

A

# TREATISE

ON

## UTERINE HÆMORRHAGE.

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TO

**SIR RICHARD CROFT, BART.**

**&c. &c. &c.**

IN TESTIMONY OF

**THE AUTHOR'S RESPECT**

FOR

**HIS PROFESSIONAL ACQUIREMENTS**

AND HIS

**PRIVATE VIRTUES.**

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## ADVERTISEMENT.

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**T**HE object of the following Treatise is to point out a mode of treatment, which has been found very beneficial in alarming cases of uterine hæmorrhage.

In the Introductory Observations, an attempt is made to explain the functions of the uterus, by tracing the resemblance which that organ has in its action to the other involuntary muscles; and the remarks on this subject will not perhaps be thought misplaced, when it is considered that many of the best established rules of

practice in midwifery, have been the result of what is known of the structure and functions of the uterus.

In the medical treatment of uterine hæmorrhage, I am not aware that opium is generally given, although it has been recommended by some foreign authors as highly beneficial. Doctor JAMES HAMILTON, Professor of Midwifery in the University of Edinburgh, to whom I am happy in having this opportunity of expressing my obligations for his instructions, and my respect for him as a practitioner, has long recommended it, as the best remedy, for relieving the irritation and state of debility which are induced by this disease; and Mr. BURNS, of Glasgow, has also mentioned it as useful in this complaint. But in many



of the best publications on midwifery, the use of opium in uterine hæmorrhage is altogether condemned. The Cases detailed in the following Treatise will, I hope, remove the prejudices which theory may have advanced against the use of opium in uterine hæmorrhage, and establish the good effects to be derived from giving large doses of that medicine.

Golden-square,  
 Aug. 1, 1816.

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## INTRODUCTION.

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THE human uterus is generally considered to be of a muscular structure, and that by the exertion of its muscular power, aided by the abdominal muscles and diaphragm, the fœtus is expelled at the time of parturition.

Some anatomists, from being unable to trace the muscular fibre, or from these fibres not possessing that florid colour which characterizes the fibres of many other muscles, have either doubted or denied their existence in the uterus. Other anatomists admit, that the uterus is possessed of muscular fibres, whilst they disagree with regard to their course and their mode of distribution. They have been represented as forming a

net-work\* ; as consisting of transverse, longitudinal, and oblique fibres† ; as forming an orbicular muscle at the fundus of the uterus‡ ; as transverse in the body of the uterus, and describing concentric circles towards the fundus||. Thus, whilst the existence of muscular fibres is admitted, the difference of opinion with regard to the course of these fibres, is a proof of the difficulty, if not the impossibility, of tracing them accurately. This difference of opinion may have arisen from muscular fibres being scarcely if at all perceptible in the unimpregnated uterus, and from their not being so developed as to be easily traced, even in the gravid uterus ; the increased size of the gravid uterus depending more upon the enlargement of its vessels, and the deposition of cellular substance, than on the increase or addition of muscular fibre.

\* Malpighi. † Vesaliæus. ‡ Ruysch. || Hunter.

Although it cannot be clearly demonstrated that the uterus is muscular, this is not the only species of evidence from which conclusions can be drawn regarding its muscular structure. That the septum of the heart is muscular has never been disputed, although its fibres are equally, if not more, intricately arranged than those of the uterus. Nor has the existence of muscular fibres in the urinary bladder been disputed, although they are equally destitute of a florid colour. In the animal economy we know but of two structures capable of exerting a power of contraction; viz. muscular fibre, and elastic membrane. Uterine contraction must therefore be referred to one of these qualities, or be supposed to possess a power of contraction peculiar to itself. Whether the phenomena of uterine contraction and relaxation are solely referrible to its possessing a power of elasticity, can easily be ascertained by considering

the laws which regulate elastic power, and comparing them with those to which uterine action is subservient.

Elasticity is common to inanimate as well as animate matter. It is a quality which enables those substances in which it is inherent to retain a certain determined position, and it is never called into action except this position is mechanically changed; its efforts being then directed to regain its natural position.

The enlargement of the uterine cavity is not produced by the ovum forcibly pressing out its sides; for, in cases of extra-uterine conception, this cavity continues to enlarge during the first months of pregnancy, although it contain no part of the ovum. The gravid uterus is not prevented from contracting by its contents forcibly retaining it in a dilated state, for the membranes of the ovum, although in contact with its internal surface, make no forcible pressure upon it; and after the

uterus has once contracted, except it be in a state of atony, it is impossible again to dilate it by the application of any force without injuring its structure.

The power of elasticity is never impaired either by affections of the mind, or by violent and long continued exertion, except the texture, in which it is inherent, be in some degree injured. But the mind has evidently a powerful influence on uterine action; and severe or long continued uterine exertion always impairs the power by which the uterus contracts, and sometimes reduces it to a state of complete atony.

Elasticity retains its power of action as long as it is acted upon independent of any other principle, and although in living animal matter its sphere of action is in some measure increased by the presence of the vital principle; yet the removal of this principle has no very sensible effect in lessening its power. But the uterus, at death, loses com-

pletely its power of contraction; and although the foetus is sometimes expelled during the last convulsive agonies, or, perhaps, immediately after death; this only proves that all resistance to its expulsion is removed, and that the uterus retaining in some degree its irritability, makes feeble efforts to expel its contents, such efforts being quite sufficient when no resistance is opposed.

Elasticity is neither completely destroyed, nor is it rapidly impaired by death; and it is not till a chymical decomposition of the texture actually takes place that it is wholly lost. It is different with the uterus, however; for, after death, when this viscus has contracted imperfectly, as in those who die of uterine hæmorrhage, it can again be easily distended to its original size; and it will make no efforts, although the distending cause be removed, to return to a state of contraction. It cannot however be denied, that the uterus possesses



some degree of elasticity; but the degree of that power is not at all sufficient to account for the force which it exerts when expelling its contents.

As uterine contraction and relaxation cannot therefore be explained on the principle of elasticity, it must be referred to some other cause; and if an analogy between its action and that of some of the other involuntary muscles be traced, it will be found strikingly to coincide.

The uterus appears to differ from all the other involuntary muscles, in the power it exerts,—in the intervals between its different actions,—and in the stimuli which excite these actions. But all the involuntary muscles, as those of the heart, the stomach, the urinary bladder, and the intestines, also differ from each other in these qualities, exerting different degrees of power, contracting at different intervals, and being excited to action by different stimuli.

By attending to the causes which ex-

cite the uterus to action, and to the laws by which this action is regulated, the greatest similarity may be perceived between it and the other involuntary muscles.

The action of the uterus is fortunately independent of the will. To discover the remote causes of this action is perhaps impossible: but the remote causes of the action of the other involuntary muscles are equally involved in obscurity. Certain fundamental principles are established, which regulate all the actions and functions of the human system, and which in a state of health direct all the involuntary movements. To attempt to discover the nature of these principles would argue presumption. The human mind, perhaps, has not faculties to comprehend them; and if they were explained, it is very probable that a knowledge of them would not add to our stock of useful information.

With respect to the proximate or ex-

citing cause of contraction, the uterus resembles the other involuntary muscles which surround cavities; their action being excited by their contents, and this action continuing till the cavities which they surround are emptied.

But the uterus resembles the other involuntary muscles not merely in the causes which excite its natural action, it is likewise affected by those causes which produce morbid action in muscles. Troublesome cases frequently occur, where the uterus has contracted spasmodically and irregularly; and the effects produced on the uterus at the time of parturition, by the depressing passions, or any cause inducing general debility, are well known.

The means which allay immoderate action in other muscular parts, have a similar effect in moderating violent uterine action: and although no means have as yet been discovered, which, by acting directly upon the uterus, have the

effect of increasing its action ; yet the general means which are best adapted to promote vigorous muscular action in other parts, have a similar effect when applied to the uterus.

When muscular fibres are divided, they retract, forming a chasm, and the divided muscle immediately loses its power of action ; and even after the chasm is filled up by the growth of new parts, and a complete cicatrix is formed, the muscle seldom regains its former power. Similar effects are produced in the uterus ; for when an incision is made through it when in a gravid state, although all the parts not influenced by this incision contract regularly, lessening its size, yet the divided fibres lose their power of contraction, and on this account the incision is proportionally larger in the contracted than in the gravid uterus : and when the uterus has been once ruptured, it is more liable to a similar accident in all future endeavours to expel the fœtus.

The uterus, like the other involuntary muscles, is capable not only of contraction, but of retaining itself in a contracted state, till that particular change in the economy of the parts takes place, which requires its relaxation. If it remain contracted longer than any other muscle, it is merely because the stimulus of relaxation, to use the language of Mr. John Hunter, is not applied; for when this stimulus is applied, the uterus, like the other muscles which surround cavities, immediately obeys, relaxing, and gradually adapting itself to the changes which are going on.

There is an intimate sympathy subsisting between the muscular coat of the hollow viscera and their sphincter muscles; for when a desire to evacuate the contents of these viscera is excited, their muscular fibres are called into action, and their sphincters at the same time relax: on the other hand, when their sphincters are irritated or forcibly

dilated, the muscular coat sympathizes, and an instant effort is made to contract. The uterus resembles such muscles in these respects, for as soon as its fibres begin to contract, the os uteri begins to relax, and gradually yields, till it at last becomes quite dilated: Also, when the os uteri is irritated, forcibly dilated, or even has become relaxed, the uterine fibre is then sympathetically excited, and begins to contract.

The uterus, like other muscles, is impaired in its action by diseases and injuries of the brain and spinal marrow, and a complete state of atony is sometimes produced by those causes which lessen nervous energy.

Other facts might be brought forward to explain the intimate analogy which subsists between the uterus and the other involuntary muscles: but from those which have been already mentioned, it may be concluded, that the uterus is possessed of a muscular power, and that

its contractions and relaxations depend on the action of muscular fibres.

Many useful practical hints arise from the foregoing observations, with regard to the management of diseases of the uterus in the unimpregnated state—with regard to the management of its diseases during a state of pregnancy—with regard to the management of labours, and especially those complicated with uterine hæmorrhage—and with regard to the management of uterine diseases which occur after delivery.

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## TREATISE, &c.

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### SECTION I.

#### ●BSERVATIONS ON THE PRACTICE GENERALLY EMPLOYED IN UTE- RINE HÆMORRHAGE.

**EVEN** when hæmorrhage takes place from external parts, where, by the use of styptics, pressure, or ligatures, the flow of blood may be commanded, it is often dangerous, and always creates considerable alarm: but when it proceeds from parts in which, on account of their situation, it is impossible to use these means, and when no remedy can with any certainty of success be employed, it is always highly dangerous,



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and never fails to excite the most distressing apprehensions.

Hæmorrhage from the uterus, although in many respects similar to other internal hæmorrhages, differs materially from them in the size and number of the vessels from whence it proceeds, and in the means which nature employs to check the discharge. In other internal hæmorrhages, a degree of faintness coming on, the flow of blood is restrained, by a coagulum forming at the mouths of the ruptured vessels, and by their contracting, and becoming imperious: and to favour this process, every mean is recommended that has the effect of retarding the action of the heart and arteries. It is evident, however, that these means can only prove effectual when the discharge proceeds from the rupture of small vessels, for when the ruptured vessels are large, the hæmorrhage must inevitably prove fatal. In hæmorrhage from the uterus the case

is somewhat different; for although the discharge proceeds from very large and numerous vessels, it does not necessarily prove fatal. The formation of coagula, however, afford but uncertain security; and admitting every good effect which they can be supposed to possess, act merely as a palliative; and as the blood in this species of hæmorrhage is poured from large veins as well as arteries, all the contractile power which these possess, can have little effect in suppressing the bleeding. But in the power of contraction possessed by the uterus itself, a very effectual expedient is happily instituted for rendering the ruptured vessels impervious, and thus suppressing the discharge.

As uterine hæmorrhage occurs frequently, and is generally dangerous, it attracted the attention of medical men at an early period. A considerable diversity of opinion however still prevails with regard to the plan of treatment

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which ought to be pursued in this complaint. Uncertainty and indecision are thus created in the mind of the young practitioner; which lead him to suspect that the structure and functions of the parts concerned, have not been satisfactorily explained. I have therefore, in the introductory observations, made an attempt to explain the functions of the uterus, as far as its actions during pregnancy and at the time of parturition, are concerned; and in the following remarks, its power of contraction shall be kept constantly in view, as every effectual attempt made to suppress uterine hæmorrhage must be in order either to assist or regulate this power.

The want of success which so often attends the treatment of uterine hæmorrhage, is to be attributed either to the practitioner's forming a wrong estimate of the powers and efforts of the uterus itself, or to his too great hurry and rude interference. In all alarming cases of this disease,

whatever leads to indecision or delay is highly injudicious. Active measures must be adopted, otherwise the patient will speedily sink : but the use of violent or rude means will be equally injudicious, and will as certainly prove fatal ; either by inducing extensive local injury, or by giving the general system a shock, from which it cannot recover.

The purport of the following remarks is,

*First*, to point out wherein the plan of treatment, which has generally been recommended in uterine hæmorrhage, is defective ;

And, next, to propose a mode of treatment which has been found very successful, and has resulted from considering the structure and functions of the uterus.

As the ovum is connected to the uterus solely through the medium of its vessels, any detachment of it from that viscus must cause a rupture of these vessels and a subsequent hæmorrhage. Some have been induced, from considering the small

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size of the vessels which connect the decidua to the uterus, to deny that their rupture can produce any alarming degree of hæmorrhage. It is certain, however, that these vessels, from their number and activity, have in some instances, when ruptured, thrown out a very great quantity of blood, producing symptoms which indicated considerable danger. The vessels connecting the placenta to the uterus are very large, particularly the veins, which inosculate freely, and are without valves. When any part of this organ becomes detached, large vessels are always ruptured, the discharge of blood is consequently very profuse, and often brings the patient suddenly into a most alarming situation.

The placenta, when attached to the cervix, or os uteri, is always in part separated by the natural changes which these parts undergo in the latter months of pregnancy : and it may become accidentally detached, when situated at the fundus, or sides of the uterus.

The causes of these cases of uterine hæmorrhage, which take place before, or in the beginning of labour, at the full period of pregnancy, have been divided into *unavoidable* and *avoidable*. In the manual treatment of those cases of the disease which arise from the first cause, medical men have nearly agreed; but the practice almost universally recommended, and generally adopted, when the disease arises from accidental detachment of the placenta, does not appear rational: and although it has received the sanction of eminent men, whose opinions are entitled to the greatest respect; yet this ought not to satisfy those, whose duty it is to think for themselves: and they do not deserve well of the profession, who rest satisfied with what others have done, without inquiring whether the practice which has been recommended may not admit of some improvement.

When uterine hæmorrhage arises from

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the accidental separation of the placenta, the practice generally recommended is, to puncture the membranes as soon as possible; and it is stated, that this of itself, without any further interference, will almost always check the discharge, so as to remove all apprehensions of danger, till the child is expelled by the natural efforts.

In all cases where large vessels are ruptured, if proper means are not employed to secure them, a fit of syncope will very soon take place, which will for a time retard the flow of blood, by decreasing the action of the heart and arteries; and a coagulum may form at the mouths of the ruptured vessels, which, even after the patient's recovery, may perhaps for a time prevent the farther loss of blood. The security, however, afforded by the formation of a coagulum, is not permanent: the most trifling motion will, in all probability, displace the clot, or the least increase



of action in the system will make the current of blood break down this feeble barrier. No remedy can be completely effectual in suppressing hæmorrhage proceeding from the rupture of large vessels, which does not render them impervious. This is easily effected in external parts by mechanical means: and although in hæmorrhage from the uterus these cannot be employed, yet nature, by giving that organ a power of contraction, has wisely provided a remedy admirably fitted for this purpose.

It must be admitted, that the only certain means of shutting up the ruptured vessels of the uterus, is its contraction; yet, till the ovum is expelled, the uterus cannot contract so as materially to lessen the size of its vessels. Therefore, in all cases of alarming hæmorrhage from this organ, the great practical object to be kept in view is its speedy evacuation, as far as is otherwise consistent with the patient's safety.



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Had this principle been sufficiently attended to, puncturing of the membranes would not have been so unguardedly recommended. The timid practitioner may satisfy his mind by thinking that he has done all that is necessary when he has performed the comparatively easy operation of puncturing the membranes; or it may form a good excuse to the indolent and careless to assert, that this is all that can be done for the patient's good: but such practice must often be attended with fatal consequences.

The good effects which are generally supposed to be derived from the early evacuation of the liquor amni in cases of uterine hæmorrhage, is the contraction of the uterus causing a suppression of the discharge, by diminishing the diameter of its vessels, and by bringing the detached portion of the placenta to press on some part of the child's body.

As this complaint is in itself very

alarming, and in its consequences often suddenly fatal, every mode of practice which leads to delay will be generally as injurious as if it actually aggravated the disease. Before the practice, therefore, of puncturing the membranes in uterine hæmorrhage is adopted, the three following questions ought to be maturely considered :

*First* ; Whether by puncturing the membranes before the os uteri is dilated, we retard or accelerate the delivery of the child?

*Secondly* ; Whether by puncturing the membranes before the os uteri is dilated, we can depend upon it as a certain immediate means for suppressing the hæmorrhage?

*Thirdly* ; Whether by puncturing the membranes before the os uteri is dilated, we do not often destroy the chance of saving the child's, and sometimes even the mother's, life?

The uterus does not always contract

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immediately after the escape of the liquor amni. Sometimes the membranes, near to the full period of pregnancy, have been accidentally ruptured several days before it began to contract. When the membranes have been punctured for the purpose of inducing premature labour, fourteen days have sometimes elapsed before the uterus made any attempts to expel its contents. It cannot, therefore, in any case be pronounced with certainty, that the uterus will be immediately excited to contraction by rupturing the membranes.

It is generally admitted, that when the liquor amni escapes before the os uteri is dilated, it almost always proves a source of protracted labour. This is a fact so common, that any one who has attended but a few women at the time of parturition must have remarked it: and the cause is obvious. Whilst the membranes are entire, and the uterus begins to contract, they are pro-

truded through the os uteri in a conical form, accommodating themselves to its state of dilatation, and forming a soft, unirritating tumor, but at the same time a very effectual means of dilating it: whereas, when the liquor amni escapes, the child's head, a hard unyielding body, comes at once to press on the os uteri, which cannot insinuate itself through it; but which, by pressing against it, acts as a source of great irritation, producing irregular contraction in the uterus, rigidity of the os uteri, and consequently retarding its dilatation.

It has been affirmed, that by rupturing the membranes after labour has commenced, the expulsive efforts of the uterus will be increased both in force and frequency. This position, however, does not appear the result of accurate observation: for although after the escape of the liquor amni the labour pains are sometimes increased in frequency, and, judging from the patient's sufferings, they

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are likewise increased in force, yet the labour is almost always protracted, and the pains, although excruciating, do not propel the child's head with such force against the os uteri as might naturally be expected. It is therefore probable that the patient's extreme sufferings are the effect of spasmodic contraction of the uterus, and that this viscus is thrown into that state by coming into immediate contact with the child's body. It may therefore be inferred, that the early evacuation of the liquor amni does not accelerate the child's delivery, but has an opposite effect.

In answering the second query, "Whether puncturing the membranes acts as a certain means of suppressing uterine hæmorrhage?" two positions come to be considered. First, Whether it allows the uterus to contract so as materially to lessen the size of the ruptured vessels? And secondly, Whether supposing the uterus to contract immediately after the evacuation of the liquor amni, such a

degree of forcible pressure will be made on the mouths of the ruptured vessels as to suppress the hæmorrhage?

Any diminution that can take place in the size of the uterine vessels by the mere discharge of the liquor amni, must be trifling: and as the quantity of that fluid varies from half a pint to several quarts, it will be impossible in any case to form a correct judgment of the degree of contraction which may be expected to take place by puncturing the membranes. But even granting that the uterus, by contracting, considerably diminishes the diameter of its vessels; as long as the child is alive, and still in the uterus, the foetal mode of life will be continued, and in this respect the functions of this organ will remain unaltered: the quantity of blood circulating towards its vessels will therefore continue undiminished, their action will be necessarily increased, and the hæmorrhage will con-

tinue unabated. In this view of the subject, then, the evacuation of the liquor amni can be of little service in restraining uterine hæmorrhage.

If, after the evacuation of the liquor amni, the uterus should immediately contract, and bring that portion of the placenta which is detached to press so forcibly against a level surface on the child's body, that a degree of firm and constant pressure is made on the mouths of the bleeding vessels, no doubt the discharge will be stopped. But it has already been shown, that it is not always certain that the uterus will be immediately excited to contraction by the discharge of the liquor amni. Those who most strenuously advise the early puncturing of the membranes, admit that it sometimes fails in checking the discharge. If the membranes are ruptured before the os uteri is dilated, we must be at the time ignorant both of the child's position,

and of the situation of the placenta, if it does not present over the os uteri. When the hæmorrhage, therefore, is checked, in consequence of the detached portion of the placenta being brought to press against the child's body, it must evidently be, in a great measure, the effect of chance.

Although the uterus, whilst vigorous, possesses a power of retaining itself in a contracted state, yet it is only during the expulsive efforts that the child's body is so closely embraced, as by pressure, to check the hæmorrhage. During the remission of these efforts, therefore, the discharge will return; and if the mouths of the bleeding vessels are not shut up by pressure, whilst the uterus is exerting its expulsive efforts, at this time the action of the heart and arteries being greatly increased, the discharge will be very profuse.

It may therefore be concluded, that, as a general rule of practice in uterine



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hæmorrhage proceeding from accidental detachment of the placenta, the plan of rupturing the membranes before the os uteri is completely dilated, is neither safe nor rational.

Many bad effects are said to arise from introducing the hand into the uterus; and some writers have even asserted, that to this cause may be traced many of the cases of cancer and phagedena of the uterus which occur in advanced life. It is only, however, when the liquor amni has been evacuated, and the uterus has contracted firmly round the child's body, that introducing the hand can injure it. For if the os uteri be cautiously dilated whilst the membranes are entire, the introduction of the hand can produce no bad effect, as no pressure will be made by it on any part of the uterus; and when the child's feet are grasped and brought into the vagina, it will be turned with the greatest facility. But if the uterus contract, after the liquor amni has escaped,

it will force the child's head against the os uteri, causing considerable irritation, and producing spasmodic contraction of this organ. If the hand be introduced into the uterus when it is in this state, its structure will be injured, its irritability will be aggravated, and the operation of turning the child will be rendered difficult, if not impossible: for even after the child's feet have been brought into the vagina, if the uterus has been previously irritated, it will embrace the doubled body of the child so closely as to prevent its head from receding, without employing a degree of force which will either injure the uterus or the child. So great a degree of difficulty may not occur in every case when it is necessary to turn the child after the liquor amni has been discharged: yet it must be admitted, that in the greatest number of such cases, very considerable difficulty is experienced, even when the patient has

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been previously debilitated by loss of blood.

It has been argued by those who recommend the early evacuation of the liquor amni as a mean for checking uterine hæmorrhage, that if the uterus contracts so forcibly as to make turning the child difficult, it must, by pressing the open vessels against the child's body, check the discharge till nature effect the delivery. This is, however, taking for granted a position which is unsupported by experience; for it is found, that although the uterus contract vigorously, the hæmorrhage in many cases still continues.

It has likewise been argued, that by trusting to the efforts of nature till the patient is considerably exhausted by loss of blood, the uterus will not contract so forcibly, and the child will consequently be more easily turned. But the power of contraction of the uterus is not

always impaired by the causes which produce debility of the general system: and when that power is much weakened in consequence of debility through loss of blood, the danger is great, as a state of complete atony of the uterus is much to be dreaded. But admitting that after the escape of the liquor amni the hæmorrhage is checked by the contraction of the uterus, if the child presents preternaturally, it will, perhaps, be necessary, in order to save the mother, to introduce the hand and turn the child: but if the uterus contracts very forcibly, this operation will be difficult, if not impossible. This consideration ought to operate as a powerful reason against the practice of rupturing the membranes, until the os uteri is so much dilated that the child's position may be accurately ascertained.

If the facts by which the foregoing observations are supported be correct, the mode of practice generally recommended

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in the treatment of those cases of uterine hæmorrhage which proceed from the accidental detachment of the placenta from the uterus, is injudicious, and apt to lull a young practitioner into false security, at a time when the life of his patient depends on watchful observation, and on the most active and decided practice.

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### SOME REMARKS ON THE PRACTICE GENERALLY RECOMMENDED IN UTERINE HÆMORRHAGE FROM DETENTION OF THE PLACENTA.

UTERINE hæmorrhage frequently occurs after the child is expelled, although it had not taken place in the previous stages of the labour. And these cases of the disease are important, not only on account of their occurring very frequently, but on account of their proving

speedily fatal, if immediate assistance be not given. It is, therefore, to be regretted, that medical men have differed so much with regard to the mode of practice which ought to be adopted in these cases, and that such inefficacious remedies have been so strongly recommended. This leads the young practitioner to hesitate and delay, or induces him to waste time in the use of ineffectual means when the patient's safety depends on the most prompt and energetic practice.

As the complete and regular contraction of the uterus is the only effectual means for suppressing uterine hæmorrhage, by considering whether the practice generally recommended will speedily produce this effect, a criterion of its efficacy may be formed.

Uterine hæmorrhage occurs after the delivery of the child, either from the placenta being retained by want of contraction, or by spasmodic and irregular

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contraction of the uterus; or in consequence of a change in the structure of the placenta causing a morbid adhesion of it to the uterus.

As the great practical object in these cases is the speedy expulsion of the placenta by the regular contraction of the uterus, various means have been recommended to excite this organ to contraction; such as the application of cold to the pubes,—pressure with the hand to the abdomen,—and the use of internal stimulants. The application of cold and pressure may be sufficient to excite the uterus to contract when the general system has not been previously much debilitated, and when delay will not prove dangerous, and the use of stimulants may be found useful after the uterus has contracted: but such remedies ought not to be trusted to in dangerous cases, as they are often found insufficient to produce speedy contraction of the uterus.

When hæmorrhage takes place from

atony of the uterus, if the placenta has descended into the vagina, it has been recommended to leave it in this situation for some hours, as it is supposed to favour the permanent contraction of the uterus. When the inactive and debilitated state of the uterus, and the faint state of the patient, are considered, this practice will appear very dangerous. For although the placenta prevents the blood from appearing externally, yet internal hæmorrhage may be going on, and the patient fast sinking before the danger is discovered. Many fatal cases of this kind are upon record; and the uterus has been found to have yielded, until it became, by being distended with blood, of a larger size than before the expulsion of the foetus. No possible advantage can be obtained by leaving the placenta in the vagina; for if the uterus has completely contracted, the hæmorrhage will be stopped; and if it has not, it is evident that the presence



of the placenta in the vagina is not likely to promote its contraction, but to have an opposite effect.

When fainting and the other alarming symptoms which generally attend a great loss of blood, occur in cases of retained placenta, it is recommended not to interfere by manual assistance till recovery takes place from the state of faintness; as it is said that such means will increase the danger, and even prove fatal. Fainting, in these cases, is a most alarming symptom, especially if the uterus is in a state of atony: for the vessels which pour out the blood are so large, that the hæmorrhage generally continues in some degree, notwithstanding the patient's faint state: and when she recovers, the sudden increase of the discharge will cause an immediate return of the syncope. But if the hand be cautiously introduced, it gives little pain, and generally has the good effect of exciting the uterus to contraction; and

likewise of communicating a degree of stimulus to the general system, which rouses the patient, so that she is able to swallow such substances as will contribute to her restoration.

When the placenta adheres so intimately, that the powers of the uterus are incapable of separating it, it becomes necessary to introduce the hand to assist in effecting the separation. The practice generally recommended in these cases, is to insinuate the fingers between the placenta and the uterus, and to peel it off. But, by following this plan, whilst the separation will be attended with great pain, and considerable risk of lacerating the internal surface of the uterus, the hæmorrhage will be increased, more vessels being lacerated, and the object of introducing the hand will be but imperfectly accomplished. When the placenta is converted into a cartilaginous, or bony structure, it often adheres so intimately,

that it will be impossible to tear it away without lacerating the uterus ; and when it is morbidly soft, by separating it in the method above mentioned, part will be left adhering to the uterus ; which will be attended either with immediate or future inconvenience.

Uterine hæmorrhage sometimes occurs after the placenta is delivered, and then it generally arises from want of contraction in the uterine fibre. In these cases, the long continued application of cold has been generally advised ; and this practice has been carried to the extent of immersing the patient for hours in ice-cold water. Cold, when applied suddenly, has the effect of exciting the uterine fibre to contract ; but the long continued application of it, if the effects on the general system are considered, cannot be expected to excite the uterus to contraction, and must otherwise prove injurious. Plugging the vagina has likewise been recommended in those cases of the

disease: but this plan must be very dangerous; for sometimes, when a coagulum of blood fills up the os uteri, an accumulation of blood takes place within the uterus, and the patient sinks from internal hæmorrhage, although no blood appears externally.

From these remarks it will appear, that the plan generally recommended for treating those cases of uterine hæmorrhage which take place after the delivery of the child, will admit of some modification.

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## SECTION II.

OF THE CAUSES AND TREATMENT OF  
THOSE CASES OF UTERINE HÆMOR-  
RHAGE, WHICH OCCUR IN THE  
EARLY MONTHS OF PREGNANCY.

As in a healthy state, no discharge of blood comes from the uterus during the period of pregnancy, every discharge of blood during this period, however trifling, demands attention.

Uterine hæmorrhage may take place at any period from the time of impregnation, till some hours after the delivery of the child and secondines at the full period of pregnancy. And as there is, generally, a very considerable difference in the causes which produce the disease,—in its symptoms,—in its termination,—and in the plan of treatment which should be adopted, according to the period at which

it takes place, it is necessary to consider it,

*First*; As it occurs previous to the sixth month of pregnancy :

*Secondly*; As it occurs in the last months of pregnancy, and during the process of parturition at the full period of pregnancy till the child is delivered.

And, *Thirdly*; As it occurs immediately before and after the placenta is expelled.

The ovum is connected to the uterus solely by means of vessels; and any cause which produces a considerable degree of derangement of the general system, or which impedes the due functions of the uterine system, is apt in part to destroy this connection, and to cause a discharge of blood. This accident is particularly apt to take place at the periods at which the woman should have menstruated, had she not become pregnant. As the quantity of blood discharged in these cases, will be in propor-

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tion to the extent to which the ovum is separated from the uterus, it may be trifling, and only take place when any exertion is made. It is often accompanied with pain in the back; or it may be considerable, and unaccompanied by pain; or it may be very profuse, either with or without pain. Considerable constitutional derangement, with a state of great irritability of the general system, and fits of hysteria, sometimes accompany the discharge.

When the hæmorrhage is not very profuse, by confining the patient to a horizontal posture, keeping her in a cool temperature, bleeding her if she is of a plethoric habit, allaying irritation by opiates, keeping the bowels regular, adhering strictly to the antiphlogistic regimen, and applying cold water frequently to the back, pubes, and vulva, the discharge will generally disappear. But if, notwithstanding the use of these means, the hæmorrhage should continue, consider-

able advantage may be derived from injecting some cold astringent fluid into the vagina; or from giving a cold clyster, consisting of one pound of lime water and one or two drams of laudanum. Sometimes all these remedies will prove unavailing, the discharge still continuing, and even increasing; a proof that a great part, or perhaps the whole, of the ovum is detached from the uterus, and that abortion will inevitably take place. In some cases, although the discharge disappears, it recurs at irregular intervals, and in considerable quantity, till at the fourth or fifth month, or perhaps at a later period of pregnancy, an ovum of two or three months' growth is voided. In these cases, confinement to a horizontal posture, injecting some cold astringent fluid into the vagina, applying cold water to the back and pubes, and giving two or three times a day small doses of sulphuric acid, will generally be found to check the discharge, till the ovum escapes



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from the uterus. The strength may, likewise, be supported by moderate quantities of light wine.

Although abortions are frequently tedious, and often accompanied with a very considerable discharge of blood, they seldom prove fatal from this cause alone, if properly treated.

It is seldom necessary, or practicable, to give manual assistance in the early months of pregnancy: and although in some cases on record it is stated that the hand was introduced into the uterus at the fifth month, the practice cannot be justified; as at this early period, when the parts are as yet in a very contracted state, it must do great injury.

When abortion is attended with very profuse hæmorrhage, the discharge can be easily commanded by stuffing the vagina.

When this remedy is employed, it is necessary to fill the vagina completely, and to avoid, as much as possible, every

thing that will cause pain and irritation. Soft rag or lint, soaked in oil, is to be cautiously introduced into the vagina; and a firm compress, wet with cold water, is to be fixed by a T bandage over the external orifice, so as to prevent the plug from being displaced. By this means, a coagulum is allowed to form at the mouths of the bleeding vessels, which prevents any farther discharge of blood. It will likewise be necessary to confine the patient to a horizontal posture,—to apply cold to the thighs and pubes,—to admit cool air freely into her bed chamber,—and to avoid the use of stimulants.

As a complete state of contraction of the uterus is the only means which can permanently stop a profuse hæmorrhage from that organ, it will be also necessary, whilst remedies are employed to moderate the discharge of blood, to excite the uterus to contract, in order to expel its contents. For this purpose,

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stimulating clysters will be found very beneficial ; but when they are given, the practitioner ought always to be in attendance, as, if the plug be displaced, a sudden and alarming increase of the hæmorrhage may occur. When the uterus begins to contract frequently, and powerfully, the bandage and compress may be removed ; but the plug should be allowed to remain till it is expelled ; as it will keep up a degree of irritation on the os uterî, which will tend to increase and continue the expulsive efforts of the uterus ; and by retarding, in some degree, the expulsion of the ovum, it will also favour the complete contraction of the uterus.

Frequent fits of syncope are apt to accompany abortions, although there has been no previous great discharge of blood : but this symptom generally proceeds more from an affection of the nervous system, than from debility. If the discharge of blood, however, has been very profuse, the strength reduced, and

symptoms of great debility supervene ; whilst means are employed to suppress the discharge, stimulants in moderate quantity must be also given to support the strength. Opium in large doses, either in a solid or liquid form, seems best calculated for this purpose ; for whilst it quiets the anxiety which the patient's apprehensions are apt to produce, it allays the state of general irritation, which always attends a sudden diminution of the powers of life, supports the strength without accelerating the action of the heart and arteries, and never prevents the due contraction of the uterus.

The following Case will illustrate the treatment recommended in the foregoing observations.

#### CASE I.

A lady, when in the third month of pregnancy, after a long walk was seized with severe pain in the back, accom-

panied by a slight discharge of blood from the vagina. At first these symptoms were disregarded, and they partly disappeared; but, after some slight exertion, they returned in an aggravated degree, accompanied with feelings of faintness, and frequent fits of syncope. These fits, however, were evidently hysterical, and not the effect of debility from loss of blood. As the discharge of blood continued, and was increasing, I ordered her to be confined to the horizontal posture, to be lightly covered, to have the window sashes kept up, and to have cloths wet with cold water, kept constantly applied to the thighs and pubes; and she had a draught containing thirty drops of laudanum. These means had the good effect of moderating both the pain and discharge; and the patient for some days continued free from danger.

In consequence of some imprudencies, the discharge again returned in an alarm-

ing degree. In addition to the use of the above means, the vagina was immediately stuffed, and the plug was retained in its situation by a compress and T bandage. As she complained of giddiness, sickness, and ringing noise in her ears, sixty drops of laudanum were given. These remedies had the effect of completely stopping the discharge, and of relieving all the symptoms of debility; but she still complained of a grinding pain in her back. As, from all the circumstances attending the case, it appeared evident that abortion would inevitably take place; a stimulating saline clyster was ordered to be given, and to be repeated every two hours, till the uterus should begin to contract vigorously. The first clyster had the desired effect; the T bandage and compress were therefore removed, and in an hour after, the whole ovum was expelled, and the uterus contracted. As the patient was very weak and

irritable, sixty drops of laudanum were given her, after the expulsion of the ovum; and a draught, containing thirty drops, was ordered to be given the three succeeding nights, at bed-time. On the fourth day she was free from every symptom of ailment.

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SECTION III.

OF THE CAUSES AND TREATMENT OF  
UTERINE HÆMORRHAGE WHEN IT  
OCCURS IN THE LAST MONTHS  
OF PREGNANCY; AND DURING  
LABOUR, TILL THE CHILD IS  
DELIVERED.

In the last months of pregnancy, and likewise during labour, till the child is delivered, dangerous uterine hæmorrhage often takes place. It is therefore of importance that the causes producing the disease, and the symptoms generally accompanying it, should be well known; and that in selecting and applying the means of relief, definite rules of practice should, if possible, be established. When called to such cases, there is seldom time for consultation or delay, and the patient's safety generally depends on the



promptitude and decision with which proper remedies are employed.

Although a separation of the decidua from the uterus sometimes causes a considerable discharge of blood; dangerous uterine hæmorrhage generally proceeds from the placenta becoming partly or wholly separated. The placenta is generally situated at the fundus of the uterus, but it is occasionally attached over the cervix and os uteri, or to one side of the uterus, and a portion of it to the cervix uteri. When the placenta is situated over the os uteri, hæmorrhage always precedes the expulsion of the fœtus; and the action of gestation is seldom continued to the full period of pregnancy; for in the last months of pregnancy, as the cervix and os uteri become dilated, the vessels which connect the placenta to the uterus are ruptured, the process of gestation is impeded, the uterine fibre begins to contract, more vessels are ruptured, and, if assistance be not

given, the woman either sinks from loss of blood, or in some rare cases the child is expelled, preceded by the placenta, and she recovers. In some cases the expansion of the cervix uteri, and the growth of the placenta, seem to go on together, and no hæmorrhage takes place till the os uteri begins to dilate at the full period of pregnancy. In other cases, although during the last months of pregnancy considerable hæmorrhage continues to take place, and the patient is much exhausted by loss of blood, the process of gestation goes on without interruption, till at the full period of pregnancy the os uteri begins to dilate, and the discharge increases in an alarming degree.

Although a morbid state of the uterus or placenta may cause hæmorrhage, these cases seldom occur. And when a profuse discharge of blood takes place from this viscus in the last months of pregnancy, unpreceded by any evident exciting cause, the placenta will generally

be found attached over the os, or to one side of the cervix of the uterus. But in no case of uterine hæmorrhage occurring after the sixth month of pregnancy can any correct opinion be formed, or any judicious mode of practice be adopted, till by examination per vaginam the cause of the complaint be discovered; and as the uterus is generally situated high in the pelvis previous to the ninth month of pregnancy, it will be necessary to introduce the whole hand into the vagina, before any accurate information can be acquired. When the placenta is attached over the os uteri, the cervix is felt more bulky and thicker than natural. The presenting part of the child cannot be ascertained; and when the finger is introduced into the os uteri, the placenta is discovered, and easily distinguished from the membranes, by its having a fleshy lobulated feel. If a portion of the placenta be attached to one side of the cervix of the uterus, it may easily be discovered by a careful examination.

In estimating the danger in uterine hæmorrhage, or in deciding on the remedies which should be employed, the effects produced on the general system, rather than the quantity of blood discharged, ought to be considered. In some women the loss of a few ounces of blood will produce symptoms which indicate great danger, whilst others will bear the loss of some pounds of blood without seeming to suffer in any great degree. In some, the loss of a small quantity of blood will destroy the action of gestation, and induce the expulsive efforts of the uterus; whilst in others, the process of gestation will go on without interruption, although the discharge continues in a slight degree constantly, or recurs on every little exertion during the last months of pregnancy. The manner in which the discharge takes place, likewise varies its effects on the general system, and on the process of gestation. When a great quantity of blood is suddenly lost, the powers of

life are either at once destroyed, or, if recovery take place, it is accompanied by a return of the hæmorrhage, which generally deranges the functions of the uterus, and excites it to contract; but when the discharge takes place gradually, although a very great quantity of blood is lost, the system can bear it better, and the action of gestation generally proceeds.

As in the last months of pregnancy hysteria sometimes accompanies uterine hæmorrhage, producing syncope, and other alarming symptoms; it is necessary, before forming any decided prognosis, to ascertain the quantity of blood discharged, and to consider the other attending symptoms. When the general system has suffered to a great degree by hæmorrhage, the countenance is ghastly, and expressive of great anxiety, the lips are pallid, there is oppressive sickness and vomiting, the pulse is fluttering, the patient complains of giddiness, dimness of vision, ringing noise in her ears, thirst, pain in the extremities, and

pants for breath. If the discharge continues, the pulse becomes more feeble and irregular, there is a low delirium, with a state of great restlessness, the pulse is not to be felt, or only at intervals, convulsive tremours, distortion of the features, and deep inspirations, repeated at long intervals, generally precede death. Sometimes when the loss of blood has been gradual, the prominent symptom is a state of great irritability of the general system, and the muscular power is often continued to the last, the patient sinking suddenly after some considerable exertion.

It is generally admitted, that in the practice of midwifery, no cases occur, which require more presence of mind, more prompt decision, or more active treatment, than cases of profuse uterine hæmorrhage. It is therefore of importance, that the remedies most appropriate to the various forms of the disease should be well understood.

When hæmorrhage takes place, and the placenta is found situated over the os uteri ; if the patient has not arrived at the full period of pregnancy, if the discharge of blood does not produce any evident bad effects on the general system, if the os uteri is rigid, and not much dilated, and if there is not much pain from uterine contraction, an attempt must be made, by palliating the most urgent symptoms, to enable the patient to go on to the full period of pregnancy. She must be strictly confined to a state of rest in the horizontal posture ; cold astringent lotions must be frequently injected into the vagina ; and ice, contained in bladders, must be applied to the pubes and thighs. If she is of a plethoric habit, blood must be taken from the arm ; pain and irritation of mind must be quieted by opiates ; and all stimulants, and every thing which would produce irritation of the mind or body, must be carefully avoided. Although stuffing the vagina, in such cases, might



at first check the hæmorrhage, it is not a remedy which could be employed with safety or advantage, as it would be apt, by irritating the os uteri, to excite the uterus to contraction, necessarily rupturing more vessels, increasing the discharge, and destroying the chance of enabling the patient to go on to the full period of pregnancy.

If the hæmorrhage be considerable, producing symptoms of extreme debility, although the patient has not arrived at the full period of pregnancy, the child must be speedily delivered, as no other remedy can save the life of the mother. At the full period of pregnancy, when labour comes on, the discharge of blood being always very great, no time ought to be spent in the use of ineffectual remedies, as no plan of treatment can with safety be depended on, but the delivery of the child. Before commencing this operation, great benefit will generally be derived from giving the patient four grains of solid opium,



or one hundred drops of laudanum. This remedy will be found to relieve the vomiting, and state of irritation of the general system usually attending this disease; and it will produce in the patient's system a degree of listless composure, which will render turning and delivering the child comparatively easy. As in cases of uterine hæmorrhage, the effects of opium on the system are generally very fugitive, the dose must be repeated as often as symptoms of irritation recur; and it must be increased according to the urgency of these symptoms. When the stomach is so irritable, as to reject the opium, when given in a liquid form, solid opium will generally be retained, especially if combined with an aromatic, such as the aromatic confection.

In turning and delivering the child, the hand well oiled, and formed into a conical shape, must be cautiously introduced into the vagina, carrying it

steadily forward, with a semicircular motion, but resting during the remission of the labour pains; the os uteri should be slowly and completely dilated in the same manner; the placenta should be separated at one side, the membranes ruptured, and the child's feet grasped and brought into the vagina. In dilating the os uteri when rigid, slow and cautious procedure is particularly necessary; but, fortunately, its structure, when the placenta is situated over it, is more vascular and spongy than usual; and when it becomes necessary to dilate it quickly, bad effects are not so apt to be produced. In extracting the child when the breech comes to occupy the os uteri, no farther assistance ought in general to be given, till the head begins to enter the pelvis: but as at this time there is considerable danger that the circulation in the umbilical cord may, by pressure, be suspended, the delivery should be accomplished as

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tion as possible. Danger need not be apprehended from following this rule of practice; for the child's body, by pressing against the open vessels, will restrain the hæmorrhage; and if only part of the placenta remains attached, its functions will be continued in a degree sufficient to preserve the child's life. The advantages to be gained in these cases by allowing the child to be partly expelled by the contractile efforts of the uterus, are important. It favours the regular contraction of that organ, and the complete dilatation of the os uteri. If the placenta is perforated instead of being separated at one side, these advantages will be lost, as the fetal vessels will be torn, and the child will perish, if not speedily delivered.

As soon as the child is expelled, the hand must be introduced into the uterus, and retained there, till that organ, by contracting, separates the placenta, and forces it into the vagina.

which blood

The following cases will illustrate the practice recommended in the foregoing observations.

### CASE II.

In December, 1810, I was called at seven in the evening, to see a woman who was reduced to a very alarming state by uterine hæmorrhage. Her countenance was ghastly, her lips were pallid, her extremities cold, a convulsive tremor shook her whole frame, she had incessant thirst and vomiting, with low delirium, the pulse at her wrist was perceptible only at intervals, and, from her faint state, the hæmorrhage had in some degree abated. On examination, the os uteri was found dilated so as to admit two fingers, and the placenta presented over it. The attendants stated, that she had been flooding excessively for a month; and that, during that period, she had discharged at least a pint of blood daily.

I was convinced, from the whole circumstances attending the case, that the only chance of saving her life consisted in the speedy delivery of the child; but before proceeding to accomplish this purpose, eighty drops of laudanum were given, which, after waiting twenty minutes, produced no sensible effect. One hundred and twenty drops more were therefore given, which in ten minutes were followed by drowsiness, with a remission of the vomiting and tremors. At eight o'clock the hand was introduced into the vagina, the os uteri cautiously dilated, the placenta detached at one side, the membranes ruptured, and the child's feet grasped, and brought into the vagina. The vomiting and restlessness again recurring, eighty drops of laudanum were given, which produced composure, and a permanent cessation of the vomiting. The fetus, which appeared to be of the seventh month, was gradually extracted. The hand was intro-

duced immediately afterwards, and the uterus contracted, separating the placenta, and forcing it into the vagina; from whence it was gradually removed.

At nine o'clock, fifty drops of laudanum were given, and at short intervals she took small quantities of gruel and brandy. At ten o'clock I left her, having ordered a draught, containing sixty drops of laudanum, to be taken at two o'clock next morning.

The following morning her pulse was one hundred and thirty, very weak and intermitting: she had taken her draught, slept two hours, and said she had no complaint. A draught containing fifty drops of laudanum was ordered to be taken as soon as possible, likewise some beef tea to be given at very short intervals, and occasionally some gruel and brandy. In the evening she was doing well, and her pulse was the same as in the morning. Sixty drops of laudanum were ordered to be taken at bed-time.

On the morning of the next day her pulse was one hundred and twenty, weak, and intermitting; she had passed a comfortable night, and felt in every respect easy. Forty drops of laudanum were ordered to be taken immediately, and the beef tea, with gruel and brandy, were continued. At night she was in the same state as in the morning: fifty drops of laudanum were ordered to be taken at bed-time.

On the following day her pulse was diminished in frequency, was stronger and more regular, and she had passed a good night. Having had no stool from the time of her delivery, an ounce of castor oil was given, which operated; and she took thirty drops of laudanum at bed-time.

The two succeeding nights she had thirty drops of laudanum each night. From this period she rapidly advanced to a state of convalescence, without the occurrence of one untoward symptom;



and in fourteen days from the time I first saw her, she was able to engage in the management of her family.

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The good effects produced by the opium, in the foregoing case, were very evident; by it the vomiting, and the other symptoms of general irritability, were relieved, and a state of the greatest distress was converted into a state of tranquillity.

This patient, although very much reduced, recovered completely, without the use of any wine, and the whole quantity of brandy given her did not amount to a pound, pointing out the advantage to be derived from large doses of opium, when uterine hæmorrhage occurs in that rank of society where due nourishment cannot be procured.

It has by some been stated, that vomiting, in cases of uterine hæmorrhage, is a



favourable symptom, contributing to suppress the discharge, and to the immediate relief of the patient, by exciting a more vigorous action of the remaining powers of the constitution, amending the pulse and all the other appearances; and that it ought, therefore, rather to be encouraged than checked. . . . When vomiting arises from the presence of indigestible matter in the stomach, it may, by removing a cause of irritation, be of service; but it cannot be denied, that, in cases of uterine hæmorrhage, vomiting is always very distressing, and is generally to be considered a symptom of the injurious effects the disease has produced on the system. The general effects of vomiting are relaxation and diminished action; and hence proceeds its beneficial influence in cases of rigidity, spasm, and inflammation. On this principle it may tend, in a trifling degree, to diminish the hæmorrhage. But if it is admitted that vomiting has the effect of exciting the

action of the general system, it must increase the hæmorrhage, aggravate every bad symptom, and speedily destroy the patient. When the strength is not completely exhausted, the cessation of the vomiting may be considered favourable; as it is always followed by an alleviation of the other troublesome and distressing symptoms which are produced by this complaint.

### CASE III.

In January, 1813, I was consulted by a lady, who, in the seventh month of pregnancy, was seized with considerable uterine hæmorrhage, and the placenta was found situated over the os uteri. She was instantly confined to a state of rest in the horizontal posture, and kept in a cool temperature; opiates were given to allay irritation; cold astringent fluids were injected into the vagina; her bowels were kept regularly open with small doses of

the sulphate of magnesia; she was put on the antiphlogistic regimen; and, by persevering in these means, she was enabled to go on to near the full period of pregnancy. When labour came on, and the os uteri began to dilate, the hæmorrhage became very profuse; the child was therefore delivered in the same manner as described in the foregoing case.

When a portion of the placenta is attached to one side of the cervix and os uteri, hæmorrhage is almost an invariable consequence; but it does not generally take place till near the full period of pregnancy. In these cases the discharge of blood is often very great, although but a small portion of the placenta has become detached; and as the os uteri sometimes becomes dilated, unpreceded by pain, the discharge may prove fatal before the uterus begins to contract. It is generally impossible, in these cases, accurately to ascertain the situation of the

placenta without introducing the hand into the vagina. If the hæmorrhage takes place before the full period of pregnancy, and if it be not very great, by injecting frequently a strong decoction of oak bark, with the sulphate of alumina, into the vagina, so that it may come in contact with the ruptured vessels, the discharge may be stopped. But if the hæmorrhage, notwithstanding the use of this remedy, still continues, and if the uterus does not contract vigorously, it will be necessary to turn and deliver the child. If the uterus, however, acts forcibly, and if the os uteri is in some degree dilated, by rupturing the membranes the child's head will come to press against the detached portion of the placenta; and if the uterine action continues, the discharge will be suppressed till the child is delivered. This is, perhaps, the only case in which rupturing the membranes may with cer-

tainty be depended on, in order to check uterine hæmorrhage.

#### CASE IV.

In Jan. 1813, I examined the body of a woman who died, undelivered, of uterine hæmorrhage. I learned that she had not felt labour pains, and the attending practitioner thought that nothing could be done for her relief till the uterus should begin to contract: she sunk, however, after flooding twelve hours. The placenta was found situated at one side of the uterus, and a part of it attached to the cervix and os uteri: a small portion, not above an inch in diameter, had become detached.

In the above case, the use of cold astringent injections would, in all probability, have checked the discharge of blood. And if this remedy had failed, as the uterus did not contract, the opera-

tion of turning the child would have been comparatively easy, and would probably have saved the lives of both mother and child.

### CASE V.

In January, 1816, I was called to a patient who was very faint from excessive flooding. On examination, part of the placenta was found situated at one side of the cervix of the uterus, and a small portion of it separated. The os uteri was little dilated, and the uterus contracted very feebly. A large opiate was immediately given, and the child turned. As soon as the breech entered the os uteri, no further assistance was given, till the head came to enter the pelvis. During the progress of the delivery the opiate was repeated to relieve irritation, and no farther loss of blood took place.

*Of Uterine Hæmorrhage arising from  
Accidental Causes, before the Deliv-  
ery of the Child.*

A great discharge of blood frequently takes place from the uterus in the last months of pregnancy, and likewise during the first stage of labour, when the placenta is not situated at the cervix of the uterus. From the supposition that the separation of the ovum from the uterus has been the effect of some accidental cause, those cases of uterine hæmorrhage have been called *avoidable*.

It has been stated, that, in almost all the cases of uterine hæmorrhage which occur previous to the delivery of the child, part of the placenta will be found situated at the cervix of the uterus, and that it is the separation of this part which causes the hæmorrhage. The chief reason for forming this opinion, seems to

be the difficulty of believing that the whole extent of the membranes, from near the fundus to the os uteri, can be separated by any accidental cause. But a degree of violence which would rupture the strong vessels which connect the placenta to the uterus, would certainly be sufficient to destroy the delicate connexion which subsists between the decidua and the uterus. Even the force and gravity of the blood, coming from the ruptured placental vessels, might, in many cases, account for this effect: and although there are cases on record where the effused blood is said to have accumulated between the placenta and the uterus, these have very seldom occurred, and do not form sufficient data from which any general conclusions can be established.

Hæmorrhage proceeding from an accidental separation of the placenta from the uterus, is often unattended by pain, is generally very profuse, and when



accompanied by uterine contraction, if the discharge of blood continues and increases, as it frequently does, the action of the uterus becomes weakened. When the os uteri is in a state of rigidity, the loss of blood from the uterus has often no evident effect in rendering it dilatable: the propelling powers, therefore, being diminished whilst the resistance continues, the process of delivery must be tedious.

The causes, which predispose to a separation of the placenta, when it is not attached to the cervix of the uterus, must either be an increased quantity of blood circulating towards the uterine vessels, or some malformation of the vessels which connect the placenta to the uterus. The exciting causes are very numerous; as sudden and violent affections of the mind, exertions or concussions of the body, or any thing that increases the action of the heart and arteries.

In any case of uterine hæmorrhage, which occurs before the delivery of the

child; without examining carefully per vaginam it will be impossible to ascertain whether the discharge proceeds from the peculiar situation of the placenta, or from the accidental separation of it.

When uterine hæmorrhage arises from accidental separation of the placenta, the prognosis may generally be favourable, except the patient is very much reduced by the long continuance of the disease, or the sudden loss of a great quantity of blood. But when the os uteri is not dilated and is in a rigid state, the liquor amni discharged, the uterus contracting vigorously but irregularly, and the discharge of blood considerable; the prognosis, particularly as relating to the child's safety, should be very guarded.

When a discharge of blood takes place from the uterus, in the last months of pregnancy, and the placenta is not found at the os uteri; there is reason to expect, if the patient has not been very much reduced, that the use of the means al-

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ready mentioned\* will enable her to go on to the full period of pregnancy. But if these should fail, as a complete state of contraction is the only mean which can effectually stop a great discharge of blood from the uterus, and as this state cannot be produced whilst it contains any part of the ovum; the great practical object in these cases is to evacuate it as soon as possible. If the discharge be very profuse, or if a great quantity of blood has been lost, producing alarming constitutional symptoms, the first thing to be attended to, is to ascertain the state of the os uteri. If it be in some degree dilated, or soft and yielding, a large opiate ought to be instantly given; and, as soon as its sedative effects on the general system are perceptible, the hand should be introduced into the uterus; the membranes ruptured, and the child turned and delivered. When the os uteri

\* See p. 54. This quotation

in a rigid state, slow and cautious attempts to dilate it will be found necessary: rude and violent endeavours to effect this purpose having almost always been attended with fatal consequences. Expedition, in those cases, is very seldom necessary; for, when an attempt is made to dilate the os uteri, it always excites the uterus to contract vigorously, and the hæmorrhage is consequently so much restrained, that if the strength has not been previously very much reduced, the delay which arises from this cautious mode of procedure will not increase the danger. Large doses of opium are particularly useful in such cases, as they not only support the patient's strength, but likewise allay the irritation which is unavoidably excited by dilating the os uteri when in a rigid state.

If profuse hæmorrhage occurs when the membranes have been for some time ruptured, and if the os uteri be at the

same time rigid and contracted, it presents one of the most perplexing combinations of untoward circumstances. In those cases, much benefit may be derived from stuffing the vagina, if the patient be not very much reduced before assistance is called; and whilst the os uteri continues rigid and contracted, internal hæmorrhage need not be dreaded. If, however, the patient be very much reduced by the hæmorrhage, it will be necessary to proceed immediately to deliver the child by turning. Resolute, cautious, persevering attempts, are in these cases indispensably necessary; for, after dilating the os uteri, the uterus is often found to embrace the child's body so closely and firmly, that in passing the hand to get hold of the child's feet, there is considerable danger of rupturing that organ; and even after the child's feet have been brought into the vagina, a continuance of very considerable extractive force is often required,

before its head can be made to recede. In many cases of this kind it will be found impossible to accomplish the delivery, without either injuring the uterus or the child, till the patient has fainted with fatigue and loss of blood. But if the os uteri be rigid, and contracted, and if the patient be not very much reduced by the loss of blood, means must be employed to restrain the hæmorrhage, till the os uteri becomes more easily dilat-able. She must be confined to a state of rest in the horizontal posture; the vagina must be carefully stuffed, as before directed\*; cold air must be freely admitted into her apartment; cold must be applied to her thighs and pubes: and this plan of treatment should be continued, till there is reason to believe, either, that the os uteri has become dilated, or, till the patient begins to complain of a sense of distention of the abdomen, accompanied by

\* See page 55.



those constitutional symptoms which are generally produced by a great loss of blood, and which indicate that internal hemorrhage is taking place. The plan of stuffing the vagina in those cases of hæmorrhage, has been condemned by some authors as unsafe. No doubt, when this remedy is employed, the patient must be carefully watched; and when any symptoms appear which indicate that internal hæmorrhage is taking place, the plug must be withdrawn, and the patient must be delivered by turning the child. But, whilst the os uteri remains rigid, and contracted, if the vagina be properly stuffed, there is no danger to be apprehended from internal hæmorrhage; and if symptoms indicating internal hæmorrhage should occur, it may be presumed that the os uteri has become yielding, and that the child may be easily turned. Stuffing the vagina restrains a discharge of blood from the uterus, by

assisting in the formation of a coagulum  
 at the mouths of the ruptured vessels.  
 It likewise, by keeping up a degree of  
 irritation on the os uteri, excites the  
 uterine fibre to vigorous contraction,  
 which has the effect of dilating the os  
 uteri, and of causing the uterus to em-  
 brace the membranes; and, by pressing  
 the bleeding vessels against them, it pre-  
 vents the flow of blood. The delivery of the child, after it is  
 returned, is not to be hurried in these  
 cases, except the discharge of blood is  
 very profuse, and the symptoms of gene-  
 ral debility are very urgent; for, by  
 allowing it to remain partly in the uterus,  
 it favours the complete and regular con-  
 traction of that viscus. But it is neces-  
 sary to bear in mind, that when the  
 head enters the pelvis, it will be ne-  
 cessary to assist the delivery, otherwise  
 the life of the child will be lost by com-  
 pression of the umbilical cord. Large  
 and repeated doses of opium will be  
 found particularly beneficial in allaying



the irritation which is always produced in those cases, by dilating the rigid os uteri, and by the pressure which the hand necessarily makes upon the internal surface of the uterus:

The practice recommended in the foregoing observations is illustrated by the following cases\*.

#### CASE VI.

A VERY delicate woman, who, during the last four years, had been afflicted with severe pulmonary symptoms, which were always aggravated during her state of pregnancy, and which it was to be feared would terminate in phthisis pulmonalis, applied to me, in the fifth month of her tenth pregnancy. She had a severe cough, which seemed to threaten the bringing on of abortion, and she was very much emaciated. By repeated

\* This case has been narrated in the 4th volume of the *Transactions of the Medical and Chirurgical Society*.

small bleedings, and the use of anodynes, her cough was relieved, and for two months after she enjoyed a tolerable state of health.

In the beginning of the eighth month of pregnancy she rode a few miles out of town in a gig; and, on her return, thought herself refreshed by the exercise, and slept better the following night than she had done for some time previous. But on the following morning she was alarmed to find the bed-clothes drenched with blood, and a considerable discharge continuing from the vagina. As she had experienced no pain, she imagined that by remaining at rest, and in the horizontal posture, the flooding would cease. In this she was disappointed; for the cough, which usually attacked her in the morning supervening, the discharge became more rapid; at nine o'clock she became very faint, and before ten she had fainted four times.

I first saw her at eleven o'clock; and I

dreaded, from all the circumstances attending the case, that she had little chance of surviving. Her countenance was ghastly, her lips pallid, the muscles of her face were occasionally convulsed, her voice was so much changed that she could only speak in a very low whisper, scarcely intelligible; she complained much of pain in her limbs, giddiness, singing noise in her ears, severe and oppressive sickness, and she was attacked with frequent fits of vomiting; her breathing was laborious, and frequently interrupted by sighing, and the pulse at her wrist was scarcely perceptible.

On examination, the os uteri was found so much dilated as to admit the points of two fingers, and the child's head presented. The discharge of blood, notwithstanding the patient's faint state, was considerable.

One hundred drops of laudanum were immediately given to her, and as soon as they produced a degree of drowsiness, I proceeded to deliver her by turning the

child. As the os uteri was soft and yielding, the delivery was easily accomplished in an hour. During this interval, as she was frequently attacked with distressing fits of irritability, oppressive sickness, and a sense of sinking; one hundred drops of laudanum were given her at two different times, and each dose was followed by a temporary remission of these symptoms.

After the child was extracted, the hand was again introduced into the uterus; and by gently irritating its sides it soon contracted, forcing the hand and the placenta into the vagina.

By compressing the abdomen with a bandage, and applying cold to the parts, the hæmorrhage was permanently checked.

In a few minutes after the separation of the placenta, as her breathing had again become laborious, and she complained of distressing pain in her limbs, with a sense of sinking, one hundred

drops of laudanum were given, which was followed by an alleviation of all these symptoms.

For several hours she continued in a very alarming state, during which time I did not think it safe to leave her; and, notwithstanding some brandy and gruel were given her every ten minutes, fits of general irritability, and dyspnea, frequently recurred, which were always relieved by a repetition of the laudanum.

In an hour afterwards she was very considerably recovered; her extremities felt warm; the expression of her countenance became natural; she was not so much distressed with thirst, or general irritability, and her breathing was regular, and not so laborious.

She was now able to bear the fatigue of cautiously getting her linens changed: for, previous to this, when she attempted to raise her head from the pillow, a sense of faintness immediately supervened; and had an attempt been made to move her,

whilst, in this weak state, in all probability a fatal syncope would have been the consequence. She had taken, from half past eleven o'clock in the morning till seven in the evening of the same day, an ounce of laudanum, without its producing any of the disagreeable effects which usually attend the exhibition of large doses of this medicine.

Before leaving her, sixty drops of laudanum were ordered to be taken that night, and a similar dose at three in the morning, if not asleep, and the brandy to be continued, or wine substituted. On the following morning I found she had slept for some hours during the night, and her thirst was not so urgent, but her pulse fluttered, and could scarcely be counted, and she was very much troubled with palpitation of the heart. At six A. M. she took eighty drops of laudanum, and a similar dose at three o'clock P. M.; Madeira wine was continued, and beef tea was taken frequently.

and in small quantities. At night she felt better, and took sixty drops of laudanum at bed-time.

In the morning of the following day she was still more revived, and appeared cheerful: she had some sound sleep during the night; her pulse was regular, though weak and frequent, and the palpitations were not so troublesome. The opium and regimen were continued.

She passed the next night quietly; but now her mamma became troublesome, attended with a smart degree of fever, and an aggravation of the pulmonary symptoms. She took some castor oil, which operated, and was followed by considerable relief, and at bed-time she took sixty drops of laudanum.

From this time she continued gradually to gain strength; the opiate was continued every night for ten nights; and she had every day, during that time, a gentle laxative.

By taking a nourishing diet, and a



moderate quantity of spirits in a few weeks from the time of her confinement she was able to sit up. The pulmonary symptoms, of which there were so many during her state of pregnancy, and which there was reason to fear would have proved fatal after delivery, almost entirely disappeared. In point has now done. This patient was for some time much distressed with severe attacks of palpitation of the heart, which gave her great alarm: these were frequently prevented by taking a tea-spoonful of the volatile tincture of valerian, when she perceived their approach, and were completely removed by taking ten drops of the ammoniated tincture of iron three times a day in a glass of water. In the above case, the hæmorrhage was neither preceded nor accompanied by uterine contraction. It has been stated, that this circumstance tends always to increase the danger of the complaint. This position must, however,



be admitted with restrictions. The absence of pain, no doubt, lessens the alarm, which profuse uterine hæmorrhage excites, in the minds of the patient and her friends; and from a supposition that the labour has not commenced, they may delay applying for assistance till it is too late. But if the practitioner is called before the patient has sunk beyond the hope of recovery, the absence of uterine contraction is rather a favourable circumstance, as it must at once determine him with regard to the mode of practice he ought to adopt: and delivering the child by turning it, is the only certain mean which, in such circumstances, can be employed to save the patient's life. This will be more easily and speedily accomplished when the uterus has not previously contracted, especially if the os uteri is soft and yielding.

A state of torpor, and a diminution in the secretions of the abdominal viscera, are generally the immediate consequence,

of the process of parturition; and especially when it is complicated with such a debilitating cause as uterine hæmorrhage. As opium, when the system is in a state of health, generally produces constipation, it might have been expected that when given in such large doses, as in the foregoing cases, it would have been apt to increase that tendency to constipation, which is generally consequent to the process of parturition. In the above, and in other similar cases which have come under my observation, this medicine when given in large doses, had an opposite effect; the bowels either being regularly evacuated without the use of laxatives, or being very easily moved when laxatives were necessary. And although purgatives were given in the foregoing case when the secretion of milk became troublesome, it was not with a view to obviate a constipated state of the bowels, but to divert the tendency

of the fluids from the chest; the effects of which, in this instance, were so much to be dreaded.

### CASE VII.

IN March 1810, I was called to a patient who was in labour. Her nurse informed me that she was at the full period of pregnancy; and had been suddenly seized with severe pain in the uterine region, accompanied with a great discharge of blood from the vagina, whilst making some imprudent exertions.

On examination, the os uteri was found dilated so as to admit the ends of two fingers; the child's head presented; the membranes were ruptured; and although the uterus contracted vigorously, and almost without intermission, the discharge of blood continued to flow profusely.

The patient was instantly confined to

a state of rest in the horizontal posture, cold air was freely admitted into her bed-chamber, her drink was given quite cool, cold was kept constantly applied to the thighs and pubes, and her mind was tranquillized by every possible means. This plan having been recommended as very effectual for suppressing uterine hæmorrhage, it was expected that it would have had the effect in this case, and that the child would have been expelled by the natural efforts, before any alarming symptoms occurred. These hopes, however, were fallacious; for, notwithstanding the continued assiduous use of the above means, the discharge became much increased, producing symptoms of great debility, and a distressing state of general irritation. It was therefore thought unsafe to trust any longer to the natural efforts. A hundred and twenty drops of laudanum were given; and as soon as its effects on the general system

became evident, the hand was cautiously introduced into the vagina. The os uteri, although rigid, yielded slowly; but, notwithstanding the faint state of the patient, the uterus contracted so forcibly, that it was with difficulty, and with the most serious apprehensions of rupturing that organ, that the hand was carried to its fundus, and the child's feet grasped and brought into the vagina. Whilst the hand was in the parts, and before the feet were brought into the vagina, one hundred and eighty drops of laudanum were given at two different times, to relieve symptoms of irritability which recurred. Here the difficulty did not however terminate; for the uterus, contracting spasmodically, embraced the child's body so closely whilst in this doubled form, that the head was partly forced betwixt the legs, the chin hitching against the pubes; and all cautious attempts exerted for a considerable time to make the head recede, proved

ineffectual. As, in consequence of the powerful contraction of the uterus, and the faint state of the patient, the discharge of blood had considerably abated, after giving one hundred and fifty drops of laudanum, she was allowed to rest for some time. When the sedative effects of the opium became perceptible, the spasmodic action of the uterus began to give way, the child's feet were therefore grasped, and by employing gentle extractive force, the head receded, and no farther difficulty was experienced in effecting the delivery. After the expulsion of the child, the hand was immediately introduced into the uterus, and retained in it, till by its contraction it forced the placenta into the vagina, from whence it was without delay removed. As the patient was so extremely faint as to be incapable even of articulating, so as to be understood, the abdomen was supported by a broad bandage, drawn as tight as she could easily bear

it. Small quantities of brandy and gruel were frequently given, and she was kept completely at rest, with her head very low, till such time as she began to recover some strength. Sixty drops of laudanum were given immediately after her delivery, and a similar dose was ordered to be taken in four hours. At bed-time she had eighty drops of laudanum. For the four succeeding nights she had fifty drops of laudanum, and gradually recovered without any farther assistance.

It may be remarked in the foregoing case, that the early evacuation of the liquor amni, whilst it rendered the operation of turning the child very difficult, did in no sensible degree tend to check the hæmorrhage; and the patient must have sunk from loss of blood, had she not been delivered by art.

Had the vagina been plugged when I was first called to this patient, in all probability it would have lessened her danger.



and suffering, and there would have been less cause for anxiety. Early instruction had prejudiced me against this remedy, as useless or hurtful: but I am from experience convinced, that in cases of uterine hæmorrhage, when the os uteri is rigid and contracted, it may be employed with the greatest safety and advantage.

Although, in the foregoing case, the uterus contracted so forcibly, as to cause considerable difficulty in introducing the hand between it and the child's body, and very considerable pressure was consequently made on its internal surface, yet no complaint of that viscus has, in this woman, as yet occurred, and she has since been twice delivered of healthy children.

The large doses of laudanum, which were given in this case, evidently produced the most beneficial effects, by relieving the irritation of the general system, and removing the spasmodic



action of the uterus, which opposed an almost unsurmountable difficulty to the child's delivery.

This patient recovered without the use of wine.

Although these two cases fully illustrate the treatment recommended when uterine hæmorrhage is caused by accidental separation of the placenta from the uterus, yet the advantages of the practice will perhaps appear more evident, by contrasting these with the following relation, in which the plan of treatment generally employed in such cases was adopted.

#### CASE VIII.

In July, 1809, at twelve o'clock, at noon, I was called to see a woman who was in labour of her eighth child, and who had a discharge of blood from the uterus. A midwife, who had been in attendance for two days, informed me,

that the discharge at first was very profuse, and that, with the intent of checking it, she had ruptured the membranes as soon as possible. Yet, notwithstanding, the flow of blood continued for a considerable time unabated, and had only become more moderate within the last two hours. The patient was naturally robust, and as the loss of blood had been gradual, her countenance did not seem much altered: she was, however, in a very irritable state, and tossed about, feeling uneasy in every posture, and distressed with oppressive sickness. On examination, the os uteri was found considerably dilated, and very rigid; the vagina contained a quantity of coagulated blood, which had lodged in it from the midwife's having stuffed the external orifice with a sponge; the labour pains were weak, and repeated at long intervals; and the pulse, although irritable, was not frequent.

At the request of her friends, two eminent accoucheurs were called in consultation, and they determined, that nothing for the present should be done; conceiving that in all probability the natural efforts would increase, and that the child would be expelled. They were of opinion, that at all events no danger could arise from the hæmorrhage by delaying the patient's delivery, as the membranes were ruptured. I urged in vain the danger of delaying the delivery; the inefficacy of carelessly stuffing the external orifice of the vagina; and the benefits which might be derived from giving large doses of opium. After directing the midwife to keep the room cool, to give the patient all her drink cold, and to introduce a sponge wet with cold vinegar into the vagina, they took their leave; and it was agreed, that if great faintness, an increase of the discharge, or any other untoward symptom occurred, the mid-

wife should lose no time in sending for us: but if we were not sent for, we should not again meet till eight o'clock in the evening.

At six o'clock the midwife was alarmed by a great increase of the discharge, which forced the sponge, with many coagula, out of the vagina, and requested our immediate attendance. We now found the patient very faint, and distressed with all the symptoms attending a great and sudden loss of blood. Her countenance was ghastly; she had oppressive sickness, with an unsupportable sense of sinking; she was distressed with intolerable pain in the muscles of her extremities, and her pulse was very frequent, weak, and fluttering. We learned from the midwife, that the uterine pain had for some hours entirely ceased; and, upon examination, the os uteri was not found more dilated, although it had become softer.

As it now was indisputable that her only chance of living consisted in the immediate delivery of the child, one

of the practitioners introduced his hand into the vagina; and, having experienced considerable difficulty from the rigid state of the os uteri, and from the powerful contraction of the uterus, after an hour's continued exertion; he succeeded in turning and extracting the child. The placenta was immediately removed, and the uterus contracted, so that not an ounce of blood was afterwards lost. Supposing that there could now be no objection to giving a large opiate, I again proposed it; but, as before the patient's delivery, it was opposed from a dread of its preventing the contraction of the uterus, it was now objected to from an apprehension that, by its stimulating property, it might induce a return of the hæmorrhage. Another objection was raised, still more unfounded; that large doses of opium always tend to aggravate a state of general irritability. The cold treatment was therefore continued, and a few drops of ammonia and sulphuric

other were ordered to be given every six hours.

I left the patient, under the most confident apprehensions that she could not live many hours. At four o'clock the following morning I was called to her, and she was breathing her last as I entered the room. The attendants informed me, that she had continued in a state of the most distressing irritability during the whole night, shifting her posture every instant, and throwing her limbs in every direction. She was frequently affected with convulsions, retained her faculties to the last, was constantly distressed with thirst, and had just sat up to take some drink the instant before she expired.

If this woman had been delivered, and if opium had been given in doses proportionate to the urgency of the symptoms, at our first visit, there is every reason to suppose, nay, there is

even a great degree of certainty, that she would have recovered; or had the vagina been carefully stuffed, it would in a great measure have prevented the immense loss of blood she experienced before we were again called: and even when she was delivered, had opiates been given to alleviate the distressing symptoms, and had she been supported by proper nourishment, there was still at least a chance of her recovery. All these means were neglected; and the event proves the danger of trusting, in similar cases, to such insufficient means as were employed.

The effects of hæmorrhage on the general system varies considerably, according to the rapidity with which the blood is discharged. When a great quantity is very suddenly lost, the patient is often seized with a fatal syncope; or if she recovers from this state, it is often only to inspire hopes which soon vanish; the general system having received a shock which its powers are

unable to bear. But, as in the case just mentioned, where the blood is lost slowly, although the system can bear it better, yet, after the discharge has continued a certain time, a train of the most distressing symptoms take place, which, even after the hæmorrhage is suppressed, continue, and eventually destroy life.

The foregoing case points out the danger of trusting too long to the natural efforts in cases of uterine hæmorrhage, — the necessity of carefully watching the symptoms, — of employing the most active measures to relieve irritation, to support the strength, and to evacuate the uterus.

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## SECTION IV.

OF THE CAUSES AND TREATMENT  
OF UTERINE HÆMORRHAGE, WHEN  
IT OCCURS AFTER THE CHILD IS  
DELIVERED.

A DISCHARGE of blood always accom-  
panies the separation and expulsion of  
the placenta; but the quantity dischar-  
ged varies very much in different women;  
without producing any sensible effects  
on the general system.

In the great proportion of cases, the  
blood which comes away with the pla-  
centa is only the quantity which is con-  
tained in the uterine vessels at the time  
this organ is separated: but if the uterus  
does not contract immediately after the  
placenta becomes detached from it,  
blood will continue to be poured into  
its cavity, either till successful means are

employed to bring it into a state of contraction, or till the patient sinks.

Sometimes uterine hæmorrhage occurs very insidiously, and proves fatal, although no blood appears externally: for after the child is delivered, if the placenta, or a coagulum of blood, forms a plug in the os uteri or vagina, although all external appearance of the discharge is prevented, yet the bleeding may be taking place internally, and the uterus may yield till it becomes completely distended. The first warning which the practitioner generally has of such an accident, is the patient complaining of faintness; and, on examination, he finds her countenance ghastly, and expressive of the greatest anxiety, her abdomen very much distended, her extremities cold, she labours for breath, sighs convulsively, and expires. If in these cases the plug be removed before the patient sinks, and the uterus is excited to contract, many pounds of blood will be discharged; and

If the patient survives, she generally remains for a long time in a very debilitated state. Uterine hæmorrhage seldom takes place until a few minutes after the child is delivered, except when it begins in the former stages of the labour. When uterine hæmorrhage occurs after the delivery of the child, it is caused, either by want of contraction in the uterine fibre, — by irregular contraction of the uterine fibre, — or by a change in the structure of the placenta, causing a morbid adhesion of it to the uterus.

A want of contraction of the uterine fibre is the most frequent cause of uterine hæmorrhage, and often proceeds from some mismanagement in the first stages of the labour. If the labour has been rendered tedious by the debilitated state of the patient, or of the uterus, by the injudicious interference of the practitioner, or by means which have induced a febrile affection of the general system, a state of

torpor of the uterus is apt to take place after the child is delivered. A similar effect is often produced in this organ, if, after the child's head is delivered, the body be immediately dragged through the parts, or if in the operation of turning, or when using instruments, as soon as part of the child is delivered, the remaining part be hastily brought away before the uterus has contracted. Women, who have had a numerous family are very apt to be affected with a state of torpor of the uterus after delivery, and where this state of that organ has once taken place after delivery, it frequently recurs in future labours. When the placenta is hastily brought away from the uterus immediately after the delivery of the child, and before the patient recovers in some degree from the excessive languor which generally succeeds the delivery, inmenstruation is apt to take place. When the uterus contracts partially and irregularly after the child is deliver-

ed, part of the placenta generally becomes detached, and hæmorrhage takes place. If the uterus has been irritated during the first stages of the labour, either by the early evacuation of the liquor amni, or any other cause, irregular contraction of it is to be dreaded after the delivery of the child. But the most frequent cause of irregular contraction of the uterus, is hurrying the delivery of the child after its head has escaped from the parts; for in this case, whilst one set of its fibres are excited to contract, another set having no stimulus applied, remain in a state of relaxation.

Rude attempts to bring away the placenta, by pulling at the umbilical cord immediately after the delivery of the child, is likewise apt to induce irregular contraction of the uterus.

The circular fibres of the uterus sometimes contract about the centre of this organ, and form it into two ca-

vities, like an hour-glass, and the placenta is either grasped by the stricture, or retained in the upper cavity. In other cases, some of the fibres about the cervix uteri contract, and grasp the placenta, whilst the fundus and body of the uterus remain in a state of relaxation, and distention. Sometimes the circular fibres of the uterus contract; whilst the longitudinal ones remain relaxed, and the uterus assumes a cylindrical form. In other cases the fibres at the fundus of the uterus contract; whilst those in the body and cervix remain relaxed, forming a cone.

Uterine hæmorrhage is frequently produced, after the delivery of the child, by a morbid adhesion of part of the placenta to the uterus. The placenta sometimes becomes of a cartilaginous or osseous structure, and sometimes it is unnaturally soft, and pulpy. In general, only part of the placenta is changed into a cartilaginous or osseous structure; but this part, although small, often ad-

he is so firmly to the uterus, that the natural action of that viscus is incapable of separating it; but the healthy part of the placenta being detached, and the uterus by its presence, prevented from contracting, hæmorrhage takes place.

When the placenta is of a soft and pulpy structure, it is apt to be torn, and if part of it be left adhering to the uterus, it will prevent that organ from contracting, and it will thus produce hæmorrhage.

If the uterus contracts vigorously after the child is delivered, the patient complains of pain, and the uterus can easily be felt, forming a hard tumour above the pubes. But when this organ is in a torpid state, there is no pain, and it will be felt softer and larger than usual; and if distended with blood, it will be felt to occupy the whole abdomen, rendering the abdominal walls very tense.

When the uterus is affected with irregular and spasmodic contraction, this state may sometimes be ascertained while



the abdominal walls are thin, by placing the hand on the abdomen, and the patient generally complains of excruciating pain in the uterine region.

The placenta is usually retained when the uterus is affected either with torpor, or irregular contraction; and as this organ may at the same time, from a change in its structure, form a morbid adhesion to the uterus, it will be impossible fully to ascertain the cause of its being retained without introducing the hand.

As there is sometimes a difficulty in determining whether the placenta is retained in the vagina or uterus; if, by tracing with the finger along that side of the umbilical cord which is towards the sacrum, the part of the placenta into which the cord is inserted can be felt, it may be concluded that the placenta is separated from the uterus, and is in the vagina. In some rare cases this criterion has been found fallacious, when the placenta adhered very firmly to the fundus of the uterus; and this mistake may be



same time in a torpid state, by pulling at the umbilical cord it has become inverted, and the placenta has felt as if in the vagina. But this peculiarity can be detected, by a careful examination, and attention to the symptoms.

When uterine hæmorrhage occurs after the delivery of the child, it is always very dangerous, and often proves speedily fatal, if immediate assistance be not given. In some women the loss of a few ounces of blood will sink the system beyond the power of recovery; whilst others will bear the loss of some pounds of blood with seeming impunity. The prognosis, therefore, should be regulated, rather by the effects produced on the general system, than by the quantity of blood discharged.

When the hæmorrhage proceeds from a state of torpor of the uterus, if the patient is very faint, the case is very alarming, and a few minutes may decide her fate. When the complaint arises from irregular contraction of the uterus,

as the blood is generally expelled more slowly, the danger is not so immediate. But as this disease is generally attended with present danger, and likewise, from the state of debility (which it produces, apt to bring on other distressing complaints, the most careful and decided means ought to be employed both to prevent, and relieve it.

In patients who have had attacks of uterine hæmorrhage after former labours, from a state of torpor of the uterus; or when from their general appearance, or other circumstances, a state of torpor of this viscus is to be dreaded at this time, a broad bandage should be applied over the abdomen as soon as the labour commences, which should be gradually tightened as the process advances. This will support the uterus, and assist it in retaining a contracted state. When the labour is natural, and advancing, although slowly, every mean which would tend to fatigue or irritate the patient, should be avoided, and the child should be allowed

to be completely expelled by the natural efforts. As soon as the child is delivered, the bandage should be drawn as tight as the patient can bear it, without rendering her uncomfortable. The application of the bandage will not only support the uterus, but will be found to obviate a strong tendency to syncope, which generally produces a state of torpor of that viscus, and which so frequently attends the sudden removal of an accustomed pressure from distended parts. As soon as all dread of hæmorrhage is removed, the bandage may be gradually loosened.

In hæmorrhage proceeding from torpor of the uterus, when the discharge of blood is very great, in addition to the application of the bandage, one hundred drops of laudanum should be given, and the hand, well oiled, should be gently introduced into the uterus. It should be kept in mind, that the object to be accomplished by introducing the hand, is not to bring away the placenta, but

to excite the uterus to contract, that it may separate the placenta, force it into the vagina, and thus permanently check the hæmorrhage.

Although in general the stimulus communicated to the uterus by the hand, when passing through the os uteri, will be found to excite it to contract; yet, when it is in a very torpid state, it may be necessary, after introducing the hand into it, to make pressure with the fingers on its internal surface, and even sometimes to move the hand for some time in its cavity, before it can be brought into a state of contraction.

In every case where it becomes necessary to introduce the hand into the uterus after the delivery of the child, it must not be withdrawn till that organ has completely contracted; and if a fit of syncope takes place during the operation, the hand must still be retained in the uterus, that advantage may be taken of the first signs of returning life to excite it to contract.

No occurrence is so much to be dreaded after the delivery of the child, and before the uterus has contracted, as a fit of syncope, as it always prevents the contraction of that organ; and although at the same time the flow of blood may be in some degree retarded, yet the ruptured vessels being large, blood in considerable quantity will continue to be poured out by them. In this way the syncope may prove fatal, or the patient's system may be so far sunk, that she recovers only to draw a few convulsive inspirations, and then expires. Those authors have been rather unjustly blamed, who in such cases have advised the free use of stimulants. The fault, in general, does not seem to consist in the assiduous use of restorative means, but in not taking immediate steps, when life is returning, to stimulate the uterus to contract. When the patient faints, whilst the hand is retained in the uterus, every mean should be employed to restore her; cold air should be freely admitted into her bed-chamber;

fomentations should be applied to the epigastric region, and to the extremities; cold water should be sprinkled on her face, stimulants should be applied to her nostrils; her head should be laid very low, and, if any liquid can be got into the stomach, hot brandy and water ought to be given in considerable quantities. As soon as signs of returning life are perceived, by gently moving the hand in the uterus it will begin to contract, and by supporting it with a bandage drawn tight round the abdomen, it will retain its contracted state so as permanently to check the discharge. If the patient's general system has suffered, large doses of opium should be given; and when a state of great irritation of the general system takes place, the opium should be repeated according to the urgency of the symptoms. Small quantities of strong soups, or wine, should likewise be given, at short intervals, to support the strength. The application of cold, in the form of



ice, snow, or vinegar and water, to the thighs and pubes, has been recommended as a very efficacious mean in the cure of uterine hæmorrhage, arising from a state of torpor of the uterus. This remedy may succeed when the uterus is nearly contracted, in checking the discharge, by retarding the flow of blood to the uterine vessels. The sudden application of cold may likewise, by giving the general system a shock, have some effect in stimulating the uterus to contraction. But when the hæmorrhage is very great, and the uterus in a torpid state, this remedy cannot with safety be trusted to, as superseding the necessity of introducing the hand. And that surgeon would not be more blamable who would trust to styptics, in suppressing a hæmorrhage from a wounded femoral artery, than the accoucheur who would trust to the application of cold alone, for suppressing profuse hæmorrhage, arising from torpor of the uterus. The application of spirits of

the abdomen has been found useful in those cases, proceeding, by its sudden elevation, a great degree of cold; and by stimulating the skin, it has been supposed that, by sympathy, it stimulates the uterus. When the placenta is forced, by uterine contraction, into the vagina, it ought to be immediately removed, and the patient should be carefully watched; for if the uterus has not completely contracted, the blood which will be poured out may form a coagulum in the vagina, and the uterus may yield till it becomes completely distended with blood: this sometimes occurs even when the bandage has been previously applied.

#### CASE IX.

In December 1810, I attended a lady who was in labour of her seventh child. She was a delicate woman, and seemed possessed of little muscular strength.



The first and second stages of the labour, although protracted from a slight degree of deformity in the bones of the pelvis, were terminated by the natural efforts, without the occurrence of any untoward symptoms. On applying the hand to the abdomen immediately after the expulsion of the child, the uterus was found contracted. From some foolish prejudice, this patient would not allow the abdomen to be supported by a bandage, after her delivery; and, in consequence of this, a state of great faintness succeeded. In ten minutes after the expulsion of the child, she suddenly exclaimed, that she was dying. On applying the hand to the abdomen, the uterus was found completely distended, rendering the abdominal parietes as tense as they were before the commencement of the labour; and although no blood had escaped from the vagina, the pulse at the wrist could not be felt; and a fit of syncope immediately came on. Her head

was laid very low, fomentations were applied to the epigastric region, and to the feet, cold air was freely admitted into the room, stimulants were applied to her nostrils, and the hand was gently introduced into the vagina. As soon as symptoms of recovery were perceived, one hundred drops of laudanum with some brandy were given, and the hand was carried forward into the uterus. The os uteri was found filled with the placenta, and coagula of blood. On passing the hand through it, the uterus began to contract, and by making gentle pressure on its sides, it contracted completely, forcing all its contents into the vagina; from whence they were without delay removed. The abdomen was supported by a firm broad bandage, cold was constantly applied to the pubes, brandy and water were frequently given in small quantities, and a draught, containing one hundred drops of laudanum, was given

every four hours, till all symptoms of immediate danger disappeared.

Although no farther loss of blood took place, this patient continued for many hours in such a faint state, that she could not bear to have her head raised an inch from the bed, without feeling a sense of returning syncope.

By giving suitable nourishment, and a draught, containing fifty drops of laudanum, every night and morning for the five succeeding days, she gradually recovered.

Had the application of cold been solely trusted to in the above case, there can be little doubt of the probable termination: for as the great object to be attained was the speedy contraction of the uterus, the use of any means which were not calculated to produce this effect, must have been worse than useless.

## CASE X.

IN March 1811, I attended a woman in labour of her sixth child, and who had suffered from profuse hæmorrhages after former labours. The first and second stages of the labour terminated easily, and without the occurrence of any untoward symptom; but although the abdomen was supported by a bandage, drawn as tight as the patient could bear it, she became very faint immediately after the expulsion of the child; and a considerable discharge of blood took place from the vagina. The hand was immediately introduced into the uterus, and it was found uncontracted, and in a state of torpor. The placenta was found partly detached. By moving the hand in the uterus, and pressing with the fingers on the part of the placenta which still adhered, this viscus gradually contracted, separating, and forcing the placenta into the vagina,

from whence it was immediately removed. A large dose of opium combined with brandy was given, cold was kept constantly applied to the thighs and pubes, and the bandage over the abdomen was continued. In ten minutes after the placenta came away, the patient began again to complain of great faintness, and on applying the hand to the abdomen, the uterus was found considerably distended. The hand was again introduced into the uterus, and it contracted, forcing the hand, with many coagula of blood, into the vagina. A compress, soaked in spirits, was applied to the abdomen, and the bandage was rendered as tight as the patient could bear it: she was kept with her head very low, cold water was frequently sprinkled in her face, and stimulants were applied to her nostrils. The brandy and laudanum were repeated. In a quarter of an hour after, the patient again complained of faintness, and whilst examining the state

of the abdomen, she fainted; the uterus felt (as before) much enlarged. The means already recommended in cases of syncope were successfully employed in restoring her; and advantage was taken of the first symptoms of recovery to excite the uterus to contraction, by introducing the hand. This viscus again contracted, and by keeping up a degree of irritation on the os uteri, for the space of five minutes, with the hand in the vagina, and continuing to employ the remedies already mentioned; no farther hæmorrhage took place. Brandy and laudanum were given in doses of fifty drops of the laudanum to two ounces of brandy, every half hour for three hours; and small quantities of strong beef-tea were likewise frequently given. This patient continued for a long time in a very weak state, and for many months was troubled with œdematous swellings of the lower extremities; she, however, eventually recovered.

## CASE XI.

In March 1816 I was called to a woman who was flooding. I found that she had just been delivered of twins, and the practitioner who attended her informed me that after the first child was expelled, in attempting to bring away the placenta, by pulling at the umbilical cord, very profuse hæmorrhage was produced. Anxious to bring away the placenta as soon as possible, he introduced two fingers into the vagina, and discovered the feet of a second child passing through the os uteri. He without delay extracted this child; but the hæmorrhage still continued, and had been going on for a considerable time before I saw her.

I found her extremely faint, and the little remains of strength she possessed was exerted in screams and groans, from the extreme pain she felt in her limbs; and she suffered very much from a state



of excessive irritability of the general system. The pulse at her wrist could not be felt, her extremities were cold, her countenance was ghastly, she complained of great thirst, whatever drink she took was instantly rejected by vomiting, and she had fainted several times.

Two hundred drops of laudanum were immediately given, and the hand was introduced into the uterus. The two placentæ were found connected, and partly separated from the uterus; which was in a very torpid state, and felt like a loose empty bag. The introduction of the hand did not at first produce any sensible stimulating effect upon it. The abdomen was immediately supported by a bandage, and brandy was given in considerable quantities. After moving the hand for some minutes in the uterus, it began to contract, separating the placenta, forcing it into the vagina, and permanently stopping the flow of blood.



The first dose of laudanum relieved the vomiting, but the faintness and state of general irritability continued in a very distressing degree. At the interval of an hour after the first dose of laudanum, one hundred and fifty drops more were given in some brandy, fomentations were applied to the epigastric region and feet, and cold was kept constantly applied to the pubes.

The state of faintness and irritability of the general system, although relieved by the opium and brandy, again recurred; these medicines were therefore continued, and given according to the urgency of the symptoms. The patient did not appear to be out of danger till five hours after I first saw her; and from eight in the evening till five o'clock on the following morning, she had taken above an ounce and a half of laudanum with a pound and a half of brandy. The opium was continued in doses of fifty drops, night and morning, for the six following days.

and she recovered gradually to a state of perfect health.

When during labour, before the child is delivered, it is evident that the uterus is contracting spasmodically and irregularly, a large opiate should be given, either in a draught or in the form of clyster; every thing that would tend to irritate or render the patient feverish should be avoided; care should be taken not to rupture the membranes of the ovum, till the os uteri is completely dilated; and the child should be allowed to be entirely expelled by the natural efforts. If the uterus be contracting very forcibly and seemingly under the influence of spasm when the child is passing out at the external parts, its expulsion should be in some degree retarded, by making pressure with the hand on the head or shoulders. These

means will generally be found successful in bringing about a regular and complete state of contraction of the uterus.

When, after the child is delivered, the uterus is found contracted, forming a hard round tumour above the pubes, when there is no unusual discharge of blood from the vagina, and when none of the constitutional symptoms which are generally produced by hæmorrhage occur; no attempt should be made to bring away the placenta till the patient has rested for some time. In half an hour after the delivery of the child, if the natural efforts have not expelled the placenta, by pulling gently at the umbilical chord, the regular action of the uterus will generally be excited, and the placenta can then be gradually withdrawn.

When the uterus contracts irregularly, whether before or after the placenta is expelled, uterine hæmorrhage is always the consequence; and it will generally be necessary to introduce the hand, for the

purpose of bringing about a state of regular contraction of that organ. In such cases it will be found of the greatest service to precede the introduction of the hand by giving a large opiate, and by dashing cold water suddenly on the abdomen.

When the neck and mouth of the uterus grasp the placenta, after introducing the hand into the vagina, it will be necessary gradually to overcome the contraction by insinuating the fingers through the os uteri, and turning them in a semirotatory manner, till the whole hand can be easily passed beyond the strictured part. The uterus is then to be stimulated to contract, and the hand must not be withdrawn till that viscus has contracted regularly and completely.

In the hour-glass contraction of the uterus the same means will be found successful, and opium should be given in large doses to allay the state of irritation of the general system which always at-

tends these cases. After the uterus has contracted, the abdomen should be supported by a bandage; and if the patient is faint the restorative means already recommended should be employed.

### CASE XII.

In October 1812 I was called to a woman who, after being delivered, had a great discharge of blood from the uterus. I learned that the labour had been easy and natural, but that the practitioner who attended her, being in a hurry, had extracted the placenta immediately after the delivery of the child. A large dose of laudanum was given, and the hand was gently introduced into the uterus. The circular fibres towards the fundus of this viscus were found contracted, whilst those at the os and cervix remained relaxed. By dashing cold water on the

\* See p. 110.

abdomen, and pressing gently with the hand on the fundus, regular contraction of the uterus was produced, and the hemorrhage was stopped. The abdomen was supported by a bandage.

### CASE XIII.

IN December 1813 I was called to a patient who, after being delivered, had a very great discharge of blood from the uterus, and complained of excruciating pain in the uterine region. I learned that the child had been suddenly expelled when the patient was in the erect posture; and although cold was kept constantly applied to the pubes, the hemorrhage continued unabated. One hundred drops of laudanum were given, and the hand was introduced into the uterus. This organ was found contracted in a cylindrical form, and in attempting to get to its fundus, the hand seemed to pass up as high as the *corbiculus cordis*. The placenta was found partly detached.

By pressing gently on the fundus of the uterus it gradually contracted, expelling the hand and the placenta. The abdomen was supported with a bandage, opium was given to allay irritation, and wine and soups to support the strength.

#### CASE XIV.

IN July 1814 I was called to a woman who, soon after being delivered of a child, was seized with a violent discharge of blood from the uterus. The practitioner in attendance had made several unsuccessful attempts to bring away the placenta.

A large dose of laudanum was immediately given, and the hand was introduced into the vagina. The placenta was found partly in the vagina, but the greatest part of it was grasped by the cervix and os uteri. The constriction was gradually overcome by insinuating the hand, formed into a conical shape, through it; and the stimulus thus com-



municated to the uterus had the effect of making it contract completely, expelling the placenta, and stopping the hæmorrhage. The abdomen was supported with a bandage.

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When hæmorrhage takes place after the delivery of the child, and the uterus is found contracted, forming a hard round tumour above the pubes, and when gentle attempts to bring away the placenta by pulling at the umbilical cord, are unsuccessful, it may be presumed that the structure of the placenta is altered, and that it forms a morbid adhesion to the uterus. The hand in these cases must be introduced, guided by the navel string, and pressure must be made on the adhering portion. This assists in detaching it, and likewise stimulates the uterus to contract. No attempts are to be made forcibly to tear the placenta from the uterus, as this would be attended with



serious injury to that viscus, and by opening the mouths of more vessels, would increase the hæmorrhage. When gentle means are not sufficient to separate the portion of the placenta which is changed in its structure, the part of it which is detached should be removed, whilst that portion which adheres must be left to be thrown off by putrefaction. To stimulate the uterus, and assist in this process, the occasional use of saline clysters will be found of service ; but their effect must be watched, as they sometimes cause a return of the hæmorrhage.

When the placenta is in a soft pulpy state, particular care is necessary in separating it from the uterus ; as, if any forcible means are employed, it will be torn, and part of it will be left adhering to this viscus. The only safe means which can be employed in those cases are such as stimulate the uterus to contract.

When part of the placenta is left in the uterus, it often produces the most

distressing symptoms. If putrefaction of this portion takes place, part of the putrid matter is sometimes conveyed by the uterine absorbents into the system, producing hectic fever, very great debility, and a state of general irritability. The discharge, which comes from the vagina in these cases is always very offensive, and highly acrimonious; excoriating all the parts with which it comes in contact, and frequent returns of hæmorrhage take place. Great pain and tenderness are sometimes felt in the uterine region, which in some cases extend over the whole abdomen, so that the patient cannot bear even the weight of the bed-clothes.

To relieve the state of irritation, and support the strength, opium in large doses combined with camphor and considerable quantities of wine, must be given, the strictest attention must be paid to ventilation and cleanliness, some mild vegetable astringent, such as infusion of

green tea, or camomile flowers, should be frequently injected into the uterus; the external parts should often be bathed with a solution of acetate of lead, or with equal parts of brandy and water, and the bowels must be kept regularly open.

Sometimes, when a portion of the placenta is left in the uterus, it is retained for a great length of time without being changed in its structure, and is eventually expelled with great pain and considerable hæmorrhage. Sometimes the retained portion is converted into hydatids; and the patient is harassed with uterine pain, and weakened with frequent attacks of hæmorrhage, till it is expelled. To facilitate the expulsion of the retained portion in these cases, saline clysters should be frequently given, and the patient should take rough exercise, as riding on a stony road in an ill-hung carriage. When the uterus begins to contract, large doses of opium should be given, to relieve the pain; and she to receive a state of irritation to give

cold should be applied to the pubes, to moderate the hæmorrhage.

#### CASE XV.

IN December 1815 I was called to a patient who was flooding, after the delivery of the child. A midwife, who was in attendance, had been making unsuccessful attempts, by pulling at the umbilical cord, to bring away the placenta, and hæmorrhage was produced.

A large dose of laudanum was given, and the hand was introduced into the uterus. The placenta was found partly separated, but a small portion of it adhered very firmly to the uterus. By continuing for a few minutes to make pressure on this part, the uterus was stimulated to contract more vigorously, and separated the placenta, forcing it into the vagina, from whence it was soon removed. Opium in large doses was given to relieve a state of irritation of the

general system; and the abdomen was supported with a bandage.

#### CASE XVI.

In February 1816 I was called to a patient who was flooding excessively after the delivery of a child. I learned from the midwife in attendance that she had attempted for some considerable time to bring away the placenta, without success. The patient was reduced to the last extremity, and seemed affected with the symptoms of approaching death. A large dose of laudanum was immediately given, and the hand was introduced into the uterus: a very small portion of the placenta was found adhering. As, from the exhausted state of the patient, the uterus was very torpid, twenty minutes elapsed before it could be brought to contract so as to force off the placenta. During this time the hand was retained in the uterus; pressure was made by an assistant on the

abdomen, and two hundred drops of laudanum, with as much brandy as the patient could swallow, were given. The abdomen was supported with a bandage immediately after the expulsion of the placenta, and the opium and brandy were continued till all symptoms of immediate danger had disappeared. Nourishing diet was afterwards given, and the patient completely recovered.

## CASE XVII.

In June 1813 I was called to a woman, who, after delivery, was suffering from severe uterine pain, accompanied with a constant discharge of blood from the vagina. I learned from the midwife who had delivered her, that finding considerable difficulty in bringing away the placenta, she had called in a practitioner who succeeded in removing it by introducing the hand; but that it was in such a soft state that it came away in



detached pieces, resembling coagulated blood.

I found the patient in a very debilitated state, suffering extremely from pain, irritability of the general system, and hectic fever. Her features were sunk, her tongue and teeth were covered with a brown crust, her pulse was small, quick, and irritable, and the fetor of the room was intolerable. She complained of headach and nausea, was affected with diarrhoea, and a constant sanguineous discharge continued to come from the vagina; which was so acrimonious as to excoriate the external parts. The patient was immediately removed to another bed-room; the vagina and uterus were washed out, by means of a syringe, with an infusion of camomile flowers. A portion of membrane having come away with the lotion, suggested the idea of introducing the fingers into the vagina, and a large mass of putrid matter which had lodged in this

situation was brought away. Two grains of solid opium were given, and ordered to be repeated every eight hours, till the symptoms of irritability were relieved. Wine was taken in considerable quantities, the vagina was frequently washed out, and the external parts were bathed with a saturnine lotion. In twenty-four hours from the time I was first called, the patient was much relieved.

The opiate was continued every night for some time, the bowels were kept open, a nourishing diet was given, and she gradually recovered.

**CASE XVIII.**

In December 1810 I was called to a young woman, who was suffering from severe pain in the uterine region. She informed me that she had been delivered of a dead child six months previous, and that the midwife who attended her had found much difficulty in bringing away



the placenta; that from the time of her delivery till twelve hours before I saw her, she had experienced no pain except at the menstrual periods; that then the pain, although severe, continued but a short time; and that the menses were in very small quantity. As the pain she was suffering very much resembled labour pains, a draught containing eighty drops of laudanum was ordered. This seemed to produce no effect; and, as the pain was most excruciating, after waiting twenty minutes, a draught containing one hundred drops of laudanum, and a clyster containing a dram of the same medicine, were ordered to be given. In ten minutes after, a short remission from the pain took place. In about an hour after, the pain returned with great violence, and reduced the patient to a state of absolute distraction; a draught was therefore given, containing two hundred drops of laudanum, and a clyster, containing two drams. A remission of the pain soon followed; and

in two hours an organized mass, studded with osseous points, was expelled from the vagina, accompanied with a very considerable discharge of blood. No return of pain afterwards took place. There can be little doubt that the substance discharged, from its structure, was part of the placenta, which had remained in the uterus from the time of the patient's delivery. The opium in this case did not produce headach, or any of the disagreeable effects which generally attend the exhibition of such large doses of this medicine. It has been mentioned by authors that a degree of fever accompanied with a state of great irritation of the general system, frequently occurs in the third day after delivery, as a consequence of uterine hemorrhage; and that it often proves fatal. It is reasonable to suppose

that this fever, considering the time of its accession, is the milk fever, increased in severity; and perhaps changed in its character, in consequence of the patient's state of extreme debility. This disease, as usually described, has never occurred after any of the cases of uterine hæmorrhage which have come under my care. It is therefore reasonable to conclude, that by following the plan of practice recommended in the foregoing sheets, the milk fever will assume its usual character, unaccompanied by any dangerous or troublesome symptoms.

Immediately after the process of parturition there seems to be a very strong tendency in the system to inflammatory complaints, and especially in organs which have suffered from previous attacks of inflammation. It has been stated by authors, that this tendency is greatly increased in those who have suffered from uterine hæmorrhage; that inflammatory complaints, in such cases,

and easy apt to occur for weeks after the delivery, and often prove fatal; and that stimulants ought therefore to be given with great caution. In the foregoing, and in many other cases of uterine hemorrhage which have come under my care, stimulants and nourishing diet were given in such quantities as the patient's state of debility seemed to require, without any regard to her peculiar situation; and no inflammatory complaints ever occurred; and in Case VI, where during pregnancy there was such a strong tendency to inflammation in the chest, after delivery this disappeared; and although the patient had for years been troubled with frequent attacks of inflammation of the pleura, accompanied with severe cough, she, for many months after her delivery, remained quite free from every symptom of this disease. Large doses of opium may therefore be considered of great use, not only in relieving many distressing symptoms which occur

in consequence of severe uterine hæmorrhage; but likewise in preventing those diseases which have so often been found to be produced by uterine hæmorrhage, and which have so frequently proved fatal. In attempting to explain the manner in which large doses of opium produce such beneficial effects in cases of uterine hæmorrhage, it is necessary to consider,

First; the immediate effects which the process of parturition has on the general system; and the effects which profuse hæmorrhage may be expected to produce at this particular juncture.

Secondly; the general effects of opium on the general system; wherein it differs in its effects from other stimulants and narcotics; and its superiority to these as a remedy in many states of disease.

A considerable degree of languor and debility, which lasts for a longer or shorter time, according to circumstances, is generally the immediate effect of the process of parturition. This may be

ascribed partly to the power which the mind possesses in influencing the state of the body, but chiefly to the violent muscular exertion employed in accomplishing this process, and to the rapid changes which take place in the general system at this time.

From the intimate connexion which subsists between the mind and body, it may be easily perceived that a reciprocal influence exists; and that whilst one set of affections and passions produce a most powerful stimulating effect on the body, others have an opposite effect, producing languor and debility. During labour, a woman's mind is generally under the influence of anxiety and fear, in some cases producing the greatest degree of despondency. To the effect which these passions have on the body, may partly be ascribed the debility which immediately succeeds the process of parturition.

Severe muscular exertion is a cause

which operates very speedily and powerfully in producing a state of general debility. (This is a fact consistent with daily experience.) When it is taken into consideration, therefore, that not only the uterus, but all the voluntary, and many of the involuntary muscles, are either actually or by sympathy excited to exert powerful and long continued action, during the parturient efforts, it will afford a farther explanation of the cause of the debility which succeeds labours. But the sudden changes which the system experiences immediately after the process of parturition, will more fully explain the cause of the subsequent debility. The functions which the uterus exercised during pregnancy are suddenly suspended, its large blood vessels are at once sealed up by its contraction, and the blood which circulated in such abundance in them, diverted in its course, is directed to some other parts of the body. But when sudden changes take place in



the vascular system, a degree of debility is produced in proportion to the suddenness and extent of these changes; and this effect will continue till the system becomes accommodated to the changes produced.

10. The sudden removal of any accustomed pressure from parts of the body which are loose and unsupported, always produces languor and a sense of faintness. This is exemplified in evacuating large abscesses, and in discharging the fluids in hydrocele, ascites, and other dropical affections. This effect has been ascribed to the sudden shock which the general system experiences, and to the immediate accumulation of venous blood in the parts from which the pressure has been removed.

11. The gravid uterus, during the last months of pregnancy, encroaches very much on the abdominal cavity, occupying both whole anterior part, extending from the pubes to the scrobiculus cordis,

pressing back the intestines, and in many cases considerably affecting respiration, by impeding the action of the abdominal muscles and diaphragm. The whole abdominal contents are mechanically affected by this encroachment; the circulation through them is impeded, the secretions are consequently rendered more scanty, and constipation, and different affections of the stomach, are produced. When the whole ovum is excluded, and the uterus becomes completely contracted, the abdominal contents experience a very great and sudden change; the abdominal muscles, relaxed from over-distention and excessive exertion, give little support, and an immediate accumulation of blood in the numerous abdominal veins takes place, producing great debility, and in many cases dangerous syncope.

It is generally admitted, that all supplies for repairing the waste to which the body is constantly subject, and for the

growth of new parts, are derived from the blood. When a great quantity of this fluid is suddenly lost, all organs of the body are instantly affected with a sense of want, accompanied with debility; and this effect will be felt differently by these parts, according to the importance of the functions which they have to perform in the system, and to the degree of waste to which they are constantly liable.

The muscles of respiration which contribute to change the blood, and the muscles which circulate this fluid over every part of the body, are of the greatest importance in the system, as the functions they perform are absolutely necessary to the continuance of life; and from these muscles being constantly in action, they require perpetual supplies to repair the waste to which they are consequently liable. If the fluid from which these supplies can alone be derived is much diminished in quantity, the system will either sink for want of nourishment,

or the medicinal remedies will excite the muscles of respiration and circulation to more vigorous action; so that the blood which remains may be carried with more rapidity over the system, and may be presented more frequently to the parts which require nourishment. But these muscles, from their state of debility, being unable to support this increased exertion, and the excitement still continuing, irregular action will be the consequence, which will suddenly impair the remaining powers of life.

From these observations it may perhaps be conceived, how the loss of a comparatively small quantity of blood will be sufficient to produce a great degree of exhaustion, when the system has been previously debilitated by the process of parturition; and how when hæmorrhage takes place at this particular juncture, powerful remedies become so necessary to relieve irritation of the general system, and to support the feeble remains of life.

The general effects of opium, when taken into the stomach, are either stimulant or sedative: the first effect, it is said, is produced by frequently repeated small doses, the last by a large dose of this medicine.

Although no satisfactory explanation has been given of the manner in which opium acts on the general system, it is obvious that the existing state of the system has a powerful influence in varying its effects. On this account, in exhibiting it, the dose ought to be determined, both as to quantity and frequency of repetition, rather by considering the symptoms for which it is given, than by estimating its general effects on the body when in a state of health.

Opium, in its effects on the general system, differs materially from every other narcotic. As a stimulant, it is said to be more rapidly diffusible; as a sedative, it acts with greater certainty, and, if

properly managed, without producing any previous excitement: it is therefore very beneficial in many states of disease, in which other narcotics would be either hurtful or useless.

In spasmodic diseases, and in a state of irritability of the general system, especially when this state is produced by great evacuations, opium in large doses gives great relief. But it ought to be remembered, that its good effects in these cases are chiefly to be attributed to its diminishing the secretions, and to its lulling that sense of want in the system, which is the chief cause of irritability; and that it does not supersede the necessity of giving nourishing diet, to supply the waste which in such cases the system has sustained.

From these observations some idea may perhaps be formed of the manner in which opium produces such beneficial effects in cases of uterine hæmorrhage; of

the symptoms which indicate its necessity; and of the extent to which it may with advantage be given.

Brandy, and other stimulants, have been recommended, in cases of uterine hæmorrhage, for supporting the strength, and relieving a state of irritability of the general system. For accomplishing the first purpose, brandy will be found very useful; but as its sedative effects cannot be procured except a great quantity be given, and a violent stimulant effect produced, it is not so manageable, nor does it act with such benefit and certainty as opium, in relieving a state of irritation of the general system. It is an excellent adjuvant, however, when a state of irritation is produced by debility arising from any great evacuations.

THE END.