might have been better said, but, at the risk of being considered trivial and unmedical, I have ventured to bring before you certain observations about the occurrence of errors which exist in the management of children, and which I trust may prove of use to us as we medical men take our right place as the instructors of the community.

Remarks

ON

POST-PARTUM HAEMORRHAGE.

BEING AN EXTRACT FROM AN ADDRESS ON
UTERINE HAEMORRHAGE DELIVERED BEFORE THE
CLINICAL SOCIETY OF MANCHESTER.

BY JOHN F. LE PAGE, M.D.,

PRESIDENT OF THE SOCIETY.

OF *post-partum* haemorrhage it may justly be said that in the whole range of surgery there is no exigency which more imperatively demands instant action. There is absolutely no time for deliberation. No time for calling to mind the innumerable things which the authorities tell you should be done; for remembering the particular order in which you should proceed; the time you may spend on each attempt; for ascertaining the precise cause of the haemorrhage. There is no time for any one of these things. Time there is only for instant, as it were intuitive, action. Every man who has seen a really severe case of *post-partum* haemorrhage knows only too well that if he does not do something then and there his patient will, in a very few minutes, be past all that human skill can do or ingenuity devise. Something. Yes; not waste his priceless time in the framing of a line of treatment likely to most accord with conventional teaching based on absolutely false premisses.

I will not enumerate all the measures which, according to textbooks and many authoritative pronouncements, should be tried, and I could not if I would. But here are some:

Pressure on the fundus uteri and manipulations of the uterus.

Introduction of the hand to excite contraction.

Cold water applied with cloths to the abdomen or poured from some height.

Hot and cold water alternately, used in the same way.

Ergot by the mouth or ergotine subcutaneously.

Injection of ether over the abdomen.

Brandy by the mouth.

Barnes's or other bag introduced into the uterus and distended with cold water.

Hot water injected into the uterus.

Ice placed in the uterus.

Iced water injected into the rectum.

The faradic current.

Injection of, or swabbing the uterus with, perchloride of iron.

These and many other measures, equally unscientific and delusive, constitute the munitions of war of the unfortunate practitioner who with them has to combat death. I do not mean to say that not one, or not all, of these measures is ever followed by a cessation of haemorrhage. Syncope is a very effective haemostatic. And a very large number of cases of so-called *post-partum* haemorrhage are cases in which the haemorrhage is the result of the prevalent, but unmitigatedly bad, practice of forcibly following down the uterus at the end of and immediately after the second stage, and thus detaching and extruding the placenta before the uterine pause which normally follows its supreme efforts. If retraction of the tired muscle had not taken place the gaping sinuses naturally poured out blood, but with, or entirely without, any stimulative interference the uterus, after its normal rest, contracts and the haemorrhage ceases. This bleeding is of course *post partum*, but it is not what is meant by *post-partum* haemorrhage. In the same category may be placed cases of traumatic haemorrhage, of bleeding from retention of a portion of placenta, etc. These are cases which seem to favour a wrong and impotent treatment, and bring confusion on statistics.

I define *post-partum* haemorrhage as a haemorrhage which is the result of an atonic state of the uterine muscle, accidental, acquired, or constitutional.

In this—assuredly one of the most appalling and un-

nerving conditions we have to confront—it is absolutely necessary that we should have the very clearest conception both of what is going on and of what we should instantly do.

All the more is this so seeing that any man, one perhaps who has never seen a severe case before, may at any moment be called upon to face impending death. His patient has perhaps just thanked him with a grateful smile for all his kindness and help. He turns to her in a few moments to see a ghastly countenance and to hear a whisper imploring for more air. A moment more, he can find no pulse at the wrist, she gasps for air, her skin is livid, cold, and bathed in profuse perspiration; her eyes are half-closed and upturned; vision has completely gone, and respiration is evidenced only by short irregular gasps; he realizes that she is dying. Yes, it is so, if he does not instantly do something.

But all the textbooks, all the authorities, tell him what to do. They tell him he must bring to mind all the dozen or more possible causes, for they may influence him as to which of the innumerable things he has to try he will begin with. Will he inject ergot? Will he begin by kneading the uterus, and follow this up with cold water and hot water? Will he—what will he not do? Many years ago a practitioner, bewildered by the multitude of his resources, by their failure one by one, and by the consequent peril, knelt by the bedside and prayed for his unfortunate patient. She died, and—well, his name was struck off the *Register*. All this because he accepted the absurd, the altogether irrational dictum of the textbooks, that the one thing he must do was to get—to *make*—the uterus to contract.

Here is what some authors, whose teaching is still taught in our colleges, reproduced in our current textbooks, and required of students in their examination, say:

PLAYFAIR says: "There are only two measures—"those which act by the production of uterine contraction, and those which act by producing thrombosis in the vessels." "It is satisfactory to know that recovery often takes place." "If we can check the haemorrhage while there is still some power of reaction left, however slight, we may not unreasonably hope for eventual recovery." "The prolonged use of all these remedies, . . . if they fail to excite contraction rapidly, will certainly prove injurious."

FOTHERGILL says: "Contraction of the uterus, and, if that fails, thrombosis."

GALABIN says: "The essential point in treatment is to secure contraction of the uterus, and by far the greater part of the value of all means used for the arrest of haemorrhage consists in their efficacy in producing this effect."

DAKIN says: "In following this treatment the various manoeuvres must succeed one another rapidly."

BARNES says: "If the nervous exhaustion is so great that irritability is lost, these agents are useless or injurious. The patient may, indeed, rally after syncope, but it may be truly said that at this point the art of the physician fails." "It fails unless he has the courage to try perchloride or persulphate of iron."

Is it not abundantly evident that not one of the measures, iterated *ad nauseam*, can by any possibility be effective unless there is nervous force present capable of responding to irritation? A bolder spirit has even suggested recently, after following the same lines, and as a very *dernier ressort*, that we try the removal of the uterus. History, however, does not relate whether he has yet found opportunity for putting this heroic measure into practice. Short of this climax, you are told that thrombosis with iron is the very last thing that can be done. If it does not succeed, at this point, "the art of the physician fails." Very far from it. It is here that art and a juster conception of the truth which underlies much error, dawn.

But, Playfair says, "Recovery often takes place." Yes; in some cases Nature comes to her aid, and by syncope and thrombosis arrests haemorrhage, and the rested uterus eventually responds to the nerve call. In others, in which the actual loss of blood has been relatively small, the uterine muscle, wearied by prolonged labour, prolongs its normal pause until waked up, as it were, by the nervous energy still remaining after the haemorrhage caused by denusion, and probably extrusion, of the placenta by ill-advised manual interference. The result, however, often is incomplete retraction, pronounced anaemia, and subinvolution. The fact that some slighter cases—cases in which there is really no atony of the uterus, but simply rest after toil—do respond to stimulation, is no justification whatever for allowing a critical condition to develop

rapidly, whilst innumerable and unsuccessful efforts are made to obtain contraction.

I have before me a letter from the Registrar-General, in which he informs me that the deaths registered last year in England and Wales from "flooding" numbered 619. On the average, then, nearly two women on every week-day throughout the year 1905 died from "flooding" in England and Wales alone. This is a striking tribute to the insufficiency and the futility of the strenuous efforts made by our profession on lines which are supported alone by tradition and are wholly innocent of reason. It will be said that the word "flooding" probably comprises several forms; a further communication from the Registrar-General explains that all the 619 deaths are certified as from placenta praevia, "flooding," or *post-partum* haemorrhage, and that other haemorrhages are not included. The main principles of treatment, therefore, apply to all the cases. If, as I aver, these haemorrhages should never be fatal, then not one of those of the 619 who were attended by qualified practitioners should have died.

If after the third stage the uterus did not contract before there was any haemorrhage, why in the name of common sense should we, when the system is drained of vital fluid and the whole nervous system is paralysed, hope for a miracle? Hope that the impotent uterus will, in response to equally impotent castigations, take as it were an independent life, and rhythmically contract and retract itself into a firm and vital organ, whilst all around it is practically dead?

It is verily past understanding that whilst every one, without the slightest hesitation, accepts and fully endorses as absolutely sound the rules of surgery anent the arrest of haemorrhage, those rules are entirely ignored when from flooding the life of a woman is in the balance.

It is now just twenty-five years since I published my protest against the treatment of *post-partum* haemorrhage. It then was, as it is now, the taught and accepted dogma, as unalterable as the laws of the Medes and Persians.

What should we say of a water-department engineer who, when a water main burst, immediately sent for every servant in his employ to attempt to plug the broken pipe? I think a child would say: "Turn off the main." I have said, "Turn it off at the main" for the last quarter of a century. And I say now that this is the one thing which should be immediately done, the one rational initial treatment in all cases of *post-partum* haemorrhage. Shut off the current along the uterine arteries by compressing the abdominal aorta. Everything is in favour of this procedure. It is done in a moment; it is done without the smallest difficulty; it is absolutely and instantly effective. Effective in what? In causing the uterus to contract? Certainly not; that is impossible. Effective in immediately restraining the pouring out of blood, which is the one primary indication.

But Playfair says compressing the aorta is a "momentary resource to give time to apply other measures," such as kneading the uterus, friction, ice in the uterus, injection of iced water into the rectum, etc. Barnes says: "Compression kept up for a minute will often give time for the contraction of the uterus—a momentary resource." A perfectly fair inference is that, had these authorities been surgeons, they would, in the case of a severed limb, have applied a tourniquet *just for a minute*, to give a modicum of time to use ice, styptics, and what not to the spouting arteries. It is too absurd.

What have we before us? The uterus is atonic. Its vessels, gaping, are, or were, so long as any blood tension remained, pouring out blood. There is marked collapse. The nerve centres which control uterine contractions, and the higher centres, which control cardiac action and respiration, are devitalized.

The first indication is to prevent any further haemorrhage.

The second is to revitalize the nerve centres, which can only be done by increasing the volume and current of the blood.

And the third indication is, having restored blood tension and nervous energy, to assist, now possible, uterine contraction.

A typical and very extreme case will best illustrate these principles of treatment:

E. M., aged 29, multipara, had been delivered half an hour when I received an urgent request to attend. On entering the house I was told she was dead. In the bedroom I found Dr. X. and Dr. Y. There was much blood on the floor. The patient was livid; the radial pulse could not be felt, and respiration could not be observed. The eyes were upturned, and did not respond to touch, the pupils dilated. I instantly thrust a hard sofa pillow under the loins. Compressed the aorta with the left hand. Had both legs raised perpendicularly to the bed, and held so by the ankles; and both arms raised and held up in same way. A sheet was torn up for bandages, which Dr. Y. ran firmly up both legs and both arms; 2 oz. of brandy, with 2 oz. of hot water were injected into the rectum, and the arms were then lowered. Pulsation of the aorta rapidly increased. My right hand, rendered aseptic, was cautiously passed into the uterus and blood clots were cleared away. Dr. X. then, with both hands, firmly grasped my closed hand. The aorta was now partly released, and there was no haemorrhage. The patient looked about and wished to speak. The uterus contracting firmly, I withdrew my hand, lowered the legs, released the aorta, and injected ergotine. Brandy and water was taken eagerly, the sofa pillow was removed, and a tight bandage with hard lateral pads put on. The pulse at the wrist was good; the temperature of the surface increasing, the respiration 22. The removal of bandages was commenced, but on unwinding the right arm and slowly loosening the left there was slight pallor, but she was quite safe. Nutriment taken freely. I desired that one of her medical attendants should constantly remain through the night, and directed that the leg bandages be very slowly loosened at intervals, depending on the effect and on the amount of liquid nutriment taken. She slept two hours and three and a half hours. The bandages were entirely removed in three hours. Notwithstanding anaemia, she made a good recovery, and was up on the twentieth day for a short time.

This was unquestionably a very severe case, and as such serves well for illustrating and elucidating the line of treatment and the mode of carrying it out. Having rendered any further serious haemorrhage impossible, the next step was not to try to make the uterus contract, which would have been absolutely futile, but to restore vitality—active vitality—so that the uterus might have power to contract.

A very elementary school physiology will teach that a muscle cannot contract without innervation, any more than can an electric motor work without current.

Taking the steps in their order: I raise the pelvis to cause blood to gravitate towards the heart and brain, and to prevent bleeding from the uterine and ovarian veins. The aorta is compressed to immediately arrest arterial haemorrhage. The spinal column beneath and below the umbilicus is very prominent and broad, and for the length of 3 or 4 in. forms an admirable *point de résistance*, for the aorta lies immediately over it. Compression is best made by the outer, the ulnar, portion of the left clenched hand, than which nothing could be more convenient and effective. Pressure should at short intervals be made to slide from one part to another of the available 3 or 4 in., that no injury be done to the sympathetic system of nerves which forms a network around the vessel, and should be continued until uterine contraction is secured, even if this be delayed for one or two hours. Its release must always be very gradual; the greatest care in this particular is essential. An important fact is that, although no blood is allowed to pass the compressing hand, there is still a sufficient, but very limited, flow through the ovarian arteries to maintain uterine vitality.

I raise the legs and arms to transmit their blood into the trunk, and then bandage them firmly to prevent the return of blood when they are lowered. The effect of this manoeuvre is that in many cases a tension of whole blood approaching the normal is attained in one or two minutes. Ergot and other remedial means are at once available.

The hand, rendered aseptic, is then very carefully passed into the uterus—first, to detect any possible laceration of the body or cervix or any remaining portion of placenta; and, secondly, to afford a *point d'appui* for grasping and compressing the uterus from outside. Having elevated the pelvis and limbs, it may be thought by some that it is unnecessary to firmly bandage. This is not so, for it would be impossible to keep the patient in that position for any considerable time, and to lower them would be to endanger her from syncope; nor is the tourniquet allowable, for it is altogether necessary to observe great caution in restoring the circulation—that is, in allowing blood to be taken from the trunk slowly and in a ratio with the increase of its volume by absorption and assimilation.

The vast advantages of this intrafusion of whole blood

are: In extreme cases tension in the vessels is immediately restored, and the heart and lungs are filled with whole normal blood. The paramount importance of this must be evident. Contrasted with the intravenous injection of saline fluid or the intercellular injection of other fluids, it should be obvious that, whilst the latter, comparatively slowly, increase the bulk of fluid, blood both supplies resistance for the heart to act upon and is that alone through which a normal vital condition can be restored, and the nerve centres develop that energy without which the uterine muscle cannot contract and retract.

This treatment—which I submit is rational, always practicable, and, so far as my experience goes, unailing—is based on the propositions: That no work can be done without energy; that there is no energy inherent in uterine muscle; that contraction of the uterus is wholly dependent on energy derived from the uterine nerve centres; that, deprived of blood, nerve centres do not, and cannot, develop energy; and that, in the collapse of profuse haemorrhage, there is practically stasis in the vascular system which supplies the nerve centres. Therefore, as depletion of blood is rapidly going on, instantly arrest the flow; as nerve centres are paralysed, restore their vitality; and, last, as the uterine muscle is uncontracted, now that the patient is safe and innervation is re-established, use such measures as may be necessary to secure normal firm contraction.

My personal experience, derived from the responsibility for about 5,000 parturitions, has, so far, attested the soundness of this theory and afforded proof of its practicability, in that I have never seen a death from *post-partum* haemorrhage.

NOTES ON THE TREATMENT OF MYOMA OF THE UTERUS.*

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I KNOW full well that papers innumerable have been written upon the subject of myoma of the uterus. If the last word had been said upon this important matter, it would be foolish of me to refer to it. We are, however, a long way off hearing the last word, and I want to record the opinions I have come to from my own experience. We learn far more from our own cases than from any number of books or papers, valuable as these may be.

The main result of my experience is that it is still necessary to run a tilt against the idea that uterine fibroids are usually harmless growths and had therefore better be left alone. You might think that in this advanced stage of surgery every one would have given up the idea of the harmlessness of fibroids. It is not so. Even to-day a large number of men—and some of them in high places—preach the doctrine that fibroids are only rarely dangerous, and that in the majority of cases the operative remedy is worse than the disease.

Are there many women going about to-day unconscious possessors of uterine fibroids, or, if conscious, suffering so slightly that their lives are little impeded? It is possible that there are some, but I do not believe the number to be great; still less do I believe that they will go on for any considerable length of time without troublesome symptoms and complications supervening. We have only to look at the serious condition to which some patients have been brought by the simplest of fibroids to be sceptical of any long period of immunity from suffering by the unfortunate possessor of one.

How often is a patient with a small fibroid—we will say no larger than an egg or an apple, with symptoms confined to excessive loss at the menstrual period, and slight but frequent bearing-down pain—advised to go on resting at the periods, lying down in the afternoons continually and taking medicine?

There is no doubt that this treatment will give the patient some relief, will enable her to go on, perhaps only getting slowly worse, but the number of times it will carry a patient over the menopause, carry her to a cure, is extremely few. Suppose she is between 40 and 45, the age at which fibroid is most frequent, for how many years

are you going to confine her to semi-invalidism? How soon can you say that the menopause will come? You cannot say. It is well known that the menopause is usually put off indefinitely, and in fact if the patient does not have the fibroid removed it will never come. We must never forget that more and more as the years go by women have more and more work to do; in the poorer classes it is the woman who is the hard worker; it is upon her shoulders that the main brunt of the battle of life falls, and invalidism or semi-invalidism is disastrous. It is not fair to her, her husband, her family, or her circle of friends and dependants not to give to her the most complete and rapid method of relief. Her actual existence may not be in immediate danger, but the good that she does, the work that she does, and the influence she exerts are all jeopardized.

If a fibroid causes no symptoms no one would dream of interfering with it. If, however, in the course of its growth it causes symptoms that call for medical relief, then I believe that, unless you advise removal of the fibroid, you run a serious risk of condemning your patient to a life of invalidism or to an operation when her condition has become worse, or even to a fatal ending.

After going carefully through the notes of my cases I find that the symptom most frequently met with is haemorrhage; only a little less frequent is pain. The frequent occurrence of pain, often severe but intermittent, is, I think, due to the large number of cases in which the fibroid is complicated by inflammatory disease of the appendages with adhesions, often to omentum and bowel. A very common symptom is the gradual deterioration in the general health, a thing of great importance. We have, too, special symptoms due to the special pathological conditions.

Haemorrhages, as is well known, may vary from a slight increase in the quantity lost at each period to a continuous loss, a loss so great and so lasting that it is impossible to differentiate the periods. How often has it happened that a patient comes to us for operation, above all things, when she is absolutely blanched from haemorrhage! I have seen them sometimes in such a condition that fainting follows the assumption of the upright position. An operation when they are like this is out of the question. They want rest in bed first, with good feeding and plenty of milk. Now, what I can never understand is why the patient has been allowed to get into this condition. Sometimes it is her own fault; she has refused treatment time after time. At other times it is not her fault. I do not say this lightly. I would not say it at all were I not convinced of its accuracy. I have already referred to the causes that contribute to this state of affairs. I would only add that those who think the remedy worse than the disease cannot possibly have watched many cases of fibroids, and must have founded their opinion of operative treatment upon their own experience. The very men who decry the operation as dangerous are those who make it so by delaying operation until the patient is *in extremis*.

As regards the special symptoms, it is impossible to refer to them all. I will briefly recall one or two.

I was called in some years ago by her medical attendant to see a woman suffering from persistent vomiting, which he rightly thought might be due to an abdominal tumour. The vomiting was the only symptom complained of. Its complete relief followed the removal of a large fibroid uterus.

In another case—the specimen from which I showed at the time at the Midland Medical Society—her chief symptom for a long time was haemorrhoids, which were only finally relieved by the removal of a fibroid which had completely blocked the pelvis.

Yet another and very interesting case: A lady suffered from severe headaches, from easily getting tired, from pain in the back, and from that most awkward of symptoms, a very frequent desire to pass water; her life was miserable. Four years previously I had operated upon her in the night for a primary rupture of a tubal pregnancy. The uterus then felt perfectly normal. From her symptoms and from a distinctly neurotic history it was thought that her trouble was all a question of nerves. Since it continued I was asked to see her, and on examination found what felt like a fundus thickened from front to back and pressing down upon the bladder. I felt certain that there was a small fibroid, with probably adhesions

* Read at a meeting of the Birmingham Branch of the British Medical Association.