ON THE PREVENTION AND MANAGEMENT OF MISCARRIAGES.*

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IN the following remarks, the term miscarriage is used synonymously with abortion, and is intended to apply to all cases where the ovum is expelled from the uterus before the seventh month; before, in fact, the foetus has acquired sufficient development to maintain a separate existence.

The subject demands more careful consideration than is usually accorded to it; for miscarriages are far more frequent than is usually supposed. The life of the foetus is invariably sacrificed, and the mother's life often jeopardised. Even when this latter is not the case, the fecundity of the female is often seriously interfered with; numberless instances of so-called acquired sterility being dependent upon the neglect or carelessness of the patient following a miscarriage.

Apart from this also, much serious discomfort and suffering, through many long years, from uterine disorder, is often entailed from want of a little judicious advice and assistance at the time. Many a valuable life has been sacrificed, and many years of suffering and unhappiness produced, in consequence of making light of a miscarriage, either wilfully or ignorantly. A fresh conception is allowed to occur before the process of involution has been completed, abortion following again as a certain consequence, until the severe hæmorrhage, anxiety, and confinement to the house call forth inevitably any latent disposition to tubercle or other hereditary disease; and, whilst sorrowing for the life thus prematurely cut short, or vainly regretting the blighted hopes of a fruitful marriage, the knowledge that this depended merely upon a neglected miscarriage will prove no solace to the friends or comfort to the sufferer.

It has been my lot to observe numberless instances where miscarriage after miscarriage has been allowed to take place without a vaginal examination ever having been resorted to, or any attempt made to ascertain the causal condition of this premature expulsion of the ovum; no instructions having been given to the patient as to what precautions should be taken to avoid similar catastrophes, no injunctions as to resting in the horizontal position, or living *absque marito* until the process of involution has had time to be accomplished; in fact, the whole affair being treated as if it were not worthy of serious consideration by the practitioner, or of any moment to the patient.

Dr. Whitehead estimates that over 37 per cent. of mothers abort or miscarry before they attain the age of 30 years. Dr. Meadows, from a collection of about two thousand cases in hospital practice, found that about one woman in every three and one-fifth aborts.

In a series of nearly 2,000 cases of my own hospital patients at all ages, where the facts had been carefully recorded, there were no fewer than 1,147 miscarriages compared with 4,588 children born at full time—a proportion of exactly one in four. This ratio I find to be as nearly as possible the same among my private patients, the increased development of the nervous system among the upper and middle classes compensating for the diminished risk from the accidents which affect the poorer classes.

In the large majority of cases of miscarriage, they will be found to be due to some deranged state of the mother's health, or to some morbid condition of the uterus or its appendages. There are also many what may be called accidental causes, such as blows, falls, sudden agitations from fright, etc., which disturb the equilibrium of the circulation or strongly affect the nervous system. These are self-evident, and will not be here further referred to, inasmuch as, beyond enjoining avoidance of all unnecessary risks when patients are in the early stage of pregnancy, we can scarcely regard these as preventable causes. I am anxious rather to direct attention to the unnecessary waste of life resulting from the frequent recurrence of miscarriages in the same patient, where there is some deranged condition of the uterus or its appendages: causes that may be termed preventable.

The hope of preventing the recurrence of miscarriage depends upon our tracing out—what in every case exists—the efficient cause of it. It is useless to sit down disarmed and passive under the influence of that ignorant dogma which asserts that women have a habit of abort-

ing; that they are labouring under an abortive diathesis. This is no more than saying that women abort because they abort, which is not very instructive, and leaves us still in ignorance of the cause of this often preventable habit.

Syphilis is so frequent a cause of premature expulsion of the foetus, that Bumstead, in his work on *Veneral Diseases*, says:—"Repeated abortions form a valuable element of diagnosis in the investigation of suspected cases of this disease in married life." It is rarely that we have a clear and distinct history of syphilis given; for naturally the husband says nothing about it, even when he suspects anything; and the wife, ignorant of the importance of certain primary symptoms that have been allowed to pass almost unnoticed, lays no stress upon them, and is innocent, indeed, of the very existence of such a disorder. We must, therefore, rely upon the objective symptoms, and not trust alone to the subjective. The intelligent practitioner will generally be able to recognise certain well known symptoms that will afford a clue to the nature of the case, such as pallor of the countenance, languor, precarious appetite, sore-throat, falling out of the hair, more or less emaciation or deterioration of the general health, numerous aches and pains, together with local evidence of constitutional infection in the form of endometritis or granular degeneration of the cervix, together with hypertrophy and induration of this portion of the uterus, evidenced by leucorrhœa, menorrhagia, dysmenorrhœa, and numerous other symptoms. Where, in such a case, we have the history of perfect health and vigour preceding marriage, and there have been repeated miscarriages since, we need have no hesitation in at once placing our patient on a mercurial course. It has sometimes been supposed that the cause of the miscarriage in these cases was not the syphilitic taint, but the mercurial treatment to which the patient may have been subjected. This opinion, however, is erroneous. The careful administration of mercury to a pregnant woman affected with syphilis affords the surest protection to her child; and it is very rare for this mineral to produce abortion, unless given injudiciously and in such a manner as to irritate the stomach or intestines. When both parents are affected with syphilis at the time of conception, and the mother does not receive appropriate treatment in the early months of pregnancy, the foetus will rarely be carried to the full term of gestation.

In administering mercury to pregnant women, the perchloride is to be preferred. The chief reasons for this selection are the ease with which it can be taken, the almost certainty that it will not produce salivation, and the length of time for which it can be persevered with. Under its influence, the patients regain a state of sound health to which they have long been strangers; they increase considerably in weight, their secretions become perfectly natural, and they eat, sleep, and digest well. Moreover, they lose that fearful mental depression which is a frequent result of the contaminated state of the blood. The dose should vary from one-sixteenth to one-eighth of a grain, given in the form of a pill or in solution with bark.

Metritis, in some form or other, is a very frequent cause of miscarriage as well as consequence. Dr. Bennet, in his valuable treatise on *Inflammation of the Uterus*, says that inflammatory ulceration of the cervix during pregnancy is of frequent occurrence, and is the key-stone to diseases of the pregnant state, and the most general cause of laborious pregnancy, obstinate sickness, miscarriages, and hæmorrhages. Dr. Whitehead also lays much stress on an inflammatory condition of the cervix being a frequent cause of miscarriage. Dr. Tilt, in his *Uterine Therapeutics*, says:—"Inflammation of the womb is frequently produced by abortion or parturition; and I am certainly not over-stating the fact in affirming that two-thirds of the serious cases of uterine inflammation can be traced to a bad miscarriage or confinement." The prevention, therefore, of uterine disease in married women is tantamount to the judicious management of pregnancy, abortion, and parturition. Did time permit, I could quote numerous authors in support of this statement; but those who have any knowledge of the subject will, I am sure, deem this unnecessary, and those who have not may accept the statement that inflammatory mischief, whether in the cervix only or in the uterus generally, is not only a frequent concomitant, but also very often the cause of miscarriage.

Aptitude for conception is not at all incompatible with inability on the part of the uterus to undergo the requisite changes that take place during pregnancy. It must not, therefore, be considered that, because a patient becomes pregnant, there can be no serious inflammatory mischief; and, when this fact has not been recognised until pregnancy has actually occurred, there is no reason why treatment should not then be resorted to.

Patients frequently consult us complaining of nausea, constipation, bearing-down, menorrhagia, leucorrhœa, burning pain in the left iliac region, and other well recognised symptoms. On examination, we find the uterus enlarged to the third or fourth month of pregnancy.

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with extensive granular degeneration of the cervix. In such a case, unless appropriate treatment be resorted to, miscarriage will almost inevitably occur sooner or later.

And here I would enter a protest against the very prevalent notion that nothing can be done until after delivery. It is a great mistake. We are in a similar position to those who advocate extreme radical views, having emphatically everything to gain and nothing to lose; for, if we shrink from treating the disorder, miscarriage will almost inevitably result; and, even if it should follow the employment of local remedies, it is in spite of, and not in consequence of, our treatment. We are no worse off than before, and have, moreover, the satisfaction of having attempted to prevent the premature expulsion of the fetus.

Experience corroborates what physiological reasoning suggests; namely, that the cure of a diseased action in the organs of parturition will contribute to the security of pregnancy. The experience of many eminent practitioners, as well as my own, proves conclusively that inflammation and ulceration of the os and cervix uteri, with mucous or purulent leucorrhœa, may coexist with pregnancy, and that they frequently cause abortion; and also proves that they can be treated successfully during gestation, without necessarily disturbing the process. Whenever there are pelvic pain and leucorrhœal discharge in gravid patients who have aborted in previous pregnancies, the condition of the os and cervix uteri should be positively ascertained.

The treatment found most successful in cases of inflammatory excoriation or ulceration of the lower segment of the uterus is sufficiently simple; namely, local abstraction of blood by the application of a few leeches, or scarification, and occasional cauterisation of the diseased sites; every possible care being taken to prevent local and constitutional disturbance following upon treatment. Vaginal injections, whether sedative or astringent, may safely be resorted to, provided due care be taken not to employ too much force. Lotions composed of glycerate of borax, carbonate of soda, acetate of lead, and sulphate of zinc, are generally found most useful. Pessaries composed of oxide of zinc, carbonate of bismuth, tannic acid, and various other agents, are also of much service.

When we consider that, during the early months of utero-gestation, it is the body of the uterus that is chiefly implicated in the lodgment of the ovum—the cervix not being involved till much later—our fears as regards setting up more irritation than we attempt to relieve may be lessened.

Flexions of the uterus are responsible for a very large proportion of the miscarriages which happen; and where we find one miscarriage after another occurring in succession, it may almost be taken for granted that that patient is suffering from flexion, provided that there is not syphilis. Thus, as Dr. Graily Hewitt asserts, the same circumstances which frequently induce sterility are liable to produce abortion if the patient do become pregnant. Dr. Albert Smith has shown that retroversion, when it does not preclude impregnation, has a great tendency to produce abortion in the early months. The uterus being in an unnatural position with relation to the pelvic organs, and being pressed downwards and backwards by the superincumbent mass of the intestines, the ligaments, instead of holding the uterus suspended firmly and sustaining it with a mobility just sufficient to accommodate it to the unavoidable movements of the body, now relaxed and useless, allow it to be jostled rudely about and irritated by every change in the relation of the surrounding organs. In such a condition of things, the retentive power of the uterus must be greater than it usually is in a primiparous woman to continue its development, resisting the influences which, from the first, operate and set up an irritability in its tissues. The chief symptoms complained of are generally a sense of discomfort and weight in the pelvis, bearing-down pains, dragging in the groins, frequent micturition, occasionally dysuria and straining on defæcation. It is in these cases that we often find a difficulty, in cases where abortion actually occurs, in complete delivery of the ovum.

Careful reposition of the uterus in cases of retroversion and retroflexion is the first thing to be accomplished. This may safely be done by pressing the fundus upwards, guiding it to one or other side of the promontory of the sacrum, and then adjusting a Hodge's pessary to assist in retaining the uterus in its normal position. Lying in the prone position for several hours during the day is generally advisable. Strict attention to the emptying regularly of the bladder and rectum should always be insisted on. The Hodge's pessary should not be removed until after the uterus has risen out of the pelvis—about the fifth month or so—when a vaginal support will no longer be needed.

There are some few points worthy of consideration as regards the reflex phenomena influencing gestation, to which it may be well briefly to refer. Foremost among these is the morning sickness of pregnancy,

which, when exaggerated in degree, often causes much anxiety and suffering, and occasionally induces abortion; though it is astonishing to what an extent—even to such a degree as to cause death—nausea and vomiting may proceed without exciting the uterus to expel its contents. After parturition, the slightest gastric irritation will excite contraction of the uterus; but, during pregnancy, gastric irritation and sickness, even to death, may occur, without disturbing the *fœtus in utero*. In many of these cases, the insertion into the vagina of a morphia and atropine pessary will at once arrest sickness, when all other remedies have been tried.

A vaginal examination should always be resorted to. Many a case of intractable vomiting, where the *Pharmacopœia* has been ransacked in vain, has been found to depend upon a retroflexed condition of the uterus, the vomiting ceasing entirely on replacement of the uterus, and supporting it by means of a Hodge's pessary.

Gestation and lactation ought never to be permitted to go on at the same time in the same individual; and where it is evident that a patient has become pregnant, the child should at once be weaned. Neglect of this precaution has caused many a miscarriage.

Where neuralgia or toothache causes much distress, wakeful nights and restless days, and there seems to be risk of miscarriage, extraction of any diseased tooth should always be effected; chloroform or nitrous oxide being given to lessen any risk from shock.

Obstinate constipation and, in consequence, the too frequent resort to purgative medicine, not unfrequently interferes with the development of the pregnant uterus, or produces so much irritation in the pelvic organs as to cause abortion. The employment of the sulphate of magnesia in small doses, or some form of tonic aperient, repeated thrice daily, will obviate this difficulty far better than drastic cathartics.

Where patients have acquired, so to speak, the habit of aborting, we must be careful to eliminate every possible cause; in these cases, continence must be strictly enjoined—the vaginal irritation, together with the ovarian influence, being often sufficient to determine a miscarriage.

In the management of miscarriages when actually threatened, when pain and hæmorrhage are present, our main object must be to conduct the patient safely through the process, provided it cannot be prevented or averted. A vaginal examination should always be made; for, until we know the exact state of the uterus as regards dilatation of the os, protrusion of the ovum, and intensity of the pains, we are not in a position to decide whether there is a reasonable prospect of averting the catastrophe, or whether we ought to facilitate the expulsion of the ovum. In any case, the hæmorrhage must be stopped; and, supposing the ovum is not sufficiently detached or protruding from the os, ergot should at once be given; and here I would call attention to the fact that ergot does not invariably produce expulsion of the ovum, as many imagine. I have repeatedly given it in large doses where miscarriage was imminent, with the effect of restraining the hæmorrhage, the patient going on to her full time, and being safely delivered of a living child. Where the os is not sufficiently patulous to allow the introduction of the finger, the hæmorrhage being severe, the introduction of a sponge-tent into the cervical canal itself will not only arrest the hæmorrhage, but expedite the dilatation and expulsion of the ovum.

The hypodermic injection of morphia is a valuable method for arresting threatened miscarriage; but time would fail me were I to attempt to mention all the various measures that have been resorted to.

When the ovum has been only partially expelled, and the hæmorrhage continues, the injection of the solution of perchloride of iron, as advocated by Dr. Barnes, should not be forgotten; and when, later on, the discharge from the uterus has any tendency to become at all offensive, the intrauterine injection, twice daily, of a solution of carbolic acid will avert any ill effects in the form of septicæmia, and materially assist the removal of any *débris*.

I have no intention of entering more fully into the management of miscarriages, though the subject is one of great importance. My main object in occupying a brief portion of your time to-day was with the hope of directing more careful attention to the consideration of the subject; and if some here object that nothing new has been brought forward, I would crave their indulgence, and beg them to consider that possibly there are others who will not regret having listened to what, after all, may be new to them.

It seems to me that miscarriages are a much neglected study. Case after case rises up before me where lives have been jeopardised and even sacrificed, hopes blighted, homes rendered desolate, and much heart-burning and physical suffering produced, for want of a due consideration of the importance of the subject; and if only the attention of the few be more earnestly directed to the study of miscarriages, my object will have been attained.