ART. X.—*On a peculiar Form of Thrombus occurring during Labour.* By WILLIAM F. MONTGOMERY, A. M., M. D., Professor of Midwifery, &c., to the King and Queen's College of Physicians in Ireland.

THERE are two situations in which the formation of a thrombus or bloody tumour during natural labour is a matter of common observation, namely, on the head of the child, and at the vulva of the woman; but I think I have fully satisfied myself that there is a third variety of it to be met with in practice, invested with no little interest, and involving considerations of much practical importance,—where an effusion of blood takes place in the tissue of the uterus, near the os uteri, and more especially in the anterior lip of that organ.

On the first variety, or that which forms on the head of the child, I do not propose at present to make any observations. With regard to the second, it does not appear to have been recognised, or, at least, was not described by any English writer^a, until Dr. M'Bride of this city published an account of two cases of it in 1776^b. Nor do I recollect to have met with an instance of it in my own practice for several years, until 1849, when I met with two within six weeks, the first on the 23rd August, and the second on the 4th October.

The former was in a lady with her first child; her labour was short and natural, with but little effort or straining, nor was I aware of the occurrence of the tumour until after delivery, when I found it on the edge of the left labium, but ruptured, and its contents partially discharged. The swelling subsided within a few days, and no subsequent inconvenience was ex-

^a The following passage from Veslingius, in 1647, appears to describe this accident very exactly: "Alias jam bis observassem ab effuso intra tunicas vaginæ sanguine in partu difficili, pudendi labium ingenti tumore distensum fuisse, quo aperto, sanguineque atro paulatim evacuato, mulieres evasere."

—*Obs.* 50.

^b Medical Observations and Inquiries, vol. v. p. 89.

perienced from it. The lady, who was not young, recovered very favourably.

The second case occurred in a lady who had three or four premature children, and now for the first time, under my care, went to the full period of gestation. I was sent for at 6 o'clock, A. M., and her labour proceeded favourably during the next two hours; and at 8 o'clock I thought the child's head would be expelled in a few minutes. I now observed, however, that there existed a great fulness and thickness of the perineum and external parts, especially towards the left labium, which began to swell perceptibly, and, as it swelled, assumed a dark purple or blackish colour. It gradually became enormously enlarged, and the advance of the head was completely prevented, until at length, a little after 9 o'clock, the swelling burst on the inside, under the pressure of a pain, and a considerable quantity, not less than twelve ounces, of coagulated and fluid blood escaped. The pains almost immediately became effective, and the head advanced easily. The child, a girl, was born at half-past 9 o'clock, and all went on well; no hemorrhage of any consequence took place. Nothing was done except laying on a pledget of lint, wet with solution of alum, and making firm pressure with a napkin fastened to the binder.

The sloughs came away on the fourth and fifth days, without hemorrhage; the swelling of the labium and perineum gradually disappeared, and a clean open sore, of a healthy aspect, remained, which gradually healed, and was completely well at the end of four weeks.

The rupture of the vessel in this case took place in the perineum, and thence the effused blood percolated through the areolar tissue into the labium.

Two things particularly struck me when this occurrence took place:

1st. The immediate effect produced on the uterine contractions, which were at once impaired, both in frequency and power; and

2nd. The complete resistance which the tumour offered to the advance of the head.

It is a very rare occurrence in private practice. Several friends to whom I have spoken say they have never met with it among their patients.

M'Bride^a witnessed only two cases, and Denman^b only three, most of which occurred, or were first noticed, after the labour was over. Davis^c mentions two or three. Dr. Clarke, who has recorded the results of 3878 deliveries in private practice, does not mention any instance of it.

In Dr. Collins' record, too, of 16,414 cases of delivery, there is not, I believe, any instance mentioned of this accident.

No unpleasant consequences attended the cases which occurred to me. Denman says:—"But I believe it is void of danger, not having seen or heard of any dangerous consequence from it, or ever found anything necessary to be done, but to wrap the tumefied part in a flannel wrung out of warm water and vinegar, and on the discharge of the coagula, which should not be hastened, to dress the little sore with some soft liniment."

Davis says, that "the subsequent hemorrhage was so moderate as to excite no alarm" (p. 46), and the lady's recovery was speedy and uninterrupted.

This is so far satisfactory, but all cases of this kind have not been so exempt from trouble or danger; very free and persistent hemorrhage having been occasionally found to cause the practitioner much anxiety; and in not a few instances the result has been fatal.

In a case of thrombus, which is reported in the *Revue Médico-Chirurgicale*, Mars, 1850, a thrombus formed during labour, and the attendant, a "sage femme," mistaking it for a bag of membranes protruded, unfortunately succeeded, under

^a Medical Observations and Inquiries, vol. v. p. 89.

^b Introduction to Midwifery, fifth edition, p. 627.

^c Obstetric Medicine, p. 44.

that impression, in rupturing it, by which an opening was made, from which the blood poured "like water from a sponge."

The edges of the laceration were pinched up, and caught between a split stick, which completely arrested the hemorrhage. The woman, luckily, was not delivered for three days afterwards; no hemorrhage returned, and she did well.

In a case recorded by M. Stendel, the tumour burst during labour, six or seven pounds of blood were quickly poured out, and the patient expired.

Mr. Crosse, of Norwich, says, that in a case which he saw "during a protracted labour, rupture of the left labium took place, to the extent of two or three inches, followed by great loss of blood, and the patient died undelivered."

Within the last year I saw a case in which a thrombus, about as large as a good-sized red plum, formed in the left labium, in the seventh month of pregnancy, and gave the lady *intolerable annoyance*, so that on the 18th June I made a very small puncture into it, and discharged its contents; but on the 13th July I was again sent for, and found her in a similar state of distress, from pain caused by a feeling of weight and tension, of which she complained most grievously. She described the sensation she experienced as resembling that produced by the pressure of the child's head when distending the perineum. I found the tumour rather larger than before, and again punctured it, after which the lady suffered no further annoyance. It did not fill again, and on the 24th of August she was safely delivered of a full-grown child.

There was no appearance to mark the situation where the tumour had been; nor was there any attempt at its reproduction subsequently.

So far, all the cases alluded to have been of effusion into the external labia pudendi, but I think I have learned from sufficient observation that these are not the only situations in which thrombus occurs during, or in consequence of labour, but that quite a similar accident, though differing much in

degree, happens not unfrequently in the tissue of the cervix uteri, and especially in the substance of the anterior lip of the os, giving rise to a condition greatly resembling in some of its characters that which is generally spoken of as œdema of the part, from which, however, it is altogether a different affection.

The first time that this matter attracted my attention in practice was in the following case:

Mr. S. requested my attendance on his wife, on 11th March, 1830, at 10 o'clock P.M., she being then in labour.

The night before she had diarrhœa and some discharge of blood from the vagina; she had six children by a former marriage, and her last was now five years old.

I found her with labour established, and with some hemorrhage, but not much. One part of the lower portion of the cervix, towards the right side, felt very prominent, thickened, and spongy, so as most strikingly to resemble a portion of the placenta; and it appeared to me that it was from this part the hemorrhage was proceeding. The head presented naturally; the labour progressed favourably, and as the descending head came to press more forcibly into the os uteri, and on the spongy tumour, its contents were discharged; the hemorrhage ceased, and did not again return, and at half-past twelve o'clock a male child was born, healthy and vigorous. The placenta came away in about ten minutes. There was no further hemorrhage or other unfavourable symptom, and the lady recovered well.

Mr. S. was a medical man, and, seeing the hemorrhage, he became anxious, and made an examination, when he was greatly alarmed at feeling, as he thought, the placenta at the os uteri, and immediately sent for me.

After hearing his report, I examined the patient, and at the first moment thought his account was only too correct; but a little further examination easily satisfied me of the true state of the case, because it was clearly evident that the tumour resembling the placenta was not merely applied to the inner sur-

face of the uterus, but was identified with the substance of the organ, so that it was impossible to insinuate the point of the finger between them, while it could be readily passed behind or partially around.

To those who may not have met with this state of the parts, I would beg leave to say, that the resemblance of this tumour, when in the form in which it occurred in this case, to the placental structure, is sometimes so close as very readily to deceive an incautious examiner.

The circumstances under which we meet with this condition in practice are generally as follows: about the time when the os uteri is more than half dilated, especially if the waters have already been evacuated, we find that the anterior lip gets gradually, but pretty quickly, fuller, thicker, and more prominent, and, instead of yielding readily before the pressure of the head, and slipping away upwards, it continues to descend as the head is forced downwards; and if we try with the point of the finger to push it past the head, and out of the way, we do not succeed; an unexpected delay now takes place, and a labour which we have every reason to hope would go on quickly, and be completed within a short time, is protracted for perhaps two or three hours, or even more, and the patient's pain increased both in character and duration. At length the swollen labium diminishes, suddenly recedes, and disappears, and very often, at the same moment, some blood is discharged, generally of a deep rich colour, and now the retarded head descends more quickly.

I do not wish to be understood to say that the swollen lip in such cases always bursts and discharges its contents, for such is not the fact, but that this is frequently the result I feel quite assured.

I had recently (10th October, 1850) an opportunity of seeing this condition of the anterior lip of the os uteri during labour. The lady had four children, and her labour was in every respect satisfactory. Shortly after the discharge of the liquor

amni the pains became urgent, and the anterior lip of the os began to swell, and immediately, as in all other instances of thrombus that I have met with, the propulsive power of the pains was at once impaired, although they continued strong, and returned at short intervals; but still the swollen lip resisted the passage of the head, or at least did not yield, and continued to be pushed down with it, until with each pain it protruded under the arch of the pubis, *of a deep purple colour, like that of black currant jelly*: suddenly it disappeared, and one or two ounces of deep, rich coloured blood flowed away; the pains became in a few minutes much more efficient, and the labour was soon happily completed. The lady recovered well.

Is this accident an occurrence of little moment beyond the temporary delay and increased suffering which it causes? or is it one that may have dangerous results? are questions of no inconsiderable importance.

Were I to judge from my own experience alone, I should be bound to say, that I had found both forms of thrombus, the external and the internal, free from *fatal*, though liable to produce *serious* consequences; but the experience and observations of others have shown that the bursting of bloody tumours, wherever situated, has been often a source not alone of great danger, but sometimes even of death.

I have already alluded to the occasionally pernicious nature of the hemorrhage accompanying the thrombus of the external labium, and I recently heard the particulars of a case, and examined the uterus after death, in which, I think, death resulted from a thrombus in the substance of the cervix uteri.

The case to which I allude was brought under the notice of the Obstetrical Society by Dr. George Johnston, and is related at length in the present Number of this Journal.

The woman had an easy and apparently safe labour, with a breech presentation, and for three or four days afterwards went on perfectly well; but on the fifth day, greatly to the

surprise of those who saw the patient, and found the uterus well and firmly contracted, a profuse hemorrhage took place suddenly, and the patient sank within an hour and a half.

After death, it was ascertained that there was in the substance of the cervix uteri, close to the os, at the left side, a distinct cavity, capable of containing a small orange, into which opened the mouths of several blood-vessels.

After a careful inspection of the parts, I felt no doubt that this was an instance of the accident I have been describing; that in fact a thrombus had formed, the cavity of which was filled by a coagulum; that the thin stratum of uterine structure, or perhaps only mucous membrane and areolar tissue, interposed between the cavity of the thrombus and that of the uterus, was gradually attenuated, and at length burst, or sloughed away, allowing, of course, the coagulum to escape, and the open blood-vessels suddenly to pour out a torrent of blood, under the overwhelming influence of which life was extinguished within the awfully brief space of an hour and a half.

It is to be observed, that in the case of thrombus of the external labium, related at the commencement of these observations, the slough separated on the fourth and fifth days; and here, in the case now before us, the fatal gush of blood took place just at the same interval after labour.

It is but right to say of such a case, that it exhibits one of those unforeseen but perilous accidents against which no human care or caution could guard, or human skill be always available to save the patient's life.

In the month of July of last year, I saw a case which I have great reason to believe was of the kind now under consideration.

A lady affected with varicose veins, which extended all up the lower extremity, and could be traced into the vagina, was delivered, after a natural and favourable labour, at midnight; but shortly afterwards a fearful rush of blood took place, very unexpectedly, for *the uterus was well and firmly contracted.* So

great was the hemorrhage, that complete prostration was immediately produced, and when I saw her, she was cold and pulseless, nor had she any return of pulsation in the radial artery for six hours and a half from the time of the sudden hemorrhage, and during a part of that time the action of the heart could neither be felt nor heard. All this time the uterus remained perfectly contracted, but in the situation of the anterior lip its substance felt as if broken up into a soft pulp, the consequence, as I believe, of the formation and rupture of a bloody tumour. To our great joy, she ultimately rallied under the treatment adopted, and completely recovered.

I believe the formation of a thrombus at or near the os uteri, its rupture, and consequently open state of some vessel or vessels in the cavity thus formed, is very often the real cause of those hemorrhages after the birth of the child and expulsion of the placenta, where the uterus is found to be well and firmly contracted; and it is to be recollected, that just where the thrombus forms is precisely the situation in which the contractile power of the organ is most feeble; and should it happen towards either side, it is then close upon the very part where the blood-vessels send in the largest supply to the uterus.

And I would say, that while we should neglect no general or subsidiary means to check the hemorrhage, or secure the patient from its dangerous effects, our *greatest security*, under such circumstances, will be obtained by plugging the vagina, while, at the same time, we take the necessary precautions against allowing the uterus to relax and become distended with blood.

If the occurrence of this affection has been described or noticed by any former writer, I am not aware of it; but in the writings of two of our most eminent authorities in practical midwifery, I find in each a passage distinctly bearing upon the view I have here put forth, and, as far as they go, tending to confirm its truth.

At p. 271 of his "Introduction to Midwifery" (5th edit.),

the admirable Denman says:—"The uncoloured mucous discharge from the vagina, which pretty generally occurs before labour, on its accession is usually tinged with blood, or a small quantity of pure blood is discharged. This sanguineous discharge, which varies in quantity and appearance in different women, is popularly called a *show*; and it happens more particularly at two periods of a labour,—when the os uteri *begins* to dilate, and when it is finally dilated.

"In the first instance, it is probably occasioned by the separation of a few of those vessels by which the membrane which connects the ovum to the uterus was originally bound; and in the second case, by the effusion of some blood before *extravasated in the substance of the os uteri; for this part, in some cases, acquires an uncommon thickness from that cause, independent of any œdematous or inflammatory tumefaction.*"

And Dr. Burns observes, at p. 460 of his "Principles of Midwifery" (9th edit.):—"In tedious labour the os uteri, and even the cervix, sometimes becomes swelled, as if blood were effused into the substance."

Where such a condition is recognised during labour, we shall show our wisdom by interfering as little as possible with it; by abstaining from attempts to get the gorged lip of the os over or past the head; and when the head does descend, and is expelled, we should be more than usually slow to withdraw the body of the child, more than usually careful to secure complete uterine contraction, and more than usually watchful of the state of our patient after all is over; although we must, at the same time, acknowledge the painful truth, that, with all the care and caution that the most anxious circumspection can prompt to the adoption of, an accident of this kind may take place under circumstances of which we have no intimation, until alarmed by the urgent danger of our patient, or struck aghast by her unexpected and untimely death.