On the Pathology and Treatment of Uterine Haemorrhage during Pregnancy and Parturition

"Ne sis teneo, nec timido"

Samuel Harris Armitage
To arrive to the finest portion of the Creator's Works, the greatest amount of safety, the least possible degree of suffering, is her hour of trial. In the high object of our pursuit as obstetric practitioners, the department of medicine and surgery can involve more trying responsibility, demand a sounder judgment, more firmness of conduct, more profound reflection. In these remarks, and applicable to the practice of medicine in general, they are especially correct when viewed in relation to uterine hemorrhages, the first in practical importance, because the issues of life, health and to much, lie in the hands of the practitioner. The danger attending hemorrhages, which arise during pregnancy, is admitted by all Authors. The father of Physic, Hippocrates, records the following sentiment: "In utero multa eorumque ut minimi obstetricarum nostrum malum." With what feelings hemorrhages were regarded by Dr. Hunter may be estimated by the following emaciated passage extracted from an apparently correct manuscript, kept of his lectures: "There are two things which I am afraid of in Midwifery: one is a flooding the other, the other conclusions. The periodical emission of a bloody fluid from the vessels of the uterus is an indication of a healthy puerperal constitution when it is limited to a certain quantity, varying from two to six ounces in different individuals, habitual and occurring every lunar month.
For about thirty years after the age of thirty in the unmarried female, it cannot be regarded as a pathological phenomenon, but constitutes natural menstruation. The healthy function of the uninfected uterus. When however the natural menstrual fluid is excessive in quantity, or when blood escapes from the gravid uterus, or when it flows in large quantities from that organ immediately after parturition, or when the substance of the organ is destroyed, the affection is termed uterine hemorrhage. As the consideration of the various kinds of uterine hemorrhages would involve us in an essay of too great length, I shall confine myself to the description of uterine hemorrhage in labor, flow with pregnancy, and parturition.

In order to understand the principles of uterine hemorrhage, it will be advisable to review, very briefly, the manner in which hemorrhages take place from other parts of the body. To point out the principles upon which are founded the different means employed to arrest them. There are many divisions of non-uterine hemorrhages, that adopted by Bichat seems to be the best. Hemorrhages may arise either from ablation or from rupture of a blood-vessel; the first variety includes those as fall under the notice of the physician, the second those hemorrhages which it is the province of the surgeon to arrest from the earliest dawn of medical science it must have been known that the accidental division of a blood-vessel was attended with loss of blood, hence the older pathologists (prior to the cultivation of morbid anatomy) thought that whenever an effusion of blood
occurred in the living body, there must be a rupture of a blood-vessel. It was by careful dissections that Morgagni demonstrated that this notion was in many instances erroneous. Subsequently Bichat promulgated the now generally recognised doctrine that the great variety of these spontaneous haemorrhages are the result of the exfoliation from the ultimate vascularisation of the minute blood-vessels which constitute the Capillary tissue. Andral, Chorul, Watson, and other pathologists of more recent date have illustrated and firmly established this doctrine of haemorrhage by exfoliation. Haemorrhages from mucus membranes are far more frequent than those from other tissues, so will they afford in the readiest means of establishing this principle in pathology. Thus when haemorrhage has occurred, in proximity from the stomach or bowels, that the death which has ensued has been sufficiently accounted for by the mere loss of blood, the whole tract of the alimentary canal has been diligently examined. This exhibited no breach of surface from any perceptible alteration of texture. In a few instances beneath the skin, or nearly, from the mucus membrane of the uterine blood, has been seen to exude in minute drops, without any breach of texture. Sometimes the mucus membrane appears here there of a red colour, as if it were suffused with blood; sometimes it is pale, transparent, whilst the vascular network immediately beneath it is gorged and turgid, sometimes the whole is colourless; the hand not
work of vessels having been completely emptied by previous hemorrhages, sometimes again, (this is illustrative of the way in which the blood has issued out numerous small dark-coloured ways like grains of fine sand can be made to start from the surface of the vessels by slight pressure) Buller states that he had often found the bodies of patients who had died during an attack of hemorrhage (with reference to this very point in pathology the surfaces of the bronchial tubes, of the trachea, of the oesophagus, of the intestines, etc., that there where was the least apparent trace of any laceration or laceration of those membranes, although he took the precautions of carefully washing their entire surfaces, of allowing them to macerate in water, but the usual times of examining them with powerful lenses. Numerous other observations might be adduced to prove that hemorrhage (in the majority of instances) takes place from the surface of the intestinal villous membrane by emphysema, but I agree at the same time with Dr. Millet when he says in his "Outlines of Pathology": "The greater number of fatal hemorrhages in any of the secret cavities of the body, some of those which take place through membranes into vessels, are the result of rupture or erosion of these vessels.

The indications of treatment are: 1. To direct the current of the circulation from the seat of hemorrhage; hinder depletion fodd to the affected parts are
employed. 2. To cause the contraction of the capillaries: herbaceous astringents applied locally and in internally. The anti-phlogistic regimen must be put in force. Full excitement of the circulation must be carefully avoided if possible; it is the most efficient means of arresting the discharge: in some cases, however, the state of the circulation becomes such as to demand the full use of stimulants, even while the hemorrhage continues to recur.

Hemorrhage by rupture of a blood vesel is somewhat different. This is best observed when the arteries of the surface are injured. If an artery be divided, it retracts in virtue of its elastic nature within its cellular sheath, leaving the extreme portion of the sheath which does not retract, without the same elasticity, vacant and of rough surface. In that vacant space coagulation forms; particles of fibrin become entangled: adherent to the rough points of its inner surface, these constitute nuclei on which others aggregate to form a clot. The cut artery retracts within its sheath; it contracts upon itself diminishing the orifice to one half its former dimension. A coiled coagulum is also formed within the artery, which gives a check to the injection of the blood: the fibres of the middle coat of the artery contract. Lymph is effused at the extremity.
of the vessel, ultimately the breach is closed. Such is the invariable rule of nature, but which is not always successful: there are cases in which there is no safety, but in the employment of surgical means: the great object of art is therefore to cause coagulation by controlling the force of the circulation; this may be done by proper ligature or plugging, while styptics are locally applied.

Uterine hemorrhage occurring during the early months of gestation arises from rupture of some part of the vascular network that ultimately forms the placenta. This may therefore be included under the second division may be controlled by coagule as well as by lessening the force of the circulation, in order that the vessel may more efficiently retract upon themselves. But when bleeding occurs at the time of delivery, there are special conditions than only existing connected with the circulation which make a very essential difference in the character of the hemorrhage: the manner in which it is arrested.

Dr. William Hunter observes that there is no circumstance in which the gravid uterus differs from the uninflated than in the time termination of its vessels. The womb is enlarged to its greatest extent, all its vessels are proportionately increased, the arrangement of its arterial trees are different to those in other parts of the body. The circulation going on in the
Placenta

The part of the general circulation must be regarded as special if its object... The quantity of blood in the uterus is far greater than is required for the nutrition of that organ; it may be increased or diminished to a certain length without affecting the general circulation. The contracted uterus may be almost emptied of its blood without affecting the fetus, but if hemorrhage exceed this point, the uterus again becomes large to meet the demand made to supply the deficiency, then the circulation is reduced to its lowest degree the constitution receives a shock proportionate to the demand. The uterine vessels are precisely adapted to meet this deficiency. When they are completely filled a large quantity of blood circulates through them for the supply of the fetus; but when this is no longer required sufficient means are provided for diminishing their size to interrupting the current of blood as to reduce the draught on the general circulation as nearly as possible to that required by the inunplacental uterus.

The Placenta

In order to appreciate rightly the nature of hemorrhages the connection between the ovum putative must be understood. The placenta is formed essentially by the chorion frondosum, it is a flat circular or
more or less oval shape, soft but becoming firmer towards its edge. It is the most vascular part of the ovary by which it is connected with the uterus; it is easily traceable, composed chiefly of capillary vessels having two distinct kinds: namely, capillary termination. These vessels ramify in a circular web which gradually becomes more filamentous as pregnancy advances.

We speak of the placenta as of double derivation, consisting of two distinct parts, the maternal or cellular formed by the ramifications of the uterine vessels into the decidua, the fetal formed by means of the shaggy points of the chorionic consisting ultimately of the ramifications of the umbilical vessels. Its longest diameter is about eight inches, its shortest six inches, its circumference eighteen or twenty-four; its greatest thickness is where the umbilical is inserted, which is usually about the middle of the placenta, although it varies in this respect, the cord sometimes coming off at the edge. The placenta as ordinarily seen after labour is barely an inch in its thickest part, but when filled with blood or injection it swells out considerably, is then little short of two inches. It is generally attached to the upper part of the uterus in the neighbourhood of one of the fallo...
plan tubes, more frequently on the left side than on the right; its inner or fetal surface being covered by the endochorial chorion, beneath which the radicles of the umbilical vessels may be discovered.

The placenta cannot be discovered from the other part of the ovum, until the end of the second month at which period it covers nearly half the surface of the ovum, gradually diminishing in relative size, but increasing in relative bulk up to the full period of uterine gestation. It forms a thorough vascular mass: it is formed by the villi of the chorion gradually diminishing in number tillually disappearing from every part of its surface except where it is in contact with the uterus, at which part they become concentrated to form with great largeness in consequence of the development within them of vessels derived from the inner layer of the chorion (endochorion) or from between the two layers. These vessels go on enlarging and multiplying, interlacing and interwinding with each other until they with their connecting or separating sheaths of villi or decidua form the mass of the placenta. The vessels are divided into arterial and venous branches. The two until
ical arteries at their insertion into the internal surface of
the placenta divide to subdivide into radiating branches which
plunging into its substance are minutely divided and
distributed to the different lobes. Each lobe has its own
proper distinct vessels which are said not to anastomose
with vessels of the other lobes: the extreme artery twine
appearing on microscopical examination enclosed in
the same cellular sheath. The radicles of the umbilical
vein coalesce until the large vessels formed by them
unite in forming the umbilical vein which is enclosed
in the sheath of the femo umbilicalis with the
arteries. The arteries are extremely tortuous: the
veins are without valves.

The point to be ascertained with respect
to the subject of hemorrhage is the precise nature of
the placental circulation. Cowper, Hoewyk, Linnæus,
Haller, and modern times Fauréus believed that the
bloodvessels of the uterus & placenta communicated with
each other, that an interchange of blood took place,
so that the fetus obtained fresh blood from the
mother for its own nutrition.

Many years ago the Hunter demonstrated that
vessels passed from the uterus into the placenta and were
beautifull injections left behind there still remain to.
testify this fact, & prove the existence of the vascular continuity "they satisfied themselves" says P. Reid in his paper in the Edinburgh Medical and Surgical Journal, No. 146. "that the umbilical arteries terminate in the umbilical veins, not in the vessels of the uterus; that the blood in the umbilical arteries passes from them into the veins as in other parts of the body; go back again into the child. They further observed that numerous small curving arteries, the largest being about the size of a straw quill, passed from the inner surface of the uterus, that they penetrated the decidua toward into the interstices between the fetal bloodvessels of the placenta. Prolongations from the uterine sinuses were also traced through the decidua. They were observed to terminate in the placenta in the same manner as the curving arteries, so that in the umbilical portion of the placenta, the arteries terminate in veins by a continuity of canal; whereas in the uterine portion there are intermediate cells in which the arteries terminate from which the veins begin. It was therefore concluded, that the blood of the mother was poured by the curving arteries into a kind of cellular tissue, filling up the
intervals between the ramifications of the fetal placental vessels, from which it returned to the uterine sinuses of the mother through their placental prolongations, after having acted upon the blood of the fetus through the thin walls of the umbilical placental vessels.

Dr. R. Lee, Ramsbotham, Redford, Vulpellac and many others deny the existence of these utero-placental vessels, repudiate that the placenta is to be considered exclusively as the fetal organe. The reasonings of Webster, Owen, Reid, Gaskell have however fully demonstrated the existence of these vessels, disapproved the opinion that the placenta does not consist of two parts, maternal and fetal.

I shall conclude this discussion with a quotation from Professor Godwin's admirable monograph on this subject: making a dissection of the uterus in the manner of Mr. Owen, he says: "In my progress I occasionally found that where the probe was pushed along an unopened vein, its point appeared at another opening; as I approached the internal surface of the uterus these anastomoses of the veins became more numerous, the spaces which they embossed presenting the appearance of various that bands. At last in introducing the probe under the fallopian edges of the venous orifices it was
found to have arrived at the placental tufts which could be seen by raising the falciform edges of the venous orifices. Having passed over the falciform edges, the venous membrane suddenly passed to each side to line the great cavity of the placenta. The flat bands which I have just described as the space enclosed by anastomosing venous sinuses become smaller, and entering the cavity itself, the bands are seen to have assumed the appearance of threads, which passed in great numbers from the vascular edges of the venous orifices, from the walls of the cavity of the placenta or to the extremities of the villi of the tufts of the placenta. The whole mass of tufts, that is the whole mass of spongy substance were in this manner permitted to be attached by innumerable threads of venous membrane to that surface of the parietal decidua of the placenta, which was covered by the venous membrane. On proceeding deeper into the substance of the placenta I perceived that throughout its whole extent villi were connected to villi by tuft to tuft through threads of venous membrane. Sometimes the apex of one villus was connected to the apex of another. In other instances the
threads connected the sides of the villi. On minute examination these threads were found to be tubular, the lining membrane of which they were formed was seen to be continuous in one direction with the lining membrane of the vascular system of the mother; in the other with the external membrane of the tufts of the placenta. Spreading from one tuft or set of tufts on to another so as to form the central containing membrane of the bag of the placenta. These threads, as well as their cavities, are somewhat funnel shaped at each extremity. The funnel-shaped portion of the cavities of threads in some instances the whole length of the tube were found to be full of cells, which were continuous in the one direction with the parietal decidua of the placenta, in the other with the external cells of the placental villi. There reticulate threads form the continuous structure of John Hunter, thus the first that inquirers are nearly agree on the subject into the great cavity of the placenta (of which Professor Goodricke speaks), the maternal blood is poured by the curving uterine arteries from it the blood returns into the uterine veins; no fetal blood enters it. This is sufficient to prove that there is a portion
of the placenta in direct communication which has been described by Wuher as a rule of colostral capillaries by John Hunter as a cavernous structure, by Godwin as a great cavity everywhere traversed intersticately by filiform prolongations of the lining membrane of the uterine veins, that maternal blood is infolded through innumerable uterine arteries into the great cavernous cavity of the placenta thereby supplying the necessary nutriment to the fetal blood which flows back through the large oblique canals that communicate with or are part of the uterine veins, that these venous canals and cavernous structure is composed of a tissue of extreme delicacy, that there is no direct communication between the maternal circulation and that going on in the fetus.

Uterine Haemorrhage takes place to a certain degree in every labour (2 or 3 oz.) It may occur to a trumper degree: 1. During first six months when it may cause abortion. 2. During last three months. 3. During first two stages of labour. 4. Between birth and delivery. 5. After expulsion of Placenta.

Signs of Uterine Haemorrhage
1. Rupture of the vessels of Cord.
Sourcés of Uterine Hemorrhage

2. Rupture of the fatal vessels of Placenta
   1. Uterine deciduous vesuels
   2. Uterine Placental vesuels (rarely)

5. A total loss of nervous power, by which the uterine fits vesuels are completely relaxed

Predisposing Causes. Symptoms

General Symptoms. In moderate cases the heart acts more quietly, the patient becomes pale, ex- hausted, faint. She complains of headache, lassitude, coldness of the extremities, occasional dull pains in the Pelvis, weight about the rectum, perhaps a difficulty in voiding urine. Nausea, vomiting. There are accompanied by low muttered delirium, picking at the bed clothes, &c. In severe cases a sensation of fainting fits come on, with reactions at intervals: there are also cold sweats, rigors, dyspnea. Head symptoms, preceded by local pains to mentioned above.

General Rules of Treatment

The patient must be kept in the recumbent position, with her head low for a level with the trunk. The room should be freely ventilated and darkened: the patient should be laid on a hard
bed, very lightly covered with clothes, kept in a state of absolute quietude. All stimulants, if possible must be avoided. Internally we must give astringents, refrigerants, sedative medicines, finally local applications; but I shall treat of the different therapeutic remedies at a greater length hereafter.

Haemorrhage during first six months.

Alarming haemorrhage may precede or accompany abortion. This is not an unfrequent cause of it, partly from the injury done to the fetoirs; partly from distension irritation of the uterus. The haemorrhage may be caused by external circumstances, such as blows, falls, etc., or it may result from some condition of the ovum or its vessels which is beyond our cognizance; it may be internal from the beginning afterwards escape, or it may be discharged per vaginam. There is no difficulty of diagnosis in the latter stage, but it is not always easy to detect the latter. It is accompanied in general by the same symptoms mentioned above.

Treatment. If the haemorrhage be slight, the pains trifling our efforts may be successful, but if the pains have continued for a long time especially if there is much flooding there is
little hope of success. If the patient is robust or healthy, it will be advisable to take blood from the arm; but this should be attended to as already spoken of. We may then attempt to suspend uterine action by means of opium or some of its preparations in full doses. If however the flooding is considerable, as the danger from haemorrhage is very great, the expulsion of the ovum, we must endeavour to moderate the discharge. Cold applied at intervals is of great service. I have succeeded frequently by giving the acetate of lead in a mixture with dilute nitric acid. The most direct means of restraining haemorrhage is the plug, but this must never be used if there is internal haemorrhage to such an extent as to destroy life. The best means of applying it is to take a linen cloth, keep it in cold water, and the vagina completely. The plug should be withdrawn after an interval of about six hours, if necessary a fresh one introduced.

I shall now proceed to consider those forms of flooding which occur just previous to or during labour afterwards. During the last month of gestation that the commencement of
labour, patients are exposed to two forms of haemorrhage, differing in their causes, but depending on the situation of the placenta. The first has been called "accidental haemorrhage," because it arises from rupture of vessels connecting uterus-placenta, which occupies its usual situation; the second is rightly termed "unavoidable haemorrhage" because the placenta has been placed partially over the os uteri, the dilatation of the os has separated it. The mortality attending the different forms of uterine haemorrhage is very great. Dr. Churchill has drawn up a statistical table of cases taken from the practice of various accoucheurs. The result was that out of 114 cases of accidental haemorrhage 28 proved fatal or nearly 1 in 4; out of 182 cases of unavoidable haemorrhage 51 proved fatal or nearly 1 in 3.4; out of 293 cases of flooding after delivery 22 proved fatal, or about 1 in 12.

1. Accidental haemorrhage. This class of cases occurs during the last month's first period of labour. The placenta is as I have already mentioned, in its ordinary situation, the immediate cause of flooding is the separation of a portion of the pla-
cette from the uterus. If rupture of the vessels. The
amount of the haemorrhage is said to depend on the
extent of the surface excited, this is true in many in-
stances but fatal haemorrhage may take place when
only a slight portion of the placenta has been detached.
The discharge is at first internal & generally though
not always ceases internally afterward s. If blood
accumulates, the uterus scells out, if it be con-
siderable it increases in time, becomes firmer and
ten to the touch. The strength diminishes, fainting
come on, the patient may die without any external
discharge.

Causes. Fright, other mental emotions, blows, fell
straining at stool, fatigue, over-exertion, lifting heavy
weights, excessive action of the uterus, placental vessels
damage of the placenta it may cause rupture of
the placenta.

Symptoms. The general & local symptoms are the
same in a great measure as those already
mentioned, but we must not omit several important
& distinctive marks, by which this form of haemorrhage
is distinguished from unavoidable. The unavoidable
haemorrhage there is no exciting cause, the dilatation of the os uteri excepted, there is a degree of regularity in the time of its occurrence; but in accidental haemorrhage we have no exciting cause, its occurrence is irregular. Again, in accidental haemorrhage during a pain there is no flooding, but in unavoidable haemorrhage the reverse takes place, the discharge continuing during the intervals, but greatly increased while the pains come on. The situation of Placental breach in accidental haemorrhage is high up, but in unavoidable haemorrhage it lies down. We may obtain other marks from vaginal examination. Dr. Blandell advises the introduction of the whole hand. This must be done in seventh or eighth month, if flooding comes on, lastly in cases of accidental haemorrhage if the membranes above are felt. The cervix is of equal thickness all round, we shall experience little difficulty in our diagnosis, but in unavoidable haemorrhage the placenta more or less covers the os uteri or if it only reaches to the ring the latter is felt to be considerably thickened.
Treatment. If accidental haemorrhage occur during the last month of pregnancy, the patient has not arrived at her full time, does not complain of pains, the rectum has not begun to dilate, the discharge is not great, the usual rules of treatment must be followed as already laid down for the avoidance of haemorrhage during first months. Prevention of abortion: but if the discharge is profuse, the pains of labour come on, another plan of treatment must be adopted. It has been remarked before that during a pain the discharge is observed to cease. The reason of this is that during a pain the contracting uterine, pressing on the placenta causes it in its turn to be pushed against the bleeding vessels, the flow of blood is arrested. The observation of this fact led to the inference that if the membranes were ruptured, the liquor amnii allowed to escape, the pains would be quickened; the prepuse increased, labour sooner terminated. If therefore the flooding is great, we must rupture the membranes, which causes the pains to increase, the discharge to diminish.
Labour to advance more rapidly. This plan was first recommended by Dr. C. Hume, but we are chiefly indebted to the late Dr. Rigby for the elaboration of the principles of this practice. The case to which it is suited, is rupture of the membranes not followed by uterine contractions. We must give rest to the uterus till this fail we must try galvanoirine which I have been greatly recommended by Dr. Radford has been used by him with great success. If this also fail we must terminate the labour by bringing down the feet of the child which is dangerous to the life of the infant, but is imperative if the state of the mother demands it. In some cases where the child is premature the os uteri not dilated it has been advised to perforate the head by means of the cordilloch. Notwithstanding these various means of arresting haemorrhages even after delivery, the patient is attacked with intractable pain, death ensues from loss of blood. Dr. Blandwell has recommended transfusion in these extreme cases. It has succeeded in fourteen cases tried in as many. The placenta is generally expelled immediately after delivery, if it is not, it
will be much better to extract it, because a firm contraction of the uterus than allow the haemorrhage to continue. In order to keep up the strength of the patient we must administer a judicious allowance of stimulants. After delivery, the stimulants must be continued. Opium in small doses combined with digitalis or arsenic is of great advantage. Care must be taken to suppress any return of the haemorrhage the patient kept in a state of quietude in order that no evil consequences may ensue.

Unavoidable Haemorrhage. Placenta previa. This form of haemorrhage as already stated arises from the placenta being situated partially or wholly over or uteri becoming separated from it. When this or uteri dilate, the more therefore that labour advances the greater, the separation from the uterine discharge it was noted by many of the earliest observers and particularly by Portia Swallow, Dr. Gifford others, but it is to Dr. Rigg, that we are indebted for its full explanation.

Symptoms. There is more or less haemorrhage for weeks or months before delivery, between may come on during the fifth or sixth month. When it occurs during labour there is no apparent cause. There is
some difficulty in distinguishing the placenta from a coagulum of blood; in that former case the os uteri is felt to be closed by a thick, shaggy mass which is firm to the touch, while in the latter the clot breaks down under firm pressure. We should also ascertain whether the whole or life of placenta presents as this influences our treatment. If the placenta is only partially over the os uteri and the feet present, they may be drawn through, and although the separation of the placenta will increase with the dilatation, yet the flooding will cease by the pressure of the body of the child upon the placenta. I have already spoken of the difference between accidental and unavoidable haemorrhage; the manner of diagnosis. Unavoidable haemorrhage is much more fatal than accidental, many of the children change proportion of the mischief are lost; the effect on the mother are the same as before described, but death issues much more quickly.

Treatment. If unavoidable haemorrhage takes place during fifteenth or sixteenth month we must try the palliative treatment, tending to retard labour till the natural time of delivery. A small sugar roasted in solution of sufreine has been
recommended to be introduced into the vagina as a means of congealing the blood. If there is slight bleeding, diluted tannin in syrup, strong astringent and sedatives, such as Gallow acid, Acetate of lead and strychnine must be given internally. The patient must be kept on a hard bed in a cool room, slight clothing, with perfect rest, as already recommended.

In rare cases where the Placenta had only one life over the uterus, though this has been blocked up, the membranes have burst at the side, the child born naturally unassisted by art; sometimes the child is sent right through the Placenta, in some instances the Placenta has separated, been carried down before the child! If there is only a life of the Placenta over the uterus, the membranes should be ruptured, the hemorrhage stops in five out of five cases.

Conquest thinks that Placenta praevia can only be properly treated by delivery. This is found to be exceedingly fatal both to mother and child as shown by statistics collected by Professor Simpson collected by Mr. John.
results by Clarke, Golliick, Ramsbotham, Smilie, Macnaughton &. Now it appears that in 421 cases in which Child was extracted before Placenta 144 of the Mothers died or 1 in 3.

The following table was collected by Dr. Simpson.

**Maternal Mortality in Placental presentations**

<table>
<thead>
<tr>
<th>Name</th>
<th>Total Cases</th>
<th>18 cases 3 deaths</th>
<th>14 cases 1 death</th>
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<tbody>
<tr>
<td>Mauricean</td>
<td></td>
<td></td>
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<tr>
<td>Portal</td>
<td>14</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Ifford</td>
<td>19</td>
<td>5</td>
<td>18</td>
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<tr>
<td>J. Hollins</td>
<td>42</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>Bullock</td>
<td>16</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>C. Keen Wilson</td>
<td>13</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Bush</td>
<td>65</td>
<td>16</td>
<td>46</td>
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<tr>
<td>Scheinigkauer</td>
<td>21</td>
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<td>Satchell</td>
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<td>86</td>
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<tr>
<td>J. Ramsbotham</td>
<td>187</td>
<td>40</td>
<td>96</td>
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<tr>
<td>J. Ramsbotham</td>
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<td>Smilie</td>
<td>46</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>654</td>
<td>180</td>
<td>421</td>
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**Total** 144
This increased mortality is fatal for the following reasons. First, in placental presentations the upper uterine is the most vascular part of that organ. Secondly, the cervix is not sufficiently stretched when you are obliged to turn, as you had often to turn before full period. The cervix is likely to be fractured and torn. Thirdly, tearing of or varicose a placenta is highly dangerous; because the patient goes on bleeding from the cervix while she does not in natural labour contract as soon as the fundus does to number who have got over this doe from the fifth to the fifteenth day after delivery. The uterine being bisected into its various structures, the lodgment slipping over Phlebitis death are the result.

Dr. Simpson finding great mortality from turning forcing cases in which the placenta was expelled before the child with little or no floctuary where very few of the mothers were lost from the fact it was mentioned above it occurred to the fertile mind of Professor Simpson that what occurred sometimes naturally might be attempted artificially that this practice might be substituted for turning. He tried this plan in cases where turning.
could not be accomplished with the same favourable results, when he had observed it occur naturally.

When this practice was first promulgated, it was the subject (still is) of much debate. Dr. Lee of London who has entered into controversy with Dr. Simpson, has not shown that courting which might have been expected from him, has even flatly denied that the statements made by Dr. Simpson were true. He objects to the perfected plan thus:

1. That the mortality as shown by Dr. Simpson is exaggerated, but this he has much ground. 2. That it was never practised by the older surgeons; but this is as frivolous an objection as the former, for if this was to be followed, we should never advance in improvements, till the later discoveries which have raised our profession appeared it would never have been known. 3. That the child must inevitably be sacrificed, this would be a very serious objection if the mortality in the ordinary mode of treatment were small, but it is so great that it is an insufficiency argument on which to reject the operation. It was moreover denied that the hemorrhage could be stopped as it was stated that the blood comes from the uterine vessels. This is not
very likely as the haemorrhage would be retrograde. In considerable uterine haemorrhage the fatal structures are not dealt with the haemorrhage being maternal not fatal occurring from the placenta. I have already described the utero-placental arteries the manner in which the placenta is attached to the uterus without again recurring to it. The bleeding does not come from the veins (for reasons already mentioned) but from the placental surface. The part of the Placenta which is still attached to the uterus is fully supplied with blood: this blood instead of returning altogether by the veins escapes from the detached placental cells. Another objection has been raised that the Placenta could not yield so much blood as is sometimes lost during labour; but the Placenta is a true erectile tissue. It is attached to a surface yielding it a great quantity of blood which escapes from the broken surface. It has been argued that the bleeding could only go on till the Placenta was emptied: the Placenta is constantly supplied as long as there is blood in the system.
Dr. Simpson has referred to the well known fact of the foot astray by the river bank as a refutation of
this objection. The existence of values have been asserted
but they have never been proved. The foregoing argu-
ment I have taken while attending the Professor's
lecture; after carefully examining this very difficult
subject I have come to the same conclusion with
Dr. Pilkington. When the haemorrhage is so great
as to show the necessity of interference, it is not restrained or
restrained by mild means (such as the evacuation
amnic) but at the same time turning on any other
mode of immediate delivery is especially hazardous or
impracticable in consequence of the undilated or unde-
developed state of the os uteri. The contraction of the placenta
in its parts. There are cases recorded in which this
infanticide has been ignorantly followed. Besides com-
pletely detaching and expelling the placenta, the child
has been consequently extracted by direct operative
interference. Dr. Simpson states, 'If the haemorrhage
ceases as it usually does when the placenta being
completely separated, the expulsion of the child
should be left to nature, unless it present premonstratiously
on the labour floor afterwards any kind of complication.'
which of itself would require operative interference under any other circumstances. Both to extract a child and detach a placenta would be hazardous a double instead of a single operation.

The evacuation of the liquor amnii should in most cases be tried first as it may stop the hemorrhage. Lumin may be employed with the best advantage where the cist of uterus is relaxed, the child alive treable.

Post Partum Haemorrhage

There is generally a certain amount of hemorrhage after delivery, not is this considered injurious, and, it produces an impression upon the constitution of the patient. The form of hemorrhage is sometimes fatal, amongst amongst the victims the Prince of Wales, whose untimely death caused the whole British nation to mourn. The bleeding comes generally from the utero-placental veins, sometimes from the utero-placental arteries. It depends on the slow contraction or irregular contraction of the uterus. The blood does not always escape externally but may distend the uterus itself; it is then called latent hemorrhage or the mast dangerou
Treatment. If the placenta has been already extracted or expelled, we must first endeavour to restore the uterus into full equal and uniform contraction. Cold is a most powerful remedy in causing contraction, terrestrial of the haemorrhage; if it is poured upon the abdomen it produces a shock, this is a more powerful means of producing contraction of the uterus than a greater amount of cold without the shock. Prepare ought to be made for some time with both hands on the fundus uteri. In order to ensure this effect by the continuance of the preparation, the abdomen must be very carefully bandaged. Exopt of rye is perhaps the most important remedy in promoting contraction of the uterine. It is however insufficient in nervous contraction of the uterus, because for from acting as a stimulant it seems to have a sedative effect (at least upon the heart); while its specific action is obvious the moment the exhaustion is removed. Opium is of the highest value in saving a patient from the consequences of extreme flooding; exopt of rye in preventing such remedies from taking place. Compulsion of the doctor is said to be effectual in some cases. Electricity has also been recommended by Dr. Radford.
But Dr. Simpson has tried a series of experiments to
test its efficacy, found results quite opposite to what
he was led to expect. The remedial therapeutic treat-
ment are equally suitable to this, as already men-
tioned in other forms of haemorrhage.