TREATMENT OF UTERINE HAEMORRHAGE

with special reference to the GRAVID UTERUS:

Illustrative Cases.

GRADUATION THESIS

by

JAMES COCHRANE, M. B., C. M.

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

On a man commencing general practice he is sure to be impressed with the frequency with which he is called to cases of bleeding from the womb, and in many cases will be surprised at the small importance with which women come to look upon this condition, especially those of the middle and lower classes. To my mind the loss of blood in many of these cases is simply appalling, and the amount of loss suffered by many women before they think it necessary to call in professional assistance is astonishing, and often places the medical man in a difficult position by finding the patient in such a debilitated state from loss of blood that he has the additional trouble of weakness to contend with which hampers him in the treatment of the case.

The apathy on the part of women in regard to this matter is no doubt to be accounted for by their being accustomed to the loss of blood at the menstrual periods, and they often

believe that what is really a pathological condition is simply physiological and natural, and it is only when they find that they are getting weaker and weaker and their general health being undermined that it begins to dawn upon them that there is more than their "illness" the matter.

This is a subject which women should be educated in, more especially married women, and, if they were a great part of the ill-health which frequently accompanies child-bearing would be prevented. Anything which will in any way help to improve this state of matters should be gladly welcomed in the interests of women generally.

My attention was drawn to the subject of uterine haemorrhage very early in my medical experience — two cases of post partum haemorrhage particularly impressing themselves on my mind, the one while a senior student, and the other among my first cases after commencing practice on my own account. These cases have left an impression which will be a lasting lesson to me during my medical life work, and cause me to approach all cases of mifwifery and uterine haemorrhage with

a deep sense of responsibility, which is no doubt the right spirit, as in general practice midwifery is the most important part, and on it the reputation of the practitioner to a very great extent depends.

CASE I. Mrs Nightingale, aged 19. While taking out cases in connection with the west-end branch of the Maternity Hospital I was called in about 10-30 P.M. to attend to her at her first confinement. She was very small in stature, with the bones of the legs mis-shapen, but seemingly otherwise healthy. Pains began during the afternoon, and continued at intervals gradually growing shorter. On making an examination I found the child in the normal position, and its heart-sounds were clear and distinct. The os uteri was dilated sufficiently to admit the point of the finger, and was quite patulous. The presenting part was difficult to reach, being very high up. I was struck by the size of the pelvis, but was not in a position at that time to determine its exact dimensions. I made up my mind to wait on the case. The pains were coming with great regularity, increasing in strength

and at shorter intervals, and at the end of three hours the os uteri would be about the size of half-a-crown, the bag of water projecting fully an inch and pointing almost directly backwards. After this progress seemed to stop, though the pains continued severe, and fearing lest the membranes should rupture and the chance of turning be interfered with, I sent for the district physician. On his arrival and examining the case he satisfied himself that the pelvis was contracted, and that the best thing to do was to deliver with forceps. Having put her under chloroform and ruptured the membranes we, with some difficulty, got the axis traction forceps applied, and, with what seemed to me very great difficulty indeed, the child was delivered alive. Up till the delivery of the child no haemorrhage had occurred beyond the usual show. After the delivery of the child the placenta was immediately expressed by Crede's method, with a good deal of haemorrhage, which however soon abated, and the doctor left me to finish the case, which seemed to be going on satisfactorily. No sooner had he left than bleeding of a most alarming nature

came on, and all my resources were called into play as to what I should do, having no one whom I could send for assistance, and I myself could not leave the case. My bag contained ergot and an enema. I at once administered a teaspoonful of Ext. Ergot. Liq., lowered the head, putting a pillow under the hips, tried the child to the breast, all the time keeping a hand firmly on the uterus which would only contract very imperfectly, and bleeding still continued. I then injected into the uterus very hot water, and withal haemorrhage continued, though not so severe. I repeated the ergot, and at intervals injected hot water till eight o'clock in the morning when I though it might be safe to leave the patient, having applied a large pad and bandage. The patient was in a very exhausted condition, her breathing being very difficult and her pulse very rapid, irregular and thready. She complained of noises in her ears, her sight was affected, and altogether she looked like a dying woman. I gave a teaspoonful of brandy in warm water, and enjoined perfect quiet; and, on again visiting her two hours later gave an enema of

saline water. She had no return of haemorrhage; and her recovery was very slow, but good. The haemorrhage here was no doubt due to an atony of the uterus brought about by its long continued futile efforts to empty itself through the contracted pelvis, and possibly to some extent by the influence of the chloroform. My experience goes to show that cases in which chloroform is administered there is always a greater loss of blood and tendency to post partum haemorrhage. I find also that in these cases the pains are seemingly lessened in strength and come less frequently; and I now make it a point to give chloroform only in those cases where operation is necessary and speedy delivery, or at the end of a case when the distress is great and the pains very strong, and in this way to some extent find it to be a conservator of the perineum, bearing in mind always that it is the privilege of the woman to demand chloroform, and, if there is no indication against its use, to have it administered.

The hot water injections I no longer use in the routine treatment of haemorrhage, believing that if not used hot

enough they tend to encourage haemorrhage, and if used too hot there is the risk of doing serious injury to the mucous membrane &c. of the parts. I invariably have good results from cold water, and it has the advantage of being always at hand when hot water may not be.

CASE II. Mrs Paterson. It was her fourth confinement. The former three children were all still-born. The cause she did not know, but stated that the children were covered with reddish spots, very possibly of a specific nature. She gave a history of there having been on previous occasions a difficulty with the placenta, the doctor having had to "take it away." She had always a good deal of loss, and usually had a very tedious recovery. She was very anxious to have a living child, and I watched her very carefully for some time before her confinement. I kept her bowels open with pil. Hydrarg. Subchlor. Co. Pains commenced on June 20th about 8 A.M., and I saw her about 10-30 A.M. when she was progressing favourably. Movements of the child could be felt distinctly over the uterus, pains recurring every three or four minutes

and good, and the os uteri was now well dilated. I ruptured the membranes, and with the rush of the liquor amni the umbilical cord came down. I found it impossible to return the cord by pushing it up past the head as it was firmly engaged in the pelvis. I determined to deliver immediately with forceps. I administered chloroform, and delivery was easily effected; but the child was dead and incapable of being resuscitated. The womb contracted and the placenta ejected in about five minutes. Alarming haemorrhage then occurred. I immediately packed the vagina with a cloth soaked in cold water, and applied cold water cloths to the hypogastrium, thighs, &c., and administered a teaspoonful dose of Ext. Ergot. Liq. I then injected hypodermically 1/50 gr. strychnia, and with the other means of posture pressure on uterus &c. the haemorrhage was effectually stopped and though she lost a very large amount of blood she made a good recovery. It was rather difficult to discover the cause of the flooding, but it was possibly due to the sudden emptying of the uterus, and the contraction being irregular and

imperfect, and it may have been to some extent due to the influence of the chloroform. I have since had the pleasure of delivering this woman of a healthy living child after a perfectly normal labour.

Before puberty uterine haemorrhage seldom requires any medical treatment. When, however, it occurs, the cause must be ascertained and strictly prevented. After puberty uterine haemorrhage independent of the puerperal state most frequently depends on general or local plethora. This condition may be relieved by antiphlogistic measures. The patient should be placed in a large, well-lighted bedroom, kept at a moderate temperature. Refrigerant remedies may prove useful. The bowels should be regulated by mild laxatives, or by enemata. The haemorrhage, especially in weak and nervous women, may become passive, when tonics and astringents must be used, and a soothing system of treatment adopted. The various preparations of iron will be found useful, also catechu, turpentine, and ergot, may prove quite as efficacious as some of the newer preparations. Sedatives are especially required

when loss of blood gives rise to nervous affections, and of these camphor, opium, and hyoscyamus are the best. Some authorities strongly recommend the application of cold, but great care and discrimination must be shown in this treatment. In bad cases I have found enemata of spirits of turpentine, and the same drug administered internally produce satisfactory results. The discharge once overcome, perseverance in treatment must be enjoined in order, if possible, to prevent its recurrence. The exciting causes should be sedulously avoided, every source of irritation removed, and a strict diet and regimen observed. The food should be chiefly farinaceous and easy of digestion. Regularity must be observed in all occupations, a certain number of hours out of the twenty four must be devoted to sleep, early rising and gentle exercise in the open air should also be enforced. The bed should not be a luxurious one, the covering must be light, and if the patient be married all sexual excitement must be foregone. In cases of bodily weakness the tonic treatment should be persevered in, and regularity of diet and

exercise enjoined; but above all a removal from home should be recommended, coast or country, where the air is pure and the situation elevated and dry.

Haemorrhage is often symptomatic of organic lesion of the uterus, and here our treatment must be modified according to the cause if that can be ascertained. The discharge is frequently continued for a long period, or it recurs until the patient dies. The organic disease causes congestion which is for a time relieved by the discharge, only to return on the renewal of the local plethora. In such cases the haemorrhage is usually all we can treat. Astringents, tonics, and narcotics should be freely used. Support the patient's strength. When the haemorrhage is the result of a polypus, the polypus should when possible be removed; when it results from malignant disease an operation may be advised in the early stage, later palliative treatment must be used. In cases of fibrous tumour I have secured good results from the use of iodine, both externally and internally.

Before proceeding to the treatment of haemorrhage from the uterus during pregnancy it will be interesting to enquire how far the natural processes for the arrest of bleeding from open vessels are applicable, and at the same time to see what means nature adopts to prevent the recurrence of flooding.

The uterus is a muscular organ consisting of many separate bundles of fibres, some circular, other longitudinal, and others oblique. These fibres interlace, and in the intertices the blood vessels which become enormously enlarged during pregnancy are found. This arrangement of the vessels deprives them of their sheath so that they cannot retract into it when divided, nor can the divided ends contract because of the disposition of the vessels in relation to the muscular fibres. Coagulation will not readily take place as the blood flows into an open cavity surrounded by living cells and not exposed to the air. We must, however, remember that though we speak of divided ends of uterine vessels, we do so merely to make the analogy closer between them and wounded arteries, as in reality there is no rupture of vessels

on separation of the placenta. The tufts containing the radicles of the umbilical arteries and veins are merely withdrawn from the oval openings in the sides of the uterine vessels, carrying with them the thin layer of cells which bound them down in their places. In most cases of labour there is no flooding. How then does nature effect this result? The surgeon stops haemorrhage from a large artery by a ligature. In the case of the uterus nature secures the open vessels by still more effective means. She shortens the fibres which surround the vessels and constricts them in a thousand places, preventing the loss of blood in a way analagous to, but more effective than the surgeon's ligature. Firm uterine contraction is then the only safe-guard against loss of blood before, during, or after labour; and in the treatment of such floodings all our measures are directed towards the accomplishment of this end.

The treatment of uterine haemorrhage before the sixth month cannot be disconnected from that of abortion, because it is always an accompaniment or a precursor of abortion.

The treatment of abortion may with advantage be divided into the prophylactic, and that which is required during an attack. When an abortion is threatened, the exciting cause must, if possible, be ascertained, and its effects carefully guarded against. In cases where there is a predisposition the patient's general health must be watched, and every exciting cause avoided. The various slight ailments of pregnancy must be carefully watched and prevented from increasing in severity: attend to the stomach and bowels, remove every source of irritation by the gentlest means, avoid everything which tends to excite the circulation, such as bodily exertion, violent emotions, stimulating and indigestible diet. The diet should be light and nutritious, the stomach must never be overloaded, regularity in meals should be observed and supper avoided. During fine weather regular but gentle exercise may be encouraged, as it has a tendency to engage and elevate the mind as well as to raise the standard of bodily health. When abortion has frequently taken place, and when the uterus has, so to speak, become

accustomed to throw off its contents at a certain period of pregnancy these recommendations should be still more strictly observed. If the case be one of general or local plethora the antiphlogistic regimen and diet should be observed, and the recumbent position with perfect quietness enjoined.

In cases of an opposite nature when the system at large and the reproductive organs are relaxed and asthenic, a tonic and invigorating plan of treatment is indicated. The diet should be better, mineral acids and bitter tonics should be given. Sea-bathing, sponging with tepid or even cold water may prove beneficial, and all causes of excitement must be avoided. When these measures are efficiently and continuously carried out, even a patient who has frequently aborted may carry the child to full time. Dr Young of Edinburgh describes the case of a patient who miscarried in thirteen successive pregnancies, and yet bore a living child the fourteenth time, and I was informed by an eminent accoucheur of Glasgow that he lately delivered a lady who had aborted on eight previous occasions.

In the treatment of a case where abortion is actually threatened the nature of the case may require that we should endeavour to stop the process in time to save the life of the foetus, or, should that be impossible, that we may carry it through as easily and safely to the mother as possible.

When abortion is threatened there is either a discharge of blood, or uterine contraction, or both. There is probably a sense of weight and coldness in the lower part of the abdomen pain in the back and loins, and a general feeling of illness, which has probably existed for several days. If the haemorrhage is not very great, and the pains trifling, then there is hope that it may be arrested. Should there be signs of congestion of the uterine vessels, indicated by pain, throbbing, and a sense of fulness about the groins, antiphlogistic treatment may be used until relief is experienced. This should be followed by a powerful opiate.

CASE III. Mrs B, age 22. On the morning of the 12th May she was seized with labour pains. She had complained of bad health for some time previously and had reached the third

menstrual period since conception. The pains though severe only came on at intervals of about an hour. The discharge was very slight. I gave 40 mins. of Tinct. Opii. which arrested the uterine contraction. The general health was afterwards carefully watched, and I had the pleasure of delivering her at full time of a living child.

The most perfect rest and quietude must be enjoined, because a very little effort or disturbance of mind will bring back the attack. After the immediate danger is over the circulation must be kept quiet, and uterine action restrained. A small discharge of blood from the uterus without uterine action need seldom cause alarm as it is a natural cure of the fulness of the uterine vessels, and need not be checked by any remedies unless it increases and continues long, or unless the pain in the loins remains unabated. When this is the case cloths wrung out of cold water should be laid on the hypogastrium, groins, and vulva, and an opiate administered to quiet the circulation and reduce any irritibility caused by the loss of blood. In cases of threatened

abortion after an injury in which the placenta or decidua is slightly separate nearly similar means may be used. If the flooding be not profuse, and the pain not recurring at short intervals, cold may be applied and a powerful opiate given. If the haemorrhage be profuse and pains recurring at short intervals with considerable severity, there is no hope of arresting the process as this shows extensive separation of the ovum. The indications are therefore to carry the patient through the condition as safely as possible. Desormeause believes that haemorrhage may take place in the early months from a portion of the placenta which has been separated, and there may be hope that no expulsion will take place, because a clot may form so as to close the bleeding vessels, and by exciting inflammation procure in a short time reunion. In cases where the ordinary means have failed the plug may with caution be used. The uterus is certainly at this period firm and unyielding and so opposes resistance to further effusion; but the ovum is not so, and the presence of the plug may favour the accumulation of blood which detaches

the whole ovum, and this happening before the uterus is ready for expulsion may be a source of great danger. The plug is one of the best midwifery expedients for the arrest of uterine haemorrhage during the early months of gestation, but prior to the separation and expulsion of the embryo much discrimination is required as to the class of cases in which it will prove beneficial.

CASE IV. Mrs O'Neil, aged 23. Thinks herself about two months gone with her second child. Yesterday she was very much abused by her husband, after which she felt so ill that she was obliged to go to bed. Shortly after a copious discharge of blood took place from the vagina which I found continuing when I arrived. No uterine action had as yet taken place, and examination showed the os uteri nearly perfectly closed. The quantity of blood lost appeared to be considerable, and the patient was very pale and faint, and her pulse quick and feeble. No embryo could be detected among the discharge. Cloths dipped in cold water were applied with benefit to the vulva, loins &c. The cloths were renewed

from time to time, and a powerful opiate was administered, after which the discharge was reduced to a slight oozing. Acetate of lead and opium were given for a few days and the discharge was completely stopped. Gestation went on, and the patient reached full time without the intervention of a single bad symptom.

It is not easy to decide when all hope of preserving the ovum should be abandoned. A great quantity of blood may be lost from the separation of the decidua near the os uteri, and urgent uterine contractions may exist, and yet by proper means the process may be stayed. Even when the os uteri is somewhat opened the preservative treatment has proved successful, so that in an actual case of abortion we are not justified in desisting from attempting its arrest until the ovum is actually protruding through the os, and the patient is in imminent danger from the flooding. Bandeloque, when speaking of this subject, say:- "We might often prevent "abortion if we were perfectly acquainted with its cause, even "when the labour is already begun. A very plethoric woman

"felt the pains of child-birth towards the seventh month of "pregnancy, and the labour was very far advanced when I was "called in to her assistance since the os uteri was then "larger than half-a-crown. Two little bleedings restored a "calm, so much that the next day the orifice in question was "closed again, and the woman went the usual time. Food of "easy digestion prudently administered stopped a labour not "less advanced in another woman, when it was suspected to be "the consequence of total deprivation of every species of "nourishment for several days. Delivery did not take place "till two months and a half afterwards and at the full time. "Emollient glyster and a very gentle cathartic procured the "same advantage to a third woman in whom labour pains came on "between the sixth and seventh months of pregnancy, after a "colic of several days continuance accompanied by diarrhoea "and tenismus."

When it is judged imprudent to continue or to use the preventitive measure of abortion our conduct will be regulated by the circumstances of the case. When the os uteri is

dilatable, the pains efficient, and the haemorrhage not very great, then the case will go on favourably without any assistance; but should matters be the reverse, then recourse must be had to various measures known to be efficacious under the circumstances. If the flooding be great, and the os uteri firm and but little opened, then plug with a view to checking the haemorrhage and procuring speedy separation of the,ovum by permitting the blood to burrow in every direction between the uterus and the ovum. Ergot of rye in some convenient vehicle may be given. Cold affusion will often prove of great service in urgent cases by restraining to some extent the flooding, and by strengthening the contraction of the uterus. But the plug may not be advisable, as in the case of soft and flaccid os uteri when the action of the organ is very inefficient. Under these circumstances endeavour must be made to bring on uterine action as quickly and as powerfully as possible. This may be done by the use of ergot, and by enemata of turpentine. Some recommend puncturing of the membrane. By doing so the uterus will be emptied

somewhat of its contents, and it will probably contract more powerfully.

CASE V. Sarah Donnelly, aged 23. Thought that she was about the sixth week of pregnancy. By over exertion she brought on labour pains with profuse flooding. I was called in about five hours afterwards, and found the bleeding continuing. On examining the clots the ovum was found entire. The pain had ceased. I thereupon applied cold water and gave an opiate, which though it lessened did not arrest the discharge. Her bowels were opened freely, and acetate of lead and opium given. Under this treatment she made a speedy recovery.

In abortion during the early months care must be taken that the whole ovum passes, and after the completion of the second month that the placenta and membrane be perfectly expelled. In general, haemorrhage ceases shortly after the complete evacuation of the uterus, so that when it is unduly continued we should suspect a retention of some part of the placenta or membrane. In such cases a careful examination

must be instituted, and any shred of membrane found removed. Ergot may be given, and antiseptic douches employed daily.

After the sixth month of gestation, the treatment of uterine haemorrhage embraces the most difficult duties of the accoucheur, and requires an amount of coolness, of decision, and discrimination which a sound judgment tempered by long experience alone can give. To be effectual our treatment must be based on a correct knowledge of the case.

PLACENTA PRAEVIA.

In cases of placenta praevia the practitioner must be ever on the watch. He must be aware of the proper time for putting the expedients of midwifery into execution, and having once undertaken the case, he must recollect that the patient's life is in his hands, and that if he hesitates or becomes afraid death may ensue before another practitioner can be procured.

In placental presentation there are usually sudden discharges of blood from the vagina after the sixth month owing to the expansion of the cervix uteri; but it is not improbable that the accoucheur may be called on such an occurrence. The mental uneasiness must be quieted by assurances of no present danger, and the case must be carefully examined to determine the proper treatment. If the patient has sustained no injury, if she has been making no violent exertion, nor been the subject of strong emotion, the case should be considered as suspicious.

Examination per vaginam when the discharge has ceased should not be made. The anti-haemorrhagic regimen should be rigidly adopted, the more so, the further the patient is from full time. But uterine action may supervene on the first occurrence of the discharge, and in that case the placenta will be separated by the recurrent contractions, the haemorrhage increases during the pains and ceases in a just measure in the intervals. Under such circumstances an examination must be made. The placenta when over the os

uteri will be detected by its fibrous labulated feeling, by its attchment to the inner surface of the os, and by the absence of the fluctuating bag of water and the presenting part of the child. The diagnosis between a blood clot and the placenta is sometimes difficult, but usually a coagulum is smooth, easily broken up, and not fixed to the uterus. Cases have occurred, however, of slight accidental haemorrhage when the clots have remained so long that they become fibrous and firm. Such clots are not easily broken up, but they may be distinguished by their non-attachment to the os uteri. In a clear case of placenta praevia one of two courses must at once be taken, either the discharge and labour must be arrested, or brought to as speedy a termination as may be consistent with the safety of the patient. When the haemorrhage is not great, the pains inefficient, and the os not much dilated, apply cold cloths to the hypogastrium, groins, and vulva, and administer opium. When these measures are successful the patient should be watched. When they fail, as sometimes happens, the case requires different

management. When the case occurs before the sixth month, it may as a rule be entrusted to nature. The vessels and uterus are not at this period so large, as the greatest increase occurs during the last three months of pregnancy. Prior to this period the mortality is small.

But the probabilities are that a patient with placenta praevia will not have labour induced on the first attack of flooding, or if she has that the accoucheur will succeed in its arrest. In such cases the flooding will recur perhaps again and again with increased vigour the nearer to the full term the patient has arrived, and will require some effectual means to be used in order to save the patient. The means to be uses are those first recommended by Leviet and now universally adopted, the speedy performance of artificial delivery. But the question here comes to be, are we to attempt to deliver the patient before nature herself makes an offer to throw off the child? This question may be answered in the affirmative, and probably it is nearly the universal practice in cases of placenta praevia when the patient is near the full

term, and suffers from haemorrhage to such an extent that a fatal result is anticipated, and when moreover labour does not occur.

In the majority of cases interim action supervenes on some sudden flooding, and then a new set of symptoms manifest themselves. There is no longer a severe gush of blood which soon ends in a slight draining and at last disappears altogether; but, with every contraction of the uterus there is a renewal of the haemorrhage in consequence of the dilating os uteri separating the attached placenta. When the os uteri is rigid, as it generally is when labour has come on before the full term, and before the loss of blood has been profuse, delivery should not be attempted. The mouth of the womb will probably resist all efforts at passing the hand, and should such an amount of force be used as to overcome this, the os will undoubedly be lacerated. The consequence will be that some of the large utus-placental vessels will be torn and bleed profusely after delivery, because the security afforded to the patient in other cases by firm uterine

contraction is of no avail, and death may ensue, although the uterus be felt as small and as firm as a ball in the pelvis. Exhaustion first ensues from the continued discharge, and at last death. On port-mortem inspection Naegele has invariably found the os uteri more or less torn. Such is the foundation of the admirable practical rule which Dr Rigby gives:- "In "recommending early delivery, I think it right however to "express a caution against the premature introduction of the "hand and the too forcible dilation of the os uteri before "it is sufficiently relaxed by pain or discharge, for it is "undoubtedly very certain that the turning may be performed "too soon as well as too late, and that the consequences in "the one may be as destructive to the patient as the other."

Under such circumstances wait. The patient has as yet lost little blood, and nothing effects relaxation of the os uteri more than loss of blood. When the orifice of the womb becomes sufficiently dilatable the hand should be passed slowly into the vagina, and cautiously and steadily insinuated

into the os uteri between the cervix and placenta until

the membranes are reached. The membranes must be ruptured, the feet of the child brought down into the vagina, and the child delivered in the usual way for breech cases.

The operation will be subject to many modifications according to the peculiarity of individual cases. The child in the vast majority of cases lies in utro with its face looking backwards and to the right side. The first position, and therefore the best place to separate the placenta from the cervix utri is undoubtedly opposite the right sacro-iliac synchronosi, carrying the hand from there directly upwards. Nor is it necessary to bring down both feet, indeed it is better practice to take one, as it is well known that breech cases, by protecting the cord somewhat from pressure, are more successful than footling cases. One foot may be laid hold of, or the finger of the operator may be hooked into the limb at the bend of the knee and the limb thus brought down, while the other parts of the child are revolving round the interior of the uterus.

Some practitioners advise waiting until the os uteri is dilated to the size of a half-crown piece before attempting delivery, but this as a general rule is not desirable, as before such dilation takes place the patient may be irrecoverably sunk. If the os uteri becomes dilatable, if its rigidly is overcome by the continuance of the discharge the operation should be tried, and will in all probability prove successful.

Uterine contractions in a case of placental implantation do not produce so much effort on the uterine orifice as they usually do in natural labour, because there is besides the ordinary resistance to dilation that produced by the situation of the placenta which counteracts the influence of the pains, and prevents the os yielding to them as it generally does when the placenta is placed at the fundus. But if the os uteri remains long in a state of rigidity, as it is apt to do, especially in first cases, the plug must be used. In this way time is gained, and the woman is saved much loss of blood. The parts relax from the discharge, and under the

influence of the pains the orifice of the womb dilates, and though the blood vessels are opened their contents cannot escape as the placenta alone prevents them passing into the womb, and the plug beneath prevents them finding a way per vaginam. In this way the patient goes on in comparative security until the proper time arrives for effecting delivery. The plug should then be withdrawn and delivery proceeded with. But the patient may not be seen till after the time alluded to as most favourable for the operation. The powers of life may be sunk to the lowest ebb, the orifice of the uterus wide open and unresisting, a large portion of the placenta separated, and the uterus itself all but incapable of contracting. Under such circumstances delivery would be easy, but in all probability the patient would die during the performance of the operation, or if not, very shortly after, as the uterus would not contract with sufficient firmness.

In surgery, for example, a primary amputation would not be performed on a patient who was still suffering from shock, because death would in all probability ensue. After the

patient has recovered the operation is performed. Precisely so it is with placental presentation when the patient has lost so much blood as to render her unable to bear the operation of turning. In such cases the plug might be used, but care must be taken not to trust too much to it. Stimulants and beef tea should be given in small quantities, brandy and ammonia may also be required. After a short perseverance in this treatment the system will recover somewhat its energy, the pulse will agsin become perceptible, the uterus will gain its tonicity, and contractions will soon come on. Delivery may now be safely effected, a full dose of ergot being first administered.

In confirmation of this advice a case may be quoted from Ingleby's work on Uterine Haemorrhage:- "Mr Grainger of "Birmingham in visiting a poor woman with placenta praevia "and apparently in a moribund condition, immediately filled "the vagina and os uteri with linen cloths and waited for two "days before hazarding delivery, which he accomplished "successfully." A case analagous in some respects to the

above came under my own observation last summer.

CASE VI. Mrs Brown, aged 24. Pregnant with her first child, and had reached between the eighth and ninth month. She had several sudden attacks of flooding during the previous two months. On the evening of 1st August she had profuse haemorrhage, during which she felt labour pains. The pains though they continued all night were not severe. Next forenoon they became stronger, and the haemorrhage became so excessive that the patient fainted. A surgeon was called who ordered her half a dozen pills of acetate of lead and opium and then left. On rallying from the faint the discharge recurred, but without pains. The woman lingered in this condition till the 4th August at 2 P.M. when the uterus began to act with an increase of the flooding. At this juncture I first saw the patient, and found her very pale and faint, the pulse at the wrist was very quick and sharp. Examination per vaginam showed that the placenta was over the os. The os was dilated to about the size of a shilling, but rather rigid, as were also the external parts, notwithstanding

the quantity of blood lost. The uterus was acting with tolerable regularity and strength, and it was evident that not a moment was to be lost. The operation of turning was performed. The child was safely delivered, and the placenta which was slightly adherent extracted. The uterus contracted very firmly, but a continued oozing which took place from the vessels of the cervix induced me to plug the vagina. Stimulants were given immediately afterwards, and a powerful opiate but both were rejected by vomiting. Brandy and hot water were then given, and an enema of opium tinct. camphor, and yolk of egg was given to secure sleep. Next day the patient was much better, the pulse was more perceptible although very quiet. The pallor and faintness still continued. The patient gradually improved till the morning of the fifth day when she had a severe and prolonged rigor, after which she fell into a state of great prostration. Three hours after the rigor I found her suffering from urgent vomiting and diarrhoea. The vomited matter was dark in colour, the respiration was quick and laboured, the face betrayed a most

anxious look, and there was great pain with tenderness over the right knee, hip, and left shoulder. On examination a red blush was discovered on each of these parts, and in a short time distinct swelling. Death took place in seventeen hours from the rigor.

Dr Rigby advises the perforation of the placenta in order that there may be as little increase of bleeding as possible produced by the operation; but he says, "if it be "impracticable, as I have more than once found it, it must be "carefully separated from the uterus on one side, and the "hand passed until it gets to the membrane." Dr Denver says in regard to the subject:- "We are advised by some to pierce "the placenta with the hand, but this should never be done, "especially as it is impossible to assign one single good "reason for the practice, and there are several very strong "ones against it.

"FIRST. In attempting this, much time is lost that is "highly important to the patient, as the flooding unabateingly "if not unceasingly goes on.

"SECOND. In this attempt we are obliged to force "against the membrane, so as to carry or urge the whole "placental mass towards the fundus by which means separation "of it from the neck is increased and consequently the "flooding augmented.

"THIRD. When the hand has even penetrated the cavity "of the uterus the hole which is made is no greater than "itself, and consequently much too small for the foetus to "pass through without forced enlargement, and this must be "done by the child during its passage.

"FOURTH. As the hole made by the body of the child is "not sufficiently large for the arm and head to pass through "at the same time, they will consequently be arrested, and if "force be applied to overcome this resistance, it will almost "always separate the whole of the placenta from its connection "with the uterus.

"FIFTH. That when this is done it never fails to "increase the discharge, besides adding the bulk of the "placenta to that of the arms and head of the child.

"SIXTH. When the placenta is pierced we augment the "risk of the child, for in making the opening we may destroy "some of the large umbilical veins, and thus permit the child "to die from haemorrhage.

"SEVENTH. By this method we incur the chance of an "atony of the uterus, as the discharge of the liquor amni is "not under due control.

"EIGHTH. That it is sometimes impossible to penetrate "the placenta, especially when its centre answers to the "centre of the os uteri, in this instance much time is lost "that may be very important to the woman."

Some authorities advise in bad cases the removal of the liquor amni by a trocar passed through the placenta. The operation of turning is then performed before the uterus becomes very firmly contracted round the child. This mode of practice I have never seen tried, although it certainly has some speculative arguments in its favour. By adopting it we empty the uterus more slowly and gradually of its contents, and thereby in some measure prevent the shock produced by the

rapid removal of the pressure on the vessels and viscera of the abdomen to which they have been so long accustomed.

This is of the more consequence when we recollect that the system weakened by loss of blood is more susceptible and more easily affected by any depressing cause. But on the other hand we have already said that in very depressed states of the vital powers all hopes of successful delivery until we are able to rally the patient by proper treatment must be abandoned, and this is the preferable plan in such cases.

Again in perforating the placenta, even though one should select the smallest size trocar, it is impossible to avoid wounding some of the large ramifications of the umbilical vessels and thus occasion the death of the child by haemorrhage. Apart from the risk of killing the child, after the liquor amni has been evacuated and the trocar removed a considerable quantity of blood will flow from the wounded vessels, and this will in a great measure supply the place of the liquor amni, and thwart our object in its removal.

Some recommend the removal of the placenta as soon as possible after the beginning of uterine contraction. Cases may be found among the writings of the earlier authors in which under inefficient uterine contraction the placenta was expelled before the child and yet the mother recovered. Mauriceau recommends the removal by the hand of the after-birth, though the reason of this is that he considered the placenta when at the os as a foreign body, entirely detached from its ordinary site at the fundus. Dr Simpson revives the plan of removing the placenta as soon as labour began. Professor Simpson from his experience in 135 cases came to the following conclusions:-

FIRST. That the complete separation and removal of the placenta before the child is very seldom followed by any great haemorrhage.

SECOND. That on the other hand the previously existing haemorrhage almost always ceases from the moment the placenta is perfectly and completely detached from its connections with the uterus.

THIRD. That the cessation of the haemorrhage is explicable, not on the idea that the descending head of the child acts as a plug or compress upon the exposed orifices of the uterine sinuses, but on the mutual vascular economy of the uterus and placenta, and the circumstance that the haemorrhage principally comes from the partially detached surface of the latter.

FOURTH. That the placenta may be and ought to be detached from its connections with the uterus in some varieties of unavoidable haemorrhage, and that these varieties are for the most part exactly those in which our present recognised methods of treatment are most applicable and most successful.

FIFTH. That under such circumstances the practice would in all probability be attended with much saving of maternal life.

SIXTH. That the treatment has been in repeated instances accidentally followed with complete success, when had recourse to by midwives and others under supposed mis-

management, and in defiance of established rules of treatment in these special complications; and

SEVENTH. In one very dangerous case in which the previous haemorrhage was great, and continued in spite of the evacuation of the liquor amni, and when the os uteri was imperfectly dilated, I adopted as a matter of principle and choice, the plan of separating and extracting the placenta, with complete success, the flooding immediately ceasing, though the child was not expelled for about two hours; and the mother recovered without a bad symptom.

While cases might occur where the above treatment might prove the best, my experience leads me to adopt the ordinary method of turning. By this means I have succeeded in the Majority of cases in saving both mother and child.

This is a subject in which it is impossible to summarise, or to hold fast to any particular line of treatment. It may be said that the first object is to, as far as possible, remove the cause of the bleeding, and thus reduce it to the treatment of haemorrhage generally; but in these cases we

find such a variety of conditions arising that to be able to cope with them successfully great tact and skill are required and the resource which only long and careful experience can give; and though unusual cases are the exception rather than the rule, the fact that they may occur at any moment, and often when least expected, makes it the more necessary that every case should be in the hands of a skilled practitioner. I shall conclude by simply without further discussion giving a few more cases of haemorrhage which have come under my own observation.

CASE VII. Mrs Stewart, aged 36. Mrs Stewart was pregnant with her twelfth child, and approaching full time of gestation. I was called in on several occasions when she had slight haemorrhage, but without labour pains. These bleedings were easily checked. On the evening of October 15th the patient had another attack, and about the same time she had uterine action. On examination the placenta was found attached to the posterior lip of the cervix uteri, its edge dipping down to the os which was little opened. The

pains were trifling, as was also the quantity of blood lost, and after a time both ceased. Next evening the pains and haemorrhage recurred. I punctured the membrane and allowed the liquor amni to drain off. The loss of blood diminished, the pains became stronger, the os uteri dilated rapidly, and the patient was delivered naturally in half an hour after the evacuation of the liquor amni. The lochia were profuse, but the recovery was rapid and perfect.

CASE VIII. Mrs McLaren, aged 27. She was pregnant with her fourth child. Labour began at 5 A.M. October 21st, shortly after which profuse flooding set in. I arrived about 6 A.M. and found the discharge continuing. As I could not detect the placenta and the presentation was natural, I ruptured the membrane and permitted the escape of the liquor amni as perfectly as possible by pushing up the child's head. The haemorrhage lessened and within half an hour disappeared, but the patient had no labour pains till 4 P.M. when they recommenced and expelled the child alive in about three quarters of an hour. On examining the placenta a large

blood clot was found over part of its maternal surface, a circumstance which is always found when the mass is separated *in utro* from its attachment at some considerable time before the birth of the child.

Case of flooding after the birth of the child at the breech, which was the presenting part of the second of twins.

CASE IX. Mrs Forbes, aged 27. Second pregnancy, breech presentation, labour easy. After birth of the child, on examination a second child was found also presenting by the breech. The membrane was immediately punctured, and in a short time uterine action supervened. The breech was soon expelled and with it a copious gush of blood. The uterus was grasped firmly with the hand, but the haemorrhage although it diminished somewhat continued. The pains ceased. The child was withdrawn, and the uterus excited to contract. As contraction did not come on, and as a considerable quantity of blood still flowed, I was just about to remove the placenta when a forcible contraction of the uterus took place, which was shortly followed by ejection of the placenta, and complete cessation of flooding.

CASE X. Mrs M., aged 28. On May 7th the patient after a natural and easy labour was delivered of her third child. After the birth of the child the uterus felt firm, but large and irregularly contracted, and in a short time copious haemorrhage appeared internally. Grasping the uterus was of no avail. I therefore introduced my fingers into the vagina and found the cord pressing through the os uteri, but no part of the placenta within reach. Thinking that the cause of the retention might be irregular contraction alone, I did not immediately pass my hand in utero but waited to see if the discharge would relax the spasm. As this did not take place and as the effects of loss of blood were beginning to manifest themselves, I introduced my hand and removed the mass, which was adherent firmly by a very small part of its surface to the fundus uteri. No sooner was this done than the uterus contracted firmly, the spasm disappeared, and my hand and the placenta were forcibly ejected. The patient made a tolerably good though tedious convalescence.

CASE XI. Mrs Walker, aged 36. was delivered of her ninth child after an easy labour on July 23rd. After delivery the uterus felt large but firm and irregular, and though several contractions came on did not in the least diminish in size. The cord could be detected passing through the os, but no part of the placenta. There was no haemorrhage, and I did not propose to remove the mass for some time. The patient would not allow me to remove the placenta. It had been removed on a former occasion and the woman said she would rather die than submit to a similar operation. I watched the case with the greatest interest, and found that no part came away except the cord, the membrane covering the foetal surface of the placenta. These were removed after my departure by one of the patient's friends pulling on the cord. For a day or two the patient suffered from some pains, the lochia were natural, but ceased gradually and stopped on the third day. The patient was long in regaining strength, but otherwise she had not a bad symptom. The uterus could be

felt distinctly above the pubis as large as a couple of fists a fortnight after delivery.

The subject might be discussed in a much fuller and more elaborate manner than has been done in the foregoing paper. No subject indeed in the medical art is more deserving of close and careful attention. My purpose has however been not to discuss the subject in an exhaustive or even original manner, but to illustrate cases which the general practitioner may be called upon at any moment to attend, and to show which method of treatment has on the whole been most successful in my experience.