A probationary essay on extraction of the placenta : submitted, by authority of the President and his Council, to the examination of the Royal College of Surgeons of Edinburgh, when candidate for admission into their body, in conformity to their regulations respecting the admission of ordinary Fellows / by J.R. Sibbald.

A

PROBATIONARY ESSAY

ON

EXTRACTION OF THE PLACENTA;

SUBMITTED,

BY AUTHORITY OF THE PRESIDENT AND HIS COUNCIL,

TO

THE EXAMINATION

OF THE

Royal College of Surgeons of Edinburgh,

WHEN CANDIDATE

FOR ADMISSION INTO THEIR BODY,

IN CONFORMITY TO THEIR REGULATIONS RESPECTING THE ADMISSION OF ORDINARY FELLOWS.

BY J. R. SIBBALD, M. D.,

LICENTIATE OF E. R. C. OF SURGEONS.

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1829.

TO

JAMES HAMILTON, M. D.,

PROFESSOR OF MEDICINE AND MIDWIFERY

IN THE UNIVERSITY,

AND

FELLOW OF THE ROYAL COLLEGES OF PHYSICIANS AND

SURGEONS OF EDINBURGH,

&c. &c. &c.

My dear Sir,—In publishing an Essay on a subject connected with *Midwifery*, it would be ungrateful in me to forget that I imbibed from your instructions my first knowledge of that art; and, when to these are added the many excellent lessons since afforded me by your example in cases of emergency, I feel persuaded, that there is no one to whom I ought to convey more willingly than to you any tribute of respect which it is in my power to offer. Allow me, then, in dedicating this Probationary Essay to you, to express in a public manner the sentiments of admiration with which I have always regarded your high professional attainments. And be assured, that you will always be held in the highest esteem by your obliged servant and former pupil,

J. R. SIBBALD.

Hope Street, Charlotte Square,
October, 1829.

ON

EXTRACTION OF THE PLACENTA.

THERE is probably no branch of Surgery or Medicine which has undergone greater improvements in modern times than Midwifery. Although now it is almost entirely in the hands of male practitioners, it was formerly throughout Europe, and especially in Britain, practised by females. It would have been very hazardous, a few centuries ago, for any Surgeon or Physician to be present at an accouchement. Nor was it otherwise on the Continent; as, even in the fifteenth century, a Dr Veit was publicly branded at Hamburgh for having been present at a delivery disguised in female attire.

Paulus Ægineta, Ætius, Avicenna, and Hippocrates, in their works, afford some obstetric hints, which, however, are now more matter of curiosity

than of any practical utility, if we except the directions given by the last-named Physician, in regard to tedious labours, in which he recommends blood-letting.

From the seventh century, indeed, down to the sixteenth, few improvements are to be met with in the works of any author until those introduced by Ambrose Parè. Since that period much has been done by Mauriceau, Chamberlain, Hunter, Denman, Smellie, Levret, Osborne, and Johnstone. But in the present day Hamilton and Burns, in their lectures and writings, have left nothing of practical utility for their successors to suggest. No one certainly has done more than the present Professor of Midwifery in the University of Edinburgh towards drawing the attention of practitioners of the obstetric art to the indispensable importance of extracting the placenta properly, and in due time after delivery, whether the retention is accompanied with hemorrhage or not.

To this limited subject the present Essay is confined; and here I wish to claim the indulgence of the College for the imperfect performance of my task, on the ground that my professional engagements have hitherto afforded me little time for exercise in the art of composition. I shall endeavour, however, to point out the description of cases re-

quiring our aid, and to lay down directions for their treatment, drawn from the best authorities in Midwifery, and confirmed by my own experience for the last twelve years.

Before proceeding to the proper subject of this Essay, a few observations on the gravid uterus may not be improper.

Very speedily after impregnation, on cutting up the cavity of the uterus we find it considerably broader and longer than in the unimpregnated state; and, before the descent of the ovum along the Fallopian tube into it, the uterus could scarcely contain a substance the size of a split almond. Its fibres are softer and more separated, and the whole of the fundus and body have their internal surface covered or lined with a dense coat adhering firmly to the uterus.

The general opinion of this coat, which has been injected, is, that it consists of two layers, but of different substances, a vascular tissue and a firm gelatine; the vessels do not pass into the gelatinous coat, but are seen shining through it; they proceed directly from the surface of the womb, and project at right angles from that surface; they are intermixed with a little gelatine, and consist of both arteries and veins. Over their extremities is spread a layer of gelatinous matter,

which very early contains fibres, and forms a sort of net-work. Thus the decidua is formed, and consists of two layers,—one highly vascular, proceeding directly from the uterus, and the other more fibrous and gelatinous, probably formed by the vascular layer. The decidua, in some cases, extends a little way along the Fallopian tubes. The cervix uteri is never observed to form decidua, but is usually filled with an inorganic jelly; and the decidua stretches across the cervix, and forms a circumscribed bag within the uterus. In every case the decidua is formed before the ovum descends. This is incontestably proved by its never being found absent, even in cases of extra-uterine conception, where the ovum has escaped the fimbriated edges of the Fallopian tube, and found its way into the abdomen, or has remained in either of the tubes, or in the ovary. The ovum, on its descent into the uterus, consists of two membranes, one within the other, with a very thin transparent jelly interposed between them. In process of time the inner membrane grows faster than the outer, until it comes in contact with it, or at least until a much smaller portion of the gelatinous fluid remains interposed. The amnion, which is the inner membrane, is thin and transparent, and affords no appearance of vessels or regular fibres; yet in the

end of pregnancy it is stronger than the chorion with its vascular covering. The amnion lines the chorion, and covers the placenta,—mounting, along the umbilical cord, throughout its whole extent, to its insertion. The sac thus formed by the amnion is filled with a watery fluid, which appears destitute of any particular chemical quality, merely containing a little mucous, earthy, and saline matter. From being contained within the amnion, it is called liquor amnii; in it the fœtus floats, or is at least surrounded by it. It varies in quantity in different women at the full time,—amounting to several quarts in some, in others not exceeding a few ounces. The proportion of liquor amnii is greater in the earlier than in the latter months of pregnancy. The chorion, like the amnion, is thin and transparent, is external to the amnion, adheres firmly to the placenta, and covers all the vessels which run upon its surface; but it does not dip down into the substance of the placenta itself.

When the ovum first descends, the chorion is every where covered with flocculi, like vessels, sprouting out from it, forming a coating, which, from its appearance, has obtained the name of the shaggy or spongy chorion.

The amnion and chorion form the fœtal portion of the after-birth: the mode of connexion with the

uterine portion, if I may so call the placenta and decidua, will be understood by remembering the description already given of the decidua. When the ovum comes down the Fallopian tube, it is stopped at the uterine extremity by the layer of the decidua, which goes across the opening of the tube, and is thus for a time obstructed in its progress. But, by the growth of the embryo itself, and by the enlargement of its membranes, this layer is expanded, and pushed downwards, into the cavity of the womb, or, as Mr Burns more correctly says, it grows with the ovum.

This process of growth and enlargement goes on until the whole cavity of the uterus is at last filled up, and the decidua reflexa, or immediate covering of the ovum, comes in contact with the decidua vera, or with that portion of decidua which lines the uterus itself.

At one part the flocculi, or vascular tissue of the chorion, seem to form placenta, along with the vessels from the uterus; in every other part they disappear, leaving the decidua closely covering the chorion.

The umbilical cord, usually about a foot and a half long, is composed of two arteries and a vein, wrapped up in a production of the amnion and chorion; it is occasionally knotted on its surface,

and usually attached to the centre of the placenta, although now and then nearer its circumference.*

The placenta is a thick cake, and grows on the outside of the chorion; it is of a circular form, about six or seven inches in diameter, and about two fingers' breadth in its greatest thickness. It seems to be nothing but a tissue of veins and arteries, which, opening on numerous cells, admit of a mixture of blood, by which the placenta is supposed to effect changes corresponding to those produced on the blood after birth, by the admission of oxygen in respiration.† The placenta may be attached to any part of the internal surface of the womb; its uterine surface is divided into lobes with slight sulci between them, and covered with a layer of decidua like clotted blood. On the surface which is next the child we see the prominent branches of the umbilical vessels, over which we find spread the chorion and amnion. The whole placenta cannot be injected by the umbilical vessels, nor even by the uterine arteries alone. Hence we may infer that the placenta consists of two portions,—one furnished by the deciduous coat of the uterus, and the

* The length of the cord varies very much, from a few inches up to the length of four feet.

† From its function, the placenta has been called hepar uterinum, or pulmo uterinus, by *Mayow*.

other by the umbilical vessels of the fœtus. The structure of the fœtal portion, so far as we know, appears to be similar to that of the pulmonary vessels, the artery terminating in the vein. But the other portion is somewhat different: there is not a direct anastomosis, but the arteries open into cells, from which the veins begin. These cells communicate freely with each other, like those of the corpora cavernosa penis.

Having now endeavoured to give a general account of the secundines, which may be called an apparatus for supplying nourishment, and performing the function of respiration to the fœtus in utero, I proceed to state, 1*st*, The nature of the cases calling for our interference; 2*dly*, The causes of retention; 3*dly*, The best mode of extraction; 4*thly*, The effects of unseasonable or violent interference; and *lastly*, the after-treatment.*

In the majority of cases, especially in natural labour, the contractile power of the uterus, aided by the action of the abdominal muscles, is sufficient to expel the secundines as well as the fœtus. For the most part, within a few minutes after the birth,

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* These heads embrace the substance of the observations which I am about to offer; and I shall adhere as strictly to these as the complex nature of the subject will permit.

the placenta separates, and the expulsion of it, together with any coagula, or air, contained in the cavity of the uterus, takes place accompanied with a gurgling noise. The uterus continuing to contract, is thus reduced in its cavity, shutting the mouths of the uterine arteries, which open upon its internal surface at the point of adhesion with the placenta. If the uterus did not contract immediately after expulsion of the placenta, the woman might instantly sink from hemorrhage. This explains the danger of leaving any thing within the uterine cavity which might prevent complete contraction, and so occasion either internal or external flooding.

Although now practitioners are almost all convinced of this fact, yet the time is not long past when it was inculcated as a useful rule to allow nature to finish the process unaided, or merely to administer emmenagogues, to promote the expulsion of the placenta. Such is the practice recommended by Heister. The consequence of allowing the placenta to remain in utero for any length of time is, either that hemorrhage comes on, and destroys the patient, or that she sinks, from the occurrence of fever of the typhoid type, induced by the putrefaction of the retained mass.

Mr Whyte of Manchester mentions three cases

reported to him, in which the patients died from this cause, although in one of the cases the placenta was extracted on the fifth day after delivery. Dr Perfect mentions a case where the patient died on the eighth day, from retention of the placenta.

Professor Hamilton of Edinburgh says, he never knew a case in which the secundines were retained for any considerable time, where dangerous consequences did not follow. With these facts before us, surely no man would now be justified in allowing his patient to sink, when it is in his power to avert every serious risk by timely interference. But let him not, on the other hand, run into an opposite extreme, from seeing the lamentable effects of non-extraction, and immediately upon the birth extract the placenta by violent and premature efforts, thinking, like many, that what is quickly done must be well done. By this haste the funis may be ruptured, or the uterus inverted, and even a complete separation of the womb from its appendages be caused.*

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* For some horrible cases of this kind see Bartolini's Works. There is also a complete case of inversion mentioned in vol. xvi. of Med. Com. page 315. Professor Hamilton has a preparation in his Museum, in which the uterus had been completely torn from a patient by the brutality of a midwife. Case also in Chapman, p. 123, case 29th. Also Annals of Med. vol. ii. page 277, case by Mr Brown.

The safe plan lies between the culpable negligence of the one class, and the no less hazardous precipitation of the other. Where the uterine efforts do not expel the placenta, we may assist by pulling very gently at the cord, during a pain, or rubbing and compressing the hypogastric region.

Within one hour after delivery, the hand, being well lubricated, ought to be cautiously introduced along the vagina into the uterus, guided by the cord. The uterus, stimulated by expanding the fingers against its parietes, in general contracts immediately; if not, pressing upon the placenta, and gathering it up like a sponge, will sometimes answer the purpose, and produce separation; when supporting the perineum with the other hand, we cautiously extract, holding the placenta by its edge, and by causing it to describe a semicircle, with its concavity towards the pubes, as the child does. It ought to be drawn out slowly, so as to avoid lacerating the perineum, or even the placenta. Care is to be taken that no portion of it is left behind. During the extraction it is always useful to have an assistant compressing the abdomen, or the woman herself in many cases can do this. After removing any coagula, we apply the binder and compress, round the abdomen. The binder is usually of cotton cloth, made about

half a yard broad, and of a sufficient length to encompass the patient's abdomen, including the compress, which commonly consists of one or two folded towels, applied to the uterine region. The whole should be of such a degree of tightness as to afford to the patient a comfortable feeling of support, and cause a steady pressure over the uterus, to promote absorption.* A soft napkin is to be applied to the vulva, and the woman composed to sleep by the administration of an opiate, or some light food, such as panado, arrow-root, or well-prepared gruel.

Should hemorrhage come on, either during the operation or soon after, the free application of cold or even iced water, over the abdomen, by means of a towel or cloth, will usually check it; if not, a continued stream, from a jug or bucket, may be thrown over the abdomen, and it will tend powerfully to cause contraction. In no instance, in which this practice has been employed, has there ever to my knowledge been any rheumatic affection induced.

Injection of the placenta, with cold water, has

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* The propriety of pressure being applied to produce absorption has been questioned by some able practitioners; but I have never seen any bad consequences arise from it, but rather the happiest results.

been recommended in retention; and, as there are no valves in either the arteries or vein of the cord, this could easily be done in a short time, if a Read's syringe, with a small nosle or brass pipe, were at hand.* In urgent cases I would much rather trust to the external application of cold, or introduction of ice or cold water with the hand.

The office of the Accoucheur in cases of this description is often attended with a degree of anxiety and responsibility which it is scarcely possible for words to describe. His patient, probably the mother of a numerous family, is reduced to a state of syncope or great debility from uterine hemorrhage,—her lips are pale,—her features contracted, her pulse thready and scarcely perceptible,—the bed, or even floor of the apartment, inundated with blood;—the attendants are confused and distracted —and, in these circumstances, he is called upon to perform his part with the consciousness that the safety of his patient depends on his skill, promptitude, and decision, and that her life will undoubtedly be sacrificed if he hesitate, or delay the use of active measures.

When we are called to a case of this nature, we

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* Might this not injure the mother unless soon expelled, as water might be carried from the cells of the placenta into her circulating fluids?

should instantly, if the patient is able to swallow, administer a dose of laudanum, or brandy, or sal volatile. Warmth is then to be applied to the extremities, either by means of hot bricks or bottles filled with warm water, or heated flannels. The patient is to be laid completely in the horizontal posture, by withdrawing the pillows, or even bolster, from under her head; and cool fresh air is to be freely admitted into the room. Bathing the temples and palms of the hands with vinegar or water, and the application of some stimulant, such as the ammoniacal salts or aromatic vinegar, or burnt feathers to the nostrils, is very beneficial in rousing the strength of the patient. But our main hope of safety is in the contraction of the uterus, to effect which, we compress the abdomen, introduce the hand within the womb, evacuate it of its contents, and, if necessary, inject cold water freely.*

Transfusion of blood has been recommended in cases of exhaustion from uterine hemorrhage; but, presumptuous as it may appear in a young practitioner to condemn what is supported by so many respectable authorities, I cannot but think it more

* The utility of opiates in hemorrhage has been disputed by some able practitioners, as Barlow, Dewees, &c. but more recommend their use.

specious in theory than likely to succeed in practice, as in general the die is cast in a few minutes. A proper apparatus is seldom at hand, and whenever the patient is so little exhausted as to justify the attempt at transfusion, I believe she would recover without it, by employing the means already pointed out. Besides, the use of too much force or the injection of air would prove as certainly fatal as the loss of blood.

The directions given will be generally useful in cases of uterine hemorrhage, whether arising previous to or after extraction.

Rupture of the funis has been assigned as a cause of retention requiring manual interference. The plan in this case is, as before, to insert the hand, and, where the cord has been completely torn off, we guide it by the membranes, and feel for the placenta, which easily separates where there is no organic disease, and may be extracted with little force.

Ossification of the womb, or preternatural hardening of the placenta, and intimate adhesion of it, at several points, which are occasionally ossified, at the uterine surface, is not an unusual occurrence, and is sometimes met with in the same woman successively three or four times. Most of these cases are attended with great danger and difficulty in

effecting the separation; and the entire separation is now and then impossible, as, even after death, this cannot be done without the knife. In such cases the accoucheur must be careful to avoid laceration, which is apt to occur about the adhering surfaces, only removing such parts of the placenta as can be got away without scratching or wounding the uterus. Dr Smellie relates two cases of adhesion, in one of which the patient died from hemorrhage, in consequence of extracting *all* the indurated portion; in the other case part was left as above directed, and the patient recovered. Cases are also recorded by Gifford, La Motte, Burns, and others, all of whom concur in dissuading us from too minutely separating the ossified points, for fear of lacerating the uterus, or exhausting the patient by unavailing efforts.

The portions retained, if small, are usually thrown off in a day or two at farthest. We may assist their expulsion by giving some smart purgative, either by the mouth or in form of clyster. Injections per vaginam are not in general required; but if so, the decoction of bark or chamomile-flowers or solutions of the salts of zinc or alum, answer very well. Bathing the external parts with weak spirits and water, and great attention to cleanliness, are necessary to prevent excoriation.

The abdomen is to be kept firmly supported; all exertion of the patient is to be strictly forbidden, as well as stimulating food or drink; and the antiphlogistic regimen is to be rigorously enforced. This in some cases after uterine hemorrhage is not easily effected, as the patient, upon being relieved from the pains of labour, and the sufferings attendant upon our manual interference, feels so much overjoyed as to be very apt, in our absence, to indulge in such food as is improper, or take such exertion as may prove permanently injurious; and this is more especially apt to happen in females who have been otherwise healthy, in whom convalescence seems to go on more rapidly than even after ordinary or easy labours; at least, it has been consistent with my own practical experience, that the loss of blood, in moderate uterine hemorrhage, seemed to reduce the inflammatory tendency of the habit; and, wherever the patient and attendants were careful, recovery appeared rather to be accelerated than retarded. In one case several quarts were lost without producing serious effects upon my patient.

Adhesion of the Membranes to the parietes of the uterus is another cause of retention which, however, I have never met with. The surface of the placenta is found disengaged, but the adhesion

of the decidua has been so great at some points of the circumference, as to prevent the descent and ultimate expulsion of the placenta. Very slight force is here required; and, merely taking hold of the placenta with the fingers, we extract cautiously as before. Dr Beilby politely communicated to me some cases of this kind occurring in his practice.

When the placenta is not thrown off within an hour, we frequently find upon examination an irregular contraction of the womb. This is not an uncommon cause of retention, and is sometimes induced by the first and second stages of labour being hurried, as where the woman has been delivered alone. By proper management, in most cases, this cause of retention may be prevented, by retarding the too rapid expulsion of the fœtus, and administering an opiate. The irregular contraction usually takes place about the body or central part of the uterus, producing what is called the hour-glass contraction, from its supposed resemblance to an hour-glass. On carrying up the hand along the cord, the placenta is not at first perceived; by tracing the cord more carefully, however, we find a stricture of the uterus, above which the placenta is retained. We may, in slight cases, remove this by pinching the parietes of the abdomen, or applying a cloth dipped in cold water; but in general it

will be necessary to administer an opiate a short time before introducing the hand. We gradually overcome the stricture by inserting first one finger, then another, until the spasm is overcome, and then bring away the placenta, which is not in general adherent. If it should adhere, we assist its expulsion in the same manner as previously directed, in cases of adhesion unattended with spasmodic contraction.

The hour-glass contraction most frequently occurs after premature labours, or in patients of a nervous hysterical habit, especially when the birth is too rapid; and in almost all those cases it may be prevented or removed by administering a dose of brandy, or ammoniated tincture of valerian, or an opiate immediately upon the expulsion of the fœtus, care being taken to diminish any over-rapidity of the birth.

In cases of plurality of children, each fœtus has a funis and placenta, and a distinct set of membranes;* yet the placenta of the first-born is not always thrown off immediately after its birth, but is often retained until the expulsion of the

* There is, however, in no case more than one membrana decidua.

last; and if we remember that in some cases the placentæ are so intimately connected by inosculating vessels, as to seem but one cake, the propriety of avoiding all violence to the cord will appear evident, as this might not only induce the death of the other children still in utero, but even cause serious hemorrhage; so that if the natural uterine efforts did not speedily expel the fœtus, we might be compelled to turn and bring down the feet so as to expedite the delivery. This union of the placentæ is one reason among others for the accoucheur, immediately and invariably after the birth of a child, applying his hand over the abdomen of the patient, when he will readily ascertain, through its parietes, if there is another child in utero.

In cases, then, of twins or triplets, the extraction of the placenta is not necessarily required until after the birth of the children. In some cases the secundines are unusually large, and the contracted uterus is not distinctly felt through the abdominal parietes. The practitioner may therefore be misled, and it will be proper in these cases to examine per vaginam; when either the presentation of another fœtus or set of membranes will be felt. After delivery of twins or triplets, the placenta is not unfrequently retained from the torpor

of the uterus. We must, after waiting a proper time, proceed in this as in the case of retention already described, but with even more caution, for the risk of hemorrhage is greater. The hand is to be inserted along the cord into the uterus, and the fingers moved about in order to excite its action; and care is to be taken that contraction has begun, before either the placenta or hand of the surgeon is withdrawn.

The placenta is, in almost all cases of abortion or premature labour, detained longer than after delivery at the full time.* But it is seldom that manual aid is required; in general, cathartic medicines administered by the mouth, or stimulating clysters, are all that are necessary. If the pain in the uterine region is very severe, and we can with the finger reach any portion of the placenta, we ought to extract; always, however, avoiding any violent attempt at dilatation of the os uteri. In most cases both embryo and secundines have been expelled before medical assistance is obtained; for many females never think of asking assistance when abortion

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* The usual period of utero-gestation is nine months; if the fœtus is expelled within three months of the full time, the woman is said to have a premature labour,—if sooner an abortion, or miscarriage.

occurs in the early months, unless considerable hemorrhage continues after expulsion. Hemorrhage is to be restrained by quiet, rest, cold, and the use of the plug,—that is, the insertion of a soft, or silk handkerchief, soaked in oil before being used. This, if properly introduced, will completely command the uterine discharge, and prevent loss of strength from that cause, until the contraction of the uterus takes place, and completely expels its contents. Should the plug not be required, but the patient be annoyed with an ichorous or fetid discharge, the ablution of the uterus and vagina by injections of chamomile flowers, Peruvian or oak bark, or solutions of the salts of zinc or lead, ought to be had recourse to.

In premature labours, or those occurring after the sixth month, the treatment is nearly the same as at the full time, and need not be here repeated.

Those cases of flooding before delivery, from implantation of the placenta over the cervix or os uteri, do not come under this branch of the subject, as in almost no case can it be supposed necessary to extract the placenta previous to delivery; which, in cases in which the placenta presents, must be promptly effected by turning or otherwise. But of this most important matter, which would require a volume, it is out of my power in this limited

paper even to give the most general description; I must, therefore, refer to the works of Mr Le Roy, Burns, Denman, Smellie, Whyte, Dewees, and Levret.

EFFECTS OF UNSEASONABLE OR VIOLENT INTERFERENCE.

Under this head, I shall merely offer a few words on inversion, prolapsus, and laceration of the uterus; and since these cannot arise but as the effects of mismanagement, they need not detain us long. Inversion of the uterus, if complete, frequently proves fatal, or at least irremediable, if not reduced within a short time after its occurrence. It is usually produced by too forcibly pulling at the cord or placenta, and it may also arise from rapid expulsion of the child, when the cord is short. The uterus is to be firmly compressed in the hand, and as speedily as possible reduced by pressing steadily upwards until the parts reach their proper situation. If the inversion has only been partial, this is very easily accomplished. Troublesome symptoms are to be relieved by the ordinary remedies; the patient should be longer confined to bed than usual, and ought for some time to wear a T band-

age. Should prolapsus continue, we must enjoin cold bathing by means of the hip-bath, with tonics internally; in such cases, too, a pessary is occasionally required. But a complete cure can only be effected in a subsequent pregnancy by the lengthening of the vagina in the ascent of the uterus.

Laceration of the uterus at the place where the placenta had adhered occasionally happens; in this case the inflammatory symptoms are to be relieved by bleedings, an open state of the bowels, warm anodyne fomentations, and the strict observance of the antiphlogistic regimen.

In conclusion, I may sum up all that has been already advanced by a few general remarks, which, in my humble opinion, cannot fail, if acted upon, to prove useful.

The best Teachers of Midwifery recommend extraction of the placenta when not expelled within a short time after the delivery of the fœtus. The time which may safely be permitted to elapse, where no hemorrhage occurs, is about an hour; by waiting longer, the parts of the mother become contracted, and the hand is introduced with greater difficulty, so that inflammation and sloughing of the passages might be induced by our efforts.

On the occurrence of considerable hemorrhage,

we are not warranted to wait one moment, since no fixed rule can be given showing how much any patient can bear; and it is known, that a small quantity of blood lost suddenly is of more injurious effect than a greater portion withdrawn slowly. Although some patients have recovered after profuse hemorrhage, in spite of the delay or mismanagement of the practitioner, yet the number of instances in which patients have sunk from want of timely aid, would, if produced, far out-number those fortunate escapes.

How very dangerous then the direction of Mr Le Roy, who, in page 50 of his Leçons, says,—"Quand la femme n'est pas delivrée, et qu'il survient une perte, il faut attendre patiemment s'il ne se manifeste aucun symptôme alarmant parce que cette perte cesse quelquefois d'elle-même. Mais quand les symptômes sont alarmans, et qu'on craint pour la vie de la femme, lorsque la matrice s'engorge et se dégorge alternativement; lorsqu' enfin la femme se plaint d'éblouissemens, que les yeux deviennent convulsifs, que le pouls devient trop petit, que les extremités sont froides, le visage d'une paleur mortelle, que le sang traverse le lit, qu'on entend dans le ventre des gonuillemens qui annoncent la résolution des forces vitales,—*alors* il faut employer des moyens propres à redonner du res-

sort à la matrice."* Now, all this might happen, and death terminate the scene in a few minutes.† We ought never to quit our patient until the secundines are expelled, and her abdomen bound up; after this we either give an opiate, or a moderate dose of brandy, on loaf sugar, and recommend quiet. Frequently before being composed to rest the patient has a feeling of want, or faintishness, and is in general benefited by our giving a small quantity of gruel or panado, taking care not to oppress or overload the stomach; some of the bedclothes may be removed, and clean body-linens will add much to her comfort; but a complete change, however desirable, will, in most cases, be hazardous sooner than from twenty-four to forty hours after delivery. Particular attention must be paid, in all cases, to the urinary and alvine discharges. If the patient has not made water by our next visit, which should always be within twelve hours, the pubes ought to be fomented with flannels wrung out of hot

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* Burns's Principles of Midwifery, p. 390, 3d edition.

† This may have excited the strong expressions of Mr Burns, page 246 of his works:—"Procrastination, irresolution, or timidity, have hurried innumerable victims to the grave, whilst the rash precipitance of unfeeling men has only been less fatal, because negligence is more common than activity."

water, or the patient may turn slowly on her knees; failing this having the desired effect, we must employ the catheter. The bowels ought to be kept open by means of cold-drawn castor-oil; or a pill composed of the extracts of colocynth and hyoscyamus will answer, where oil does not remain on the stomach. If there is much constitutional irritation, the camphor julep affords relief. After-pains may be moderated by the use of opium, hyoscyamus, or other anodynes occasionally repeated. But in all cases, whether accompanied by flooding or not, every one who has been engaged in the practice of Midwifery must have felt how necessary it is for the practitioner to preserve an unruffled temper, and to act with gentleness, caution, and decision, since, on the exertion of these qualities, not less than on the application of proper remedial measures, depend the safety of his patient and his own reputation, as well as his future peace of mind.

THE END.

OLIVER AND BOYD, PRINTERS.