cases from that of an orange to that of a four months' pregnant uterus. In three of the four cases the uterus had to be diminished in size before it could be removed through the aperture in the vaginal vault. In the larger tumours neither the dimensions nor the weight could be accurately ascertained after operation on account of the mutilation which was necessary. All the tumours were specimens of intramural fibroid, but in Cases I and III they had developed more towards the uterine cavity, while in Cases II and IV they bulged out the peritoneal aspect of the uterus. The cases practically divide themselves into two classes:

(1) Intramural fibroid of moderate size, with a considerable amount of its periphery in contact with the lining membrane of the uterus, causing excessive hæmorrhage.

(2) Intramural fibroid developing towards the outer surface of the uterus, and more or less incarcerated, causing distress from pressure on pelvic tissues and organs.

REMARKS.

A few years ago the only method of dealing with such growths, apart from palliative treatment, was by oöphorectomy. With the improvement in the technique of vaginal hysterectomy, this latter method now presents itself as an alternative to oöphorectomy, and it was between these two operations that I had to make my choice.

In comparing these operations, the first question we have to ask concerning each is, What is the chance of immediate death? The mortality of oöphorectomy for fibroid is variously estimated at from 2 to 10 per cent. The latest statistics I can find are contained in an article by Hermes, in the *Archiv. f. Gynäk.* vol. xlviii, part I:

Kaltenbach ...	48	cases with 2 deaths.
Wiedow ...	66	" "
Leopold ...	35	" 4 "
Hofmeier ...	40	" 2 "
Hofmeier ...	15	" 2 "
Olshausen ...	13	" 4 "
Olshausen ...	14	" 4 "
Freund ...	23	" 2 "
Fehling ...	30	" 3 "

Total ... 312 " 28 " = 9 per cent.

In estimating the mortality of vaginal hysterectomy for fibroid, we have to go to foreign statistics. The largest list of cases I have seen is given by M. Landau who publishes the following figures:²

Richelot ...	39	" 1 death.
Doyen ...	28	" 1 "
Jacobs ...	22	" 0 "
Péan ...	300	" 6 deaths.

Total ... 389 " 8 "

The percentage mortality of 389 cases therefore was a little over 2 per cent. This statement probably gives too favourable a view of the mortality. Leopold³ in 1890 published his own statistics: in 35 oöphorectomies for fibroid there were 4 deaths (about 11 per cent.); in 21 vaginal hysterectomies there were 3 deaths (14 per cent.). In considering these statistics it is to be remembered that in all operations the mortality diminishes with the experience of the operator, and that vaginal hysterectomy is comparatively a new operation. We are therefore justified in claiming for vaginal hysterectomy a mortality at least as low as that shown by oöphorectomy; indeed the balance of evidence is decidedly in favour of the former. There are one or two reasons why we might conclude *a priori* that the vaginal operation would show a comparatively small mortality, in spite of the fact that it is generally a prolonged and apparently a trying method. In the first place, there is a notable absence, or comparatively small degree, of shock immediately after vaginal operations, even in those which involve the opening of the peritoneal cavity. This will be recognised by all who have seen the quiet, and even restful, condition in which a patient is often found a few hours after vaginal hysterectomy for cancer. There is none of the restlessness and anxiety which is so common a sequence of the most favourable laparotomy. This absence of shock is probably explained by the fact that the intestines are not touched, and that they are not exposed in any but the smallest extent to the external air. For the same reason there is much less liability to abdominal sepsis

or ileus after the vaginal operation than after abdominal section. The complete drainage which is obtained in the former operation may also act as a factor in the prevention of sepsis. It is for the two reasons just stated that abdominal hysterectomy offers distinct advantages in cases in which the patient has been drained of blood by long-continued hæmorrhage. In this class of cases the simplest laparotomy becomes a critical procedure.

Apart from the advantage in immediate mortality which I believe belongs to vaginal hysterectomy as compared with oöphorectomy, there are minor advantages belonging to the former both in the nature of the convalescence from operation and in the ultimate results. The one is a radical operation; the other, if not exactly palliative, is at least only an indirect method of cure. The cure in the one case is manifest within a few weeks of the operation; in the other the patient has generally months if not years of considerable discomfort, during which the tumour is slowly diminishing; nor is permanent cure after recovery from oöphorectomy always a certainty, a fact which is admitted by its strongest partisans. Finally, the absence of an abdominal scar is a distinct advantage on the side of vaginal hysterectomy. It is not easy to estimate the frequency with which ventral hernia occurs after oöphorectomy, but there is no doubt that, even with the greatest precautions, ventral hernia does occasionally follow abdominal section, and that when it does occur it is a source of real discomfort if not of actual danger to the patient.

In spite of the advantages which vaginal hysterectomy offers in certain cases of fibroid tumours, it is not an operation which is likely to be very extensively practised in this country, for two reasons: (1) It is only applicable to a limited number of cases of fibroid tumour, in which the symptoms call urgently for operative interference. In all cases in which the fibroid projects well into the uterine cavity, the proper treatment is to dilate or incise the cervix and to enucleate the tumour. Further, only tumours of a moderate size can be removed by vaginal hysterectomy. It is true that this limit has been considerably extended by experience and by the method of removing the tumour in pieces. But nevertheless, if the tumour rises above the pubes to the extent of more than 3 or 4 inches, or is of such volume that it will not pass through the pelvic brim, the case is not a suitable one for extirpation by the vagina. (2) The technical difficulties are at times so great as to tax one's patience and perseverance very severely, and for this reason it is not likely to become popular.

ON THE TREATMENT OF PUERPERAL ECLAMPSIA OCCURRING DURING PREGNANCY, AND PRESENTING NO SIGNS OF LABOUR.¹

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In the older handbooks of midwifery, such as I used when a student, puerperal convulsions were divided into three classes—namely, the hysterical, the epileptic, and the apoplectic. It is difficult to understand why such a classification was ever made. There is only one of these three that has any claim to be considered a distinct disease *sui generis*, and that is the epileptic form, or puerperal eclampsia as it is more correctly termed. The other two are merely attacks of hysteria or apoplexy which happen to come on during pregnancy or parturition. But, in my opinion, it would be much more rational to divide cases of puerperal eclampsia into three kinds, according to the time when the attack begins, whether before, during, or after labour; for the prognosis and treatment differ widely in each of these varieties. My own statistics of puerperal eclampsia abundantly prove this. Since I have been in practice (during a period of more than fifty years) I have met with 36 cases of puerperal eclampsia. Of these, 11 came on during pregnancy (before any signs of labour were present), 20 during labour, and 5 after labour. Now in the 11 that occurred before labour, 6

² *Arch. f. Gynäk.*, vo. xlvii, part i.

³ *Arch. f. Gynäk.*, vo. xxxviii, part i.

¹ Read in the Section of Obstetrics and Gynecology at the Annual Meeting of the British Medical Association held in London, July-August, 1895.

mothers, or just over one-half, died, and 9 children, or more than three-fourths. In the 20 that occurred during labour, 5 mothers, or exactly one quarter died, and 9 children, or scarcely one-half. In the 5 that came on after delivery, no mother and no child died. The prognosis is therefore as favourable as it can be in the third class, and very grave in the first; whilst in the second it occupies an intermediate position. My statistics, then, tend to confirm the observations of others which show that the earlier the convulsions come on before labour the more unfavourable is the prognosis. Another peculiarity that ought to be noted in my 36 cases of eclampsia is that 31, or rather more than five-sixths of the whole number, were consultation cases; whereas in 5 only was I the original attendant. This implies that the former were uncommonly severe cases which had not yielded to the usual treatment, otherwise the ordinary family attendant would not have requested a consultation. On the contrary, in lying-in charities, such, for instance, as that at Guy's, where women are attended at their own homes (or better still, at lying-in hospitals) by students, whose duty it is to send at once for a consulting practitioner as soon as ever they recognise a case of eclampsia, however ordinary and favourable a one it may be. It is, therefore, obviously unfair to compare under such different circumstances the results in two such distinct classes of patients. This especially applies to my own practice, for from 1850 to 1875 I was the only obstetric physician in Bristol, and had quite a monopoly, consequently, of difficult midwifery cases requiring a consultation. But perhaps there are no obstetric cases which involve a greater responsibility for the consulting accoucheur than those which form the subject of this paper, both on account of their danger, the frequent discrepancies as to treatment, and the fact that they involve, as they often do, the sacrifice of the child's life to save the mother's.

I have now said quite enough to show the great danger of cases of eclampsia occurring during pregnancy; but this danger is much increased, and so are the differences of opinion as to the best treatment, when there are no symptoms whatever of approaching labour. In proof of this I cannot, I think, do better than quote rather largely from a good practical paper which was published by Dr. Haultain in the *Edinburgh Medical Journal* for August, 1891.

Dr. Haultain is to be congratulated on a successful result in three out of his four cases; the remedies on which he principally relied in the last three being apparently the prophylactic treatment by means of strictly enforced milk diet, free diaphoresis and purgation. Most authorities agree with him in this treatment, which, whenever albumen is present in the urine, may be tried for some time before resorting to more active measures. The other remedy on which he seems to place most reliance, after trying the prophylactic treatment for some time without the superintention of labour pains naturally, is prompt artificial delivery so as to cut short the pregnancy, and save the woman from the superintention of convulsions, which may probably prove fatal to both mother and child, as in the first of his cases. When it has been decided to empty the uterus, Dr. Haultain recommends dilating the os uteri by the fingers alone when the patient is fully under the influence of chloroform, 30 grains of chloral having been administered on the previous evening. "The time taken to dilate the cervix sufficiently to allow of the easy application of the forceps varied, in my cases, from sixty-five minutes to an hour and a-half, and in no case were the membranes ruptured accidentally. After the application of the forceps little further digital dilatation was necessary, the gentlest traction being sufficient to cause the head to act as a most efficient dilator."

Dr. Haultain leads us to infer, from the success of his 3 last cases, that the first died because labour was not induced; and certainly there is no better argument, in doubtful cases, in favour of heroic treatment, than its success in others that are similar; but I question very much whether in this case it would have succeeded. From the circumstance that the patient lay for twelve hours in a comatose condition before death, I should be inclined to attribute the convulsions to increased tension of the cerebral arteries rather than to uræmia; and, as I shall show presently, there are much more effectual means of obviating this condition than by forcible delivery. Charpentier, who is a very high authority, and who

introduced the prophylactic treatment (so successfully adopted by Dr. Haultain) objects very strongly to this latter practice, for he says: "Premature labour is never to be induced, and still less abortion. It is a deplorable procedure no matter how gently it may be performed, it always results in contusions, or tears of the cervix, sometimes with resulting gangrene. It is only possible to practise it after the cervix has been softened in consequence of the preceding hæmorrhage." But Dr. Haultain remarks on this: "This happily, however, is quite opposed to my experience." This is true, no doubt, but it may be answered, in opposition to it, that the experience of 4 cases is scarcely enough to settle a controverted question of such importance. That induced premature labour is sometimes a cause of danger, especially in cases of increased arterial tension, Dr. Haultain seems to be fully aware, for, after speaking of defective renal secretion as a cause of eclampsia, he remarks, "Uterine contractions would also seem to be a potent factor in the production of eclampsia, and this probably from the fact of their raising arterial pressure. That uterine contractions alone are sufficient to cause eclampsia is improbable, but in an arterial system whose vessels are already overfull, the superintention of pains is like putting a light to gunpowder."

On this account, when the os uteri remains in so rigid and undilatable a condition that it cannot be overcome by the fingers (which fortunately does not appear to have been the case in Dr. Haultain's successful cases), and the condition of the woman seems so critical that speedy delivery appears to be her only chance, some accoucheurs have not scrupled to call in the assistance of surgery, and to take the most extreme measures to secure this result, not only by forcible dilatation, which the French call the *accouchement forcé*, but even by the performance of the Cæsarean section, which has actually been resorted to in 10 or 11 cases on the Continent, 6 of which were in Holland.

But the general opinion on the Continent seems to be that such an operation is only justifiable when the woman lies comatose, with an undilated os uteri and cervix, and a child in the uterus that is undoubtedly living. In England I should say that the majority of obstetric practitioners regard the *accouchement forcé* as a *dernier ressort*, when all other remedies fail.

At the meeting of the British Medical Association in Bristol last year, we had, in the Obstetric Section, an excellent discussion on the "necessity for inducing labour in certain diseases of the mother not obstructing delivery."

The discussion was introduced and very ably conducted by Dr. Barnes. Some of his remarks as to the treatment of these cases were so judicious, and bear so much on the management of those I have just been discussing, that I cannot forbear quoting short extracts from them. For instance, he states *in limine* that "the strictly medical treatment of the difficulties that complicate pregnancy is often delusive. We must not defer too long an appeal to the decisive intervention of surgery." He then goes on to say: "We pass under rapid review the dangers of high vascular tension with ultra-physiological changes in the qualities and quantities of the blood, Nature's methods of relief, and the consequent therapeutical measures indicated." What are the indications thus given? In a former paper of his he says: "A copious flooding which may or may not be the precursor of abortion sets in, and the fit and the albuminuria may be at once relieved. This suggests venesection, a disputed point. It is not wise to make venesection a rule in practice, but the empirical evidence in its favour in appropriate cases is incontestable; nothing so quickly lowers the excessive action of the heart." And then in last year's discussion he remarks: "Venesection is sometimes strongly indicated, as when hæmorrhages occur, and when there is undue pressure on the kidneys, as in Mahomed's pre-albuminuric stage, or in the early stages of albuminuria with convulsion. Venesection is out of date, but I have practised it with the best results. Then, in the last resource, we follow Nature's most decisive action in her rebellion against pregnancy in inducing labour."

Dr. Barnes, in the passage just quoted, in which he alludes to convulsions induced before labour by undue arterial pressure, used the following words: "Venesection is out of date,

but I have practised it with the best results." I may well ask, Why is it out of date, when such an important witness gives his valuable testimony in favour of such a remedy in these most critical cases? I have done so myself, and have on different occasions published in the medical journals cases of eclampsia I have attended, where bleeding has saved the patient when all other remedies have failed; and I shall no doubt, very naturally, be asked, How, then, do you account for the very general disuse of this remedy in the present day? I must honestly answer that, as regards puerperal convulsions, I cannot account for it. I know of no good reason which has been given against its employment. But yet, at the present time, this valuable remedy is very seldom used, for no better reason than I can find than that, in the treatment of all diseases, bleeding has quite gone out of fashion. It is true that, in the latter half of this century, we have acquired two powerful agents in the treatment of eclampsia, namely, chloroform and chloral, and these have perhaps, to some extent, caused us to lose sight of the value of bleeding. But in the first half of this century a very different state of things prevailed. Perhaps there was no remedy about which doctors were so thoroughly agreed as about the value of bleeding in puerperal eclampsia.

I may now refer to a case in which the patient made a very good recovery, and which was, moreover, a most conclusive proof of the value of bleeding. It occurred in the practice of my brother, Mr. S. Henry Swayne, very shortly before the meeting of the British Medical Association in Bristol in 1863, and was recorded in the BRITISH MEDICAL JOURNAL of June 20th, 1863. In his remarks on the case my brother says:

"No other exciting cause for the convulsions in this case beyond the uræmia could be discovered; and that the presence of the fœtus *in utero* had little share in bringing them on or maintaining them would seem to be shown by the cessation of the convulsions, and of the albuminuria, notwithstanding the presence of the dead child in the uterus for a fortnight afterwards. That the improvement was due to the measures employed, especially the bleeding, I think, can scarcely admit doubt."

And I may add to this that it can "scarcely admit of a doubt" that my brother, who had just witnessed the rapid improvement caused by bleeding, took the best course in letting well alone, in adopting the expectant plan, and in avoiding any rash interference with Nature by an operation, such as the *accouchement forcé*.

A NEW THEORY AS TO THE POSITION OF THE FÆTUS IN UTERO.¹

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MANY papers have been written upon the attitude and presentations of the fœtus *in utero*, and endeavours made to explain the reasons for cranial, pelvic, transverse, and other presentations. The subject, although a very important one, has received little attention of late years, and most new authors have contented themselves with repeating the theories found in older textbooks dealing with the attitude of the fœtus and the frequency of cranial presentation.

In this paper I shall simply attempt to explain the reason for the child being dorso-anterior or dorso-posterior, and possibly the same cause may explain transverse presentation also.

During the later months of pregnancy, the fœtus as a rule is found to present by the head, and writers have advanced various theories to account for its doing so. This point I do not wish to discuss, and I will limit myself to the position of the fœtus without respect to its attitude or presentation.

Briefly, my experience in Cæsarean section has shown me that in dorso-posterior positions the placenta is attached upon the anterior wall, whilst in dorso-anterior positions the placenta is upon the posterior wall.

(a) Thus, in the first cranial position, or O.L.A., the placenta will be found upon the posterior wall, and somewhat to the right side.

(b) In the second cranial position, or O.D.A., the placenta will be upon the posterior wall, and somewhat to the left side.

(c) In the third cranial position, or O.D.P., the placenta will be upon the anterior wall, and somewhat to the left side.

(d) In the fourth cranial position, or O.L.P., the placenta will be upon the anterior wall, and somewhat to the right side.

The fœtus and placenta will be found in the same relation in the various pelvic positions.

Now, such being the case, we can readily understand how this arrangement favours the wellbeing of the fœtus during labour, as then during a uterine contraction the back of the fœtus can apply itself to the uterine wall with advantage, whereas if the placenta intervened asphyxia would result, more especially after the membranes had ruptured. In many cases also very little liquor amnii exists at full time, and in such cases, if it were not for this wise arrangement of the fœtus *in utero*, the circulation in the placenta, even during the course of pregnancy, would be interfered with if the placenta was upon the anterior wall and the fœtus was dorso-anterior.

The head of the fœtus in the ninth month is generally near the brim and the body dorso-anterior. The frequency of this as compared with other presentations at the same term is such that it is looked upon as the most natural. I do not wait to discuss the theories of Dubois, Simpson, or Duncan, as to whether this presentation is the result of instinct, reflex action, or gravitation, but wish rather to refer to the various positions in such a presentation, and to show that in these cases the child invariably assumes a definite posture in its relation not to the pelvis, as has hitherto been assumed, but to the site of the placenta. As regards this site Oslander² states that the ovum in a normal uterus on emerging from the Fallopian tube will find little space in the uterus, and will consequently attach itself near the tube on the fundus or side of the uterus.

Since the time of Smellie the first or O.L.A. position has generally been admitted to be the most frequent. In order to simplify matters a glance at the following table will show the statistics of various observers.

—	First Position. (O.L.A.)	Second Position. (O.D.A.)	Third Position. (O.D.P.)	Fourth Position. (O.L.P.)	Not Classified.
Nægele	70.00	—	29.00	—	1.00
Nægele, the younger ...	64.64	—	32.88	—	2.47
Simpson and Barry ...	76.45	0.29	22.68	0.58	—
Dubois	70.83	2.87	25.66	0.62	—
Murphy	63.23	16.18	16.18	4.42	—
Swayne	86.36	9.79	01.04	2.80	—

It will be seen that Nægele places the third or O.D.P. position next in frequency to the first or O.L.A. position, whereas Murphy places the second or O.D.A. position, and the third or O.D.P. position, as equally frequent. It must be remembered, however, that judging from vaginal examination the results may vary with the progress of the head. If examined early they might be tabulated as occipito-posterior, but if examined later, after rotation has taken place, they might be classified as occipito-anterior. It is, therefore, only at the beginning of labour, and upon a large number of observations, that any correct conclusions can be based.

The relative frequency may be put down as:

First Position. (O.L.A.)	Second Position. (O.D.A.)	Third Position. (O.D.P.)	Fourth Position. (O.L.P.)
Per Cent.	Per Cent.	Per Cent.	Per Cent.
67	10	20	3

¹ Read in the Section of Obstetrics and Gynæcology at the Annual Meeting of the British Medical Association held in London, July-August, 1895.

² *Denkwürdigkeiten für die Heilkunde und Geburtshilfe*, Bd. 1, s. 316.