PRIZE ESSAY

ON

THE UTERUS:

ITS FUNCTIONS—HEALTHY AND MORBID,

ITS DISEASES AND TREATMENT.

BY

H. E. FIRTH, M. D.,

(100 Clermont Avenue, Brooklyn, New York.)

PUBLISHED BY THE ECLECTIC MEDICAL SOCIETY OF THE STATE OF PENNA.

PHILADELPHIA:
W. B. SELHEIMER, 501 CHESTNUT STREET.
1868.

Extract from the Minutes of the Annual Meeting of the Eclectic Medical Society of the State of Pennsylvania, held at the Hall of the Eclectic Medical College of Pennsylvania, Philadelphia, January 23, 1868.

"The Chairman of Committee on Prize Essays reported that, out of two hundred and seventy-three essays competing for the Philadelphia Prize of $100, on '*The Uterus: its Functions—Healthy and Morbid; its Diseases and Treatment*,' that they, after an impartial examination, unanimously awarded the prize to H. E. Firth, M. D., Claremont avenue, Brooklyn, New York."

On motion, the Essay was ordered to be printed for distribution.

The following is the Essay:

THE UTERUS:

ITS FUNCTIONS—HEALTHY AND MORBID.

ITS DISEASES AND TREATMENT.

In discussing the above question, I shall confine myself more particularly to the practical points of treatment, rather than to make extended comments upon the anatomical or physiological character of the uterus. Its diseases are so numerous that, to give a minute pathological description of the whole, a volume would be required.

It has occurred, according to the wisdom of Providence, that all living animals should be created male and female; that each should be endowed with peculiar characteristics, and so constituted that they may subserve the purpose of their creation, not only in contributing to each other's happiness, but capable, conjointly, of propagating their species. The human family rank pre-eminently above all created beings, and for their welfare were all other creations formed.

The female, in all civilized communities, is regarded as the weaker sex; and, from the nature of her physical conformation, and the relation she sustains to the male portion of mankind, custom has wisely exempted her from many of the hardships and dangers common to man. She is, nevertheless called to encounter inconveniences growing out of the functional necessities of her uterine organs, and the repeated ordeals through which she must pass in reproducing the species. She is also liable to many diseases peculiar to her sex, from which man is exempt.

The liability to uterine derangement is so great, and the individual cases of suffering (in some form of female disease) so numerous, that the female is frequently led to realize her extreme susceptibility to the func-

tional and organic diseases of her sex, and is ofttimes heard to express a regret that she was not created man instead of woman. Especially in our large cities are female diseases of frequent occurrence, owing, principally, to the sedentary habits and customs of society, which are at variance with the laws of health.

That the uterus and its appendages should become so frequently the seat of disease, is not so mysterious to the physician, when he considers the character of the changes so frequently transpiring in that organ, and the external and constitutional influences to which it is exposed.

The anatomical and physiological relations of the uterus to the sympathetic and cerebro-spinal nervous system is of such a character that it must be apparent that influences, either mental or physical, may arise at any time which may change the functions of that organ. Under such circumstances, hereditary and constitutional tendencies may mould the character of morbid development.

If the milk of the mother be rendered suddenly poisonous and fatal to the child, through mental emotion, is it not probable that the functions of the uterus are influenced from mental as well as from physical causes?

There is no doubt, in my mind, that many morbid growths of the uterus have some relation to changes transpiring during the process of menstruation, and at its close.

The received theory with reference to the cause of menstruation is, I believe, now considered to be the result of ovarian excitement, during or at the close of the maturing of the ovule in the ovaries. In all normal cases of menstruation, a sympathetic relation exists between the ovaries and the uterus. About the time the ovum is developed, and just prior to its expulsion from the ovaries, an exalted state of the uterus takes place; its blood-vessels become distended, and a general hyperæmic condition of the organ foretells the advent of the catamenial flow. Whether the menstrual blood is the result of simple rupture of the engorged blood-vessels, as claimed by some authors, or whether it may be regarded in the light of a secretion, one fact is apparent, that changes are transpiring in the mucous surface of the uterus, and there is emitted from it elements capable of organization, as evinced in the formation of the deciduous and dysmenorrhœal membranes; as, also, in the altered function of the organ in the formation of various morbid growths.

There would seem to be some evidence of a secretory function of the uterus, independent of the discharge of mere blood. We have, under such circumstances as retention or suppression of the menses, a diminution of the red corpuscles of the blood, and, associated with this, anæmia, a disturbed state of the system. This would suppose some irritating or morbid presence in the blood, which the uterus should have eliminated.

As it is difficult to discuss general diseases of the uterus so as to make

the subject practical, I propose, first, to treat upon fibrous tumors of the uterus, their pathology and treatment; and, secondly, to give some practical thoughts on various diseases and displacements of that organ.

There is a tendency in all mucous membranes to develop morbid growths, and in no part of the system is this tendency so common as in the uterus. Whether fibrous and fleshy growths of the uterus are the results of a long-congested and sub-acutely inflamed condition of the organ, or whether the result of an abnormal secretion, or from partly disintegrated and metamorphosed tissue, or whether developed from germs imbedded in the blastema of the subjacent mucous tissue of the mucous membrane, certain it is, that such growths are of frequent occurrence, and are the result of some pathological condition of the functions pertaining to the uterus.

It is a law in physiology, that a long-continued increase or determination of blood to a part may give rise to an increased development of that part. All muscular parts of the system may increase in size by a hyperæmic condition of their blood-vessels; the heart may enlarge or thicken its walls; the cartilage of joints may become thickened; even bone is liable to enlargement from the same cause. The uterus is not only liable to a long-continued vascularity, but it presents a mucous surface which renders it doubly liable to excessive development. "Mucous and cutaneous follicles, after a continued excitement, frequently acquire an extraordinary degree of development, and even at times without such obvious cause."—(*Williams' Path., page* 301.)

These morbid growths are probably produced, partly from an exuberance or increase of the natural texture, and partly from new formations, or new structure. They differ from polypus in that they are non-pediculated, less cellular and more fibrous, and also from the fact that they are intermediate between the fungus and solid fibrous tumor.

It would seem that the most usual time for the development of fibrous tumors of the womb, is about that period when the functions of the uterus are about to be suspended. Is it not reasonable to suppose, that at the period when the functions are but partly exercised, and the engorgement of the vessels not relieved by the catamenial flow, that the epithelial debris, arrested fibrin, and other elements usually excreted, may undergo a degeneration, and prove a cause of morbid growth?

In the process of menstruation, nature demands this periodic and hyperæmic condition of the uterus to furnish the material for menstrual blood. During the changes consequent upon suspension of the menses, we have this congested condition of the vessels of the uterus, and an excess of the peculiar materials usually furnished to supply the discharge. This excess of material, not being required for the imperfectly performed,

if not entirely suspended function, nature disposes of it upon the same principle that excessive growths take place in other parts of the body.

We have sometimes in these growths an augmentation of the uterine walls, or proper tissue of the womb; in other cases they occur as appendages growing from, although attached to, the uterus. In some instances they are principally fibrous in their nature; in others they are of a fibrous texture, interspersed with cells, or cysts, containing serous fluid; while, at other times, they partake somewhat of a fatty nature.

Carpenter speaks of a fatty form of degeneration as common to nearly all tissues under given circumstances. It is supposed that by this process the excess of muscular tissue is removed from the uterus after parturition; the albuminous and gelatinous materials are changed by this fatty degeneration, when it is removed by absorption. Nature would dispose of these fibrous and fleshy degenerations in the same way, were the absorbent vessels not rendered less active than the secretory; in fact, in some instances, the balance of power is naturally in favor of the absorbents, and we have spontaneous cures, or cures accomplished alone by nature.

The growth or development of these tumors is very capricious; in some instances they will develop rapidly from the first, until they arrive at a sufficient magnitude to mechanically interfere with some neighboring organ or function, when serious symptoms may arise, which may ultimately prove fatal. At other times, after a certain period of development, they will remain stationary, and during a life-time may not seriously interfere with any of the functions of the body.

The inconvenience and danger of these tumors are not, at all times, in proportion to their size: as, in some instances, a small tumor may interfere with and derange the functions of the uterus; while, in other cases, the uterus and adjacent organs will not be interfered with, although the tumor may be of a large size.

The structure of these tumors also differ much; we find them of every degree of density, from that of a soft fleshy character, with loose fibrous tissue, interspersed with fatty deposits, or serous fluid, to a firm fibrous tumor. In some instances, in the interstices of the cellulo-fibrous texture, we find depositions both of the phosphate and carbonate of lime, and even osseous concretions.

All authors agree that the treatment of fibrous tumors of the uterus is very unsatisfactory, and hitherto little has been attempted, except in the way of palliative measures. Tonics, with the internal administration of iodine and the iodide of potassium, have been suggested by some, and the compound iodine ointment recommended to be applied over the seat of the tumor.

In presenting my views for consideration, I would not have it understood that I claim to offer an infallible remedy for these morbid growths,

but simply what I suppose to be an improvement upon all former treatment. The physician engaged in combating these difficulties will find that he will not only require strategy with good generalship, but must also expect to succeed only after a succession of hard knocks. The advantage that I offer may be compared to an improved artillery, with heavier metal, and with better facilities for transportation.

The treatment I am about to introduce will be specific in its nature. When I speak of specific treatment, I do not desire to be understood as advocating a routine course, or to anticipate the same results in every given case. We may have specific indications for remedial agents, yet the doses in different cases differ, as also the periods for the administration of these medicines. Circumstances will also suggest auxiliary means to assist the action of specific remedies, which may not only facilitate their action, but also be essential to their efficiency.

The indications for the treatment of the diseases above described are, first, constitutional; second, direct or specific.

So far as constitutional treatment is concerned, no specific direction can be given. The physician must be governed by the circumstances presented in the case, and must exercise his judgment in the administration of medicines. I will, however, give some general directions, which may serve to guide in the treatment, and that may harmonize with the specific means I am shortly to recommend.

In almost every case that the physician may be called to treat, he will find that the vitality of the patient is below the normal standard; if debilitated to any extent, tonics, with generous diet, should be the first constitutional treatment employed. In the majority of cases you will find that the bowels are constipated, unless the uterus should be much irritated, in which case the irritation may be reflected upon the intestines, and we may have diarrhœa. If costiveness is present, the mildest and least depressing laxatives should be employed. The following will frequently be found beneficial:

℞.—Pulv. Turkey rhei, grs. xxx; quinia, sulph., grs. viii.—*Mix.*

Make into three powders.

S.—One powder three times each day, until the bowels are regulated.

If costiveness is persistent, the dose may be increased and a little nux vomica added to the compound; in that case the fluid extract of rhei would be the most convenient form, and would be more palatable. As a mild laxative, the neutralizing compound is also very good.

After the debility is measurably overcome by the use of vegetable tonics, and if necessary some preparation of iron, and the bowels are restored to a more healthy tone, commence the administration of the compound syrup of stillingia, with the addition of the iodide of potassium, for the purpose of promoting absorption of the tumor. The patient should

take five grains of the iodide of potassium, in a proportionate amount of the stillingia compound, three times each day. After using the alterative treatment for some weeks, it may be suspended temporarily, and tonics, (the female tonic, the formula of which will be hereafter given, is good,) with generous diet used in its stead. As no rule can be given for each case, the physician must determine the necessary changes in the constitutional treatment.

We now come to the second indication, the direct, or specific means to be employed. When I say direct means, I do not wish to be understood that any direct agent is to be applied to the womb, although I have frequently injected the cavity of the uterus, and the surface of the tumor, for the purpose of assisting in promoting absorption; but I refer to an agent that has an affinity for the uterus, and that acts upon a physiological principle in accomplishing the object designed by medication. This remedy is the secale-cornutum, or spurred rye.

Whether the agent above alluded to acts directly through the circulation of the blood, or through the medium of the sympathetic or cerebro-spinal nervous system, it will have its specific effect, which is to contract the circular, and probably to some extent the longitudinal fibres of the uterus, and thereby perform what I propose to show is the most reasonable, and, therefore, the most desirable effect for the accomplishment of a radical cure.

If I may be allowed to digress somewhat from the subject, I will offer a few thoughts by way of theory, with reference to the action of ergot upon the uterus as witnessed in labor.

My opinion is, that ergot acts through the medium of the cerebro-spinal nervous system for the following reasons, viz: the uterus, as we are aware, receives its nerves principally from two sources—from the renal and hypogastric plexus. Those from the first source follow the course of the ovarian arteries, and are distributed to the fundus and superior region of the uterus. The second are principally made up from branches of the sympathetic, and follow the course of the uterine arteries, giving off branches to the os and cervix uteri, and doubtless influencing them in their dilatations.

Every physician who has been a close observer of the physiology of labor, cannot but have noticed that there is a marked difference between the first and second stages of labor. The symptoms materially change upon the ushering in of the second stage of labor. This change of symptoms is more plainly perceived in some instances than in others, owing chiefly to the rapidity with which the os uteri in some patients dilates. But it may always be observed that the general bearing and character of the pains change upon the advent of the second stage of labor. In many

instances patients that have been almost uncontrollable in the first stage of labor have become perfectly docile during the second.

I do not desire it to be understood that the cerebro-spinal nerves have no connection or influence with the process of dilatation of the os uteri, but that their influence is secondary to those of the sympathetic, until after the os uteri is considerably dilated. If ergot is given during the first stage of labor, unless the os is naturally inclined readily to dilate, labor is retarded, and may become complicated, from the fact that an action is set up from the cerebro-spinal nerves, through the renal and sacral plexus before the os uteri is sufficiently relaxed; the nervous force which had been spent in producing relaxation of the os, is now diverted from the sympathetic to the cerebro-spinal nerve, and through them to the fundus. The os uteri refuses to dilate, notwithstanding the vigorous contraction of the fundus, until the muscular force becomes exhausted, and ceases to respond even to the action of the ergot, and we have inertia of the uterus as a sequence of its ill-timed administration.

On the other hand, if the os uteri is well dilated, we give ergot, because, as we believe, it influences the hypogastric plexus of nerves through the medium of the spinal cord, and we have the immediate and specific evidence of its action.

But I return from this digression from the subject, and claim for ergot, when employed for the cure of fibrous and fleshy tumors of the womb, that it acts upon three distinct principles, viz:

1st. It produces contraction of the uterine fibres; lessens the engorgement of the blood-vessels of the uterus, and measurably performs the office of a ligature.

2d. It lessens the amount of nutrition to the parts; favors the disintegrating processes by diminishing the vitality of the tumor, enables the absorbents to maintain a balance over the nutritious processes, and thereby assists to disperse the morbid growth.

3d. It causes the uterus to act as a compress; furnishes the same means that the surgeon would employ were the location of the tumor accessible to his appliances, and tightens that compress as the substance yields under its pressure.

I deem it proper, before leaving the subject, to anticipate some objection which might arise in the mind of some in opposition to my theory of cure.

It may be admitted that tumors growing from the mucous membrane and occupying the cavity of the uterus may be acted upon, and, at times, expelled; or, that absorption may be produced by the contractions of the uterine fibres upon the inclosed tumor. But, says the objector, what will you do with those tumors that appear as a part of the womb, being, as it were, an out-growth of the uterine wall; or, what is still worse, when the

tumor is located exterior to the womb, and although attached to, growing from it?

In answer to such objections, I will state, as I have done heretofore, that I do not claim infallibility for my treatment, and that I recognize in some of these locations of the tumor a greater difficulty in accomplishing the cure, and I believe the chances are lessened in proportion as the tumor is situated exterior to the uterine walls; and, also, in proportion to its density and deviation from the natural texture of the organ. Yet, I hold that the principle upon which the remedy acts, is not invalidated by the location of the tumor, only so far as compression is concerned. It is true, that if the location of the tumor is exterior to the walls of the womb, it cannot be expelled by the muscular contractions of that organ; yet, its vitality can be lessened by cutting off its circulation at the base of the tumor, and ligaturing, as it were, the arteries that are distributed to it.

One of the strongest objections that has ever been urged against the use of ergot in parturition, is the one above all others which renders it valuable in simple enlargements of the uterus, and especially so, in enlargements from fibrous and other tumors, viz:—Its power to excite continuous contractions. It is because of this power that the materia medica has been ransacked to find something that will excite the normal action of the womb during labor, without producing this persistent and unresisting influence. It is for this reason, chiefly, that so many cautions are urged on young practitioners in regard to its use in the early stages of labor, and before the os uteri has dilated.

This latter influence might, at first sight, appear to be an objection to its use, but it is not for the reason that it is not given in sufficient quantity and frequency to produce continuous contraction; but by proper timed and in medium doses a gradual contraction is effected without exhausting the muscular irritability, thus producing the same effect as in other external enlargements, viz.: by continuous pressure promote absorption.

I know from experience that it is possible to remove tumors upon the principle that I have described, and I deem it not egotistical in me to affirm, that my success in removing such tumors has been sufficiently great to warrant me in recommending the plan of treatment suggested in this paper. There are those of my professional brethren who have witnessed my treatment of fibrous and other tumors of the womb, and who also know that my opportunities for treating functional and organic disease of the uterus have been considerable.

I will refer, as an example, but to one special case, that of a lady in Brooklyn, who had a fibrous tumor of the womb, equaling in magnitude the gravid uterus in the seventh month of gestation. This patient was pronounced incurable by Professors Mott, Carnochan and Bedford; she

was also seen by at least half a dozen Eclectic physicians. The tumor was hard and nodulated, and extended from one ilium to the other. It could be felt, per vagina, filling up and resting upon the superior pelvis, and extending from thence until its apex reached the ensiform cartilage.

Professor Mott stated, in my hearing, as did also Prof. Bedford, that the treatment must be in view of palliating the symptoms, as curative means were out of the question. The lady was bed-ridden from severe constitutional disturbance, caused by the pressure of the tumor upon the neighboring organs, thereby interfering with their functions; she was also greatly emaciated.

Professor Carnochan requested me to notify him at her death, in case the friends should consent to a post-mortem examination, stating that the case was an unusually interesting one. . . . . Without further comment, and for the sake of brevity, suffice it to say that the patient, under the treatment recommended in this paper, has fully recovered, and for eight years has been in the enjoyment of the best of health, not the slightest trace of the tumor remaining.

Other and equally interesting cases could be referred to, but space will not permit of my recording them.

It is hardly necessary to state, that in whatever form the ergot is employed, whether in powders, fluid extract or tincture, care must be taken that the preparation is from the fresh seeds, as, under other circumstances, you could not expect the same results.

If the tincture is employed, one large teaspoonful may be given three or four times each day.

The constitutional treatment, which, you will remember, was either the tonic or alterative, is also to be employed, and the ergot continued for several consecutive weeks. You will then (if you think advisable) suspend the special treatment for a time, when the remedy should again be resumed.

During the administration of the medicine, the compound iodine ointment may be applied over the seat of the tumor, or any other good discutient may be locally applied. Electricity, judiciously employed, will, in some cases, facilitate the cure. It is not alone in fibrous and fleshy tumors of the womb that ergot is beneficial, but it may be employed with equal advantage as an auxiliary to other means in many other diseases in which that organ is involved.

PROLAPSUS UTERI.

Of all the displacements to which the uterus is liable, that of simple prolapsus, or falling of the womb, is by far the most common. It is not my design to describe the manifold causes which tend to produce the above mentioned displacement, but simply to refer briefly to some of the

more prominent ones. It may be observed, before referring to general causes, that prolapsus uteri seldom occurs with those of a vigorous constitution; it is necessary, then, that the system should be reduced by some general cause, before the displacement is likely to occur. As I do not propose to engage in a lengthy discussion of the subject, I will proceed to the statement of one cause, which, in my judgment, tends more frequently than all others to produce this displacement.

In order that the health of the female should be preserved, it is necessary for her to menstruate at stated intervals, or within certain periods of time. Nature has made the provision that, as these periods approach, certain physiological changes should take place in the uterus and ovaries, and, as before stated, the advent of this catamenial flow is characterized by an increased determination of blood to the uterus, thereby increasing the weight and dimensions of that organ. As the menstrual period declines, this hyperæmic condition diminishes, and the uterus assumes its usual passive state, until the next recurring period. Now should, from any cause, such as over-fatigue, exposure to cold, sudden shocks affecting the nervous system, strong mental emotion, or from previous constitutional causes, this engorgement become protracted, the tendency to prolapsus may arise from the increased weight of the uterus. Suppose such a patient should have, in addition to the above pathological state, a relaxed state of the vagina, resulting from previous child-births, sedentary habits, constitutional debility, &c., the result is, that the uterus descends into the cavity of the pelvis, and the tendency to prolapse will continue until tonicity can be imparted to the uterus and vagina, and the system restored to its wonted vigor.

When, then, it is observed that this protracted hyperæmic condition is present at the period of menstruation, the ergot may be employed with marked advantage, in all of those cases in which falling of the womb is accompanied with a congested condition of the blood-vessels of the uterus, (hyperæmia without inflammation.) It will do more to restore the enlarged capillaries to their normal condition than any other remedy, and may be employed as an adjunct to other local and constitutional treatment.

Those females who have a large pelvis, are most subject to prolapsus. Especially is this the case if they become debilitated, and have vaginal leucorrhœa, as relaxation of the vaginal walls, under such circumstances, is very likely to occur, as also, relaxation of the lavator ani muscles, which muscles antagonize those of the abdomen and the diaphragm, and assist to keep the vagina and uterus in a normal position.

In the treatment of prolapsus uteri, we should not fail to direct our attention to the condition of the vagina. Our object should be to lessen leucorrhœal discharge, allay the irritation of the vaginal mucous membrane, should such irritation exist, and to astringe and tone the tissues

as much as possible. To accomplish this, I would employ astringent washes, made from such agents as hamamelis virginica, quercus alba, geranium maculatum, weak solution of ferri perchloridi, solution of tannin, hydrastis canadensis, &c., or an ointment composed of hydrastin, tannin and adeps may be introduced into the vagina. Or a tampon made of cotton or very fine sponge, may be saturated with a solution of tannin and glycerin (Demarquay's plan) in the proportion of from one to four drachms of tannin to the ounce of glycerin, according as you desire its astringency. Recent cases of prolapsus will usually yield readily to constitutional and local treatment. It may be necessary for the patient to remain in a recumbent position, care being taken that the bowels are daily evacuated by laxatives, injections and mild aperients.

DISPLACEMENTS OF THE UTERUS.

In *retroversion*, *retroflexion*, and other displacements of the womb, especially if the displacements are produced by enlargement of the fundus, (caused by pregnancy excepted,) the ergot will, with other treatment, prove invaluable.

In many instances in which the womb is displaced, you may rectify the displacement or position a dozen times over; unless you properly tone the system, and lessen the engorgement of the fundus, the womb will fall back to its displaced position. It is true that you may hold up the fundus by mechanical means, but that sometimes is difficult, and without fully removing the displacement, may endanger the texture, or possibly induce cellulitis.

Mechanical means are at times indispensable, but in their use the physician should be extremely cautious. The instruments, of whatever kind, should be selected and applied in view of the nature of the displacement, and the capacity of the vagina.

RETROVERSION AND RETROFLEXION

of the uterus, when they become chronic, are very troublesome forms of displacement to rectify, and such displacements are frequent causes of sterility. The diseases of the

OS AND CERVIX UTERI

are so numerous that it is impossible to give them but a passing glance in this paper. In connection with constitutional treatment, the physician possesses the advantage of local applications through the speculum; the diseased part being brought to view, the cure may be greatly facilitated.

One reason why the os and cervix uteri are subject to diseases of an inflammatory nature much more frequent than the fundus, or body of the womb, is because of its anatomical character.

While the cervix is of the same ultimate structure as the body of the organ, it differs in that it is more largely supplied with blood-vessels; has a greater amount of cellular tissue, and the mucous follicles are more numerous. It is now an established fact, that inflammation may exist, to a considerable degree, in the lining membrane of the cervix uteri, and along its whole extent for a considerable time without seriously implicating the cavity of the fundus.

The vitality of the womb in its passive state is low, but during the period of menstruation, as I before remarked, the whole uterine organs become vascular and sensitive, and it is during this period that the female is liable, from external and constitutional influences, to have this state of exaltation morbidly increased or prolonged, until, what has heretofore been a physiological, becomes a pathological condition.

Inflammation and ulceration are the fruitful products of excessive engorgement of the os and cervix uteri during menstruation. If the inflammation becomes chronic, we have infiltration into the cellular structure of the parts contiguous to the mucous membrane, and a gradual consolidation and induration is the result. When such a pathological condition is present, the only hope of successful medication depends, not alone on local means and applications to the os and cervix uteri, but by regulating the menstrual flow, by restoring the constitutional powers of the system between the periods, and also, at each monthly recurrence, relieving the engorged uterus by equalizing the circulation, and maintaining its equilibrium by proper nerve stimulants during the period of menstruation.

If the constitutional causes are suffered to continue, the cervix uteri becomes more and more congested at each menstrual period; ulcerations of the os and cervix are likely to occur, or the inflammation may extend to the fundus, and metritis or endo-metritis may result; or the mucous membrane of the vagina may become involved, and we may have vaginitis; or the cellular tissues surrounding the os and cervix may be implicated, and we have cellulitis, &c. If I chose to protract the discussion of this subject, I could refer to many complications of neighboring organs, such as the rectum and bladder, as also constitutional symptoms that result from these local diseases, but as brevity is my object, I forbear.

The amount of suffering that patients endure from the diseases above enumerated differ widely in individual cases. The cervix uteri may be very much indurated and hypertrophied, and the os extensively ulcerated, and still the patient complain of little pain; while, in other cases, the pain is exceedingly great when apparently from very slight causes. This fact will also apply to prolapsus uteri, as with some females the slightest displacements will produce a variety of painful and harrassing symptoms;

while, in other cases, the woman may not be seriously discommoded when the os uteri has prolapsed so far as to rest on the perineum, or when even protruded through the external orifice of the vaginal canal, everting both the bladder and vagina.

I have found that in the treatment of the various diseases of the os and cervix uteri, the physician must largely exercise his judgment. If he hopes to become successful in treating these diseases, he must become so after considerable experience. In the treatment of simple inflammation of the mucous membrane of the os and cervix uteri, we may succeed as a rule by soothing washes and constitutional treatment. The diet should be light and nutritious, and if the patient is not exposed to cold, she may take the sitz or warm bath; in addition to this, administer small and repeated doses either of the tincture of gelseminum, (Merrill's tinct. of green root,) tinct. aconite, or verat. viride, and, if necessary, use means to produce diaphoresis. If constipation is present, gentle laxatives should be employed. After the inflammatory symptoms have subsided, restorative tonic treatment should be administered until the patient has fully recovered. A wash made from the following formula I have used with advantage: ℞.—Fol. hamamelis virginicæ, rad. hydrastis canadensis, āā ʒiii; aquæ bullients, Oj.—*Mix.*

This should be used with a rubber syringe several times during the day. Should the above means fail, applications may be made through the speculum. A solution of nitrate of silver may be employed, (say 5 to 15 grains to the ounce,) and, if still unyielding, the white zinc ointment (ung. zinci oxidi comp. of the Eclectic Dispensary) may be applied and secured, at least for a time, by the introduction of a soft sponge into the vagina and against the dressing. If there is reason to believe that the disease extends into the cervical canal, the ointment may be carried by a proper instrument to the parts. I have an instrument expressly for introducing ointments to the cavity of the uterus. It is a silver canula, properly curved and graduated, and accompanied with a hard rubber syringe. By introducing the instrument a short distance you can lodge the ointment into the cervix without passing it beyond the point necessary. If the object is to reach the cavity of the uterus, I much prefer ointments to liquids, as the smallest quantity of liquid introduced into the cavity of the womb will, in most cases, produce the most agonizing pain, which assumes the neuralgic form, and, in some instances, it will not subside for days.

If the ulceration is deep-seated, and does not yield, other applications may be employed, such as tincture chloride of iron, a saturated solution of the sulphate of zinc, applied with a brush. If, however, the inflammation and ulceration does not yield, and the surface remains indurated and hypertrophied, the sulphate of zinc, or chloride of zinc, may be retained

against the diseased surface for a considerable time, and until they produce their full caustic effect. The character of the ulceration will be changed by these applications, and will more readily yield to subsequent treatment. Hemorrhages need not be apprehended from the use of the above caustics. The compound syrup of stillingia, with iodide of potassium, may be employed with advantage in many cases, and especially if the ulceration is of a syphilitic origin.

I cannot, in justice to the subject, bring this paper to a close without referring to a formula which I have employed for over twenty-one years, in a variety of female diseases. The formula is a modification of a recipe taken from the revised work of Dr. Elisha Smith, (republished by his son, Isaac S. Smith, M. D.) The remedy is applicable in debilitated subjects, and possesses the advantage of combining a general and specific tonic—general, so far as giving tonicity to the system is concerned, and special with reference to the uterus.

In sterility, the tonic above referred to will be found to possess peculiar properties; especially is this the case when the cause of barrenness is the result of menorrhagia, leucorrhœa or debility of the organ. It is also beneficial when the cause is from functional disturbances and irregularities of the menstrual flux, and deficient enervation of the uterus and ovaries.

I presume that I can produce fifty women in the cities of New York and Brooklyn that have been incapable of conception in consequence of some functional or organic trouble of the womb or ovaries, that have been cured and are now mothers. Two women living in the street in which I reside, and within a block of my office, have both been subject to female diseases. One of these ladies had been married eight years without ever becoming pregnant, and the other had not borne a child, nor been likely to have done so, in over nine years. The first married lady's difficulty was leucorrhœa, with prolapsus, and an enlargement of the os and cervix uteri. The second, leucorrhœa and dysmenorrhœa, with irregular monthly periods. Both ladies referred to have since borne healthy children.

Whilst writing this article I have been summoned to attend one of my patients who, from imprudence, by over-taxing herself in her domestic duties, brought on symptoms of premature labor. I succeeded in quieting the pains and arresting the symptoms, and the prospect is that she will go her full time. This lady has not borne a child for thirteen years, and has been a sufferer during most of that time from diseases of the uterus. When she first applied to me for treatment, she stated that she had long been a sufferer from female diseases, and had almost give up the hope of being relieved. Upon examination, I found the uterus considerably enlarged, and the os uteri extensively ulcerated. She was placed

upon local and constitutional treatment, and after the ulcerations were healed, and the enlargement reduced, I placed her upon this female tonic. I jocosely remarked to her that she would be an exception to the rule if she did not have a physical and ocular evidence of the efficacy of the medicine.

Formula for the Female Tonic.—℞.—Liriodendron tulipifera, cornus sericea, geranium maculatum, trillium pendulum, leonurus cardica, symphytum officinale, *aa* ℥iv; cortex aurentii, ℥ii; cort. cassia, ℥i.—*Mix.*

Form into a syrup, or, what may be preferable in some cases, wine bitters. If you prefer the bitters, sweet Malaga wine will answer for the menstruum, and may be procured at much less cost than some other kinds. Each pint of the medicine should contain the strength of from three to four ounces of the roots. Dose, from one tablespoonful to one wineglassful three or four times each day.

The above female tonic may be employed in all cases in which the object is to combine a constitutional with a uterine tonic.

MENORRHAGIA.

The female tonic will prove effectual in a large number of cases, in removing those functional conditions of the uterus upon which menorrhagia depends. During the time, however, of the excessive discharge, the following formula will be more specially indicated.

℞.—Abies Canadensis cortex, Hamamelis virginica fol., cinnamomum zeylanicum cort., aa ʒiii —*M.* (Crush the barks.)

Sig.—Add one pint of boiling water, cover closely and let it steep.

Dose—Wine-glassful every twenty or thirty minutes, if the hemorrhage is severe. If but moderate, every hour will be sufficient.

The above remedy will be found equally beneficial in controlling inordinate hemorrhage, whether occurring at the menstrual period, in miscarriage, or at the time of labor.

I obtained this formula from Dr. D. E. Smith, of Brooklyn, about fifteen years since. He informed me at the time that it was a favorite formula of an old pioneer of reform, Dr. Lapham, of New York. I have never, in all my practice, lost a patient from hemorrhage of the uterus, and I attribute much of my success to this remedy. If the hemorrhage should not yield, the following prescription will be found very effectual:

℞.—Pulv. alumen, pulv. potassæ citras. M. f. Chart. No. 12.

S. One powder to be taken in a little water every hour until relieved. The above prescription is applicable in all kinds of hemorrhage. For hæmoptysis it may be administered in a tea made from sweet bugle-weed.

I would call especial attention to the above prescription, having a full knowledge of its efficacy from an experience in its use of twenty years.

In very severe cases of flooding I give, in connection with this remedy, the ergot, and suitable stimulants. In such cases, as last alluded to, I seldom omit mustard poultices and other heating applications to the extremities, and at times use opium combined with camphor. Beache's diaphoretic powders, (the pulv. ipecac et. opii comp. of the Eclec. Dis.,) in small and repeated doses, acts, in some cases of hemorrhage, very promptly, especially if combined with ergot and the formula last given, (hemlock compound.)

DYSMENORRHŒA.

The following formula will be found to give prompt relief in cases of severe suffering from the above disease: ℞.—Pulv. ipecac. et opii comp., ʒss; caulophyllin; dioscorein, āā grs. xii.—*Mix.* F. Chart. No. 10.

S. One powder to be given in ginger tea, every half hour or hour, until relieved. Or the following: ℞.—Pulv. ipecac. et opii comp., ʒss; dioscorein; cimicifugin, āā grs. x.—*Mix.* F. Chart. No. 10.

S. Give one powder every half hour or hour in a warm tea made from asclepias tuberosa, or leonurus cardica.

In those persistent cases, after having tried the above remedies together with warm hip baths, and relaxing applications over the region of the womb and ovaries, and especially when the pains seem to assume a neuralgical character, the following treatment will frequently afford effectual relief: ℞.—Tinct. valerianate of ammonia, ℥ii; tinct. gelseminum, (tinct. of green root,) ʒii; quinia sulph, grs. xii.—*Mix.*

S. One teaspoonful every two hours. Give in the interval of each dose one teaspoonful of the following mixture:

℞.—Alcoholic, or Eng. ext. of belladonna, grs. ii; aqua, ℥ii.

Alternate these medicines until the nervous system is brought under their influence, and the disease has abated. If the case is a severe one, a belladonna plaster may be placed upon the lower part of the spinal column. After the symptoms have abated the physician should direct his treatment to the removal of the more direct cause of the disease, or to the changing of those conditions, whether local or constitutional, upon which the disease depends.

It is hardly necessary for me to state, that in connection with constitutional treatment, the various preparations of iron may be indicated.

It is an important point, in the treatment of the various female diseases, to discriminate between a constitutional and a local cause. It matters not how good a remedy may be, if this principle is not observed, and remedial agents are not selected and applied with reference to the cause, we cannot, according to the nature of things, expect to succeed.