CHAPTER IV.

ANÆSTHESIA IN LABOR.

A FEW words may be said as to the use of anæsthetics during labor, a practice which has become so universal that no argument is required to establish its being a perfectly legitimate means of assuaging the sufferings of childbirth. Indeed the tendency in the present day is in the opposite direction; and a common error is the administration of chloroform to an extent which materially interferes with the uterine contractions and predisposes to subsequent post-partum hemorrhage.

Agents Employed.—Practically speaking, the only agent hitherto employed in this country is chloroform, although the bichloride of methylene, and ether, have been occasionally tried. Of late years, chloral has been extensively used by some; and as I believe it to be an agent of very great value, I shall first indicate the circumstances under which it may be employed.

Chloral.—The peculiar value of chloral in labor is, that it may be safely administered at a time when chloroform cannot be generally employed. The latter, while it annuls suffering, very frequently tends, in a marked degree, to diminish uterine action. This is a familiar observation to all who have employed it much during labor, as the diminution of the force and intensity of the pains, and the consequent retardation of the labor, often oblige us to supend its inhalation, at least temporarily. Indeed, this very property of annulling uterine action is one of its most valuable qualities in obstetrics, as in certain cases of turning. For such purposes it is necessary to give it to the surgical extent, which we endeavor to avoid when it is used simply to lessen the suffering of ordinary labor. Still it is not always easy to limit its action in this way, and thus it very frequently does more than we wish. Such diminution in the intensity of uterine contraction is comparatively of less consequence in the propulsive stage, and it is generally more than counterbalanced by the relief it affords. In the first stage it is otherwise, and, practically speaking, chloroform is generally not admissible until the head is in the pelvic cavity.

Chloral, on the other hand, has no such relaxing effects on uterine contraction. It cannot, it is true, compete with chloroform in its power of relieving pain, but it produces a drowsy state in which the pain is not felt nearly so acutely as before. It is, therefore, in the first stage of labor, while the pains are cutting and grinding, and during the dilatation of the cervix, that it finds its most useful application. It is especially valuable in those cases, so frequently met with in the upper classes, in which the pains produce intolerably acute suffering, but with little effect on the progress of the labor. In

them the os is often thin and rigid, and the pains very frequent and acute, but little or no dilatation is effected. When the patient is brought under the influence of chloral, however, the pains become less frequent but stronger, nervous excitement is calmed, and the dilatation of the cervix often proceeds rapidly and satisfactorily. Indeed, I know of nothing which answers so well in cases of rigid, undilatable cervix, and I believe it to be far more effective, under such circumstances, than any of the remedies usually employed.

The object is to produce a somnolent condition, which shall be protracted as long as possible. For this purpose fifteen grains of chloral may be administered every twenty minutes, until three doses are given. This generally suffices to produce the desired effect. The patient becomes very drowsy, dozes between the pains, and wakes up as each contraction commences. It may be necessary to give a fourth dose at a longer interval, say an hour after the third dose, to keep up and prolong the soporific action; but this is seldom necessary, and I have rarely given more than forty to fifty grains of chloral during the entire progress of labor. Another advantage of this treatment is that, while it does not interfere with the use of chloroform in the second stage, it renders it necessary to give less than otherwise would be called for and thus its action can be more easily kept within bounds. On the whole, therefore, I am inclined to consider chloral a very valuable aid in the management of labor, and believe that it is destined to be much more extensively used than is at present the case. So far as my experience has yet gone, I have not met with any symptoms which have led me to think that it has produced bad effects; and I have known many patients sleep quietly through labor, without expressing any excessive suffering, or asking for chloroform, who, under ordinary circumstances, would have been most urgently calling for relief. It occasionally happens that the patient cannot retain the chloral, from its tendency to produce sickness; it may then be readily given per rectum in the form of enema.

Generally speaking, we do not think of giving chloroform until the os is fully dilated, the head descending, and the pains becoming propulsive. It has often, indeed, been administered earlier, for the purpose of aiding the dilatation of a rigid cervix, and there is no doubt that it often succeeds well when employed in this way; but I have already stated my belief that chloral answers this purpose better.

There is one cardinal rule to be remembered in giving chloroform during the propulsive stage, and that is, that it should be administered intermittently, and never continuously. When the pain comes on a few drops may be scattered over a Skinner's inhaler, which affords one of the best means of administering it in labor, or placed within the folds of a handkerchief twisted into the form of a cone. During the acme of the pain the patient inhales it freely, and at once experiences a sense of great relief; and, as soon as the pain dies away, the inhaler should be removed. In the interval between the pains the effect of the drug passes off, so that the higher degree of anæsthesia should never be produced. Indeed, when properly given, consciousness should not be entirely abolished, and the patient, between the pains,

should be able to speak, and to understand what is said to her. This intermittent administration constitutes the peculiar safety of chloroform administered in labor, and it is a fortunate circumstance that there are very few cases on record of death during the inhalation of chloroform for obstetric purposes. This is obviously due to the effect of each inhalation passing off before a fresh dose is administered.

The effect on the pains should be carefully watched. If they become very materially lessened in force and frequency, it may be necessary to stop the inhalation for a short time, commencing again when the pains get stronger; this effect may be often completely and easily prevented by mixing the chloroform with about one-third of absolute alcohol, which, originally recommended, I believe, by Dr. Sansom, increases the stimulating effects of chloroform, and thus diminishes its tendency to produce undue relaxation. The amount administered must vary, of course, with the peculiarities of each individual case and the effect produced, but it need never be large. As the head distends the perineum, and the pains get very strong and forcing, it may be given more freely and to the extent of inducing even complete insensibility just before the child is born.

Ether.—In cases in which chloroform has lessened the force of the pains, ether may be given instead with great advantage. It certainly often acts well when chloroform is inadmissible on account of its effects on the pains, and, so far as my experience goes, it has not the property of relaxing the uterus, but, on the contrary, has sometimes seemed to me distinctly to intensify the pains. Of late I have used a mixture of one part of absolute alcohol, two of chloroform, and three of ether. This is less disagreeable than ether, and has not the over-relaxing effects of chloroform, and, on the whole, I believe it to be the best anæsthetic for midwifery practice.

Bearing in mind the tendency of chloroform to produce uterine relaxation, more than ordinary precautions should always be taken against post-partum hemorrhage in all cases in which it has been freely administered.

In cases of operative midwifery, it is often given to the extent of producing complete anæsthesia. In all such cases it should be administered, when possible, by another medical man and not by the operator, because the giving of chloroform to the surgical degree requires the undivided attention of the administrator, and no man can do this and operate at the same time. I once learnt an important lesson on this point. I had occasion to apply the forceps in the case of a lady who insisted on having chloroform. When commencing the operation I noticed some suspicious appearances about the patient, who was a large stout woman, with a feeble circulation. I therefore stopped, allowed her to regain consciousness, and delivered her without anæsthesia, much to her own annoyance. Just one month after labor she went to a dentist to have a tooth extracted, and took chloroform, during the inhalation of which she died. This impressed on my mind the lesson that no man can do two things at the same time. The partial unconsciousness of incomplete anæsthesia, in which the patient is restless and tossing about, renders the application of forceps, as well as all other

operations, very difficult. Therefore, unless the patient can be completely and fully anæsthetized, it is better to operate without chloroform being given at all.

[In the United States the dangers attending the use of chloroform in obstetric practice have, in large measure, banished it from the lying-in chamber. Some obstetricians in our chief cities still resort to it with little hesitation, believing that by great carefulness in its administration, and by the substitution of ether in exceptional cases, all danger may be avoided. Others have a very great fear of it, and universally trust to the safer anæsthetic. It is an error to suppose that the parturient state robs chloroform of much of its danger, the apparent immunity being due to its intermittent and incomplete administration; complete anæsthesia being but a fraction less dangerous than in surgical operations upon women who are not pregnant. Dr. Lusk, already quoted, after a large experience with the use of chloroform, says: "*Patients in labor do not enjoy any absolute immunity from the pernicious effects of chloroform.*"[1] It is much to be regretted that this more pleasant anæsthetic is so much more dangerous than ether as an inhalant; but in consideration of the difference of risk, that of their relative effects upon the nose and trachea is scarcely to be considered. Chloroform acts upon the respiratory centres just as ether does; and this is an element of danger in each, but is capable of being counteracted by artificial respiration. But, beyond this, chloroform is far more dangerous, in acting upon the motor ganglia of the heart and producing sudden death. According to the experiments of Vulpian upon animals, not more than one case of cardiac failure in forty can be restored by artificial respiration. He affirms that there is danger at the commencement, during the course, and at the close of chloroformization, and even some hours or days subsequent to it. Nélaton made the important discovery that the cerebral anæmia produced by chloroform, with its accompanying death-like condition, might be remedied by long perseverance in artificial respiration with the patient turned head downward.

Anæsthesia in labor is much less popular, both with obstetricians and patients in this country, than it was soon after its introduction. Improvements in the purity of sulphuric ether have made the narcosis more reliable, but the general effect upon patients varies very decidedly, being all that can be desired in some, and just the reverse in others. Some of the undesirable effects I have witnessed are intoxication, with cessation of labor, hysterical excitement, nightmare, and post-partum inertia and hemorrhage. I have also witnessed the most delightful results from ether that could be desired. In a small, delicate multipara whose mother died of phthisis, and to whom I had been obliged to administer stimulants in the first and much of the second stage of labor, the use of ether had the effect of revolutionizing her condition. Her pulse became strong; her expulsive power increased; she had no suffering; the placenta was expelled without accompanying blood; and there was no subsequent uterine relaxation. But such cases are, unfortunately, exceptional.—Ed.]

[1 Opus cit.]