

UTERINE EXPRESSION AS A MEANS OF DELIVERY.* By Dr. G. CHANTREUIL, Chef de Clinique d'Accouchements de la Faculté, ex-Interne de la Maternité de Paris. (*Archives Générales de Méd. and Cin. Lancet*, August, 1871.)

IN 1769, Robert Wallace Johnson, in his "New System of Midwifery," p. 100, made known a particular method of delivery, which consisted in a combination of manœuvres exercised on the one part upon the cord, and the other part exteriorly upon the uterus. "As soon as the cord is cut," says this author, "we must learn the accouchee to place her hands upon the level of the umbilical region in such a manner as to exercise upon the superior and lateral parts of the uterus a gradual pressure. At the same time the accoucheur draws the cord without exercising any traction, properly speaking. When this tension has lasted about half a minute, he ceases to produce it, continuing, however, to exercise a soft pressure upon the uterus at the level of the hypogastric region. The placenta is expelled then in from ten to fifteen minutes after the accouchement. In certain cases, the hand of the accoucheur, applied upon the base of the womb, and pressing this organ from above downwards, may replace advantageously the hands of the woman."

Mayer† recommends pressure upon the base of the uterus, in the case where a woman has no more pains after the accouchement. "Under the influence of this manœuvre," says he, "contractions are awakened, the placenta is expelled, and I have never seen a fatal confinement follow the employment of this process."

To Crede belongs the honor of having generalized this procedure, in applying it to all accouchements, and consequently elevating it to the height of a method. This professor believed in interfering in an efficacious manner in order to expel the placenta, immediately after the birth of the child, as the placenta no longer had any right to remain in the womb. He had recourse to a method known under the name of *uterine expression*.

In this process we imitate nature in using not traction, but

* Plenck, "Anfangsgrunde der Geburtsk." Wien. 1768.

† "Verhandlungen der Gesellschaft für Geburtskunde in Berlin," Jahrg. 2, 1847, § 47.

the *vis à tergo*, developed by external manipulations, bringing it in contact with the walls of the uterus, immediately after the expulsion of the fœtus, we prevent the entrance of air into the cavity of the womb, and also prevent all the dangers that may result from deficient contraction of the uterus. This is the process, slightly modified, that Dr. Saussier (of Troyes) employs. He showed the principle of it in 1862, before the *Société Médicale de l'Aube*.

We learn but recently that Dr. Aubenas, fellow-professor of the *Faculté de Médecine, Strasbourg*, has employed this method for many years, both in the hospital and in his private practice, and that he recognizes the advantages of it.

The method of *uterine expression* is simple in its principle and easy in its execution. Its purpose being to strengthen the uterine contractions, we must act during the pains and not in the interval; success is much more rapid when we operate immediately after the expulsion of the fœtus; however, we may succeed a quarter or half an hour after the accouchement, but these are the conditions the most unfavorable.

When the contraction of the uterus has attained its maximum during the first contraction, which it normally manifests after the birth of the infant, we embrace with the full hand the base of the womb, in such a manner that its base and the superior part of its anterior face shall be in contact with the palm of the right hand, placed transversely. The latter exercises from above downwards, and from forwards to backwards, a sustained pressure.

We feel, under this pressure, the placenta and its membranes loosen themselves, then engage themselves like a rag across the uterine orifice; sometimes also we see them expelled suddenly from the external genital parts. This is the truthful description of the process, of which Professor Crede (*Directeur de la Maternité de Leipzig*) is actually the promoter in Europe. It is under his direction that I made the first deliveries of this sort. I have seen the same manœuvres repeated at the *Maternité de Prague* by Professor Seyfert.

When I resumed my position as *interne* at the *Maternité de l'Hôpital Cochin, M. de Saint-Germain*, who is surgeon of it, permitted me, with a liberality which I cannot thank too much, to constantly employ this process, and he himself, each time that he was in the lying-in ward at the time confinements occurred, had recourse to *uterine expression*, and obtained always good results from it. My colleague, Suchard, whom I replaced when I returned to the *Clinique*, two *externes*,* and two *sages femmes* †

* MM. les Drs. Peronne et Capet.

† Mlles. Blanchet et Gay.

of the establishment, followed my example, and found no difficulty in the operatory manual of this procedure, by means of which they always succeeded in effecting a complete expulsion of the afterbirth.

We have ascertained, in the 540 observations that have been collected, that there was ordinarily a rapid expulsion of the placenta and in its membranes. Sometimes it is at the moment of the first contraction that follows the accouchement, but more often it is during the second or third that this expulsion takes place.

The following, for the remainder, is the list of the different times in which delivery was performed in the numerous accouchements where we have employed this method :

RESULTS OF 540 OBSERVATIONS.

Immediately after the accouchement	32 times.	14 minutes after	0 times.
1 minute after	78 "	15 " "	6 "
2 minutes after	175 "	16 " "	0 "
3 " "	109 "	17 " "	0 "
4 " "	50 "	18 " "	0 "
5 " "	47 "	19 " "	0 "
6 " "	20 "	20 " "	3 "
7 " "	4 "	21 " "	0 "
8 " "	4 "	22 " "	0 "
9 " "	0 "	23 " "	0 "
10 " "	11 "	24 " "	0 "
11 " "	0 "	25 " "	1 "
12 " "	0 "		
13 " "	0 "		
			540

We see by this table that the greatest average is during the first six minutes after the expulsion of the fœtus that the afterbirth is expelled.

In the meantime the expulsion of the placenta takes place:

11 times after 10 minutes.

6 times after 15 minutes.

3 times after 20 minutes.

In the last group we find three cases of tardy delivery, *à propos* to which we read in the observation column—

1st. Woman confined, but not delivered at the moment of her *entrée* into the hospital. Uterine expression had not then been immediately employed after accouchement.

2d. Woman in whom the contractions were very rare after accouchement.

3d. Woman in whom the contractions were slow and irregular during the travail of the accouchement.

In cases where the contractions, and particularly the contrac-

tions of the expulsive period, are short, slightly energetic, irregular, the delivery by expression is more tardy.

To the contrary, when the expulsive pains have been strong and close together during the latter period of labor, the expulsion of the placenta is almost immediate.

It is the same when manœuvres have been made in the uterine cavity in order to extract the fœtus.

It has seemed to us that the method succeeded more slowly when it was performed in a premature accouchement. The weight of the placenta, which we have noted in each observation, has not appeared to us to have had any very sensible influence as regards the rapidity of the result. According to Crede, the accouchee experiences no inconvenience from *expression*; it is only a very acute pain at the moment of the manœuvre, and altogether comparable to that which is produced by a strong contraction. But there is a great difference between this phenomenon and the distension so painful of the genital organs that we are obliged to produce when it becomes necessary to seek for the placenta in the uterine cavity. On our part, we have besides observed, some time after the delivery, a certain painful state of the womb, which soon disappears, either spontaneously or under the influence of laudanumized cataplasms, and never ended in metritis.

It is evident that this procedure prevents the rupture of the cord and its consequences, retention of the afterbirth, purulent infection, etc. Deviations and inversion of the uterus cannot take place when we no longer use traction upon the umbilical stem.

The regular and energetic contraction of the womb, which follows the rapid expulsion of the placenta, prevents the production of hæmorrhage. In the observations we have gathered upon this subject in the lying-in wards of *Cochin*, we have not a single time noticed a case of hæmorrhage coming on during or after delivery.

And many times, in the different *services d'accouchements* to which I have been attached during my *internat* (*Maternité, Laviboisière, Cochin*), I have been struck by the great number of hæmorrhages coming on after classical delivery. I would not, in the meantime, have any one suppose that I believe in the impossibility of hæmorrhages after delivery by *expression*; that which I wish only to establish is, that they are less frequent with this procedure than with the others. From the multitude of worthy observers (*Crede, Clark, Spiegelberg, Mayer*), they affirm that they have not had any hæmorrhages since they employed exclusively this method in their *services*. Since that epoch they

have no longer observed the cases described in the works on obstetrics under the name of adherent placenta, or retention of that organ, etc. This has so astonished them that they have demanded if these troubles really ever existed. It would seem that the cases which have been described as such are owing simply to the deficient energy of the contractions. In strengthening these latter, we succeed in loosening and expelling the afterbirth, which was neither adherent nor retained.

M. Depaul, in his clinical lessons, has done justice to hour-glass contraction. This professor admits difficulty when the superior part of the body of the uterus contracts itself separately, and forms a cell where the placenta will be retained. According to him, it would be more conformable in practice to explain the form of hour-glass contraction (described and pictured in the works on obstetrics) than judging the womb in certain cases by the contraction of the internal orifice. The inferior part, up to the strangulation, will be nothing else than the cavity of the neck enlarged and dilated; the superior part would be formed by the whole body of the organ, enclosing in its cavity the afterbirth, which remains because of the insufficiency of the expulsive force. One may, it is true, object that the dangers of the method actually adopted are due, above all, to the inexact application of the practical means which constitute it, and that one does not take into account the inconveniences resulting from the ignorance of persons who employ it.

We recognize, in part, the justice of this observation; but one will be forced to agree that, in the period of delivery, which consists in drawing upon the cord a certain time after accouchement, if there is something undecided, undetermined, the case is given up to the sagacity and experience of the accoucheur. We do not know at what precise epoch it is necessary to exercise traction, what force we may employ, what is, above all, the superior limit of this force compatible with the health of the female.

There is, it is true, a good way of preventing one's self from being deceived in not drawing on the cord to soon, that is, touch. It determines whether the placenta is engaged across the neck. But it is necessary, in order to make this diagnosis, to have a certain familiarity with touching. Unfortunately, this habit is not acquired easily; time and occasion have often failed with the physician in perfecting him in this sort of exploration, as the result of his examination is necessarily uncertain. For the remainder, in a goodly number of cases, we have seen that this precaution was completely neglected before one made tractions upon the cord. For midwives, in particular, we believe that it

is useful to give them fixed rules in reference to delivery, to the end that their minds may be less disquieted, and their conduct less uncertain during the period that follows the accouchement; we see, with the method of *uterine* expression, that this uncertainty disappears.

Students, in receiving this precept, *never draw upon the cord*, nor risk the breaking of it, nor the production of uterine inversion, neither the destruction of the placenta by fragments.

To the contrary, with their ideas having actual scope on the subject of delivery, that which remains the most clear, the most striking, in the minds of the students who have not devoted themselves a very long time to the study of accouchements, are the *tractions upon the umbilical cord*.

The very able epoch that we believe fixed at which we should make these tractions; the precaution, so important, that we must take before applying them—which consists in knowing whether the placenta is already engaged across the orifice—are fine traits which efface themselves from the memory; and the best proof we can give of it is, that these tractions are often made too soon or too late: too soon, we know the consequences of this premature intervention, rupture of the cord, uterine inversion, etc.; too late, and from thence contraction of the internal orifice, imprisonment of the placenta in the uterine cavity, etc.

We then shall remedy these accidents by persuading practitioners not to touch the cord, but to replace the force of traction by the *vis à tergo*.

These external manœuvres are much less repugnant to physicians and midwives who are not very familiar with the obstetrical art, than the operation which consists in introducing the entire hand into the uterine cavity, in order to search for the placenta.

This is what happens, in particular, in the case of rupture of the cord: the internal manœuvre which must be made in this case, without waiting too long, frightens them, may be with reason; they wait two hours, three hours, and sometimes longer, relying upon the effects of nature. If nature is powerless, it is then only that they have recourse to other medical *confrères* more experienced or more enterprising, who find, at the moment of their arrival, excessive and at the same time insurmountable difficulties. The cases we have reported at the commencement of this article are a proof of what we have advanced.

When we speak of the advantages of *uterine expression*, let us say, moreover, that the generalization of the employment of this method would have for a result the active surveillance of confinements by competent persons: preventing the entrusting

of this care to women, altogether strangers to the obstetrical practice, and attention would be drawn to the necessity of exercising a severe control over the state of the uterus after accouchement. Uterine contractions would be excited, provoked at the same time, in order that the expulsion of the placenta might take place spontaneously.

If these conditions are fulfilled, we easily understand that hæmorrhages will be very rare.

I know very well that in all the works on obstetrics we are recommended to watch the womb after accouchement, for fear of an inertia and a distension of the organ by an internal loss; it is evident that this recommendation is often forgotten in practice, and we can give no better proof of this than to cite the cases occurring daily.

Midwives, and sometimes physicians, after the section of the cord and its ligature, abandon the accouchee in order to wipe, bathe, cleanse the infant, sometimes to dress it; when they return to the bedside of the mother, in order to bring away the afterbirth, they draw upon the cord, abandoning it if there is too much resistance; some time after they use traction again, up to such a period as the placenta shall be brought to the vulva. We can imagine the accidents which may result from this sort of procedure; abundant and rapid hæmorrhages may occur during the time the midwife is occupied with the infant without caring for the patient. The employment of uterine expression will cause the disappearance of the habit, for, after the precept given by Crede, the hand of the accoucheur must be applied upon the uterus immediately after accouchement, and must only be withdrawn when the placenta is expelled.

En résumé, I believe that this method of delivery, called *uterine expression*, presents serious advantages. I am not by nature enthusiastic in regard to new things; but I believe that it is the duty of all physicians to make known that which they believe to be useful in the practice of their art. I desire that they will not decide against this mode of delivery without having employed it, and I shall wait in regard to the subject of the result of the experience of my *confrères*.

This article will not be useless even if it convinces practitioners of the dangers of untimely tractions made upon the cord, and I shall not regret in any way the time I have consecrated to it.