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## ETHERIZATION IN CHILDBIRTH.

BY WALTER CHANNING, M.D.

READ TO THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

[Extracted from the American Journal of the Med. Sci. for April, 1849.]

January 22. *Cases of Etherization in Childbirth.*—Dr. Channing read a paper, as follows.

These cases are communicated to the Society as affording additional evidence to that contained in a volume recently published in this city, of the safety and usefulness of etherization in childbirth. One case only of convulsions is given. Others of great interest, in which etherization was signally useful, will be communicated at another meeting. In this and other ways I shall endeavour to keep before the public and the profession, such facts as fall under my notice, or which are communicated to me, which may serve to illustrate a subject of the deepest and widest interest.

*Natural Labour.*—Mrs. —, aged 25. Second labour. Health perfect. I have rarely if ever met with the appearance or the fact of such entire absence of disease, and of the absolute want of anything having its likeness. The whole pregnancy was marked by freedom from annoyance, discomfort, or trouble of any kind. The natural, habitual buoyancy, fulness of spirit, enjoyment of everything, prevailed through the whole period of the nine months, which so frequently are passed in more or less discomfort, and so often by more or less positive disease.

Her first labour, two and a half years ago, was immediately preceded by convulsions. The disease had its severest characters, and when it had continued unabated for many hours under very judicious treatment, I was desired to see the case in consultation, with a view to terminate it with instruments. This was done. But the convulsions continued. After a time they ceased, but consciousness did not return. The patient remained for a week in a most critical situation, passing much of the time in groans and screams as if in great agony. Convalescence at length began, and her ordinarily excellent health was gradually restored.

Box 11

The present labour began Oct. 15th, P. M. I was called to see her about 3, A. M. of the 16th. She was in active, natural labour, the presentation good, and progress satisfactory. She soon demanded ether, which she had before determined to use. The vapour was inhaled from a hollow sponge in the usual manner, and was followed by its happiest effects.

The child, a boy weighing nine pounds, was born during almost perfect unconsciousness, and without the least untoward results. The bowels were perfectly regular, and, without any medicine whatever, lactation was most kindly established, natural appetite for food continued undisturbed, sleep was tranquil, and after-pains kindly referred to.

I present this case to the Society because of the evidence it affords of the entire safety and advantage of etherization in labour, and in the puerperal state. I do so because we are often asked if it be proposed to employ it in common natural labour, why not do so? Why not prevent great suffering, it may be, and make convalescence more rapid and more sure, than to take the chances of protracted suffering, and of slow recovery. This is not a solitary case of the employment of etherization in the most natural labours. It is enough, however, to furnish this additional evidence of its safety in such cases to the large amount of the like contained in the treatise above referred to, and which a wider later experience abundantly confirms.

*Natural Labour.*—Age 34. 9th labour. Jan. 16, 1849. Labour begun at about 3 A. M. I was called about 6 A. M. Contractions strong. Os uteri dilatable. Head presenting. Membranes not at all separated from scalp by water. Posterior fontanelle to right acetabulum. At 9, os uteri had disappeared. Liquor amnii discharged. External organs moderately dilatable. No *show*. The only moisture was produced by the slight trickling of liquor amnii over the organs. At 9 she inhaled ether vapour. Its good agency was soon seen. Pain was so much diminished as scarcely to be complained of. Pressure to the back was no longer clamoured for. An abundant *show* appeared. It was of dense and *coloured* mucus. I underscore the word *coloured*, as I well remember Dr. John Clarke's remark on this occurrence. He ascribes it to the rapidity and fulness of secretion,—to the rapid dilatation of organs,—and especially looks to it as the best evidence of the most favourable pregnancy case. In this instance the increased dilatability was most observable in the vagina and external organs. Labour advanced rapidly and kindly. The posterior fontanelle was forced towards the symphysis. The sagittal suture in the direction so well described by Neagle. The child was born in about an hour and a half from beginning etherization. A male, weighing 11 pounds and 12 ounces, in perfect health. The placenta soon followed, and without hemorrhage.

17th. Perfectly comfortable. No after-pains, which, in other labours, had been remarkable for their severity. Urine natural. Bowels regular without medicine. Child at breast.



This case is presented to the Society because of the occurrence of full secretion, *show*, and of the free dilatability which occurred along with etherization in textures which before had undergone very slight change. It is farther offered because it has been gravely questioned if such changes do occur from etherization, or during that state, and if they do, whether they should be referred to that. The coincidences have been too numerous to leave this any longer a question.

*Convulsions.*—Age twenty-two. First labour, December 17th. A fortnight ago having been looking for labour some weeks, was seized with convulsions. Her physician reached her about an hour after the attack. She was then in a comatose state,—her breathing stertorous—pulse very rapid, and small—blood coming from nose and mouth—skin generally pale. While the examination was proceeding, another fit occurred. As soon as it could be done the patient was raised up in bed, and supported in that position. A vein opened, and thirty-two ounces, two pints, of blood taken. This was followed by perfect calm, and there was no fit afterwards. The patient soon rallied, so that in three or four days she was abroad, and walked from her house to South Boston, a quarter of a mile or more. In other words, she was quite well.

A week after her recovery her physician called to see her again. He found her complaining of most severe headache; referred to top and front of head, and almost immediately she said, "I can't see you—what is the matter?" He bound up her arm at once, and bled her again to full two pints. There was no convulsion.

On the 17th, Sunday, between eight and nine, A. M., he was called, as the membranes had broken, and the liquor amnii had freely escaped. He reached the address soon after, and in time to witness the faint fit which ushered in the labour. This was very severe; so that notwithstanding the former bleedings, and the pale skin, and very small and weak pulse, he thought it safer to bleed again, especially as such good effects had followed the former bleedings. He now took a pint. Examination showed labour was present. Convulsions continued to recur about once an hour through the day, the labour slowly advancing. At length, in the evening, progress had nearly or quite ceased; and the convulsions continuing, he desired me to meet him in consultation.

I found the patient exceedingly restless—very pale, lips as well as face—skin cool, almost cold—pulse very small and feeble, about 140 in the minute. During pain, restlessness especially great. In intervals she lay most of time in heavy sleep. Examined and found head low; at the bony outlet partly covered with os uteri—os being partially dilatable, being very firm where dilatability ceased. Much dryness, there being no proper show, the moisture mainly depending on liquor amnii, which slowly was passed away. I was told that the urine had been passed in the forenoon.

The question of chloroform arose. The physician in attendance had used



it in other labours, but never for convulsions. I stated my observation of its effects—that I had within a year or two employed etherization in ten cases, and that six of the patients had done well; and that in the present case it seemed especially deserving of trial, seeing that bleeding had been thoroughly tried, and that the convulsions continue to recur, and without any promise of spontaneous abatement. It was agreed to employ chloroform; and as the time of an expected fit had nearly arrived, it was determined to use it at once. Some progress had apparently been made within an hour or two; but her whole state showed that she could not probably survive if her present state was not soon replaced by delivery.

A handkerchief was wetted with about half a drachm of chloroform, and applied to her nose and mouth. She very soon inhaled regularly and thoroughly. A pain came on. It was strong, and of fair length. She did not move in the least, but you felt by her respiration—her obviously involuntary bearing down that the pain was efficient. The physician said that this was the case—that the head was pressing down, and the os uteri disappearing. A good interval occurred, and immediately, as pain returned, inhalation was again practiced. Progress was now reported as rapid. Another interval, and another pain of the character first described. I now examined, and found the labia well opened—the head just within them—the os uteri gone, and a sufficient mucous show. I called the attention of the physician to these points. He was a competent witness, and for hours had been in faithful attendance on the patient. He agreed entirely with me as to the facts now stated. In a few more pains the child was born. The cord was twined firmly round its neck. There was no pulse in it. The child was soon relieved of the presence of the cord, and was then easily born. There was no respiration—no movement of the heart, and the whole appearance was of death, which probably occurred some time before its birth. The womb contracted well. The placenta was expelled. I asked if there were any hemorrhage, and found there was none. The hand of the physician which was employed in receiving the after-birth, was not even soiled with blood. A binder was applied. The course settled as to what should be done in the night, especially if convulsions recurred, and I left the patient perfectly comfortable in about an hour and a half after reaching the address.

18th, 9 A. M. I found the patient very comfortable—pulse 100, of good strength; skin warm—in sound sleep. I learned that in about an hour after my leaving the patient she was seized with a convulsion. Chloroform was at once used, and the fit was not as long nor as severe as had been others—that there had been frequent threatenings of fits, by a convulsive twitching, or *drawing* of the head to one side, with rapid motion of the eyelids—the precursor of former convulsions. As soon as these signs manifested themselves, chloroform was inhaled, and not another fit occurred. No urine. Catheter.

19th, 9 A. M.—Patient very comfortable. Wide awake; colour of cheeks good; pulse 96; warmth sufficient. Asked how she felt; “First rate,” was



the quiet answer. One dejection yesterday without medicine. Physician reported that he had for a time utterly failed to introduce the catheter. The violence of the patient made it impossible for him to do it. He placed her under the fullest power of chloroform. Perfect etherization was established, and the catheter introduced with entire ease. About a quart of urine was drawn off, and showed to me. It had no appearance of urine, but rather resembled turbid black tea into which much milk had been poured. It having been drawn into a large white bowl, the resemblance was the more noticeable. It was entirely without smell, and in this respect it corresponded exactly with urine drawn during a case of convulsions of great interest, which I saw some months since with Dr. Wyman, of Cambridge. The colour of the urine in Dr. W.'s case was darker than in the above, but the liquid had likeness to urine. A test tube was filled with it, and boiled; coagulation occurred at once, and of a heavy dense character. Another portion was tested with nitric acid. It was at once, and almost the whole of it, firmly coagulated. I have not met with any instance in any disease in which the urine has been so remarkably coagulated as in this.

This case furnishes strong corroborative testimony in support of the observations made on the urine in puerperal convulsions, by Professor Simpson, of Edinburgh.

I am indebted to my friend, Dr. Bacon, one of our best analytic chemists, for the following note of some experiments made by him on some of the urine above referred to.

*Boston, January 13th, 1849.*

DEAR SIR:—I have made a partial analysis of the specimen of urine which you desired me to examine, but regret to find that it is so far decomposed that no reliable conclusion can be drawn as to its character when recent. I was able, however, to ascertain that there is no deficiency of urea, the analysis yielding 1.15 per cent., an amount but little below the average. It is probable that a part of the urea originally present has been destroyed by decomposition.

A considerable quantity of uric acid occurs in combination with ammonia. The white sediment, which when diffused through the urine gives it a milky and turbid appearance, is principally urate of ammonia. The most remarkable peculiarity of the specimen is the large amount of albumen which it contains.

Yours truly,

JOHN BACON, JR.

WALTER CHANNING, M.D.

*Inverted Womb.*—Age 22. 1st child. Labour took place evening of January 1st, 1849, and was completed between 8 and 9 A. M. This person is small, of feeble aspect, pale, but was very easily delivered of a large living child, a female. The pelvis was large, and well formed. The placenta soon followed the child, very moderate traction being used by the cord. The physician was struck by the mass, and by the suffering which attended and

followed its expulsion. Upon examination he found the womb was inverted, the placenta being still attached to it. He used chloroform to facilitate the reduction of the womb, having first removed from it the placenta. The womb was readily carried into the vagina, and there resisted further attempts to return it to its natural situation. There was much hemorrhage.

I was desired to see this patient, and learned these facts in the case. Her attendant removed his hand from the vagina, and requested me to make an examination. I found a large and solid conical tumour, at the upper part of the vagina, extending some distance above the brim of the pelvis, and surrounded by a sac, which it nearly filled, allowing the hand to pass between them, the upper termination of which the ends of the fingers did not reach, and the lower edge of which was not so distinctly separated from the vagina as to make it perfectly clear where this last ended. The vagina was filled with coagula, and blood was freely oozing from the surface of the tumour. Having the tumour encircled by my hand as far as its size permitted, I directed chloroform to be given to diminish or suspend sensibility when pressure should be made upon the mass. It was strongly demanded by the patient. When etherization was produced, and it was very satisfactorily done, the tumour was firmly compressed. If any doubt had existed of the diagnosis, it was soon entirely removed by the gradual but certain diminution in the bulk of the mass, and by its slow return within that which contained it. It ascended gradually, until by a sudden bound it escaped from the hand. Contraction took place very soon. First in the upper part of the womb, and then in the lower part, the neck and mouth,—the latter closing accurately upon the fingers as they were withdrawn, or were protruded into the vagina by it. A considerable portion of the membranes which were left attached to the womb after the placenta had been pulled off were partly expelled into the vagina, and partly remained in the womb. They were now carefully, and apparently wholly removed. Hemorrhage at once ceased. The womb was full in its usual place immediately after delivery. The patient seemed to suffer nothing from the operation.

4th. Report favourable.

10th. Recovery perfect.

This is the second case only which I have met with of recent *inversio uteri*. I have seen one only of the chronic form of this gravest of uterine displacements. The first case was not seen by me till two or three hours after its occurrence. I was called because of the extreme distress and death-like sinking, and hemorrhage which occurred, or increased after the supposed entire reduction of the displaced organ. I found the patient in apparently extreme danger. The symptoms were great restlessness, extreme distress, pale and cold skin, and scarcely perceptible pulse. I examined the abdomen, and found it presenting a hollow, rather than a fulness, in the place of the contracted womb, as ordinarily exists after delivery. A firm ring was felt extending from ilium to ilium, and permitting the hand to pass downwards as



into the cavity of the pelvis, or a large empty bowl. Slight pressure on this ring, or rounded edge, produced severe pain. I said to the medical attendant that the womb was still inverted. He said it was impossible that this should be the case, as he had reduced it, but consented that I should examine the case. This the patient resisted. She said she had already suffered terribly and would not submit to be tortured any more. She was told of her danger, and assurances given that as little suffering as possible should be produced. At length she consented. I found, as I knew before was the case, that the womb was inverted,—passed the hand at once into the vagina, and with the backs of the fingers pressing upon the presenting fundus, steadily carried it into its place. Contraction at once occurred,—the hand was slowly expelled, and the woman at once expressed how great was her relief.

In comparing these two cases I cannot but notice the striking differences which characterize them. How painful was this last in its whole history! In the first case there was no suffering at all. There was the slightest degree only of constitutional disturbance, and local symptoms hardly existed. There was neither organic nor voluntary resistance to reduction, and from first to last the operation was progressive and satisfactory. It is a new application of etherization, and corresponds with the happiest,—the most successful.

*Placenta Previa.*—About 30. Fourth pregnancy. 8th month. Jan. 13, 1849, was desired to see her in consultation. Found that she had been flowing at times for three months. Last three weeks great loss. Labour occurred in night preceding my visit. I found her very pale,—perfectly blanched,—no pulse,—respiration sighing,—no uterine contractions. Her medical attendant was absent. Stimulants were given and the pulse returned, very feeble. Examined,—dilatation of external organs, and os uteri good. No hemorrhage. Coagula black, shreddy, firm. It was my purpose to have turned before such reaction had occurred as would or might be attended with hemorrhage, as it seemed pretty clear that further loss would be fatal. Circumstances prevented my doing an operation which I could not control. I left,—came back in an hour,—found the physician in attendance, and it was agreed that turning should be done.

The hand passed easily into the vagina, and etherization by chloroform was established. Os uteri was now passed. The placenta was found to be extensively separated, and remaining adhesions were separated. The hand now was passed between the womb and membranes, till a knee was felt within the latter. They were broken, and the liquor amnii scarcely at all escaping, the limb was readily grasped, and slowly but easily brought down. Delivery was accomplished without the patient being at all conscious of the event. The placenta followed. *There was no further hemorrhage.* A swathe was applied, and the woman left after an hour perfectly comfortable. The ease of the operation has been spoken of. This was wholly owing to etherization. There was not the least resistance to the operation. The patient was in per-

fect sleep. No excessive action of the womb occurred. How important are these facts in this history. How deeply should they be considered by the enemies of etherization. This woman must have died under any farther hemorrhage. What more likely to produce this than struggles to escape from the pains of turning? Her strength was almost exhausted. What surer to take away that little which remained than resistance and struggle? What more perfect than the operation, both in itself, the quiet during which it was done, and in its results?

14th. Fair reaction.

15th. Doing well. Milk in breasts. Pulse of sufficient strength. Not the least abdominal tenderness. Renal excretion natural. Good colour in lips. Sleep disturbed by moral excitement, and by visitors. On the whole very comfortable.





