

THE ADMINISTRATION OF PITUITRIN AT THE BEGINNING
OF THE THIRD STAGE OF LABOR*

WITH A REPORT OF ONE HUNDRED CASES

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THE third stage of labor has always been a matter of concern to the obstetrician. He knows that at any time during this period, hemorrhage may occur. It may appear in any kind of labor, even in the easiest and apparently the most normal. And unless the obstetrician is prepared to meet and check this hemorrhage promptly, it may lead to most serious consequences. Aside from deep tears of the cervix, fibroids of the uterus, or abnormalities of the placenta such as placenta previa and accidental hemorrhages, hemorrhage occurring in the third stage of labor is due mostly to relaxation of the uterus. This relaxation is more apt to occur in a uterus exhausted by difficult or prolonged labor, but may occur in almost any kind of labor.

It is knowledge of this possibility of hemorrhage that makes the conscientious obstetrician apprehensive during the third stage of labor, and causes him to be on the alert, till the placenta is safely and completely expelled, and the uterus has firmly contracted, with no sign of bleeding. Even then the obstetrician cannot safely relax his vigilance, for it is possible that softening of the uterus may occur after labor, with consequent hemorrhage, unless measures are taken to guard against it.

Several methods are in use for preventing hemorrhage during the third stage of labor and for insuring the complete expulsion of the placenta.

1. The fundus is left entirely alone and untouched, and after a certain time, the placenta is expressed by Credé. This method is mentioned only to be condemned, for it seems too uncertain and haphazard. It is true that in many cases the uterus if left alone will behave perfectly, but it is also true that in many other cases it will not. Instead it will balloon up and partially fill with blood, and thus needless and even serious hemorrhage may occur.

2. The obstetrician looks after the fundus himself. Putting his hand on the patient's abdomen after birth of the baby, he locates the fundus through a sterile towel, and by holding it and gently tickling it with his finger tips when it starts to relax, he can keep it well contracted and prevent hemorrhage. Finally, at the appropriate time, usually in from ten to twenty minutes, he can cause the expulsion of the pla-

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little value, as in the pituitrin series a deliberate attempt was made to wait 20 minutes, while in the nonpituitrin series no such attempt was made. However, this effort to express the placenta before 20 minutes, gave less chance of its spontaneous expulsion, and might partly account also for the greater hemorrhage in the nonpituitrin series.

The hemorrhage was slightly greater in the nonpituitrin series, an average of 8.2 ounces, as against 5.9 ounces in the pituitrin series.

In the puerperium 60 had no temperature at any time of 100° F. or over, as against 74 in the pituitrin series; and 40 did have temperatures at some time of 100° F. or over, as against 26 in the pituitrin series; 36 of these were due possibly to uterine causes, as against 16 in the pituitrin series.

Following this series, the writer tried the administration of pituitrin at the beginning of the third stage of labor, on 7 of his own private patients.

Six were multiparæ, all with normal vertex deliveries, all with short labors, one of 8 hours and the others all under 5 hours each. One was a primipara, with a forceps delivery and a 10½ hour labor.

The length of the third stage was 26 minutes, 23 minutes, and 15 minutes, respectively, for 3; and 20 minutes for each of the others.

The amount of hemorrhage was as follows: 2 had 10 ounces each; 2 had 8 ounces each; 2 had 6 ounces each; and 1 had 7 ounces. An average of 7.8 ounces.

In the first 5 the fundus contracted promptly within five minutes after giving the pituitrin, and remained so, without tendency to soften or enlarge. At the end of fifteen or twenty minutes, with slight pressure on the fundus, the placenta was expressed easily, and complete. In one of these cases the cervix shut down on the trailing-after membranes, but with a little delay they came away complete.

In the last two, when the placenta was expressed, clots were inside of the membranes. In one there was a hard clot weighing about 8 ounces. There was practically no other bleeding before or after expulsion of the placenta. In the other, with the birth of the placenta, about 8 ounces of bright clotted blood was found in the membranes, and further pressure on the fundus expressed 2 more ounces of clots. In this case, the fundus remained hard throughout the third stage, but was rather high, and the bleeding seemed to be into the membranes already partly expelled into the vagina. It seems probable that in each of these two cases earlier expression of the placenta might have prevented this hemorrhage.

All of these seven cases received as a routine 1 dram of ergotole after labor.

CONCLUSIONS

The series is too small to allow of definite deductions, but in so far as it goes, we may draw the following conclusions concerning the

administration of pituitrin at the beginning of the third stage of labor.

1. It is a safe procedure. In none of the 100 cases was there any bad effect apparent.

2. It tends to cause spontaneous expulsion of the placenta. This occurred in 25 of the 100 ward cases; in none of the private cases.

3. It tends to lessen the amount of blood lost. The average amount of hemorrhage per patient was $2\frac{1}{3}$ ounces less in the pituitrin series than in the nonpituitrin series. (For the 100 patients a total saving of nearly 2 gallons of blood!)

4. It makes guarding of the fundus during the third stage easier. Little stimulation of the fundus is necessary to keep it contracted.

5. It does not do away with the necessity of watching or holding the fundus. It is not sufficient that the fundus remains well contracted. It must be kept from riding high, otherwise unobserved bleeding may occur into the membranes already partly expelled into the vagina.

6. It is probably better not to wait twenty minutes as a routine before trying to express the placenta, as was done in this series. The attempt can often be made earlier with advantage, but should not be persisted in if expression is at all difficult.

7. The method is worthy of further study and consideration.

However, whether pituitrin is given at the beginning of the third stage of labor, or later, or not at all, it has been shown to be an efficient means of quickly checking hemorrhage. And, therefore, it should be at hand, in a hypodermic syringe, ready for instant use, during and after the third stage of every labor. This should be a part of the equipment of every modern obstetrician.

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