. In hysteria there is never a total abolition of the intellectual faculties, no coma succeeding

the attack, no frothing at the mouth, and the convulsive movements being altogether different from what they are in eclampsia. In eclampsia the limbs are extended, while in hysteria they are forcibly flexed. In hysteria the patient not unfrequently have to be held in bed, she utters violent cries, while in eclampsia there is none of those phenomena. Hysteria generally makes its appearance at the commencement of pregnancy, eclampsia to the contrary, scarcely ever, but mostly at the latter months of the gravid state.

Epilepsy simulates eclampsia more than any other convulsive

disease, and is more likely to be mistaken for it, than any other, however there is little, or no coma succeeding an epileptic fit, as in eclampsia and a knowledge of what has succeeded, and the termination of the disease, will enable us in the most of cases to form a diagnosis.

Tetanus is distinguished from eclampsia by the persistence of the convulsive rigidity of the limbs, and Catalepsy from the singular phenomena that the limbs retain the same position throughout the fit, which they happened to have at the commencement, or any position we make them

resume during the convulsive state, which is very different from eclampsia,
Apoplexy is never preceded by convulsions, nor neither is Concussion of the brain, and in the latter the presence of wounds on the head &c would always enable us to form a correct diagnosis A previous history of the patient and the odor of the breath of the individual would enable us to distinguish the coma of drunkenness from that of eclampsia.
Prognosis The prognosis of eclampsia is somewhat unfavorable According to statistics on the subject, one out of every three or four dies, but the fatality is,

greatly owing to what gives rise to the convulsions, the period of pregnancy on which an attack makes its appearance, and the manifestations of the progress and intensity of the symptoms &c. In women who are affected with serous plethora or general infiltration, the prognosis is thought to be exceedingly unfavorable also where the cause seems to be due albuminuria, the prognosis is more unfavorable than in women who are not affected with such an alteration of the blood.

When the attack comes on at the commencement of labor the convulsions are more serious, than when manifested

at a later period of parturition where the os uteri is well dilated and would admit of a spontaneous or artificial delivery, whereas in the former the parts are not dilated, and as a depletion of the uterus is one of the most favorable conditions to the cure of the paroxysms would render the prognosis much more serious

The convulsions are much more dangerous, when they occur in the early months of pregnancy, than in the latter, for this reason, In the early months of pregnancy, the obliteration of the os uteri, and hardness and rigidity of the cervix, would render a depletion of the

uterus almost impopsible and in cases of recovery the patient would then be liable to fresh attacks during the remainder of the gravid state.

If the paroxysms are continuous or appear after delivery the prognosis is much more unfavorable than otherwise, as we would then be deprived of having recourse to the extraction of the foetus, In primiparous women the prognosis is more unfavorable, than in those who have borne children, as in the former, the expulsion of the foetus is generally attended with much more difficulty than in the latter

The course and intensity of the

symptoms should also be taken into consideration, as they greatly influence the termination of the disease. When the paroxysms are numerous, and occur in rapid succession and the comatose stage prolonged during the whole interval, and the patient does not recover her sensorial and intellectual faculties between them the prognosis is exceedingly unfavorable and death generally ends the scene.

The prognosis is more unfavorable for the child than it is for the mother, especially when the paroxysms occur in rapid succession, for then the maternal circulation is partially if not

altogether suspended, and the child receiving blood imperfectly oxygenated, death ensues as a natural consequence.
The death of the child is also endangered, by the manner in which it is sometimes necessary to affect a delivery, such as the practice of version, the application of forceps, &c. And even after it has been delivered and escaped all the dangers while in utero, it is not yet safe, as it is liable to a hereditary influence, and may die of convulsions, similar to those which affected the mother.
Pathological Anatomy. Post mortem examination, according to the

best authors on the subject reveals but little light on the cause or nature of eclampsia. There is sometimes found an effusion of serum in the ventricles and arachnoid cavities of the brain and also an extravasation of blood into the cerebral substance, but this is supposed to be due the effects, and not the cause of the disease.

Those authoss who believe /or are of the opinion that albuminuria is the predisposing cause of eclampsia, seek out the anatomical lesions in the kidneys, which reveals in most cases according to their observation, albuminous nephritis or Bright's disease of the Kidneys

Treatment. The treatment of eclampsia, is divided into prophylactic and curative. The prophylactic treatment should be directed to the predisposition which by removing will prevent the approach of the paroxysms. If the cause seems to be due albuminuria, the indications are to correct such an alteration of the blood, and as the elimination of albumen from the blood has a tendency to lessen all the solid constituents of that fluid, the recommendations are to advise an animal diet, and to administer as a tonic, some preperation of iron, which has been proved to be the best preventive means used in such cases,

If there is any symptoms of Cerebro-Spinal congestion, venesection should be employed, and practised frequently during the latter months of pregnancy, especially if such symptoms are still manifested, next as preventive means are purgatives and diuretics, after these some have used Tartar Emetic in nauseating doses; and thought with great success.

In parturition, all causes should be removed or correctied that tend to produce difficult labors. If the contractions of the uterus are irregular, they should be restored to their normal type, by venesection, bathing opiates &c.

At the commencement of labor, the bladder should be emptied, also the intestinal canal, and stomache of all indigestible food &c, which might be so many sources of irritation as to produce Convulsions. And after delivery an examination per vaginam should be made to remove all sources of irritation, such as coagula, portions of placenta &c, as the neglect of such things not unfrequently is the cause of eclampsia.

Under the head of curative means the first indications are to prevent Cerebral Congestion This is to be done by taking away blood from the arm in a full stream, approaching To

Syncope or until the congestion is removed, and repeated if the paroxysms still continue to come on. Where general bleeding has been employed and the coma is prolonged throughout the intervals, cups and leeches should be applyed to the temples and back of the neck. which relieves local Congestion.

If we suspect there is any indigestible food in the Stomach, vomiting should be produced by the administration of an emetic, or mechanically by tickling the fauces. The condition of the bladder should also be examined, and the catheter used if perchance it is found distended with urine.

Purgatives should also be administered composed of castor oil or calomel. They should be given during the intervals, but if the patient does not regain her sensorial or intilectual faculties and cannot swallow, an enema should be used instead, composed of castor oil, with a few drops of oleum Tiglii, and to be repeated until a copious alvine evacuation is obtained.

At the same time, counter irritation should be kept up, by means of sinapisms applyed to the thighs, legs, and feet, which is thought to be productive of much advantage. Opium as a sedative, after sufficient depletion has been recomonended by some,

The head should be shaved and
cold water frequently applied.
This ought never to be neglect-
ed, as it has been used with the
happiest results, and is an exc-
llent remedy. During the par-
oxysms, the prerequisites are to keep
the tongue from being bitten,
This is done by placing the
handle of a spoon, between the
teeth.
If an attack makes its appear-
ance during gestation, the uter-
us should not be interfered
with, and the medical treatment
above indicated employed, though
should labor come on prematu-
rely, the treatment is then simi-
lar to that employed during
parturition at the regular time.

When the convulsions occur during parturition, and the os uteri is dilated or dilatable, and the head of the child engages at the superior straight, the application of forceps, should be used, except the paroxysms are very light and a spontaneous delivery soon anticipated. If the head is still above the superior straight, and the paroxysms are very frequent and intense, pelvic Version should be resorted to, that is if the parts are sufficiently dilated or dilatable to admit of the introduction of the hand. In face presentations, the same means are necessary, that are employed in presentations of the head.

Where the pelvis presents, delivery should be hastened by cautiously making traction at this extremity, and in like manner in trunk presentations, the feet should be drawn down, and the child delivered as in pelvic presentations.

When the os uteri is not dilated nor dilatable, and the membranes unbroken, they should be ruptured, and the dilation of the os, facilitated by the application of the ointment of belladonna.

If the membranes are already broken and the part seem to dilate slow, and the convulsions very serious, a forceps delivery has been recommended,

This is accomplished by forcibly introducing the hand into the uterus. If there is so much resistence that the hand cannot be introduced, cutting instruments have been employed to divide the parts, so as to admit of its introduction

After the expulsion of the child, an examination per vaginam and an exploration of the uterus, should be made, and all coagula, portions of membranes, placenta &c that may be retained, removed, so that there will be no source of irritation whatever left behind.

If the convulsions still continue after the child has been

delivered - the same medical means should be employed as has above been recommended.

The inhalation of anaesthetic agents in this disease has been highly extolled by some practitioners, and thought productive of a great deal of advantage, seemingly to lessen the frequency of the paroxysms, and sometimes put an end to them altogether.