

Obstetrics: The Science and The Art, by Charles
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Rare Medical Books

1856

Obstetrics: The Science and the Art - Part III. The Therapeutics and Surgery of Midwifery; Chapter XXI. Of Ergot

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Recommended Citation

"Obstetrics: The Science and the Art - Part III. The Therapeutics and Surgery of Midwifery; Chapter XXI. Of Ergot" (1856). *Obstetrics: The Science and The Art, by Charles D. Meigs, M.D.*. Paper 20.
<https://jdc.jefferson.edu/meigsobstetrics/20>

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CHAPTER XXI.

ON ERGOT.

I AM inclined to say a few words as to my opinions upon the *secale cornutum* as a therapeutical agent of great power in labors. It is needless for me to say anything here as to the nature of this substance, which is fully described in a book universally in the hands of the physicians of this country: I mean, *Wood and Bache's Dispensatory*. There is also a very full account of it in Cazeaux's new work, *Traité Théorique et Pratique de l'Art des Accouchemens*, commencing at p. 395. I have had occasion many times to witness, during a long-continued practice of Midwifery, the effects of the *secale*, whether administered with my own hands or by those of others. It has frequently been the subject of conversation among my medical brethren here; and I feel very much persuaded that the general opinion of those gentlemen is one that may be stated as distrustful of the ergot, not as to its want of power, but as to the dangerous nature of that power, whether as regards the woman or the child she is bearing.

The late professor, Dr. James, was perhaps less fearful of its mischievous qualities than Dr. Dewees; the former resorting to it not unfrequently when a failure of power existed, and the latter always presenting against its use the most careful array of objections, except under circumstances pointed out in his Midwifery.

Those who have perused the little volume published a few years ago by a Dr. Mitchell, an English practitioner, who writes in favor of the use of ergot, will feel surprised to witness the audacity with which one person exhibits it at the very onset of labor, or as a preparative or aid in turning, etc., and the extreme precaution recommended by Dr. Dewees, who never sanctions its use as an aid to expulsion, unless the os uteri should be fully dilated, and the child already pressing out the perineum.

Within a few years a good many persons continued to doubt whether the article really possesses the singular and positive quality of exciting the contractions of the womb. I have not lately heard of

any objections to it on that score; but they rather arise from the uncontrollable force which it awakens in the womb, leading, as is supposed, to danger of lacerating the organ when the resistance to its expulsive effort is too great, and very commonly to the death of the child.

It is true that I have known laceration of the womb follow the exhibition of ergot, and have on occasions stood by with fear, and expected that horrible result. This is a rare event, however; whereas the death of the foetus from the rash exhibition of the medicine is a common one, which is reasonably to be looked for, and for the reasons which I am about to state.

In the case of a feeble and attenuated patient, with relaxed and weak tissues, whose labor is lingering merely from want of power, and not from unnatural resistance, I can imagine that the ergot might be safely administered at almost any stage of the labor. But in a woman in good health, whose labor is slow for want of proper rotation of the head, or rendered lingering by rigidity of the os uteri, vagina, or perineum or vulva, or from excessive relative magnitude of the head, the greatest consideration should ever, before resorting to the ergot, be given to the whole case in order to decide which is preferable, the secale, or the forceps or vectis.

Suppose the child so situated or so large that an enormous force is required for its expulsion, and that antecedently to that expulsion some changes ought to take place in the direction of the vertex, &c.; no prudent practitioner would blindly urge his patient to destruction by giving her ergot, without first changing the direction of the head to the required position; and if the soft parts should oppose, by an excessive rigidity, the birth of the child, he would, by the use of the lancet and warm bath, or by stuping the parts, &c., make some preparation for the exertion of the terrific energies of the medicine. Let us think for a moment upon it. A labor is effected by the contraction of the muscular fibres of the womb, aided by that of the abdominal muscles. If all the power employed in a labor could be accumulated in one single pain, lasting as long as all the natural pains do, few women probably could escape with life from so protracted an agony, except that small number who are met with, and whose organs, happily for them, make no resistance, but open spontaneously like a door to let the foetus pass out.

Now the influence of ergot in a full dose is such that it excites in the fibres of the womb a contraction or tonic spasm which is called ergotism, and which, when once begun, does not cease until the child is expelled, or until the organ has parted with all its irritability, and the spasm ceases from sheer exhaustion of power.

This contraction is so great, in some cases, as to split or lacerate the womb on the projecting parts of the child, or, what is more likely, to tear off the connection between the vagina and uterus, so as to force the child through the rent into the belly. Such a pain may last twenty minutes or even half an hour, without a moment's suspension. Imagine the feelings of the woman.

By a beneficent law of the economy, the pains of a labor are short, not lasting more than thirty or forty seconds in general, and returning once in three or six minutes. Under such pains or contractions, however powerful, the foetus is safe; for, as soon as the contraction is over, it lies in the womb free from pressure; and the placenta, which during the contraction, had been violently compressed betwixt the womb on which it lies and the child within the cavity—the placenta, I say, recovers its circulation, and continues, during the absence of the pain, to perform all the branchial offices which belong to it. But, if an ergotic pain is produced, to last thirty minutes, in a case where the placenta seated on the fundus uteri is to be jammed for thirty minutes against the child's breech, without an instant of relaxation, who can doubt that its circulation is either wholly or nearly abolished, and that, when the child emerges at last from the mother's womb, it will emerge quite dead, or in a profound asphyxia, caused by the long suppression of its placental circulation? Multitudes of children are born dead from this very cause, viz., the imprudent exhibition of a medicine which as certainly excites spasm of the womb in labor as *nux vomica* does of the other muscles of the body.

What I want the Student to reflect on is this. Shall I in this case give a dose of ergot which will excite a spasm of the womb, hoping that the spasm will bring the child into the world? Is the child ready—is its head through the os—has its head undergone the rotation—is the vertex under the arch of the pubis—is the external organ in a dilatable state—in short, is there anything here that could prevent the child from emerging at once, if the whole of the contractile fibres of the womb could be thrown into a strong spasmodic action? No! Then the ergot may be given; for, if the child begins to move as soon as the womb begins to move, it will be born soon, and escape the asphyxia which would certainly overtake it were it to remain inside of the body, while a long ergotism should be exhausted in vain. The power of the ergot is exerted upon the whole muscularity of the uterus, the contractions that take place under the influence of ergotism affecting the fibres of the cervix as truly as they do those of the corpus and fundus; the question then recurs, shall I give ergot in this case, the cone of the cervix being still unconverted into a wide

open cylinder, in order to produce violent contractions of the fundus uteri, not doubting at all that the whole of the cervix will be thrown into spasmodic or ergotical contraction, but confiding in the superior power of the greater mass of muscular material contained in the fundus and body?

Michel's cases show that when he administered ergot in the undilated uterus, containing an unbroken ovum, the superior power of the fundus and body rapidly overcame even the ergotism of the cervix, and many of his patients appeared to have escaped well from the rude trials to which he exposed them. There would certainly be less danger in administering ergot in a case where the ovum is unruptured, than in one in which the waters have been already expelled, since the uterus, in such a case, could by no means mould itself upon the anfractuositities of the child's body and fatally compress the after-birth. The practitioner who should dare to drive the uncovered head of a foetus against a rigid cervix in spasm by means of the mad force of ergotism, is, to say the least, a most untrustworthy practitioner; one who recklessly exposes his patient to the danger of uterine lacerations, indifferent to the security of the child, and to the poignant distress which cannot fail to result from such an administration.

For my own part, I can say that I rarely give ergot as an expulsive agent: I chiefly employ it at the moment of, or just before the birth of the child, in order to secure, if possible, a permanent or tonic contraction of the womb after labor, in women who are known in their preceding labors to have been subject to alarming hemorrhage. Of this I have before spoken in this work, and shall take occasion to speak further of it hereafter.

Upon the whole, I must say that I feel far more comfortable, and freer from apprehensions for the child and the mother, when I deliver with the forceps, than in waiting for the result of a dose of *secale cornutum*.

The medicine may be given in doses of twenty or thirty grains of the powder, mixed in half a cupful of hot water; or half a drachm may be mixed in six spoonfuls of water, of which one may be given every ten minutes. I think, however, that, when one resolves upon using the article in order to hasten delivery, it is best to give at once a good dose of twenty or thirty grains.

A forceps ought to be at hand. In some cases, when the ergotism is produced, not the smallest tendency to expulsion appears, but the child is held still, under a firm and equable pressure exerted upon all the parts of it still retained in utero. It would die very soon if not

released. Hence, I said a forceps ought to be at hand, to save it, if possible, from the fatal grasp of the infuriated organ.

The use of ergot has very much diminished in Philadelphia in the course of the last ten or fifteen years. Few practitioners, when I was first engaged in business in this metropolis, were unprovided with a portion of ergot, which was given in almost every case of slow labor; the number of stillborn children, I doubt not, was greatly increased by this pernicious practice. At the present day, I think, it is rare for the practitioner to carry portions of ergot about his person.

I advise the Student of Medicine to be provided with a sufficient quantity of *secale cornutum* for any case in which he is made aware of a constitutional tendency of the patient to faintness and flooding after delivery. I think that no woman, who is known to have a tendency to flood dangerously after the birth of the child, should be left without its conservative influences. To give ergot some three or ten minutes before the child is born, is certainly not to expose it to the least danger from the ergotism, for it is extremely rare to observe the therapeutical force of the remedy until from twenty to thirty minutes have elapsed after its exhibition: now, women who flood after delivery rarely do so within the first twenty minutes, and, as the power of the article extends to the vacant uterus, and is perhaps no less forceful there than in the gravid womb, a well-timed administration of the drug is almost invariably successful in obviating the tendency to hemorrhage. It is true that I have exhibited the *secale* in some instances at the very close of the labor for women whom I had known to flood dangerously before, and in whom no good effect was produced; but it is still quite true that, in the vast majority of instances, and they are very numerous, in which I have made use of this precaution, my patients have been preserved from the alarm, and the exhaustion, and probable danger to which I have deemed them exposed; so that, in fine, I have no conviction stronger than this, namely, that the late administration of ergot for hemorrhagic patients is salutary and needful.

I trust that no reader of this work will ever commit the imprudence of administering *secale cornutum* with the view to force a child through a too narrow pelvis. I have said already enough, perhaps, as to the necessity of ascertaining beforehand the amount of probable resistance to a successful ergotism, to guard him against so gross a malapraxis. I am painfully aware of several examples of fatal rupture of the womb brought on by the furious excitement of ergotism, generated in order to overcome the resistance of a contracted pelvis.

As to the influence of the ergot on the constitution of the female,

I am entirely unaware of any poisonous power that it can exert when given in moderate doses. I have seen a few women affected with slight vomiting after its exhibition, but was unable clearly to trace the accident as an effect to the medicine.

It appears to me that its sole therapeutic force is exerted in stimulating the muscular activity of the uterus.

It is sometimes given for the purpose of procuring abortion; but for the most part, happily for humanity, in vain. There are to be met with inside of the professional pale, here and there, wretches who, not like Shiprah and Phua of old, will consent to destroy the fruit of the womb. Those good women preserved the children of the Jews, notwithstanding the command of Pharaoh. The modern Christian assassins will for a small fee sometimes agree to put out of the way the child, whose wicked parents circumvent its death.

It is useful to exhibit ergot for the purpose of rousing the torpid muscular force of the uterus for the expulsion of hydatids, and of the dead ovum or mola; I have succeeded in this administration of it. It is highly useful in the hemorrhage of abortions, often provoking a speedier expulsion of the remains of the ovum; and, when that effect fails, it succeeds in arresting the hemorrhagic molimen by its power of condensing the uterus; of which a philosophical rationale is found in its ability to diminish the hyperæmia of the uterine circulation. In a gravid womb, the vessels are everywhere surrounded by the muscular tissue of the organ: when those fibres act fully, they cannot but compress the veins and arteries, so that we might metaphorically say that every vessel is surrounded by an animal ligature consisting of muscular fibre, which will tie the bleeding vessel if it be allowed to do so; and it will always do so, if we should allow it, by taking away the ovum, the waters, the child, the secundine, the clot, or the tampon.

To show that ergot may be taken in large quantities without injury to the health of the patient, and at the same time without exciting in the least degree the contractility of the child-bearing organ, I shall lay before the reader the following case, that of Mrs. R., at the 82d page of the 2d edition of *Clinical Midwifery*, by Dr. Lee.

"[CASE 29.] Mrs. R. again became pregnant about the end of December, 1837. 'On the 17th January, the catamenia not having appeared, she began taking secale cornutum for the purpose of producing the expulsion of the ovum.' She began by taking twelve grains four times a day in infusion. This having produced no effect in six days, the dose was increased to fifteen grains four times a day. In six days more, this was increased to a scruple four times a day. In

six days more, this was increased to twenty-five grains without any effect. The dose was then increased to half a drachm four times a day. Mrs. R. then left off ergot for one week. When she again resumed it, she took one-drachm doses four times a day for four days, and this having produced no effect whatever, she left off taking it altogether. Mrs. R. therefore took seven ounces of ergot of rye, which was all procured at Butler's, Covent Garden. Labor not having followed, I perforated the membranes," &c. &c.