Uterine catarrh : frequently the cause of sterility new treatment / by H.E. Gantillon.

DISEASES OF THE WOMB.

UTERINE CATARRH

FREQUENTLY THE CAUSE OF

STERILITY.

NEW TREATMENT

BY

H. E. GANTILLON, M.D.

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WORKS BY THE SAME AUTHOR

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ANALYSIS OF " THE BRITISH ARMY AND MISS NIGHTINGALE " by Dr SHRIMPTON (1864).

NEW TREATMENT OF FRACTURES of the Lower Extremities by the anterior suspensory apparatus of Professor N. R. SMITH. (Société de chirurgie, 1864.)

ON VESICO-VAGINAL FISTULA (1865).

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August 3rd, 1868.

My dear Dr Bulloch,

Pray accept the dedication of this little work as a testimony of my kind regard and gratitude for the many and great services you rendered me during my stay in Savannah.

Believe me to be,

My dear Dr Bulloch,

Yours very gratefully,

H. E. GANTILLON.

To Dr Wm G. Bulloch,
Surgeon of the Hospital of Savannah (Georgia) U. S.

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humane than the study of the causes of sterility? How numerous are the causes of sterile marriages! How great is the service which an experienced physician has in his power to render, dispelling disappointment and creating new hopes and joy!

The circumstances which occasion sterility in the best chosen marriages are very numerous. The physician is called on to discover these circumstances and to overcome the difficulties.

I have embraced in my researches every thing relative to sterility, arising from disorders of the womb and its annexes, as well as that depending on the general state of health of the patient, which alone often renders conception impossible.

The book which I hope soon to offer to the medical public, under the title of Diseases of the Womb, will contain a series of monographies upon the most frequent affections of the genital organs of women; the diseases of the ovaries and of the Fallopian tubes have been the special object of my study. I have also studied the contractions, obliterations, and imperforations of the cervix uteri and their relations with the imperfect development of the womb, and with the different congenital and accidental deviations of this organ.

The fungosities and the fibrous tumors of the

uterus, polypi, cysts, etc., are other causes which require the intervention of the surgeon.

There is however one pathological condition, uterine catarrh, much more common than all other affections of the womb, which causes sterility.

This rebellious and oftentimes reputed incurable affection has always been materially relieved and generally radically cured by the rational treatment I propose. The constant success I have obtained, without exposing my patients to any danger, has induced me to publish the method I have adopted.

I trust this modest pamphlet may be favourably received by my medical bretheren as an encouragement to the efforts I am making to bring forward a much more important work on the same subject.

DISEASES OF THE WOMB

UTERINE CATARRH

AND

ITS TREATMENT BY INTRA-UTERINE INJECTIONS.

The diversity of opinions with regard to the nature of uterine catarrh and its almost numberless interpretations are sufficient evidences of the difficulties attending the study which we are about to undertake. What indeed, if we may be allowed to ask the question, what is uterine catarrh? Is it a disease, or is it a symptom of some morbid condition of the womb? These are important questions,

the answers to which would involve all the difficulties of uterine pathology which time and space will not allow us to enter upon at present; we must confine ourselves to the study of those functional disorders which, under the form of uterine catarrh, so often embarrass the practitioner. Medical men are consulted every day in cases of this kind, and they must be prepared to treat their patients without wasting time in scholastic disputations on questions of nosology. We shall be as precise as possible and endeavour to avoid all ambiguity.

We often find in young girls as well as in married women, in perfectly good health in other respects, a flux which varies considerably in quantity and quality. Their linen is stained with spots of a greyish yellow or even almost green colour. When this liquid flows too abundantly, or when its irritating qualities are beyond endurance, the physician is consulted, and the source from whence the flux proceeds is easily discovered: the mucous membrane of the vagina presents certain modifications which leave no doubt as to its origin. This however is not uterine catarrh, and the flux mentioned is designated by different names, of which whites and white runnings are the principal.

Under other circumstances, besides soiling her

linen, the patient experiences a series of phenomena which show at once from whence the flux has its source. The discharge, instead of flowing in a continuous and imperceptible manner, rushes out at intervals and is attended by severe pains, sometimes colics in the lower part of the abdomen. Women know very well that the rush of liquid comes from the womb and that its issue coincides with the contraction of this organ. Many patients can give us important details. The discharge is slimy, gluey, sometimes it escapes in a small lump or mass from the genital organs. This generally takes place as the patient quits her bed in the morning.

If, in the case of whites, the examination of the vaginal mucous membrane suffices to establish the diagnosis, *a fortiori*, the use of the speculum will, in uterine catarrh, enable the physician to discover the origin of the disorder when it exists in one of the cavities of the womb.

It is scarcely necessary to add that frequently both the vagina and the womb are simultaneously the seats of chronic inflammation, either from some accidental cause or dependent upon the peculiar state of the constitution.

The discharges from the uterine cavity generally

pass through the vagina and are thus mixed with mucous and other secretions; by the aid of the speculum however the peculiar physical qualities of the uterine discharge can be distinguished as it flows from the os uteri.

This discharge is sometimes transparent, gluey, exactly similar to the white of an egg; the disorder is then nothing more than an exaggerated secretion from the mucous membrane of the uterine cavity; at other times the discharge is of an opaline or a yellow colour: under both circumstances this pathological flux presents the same character of viscosity and adhesiveness which makes it difficulty to clear it away from the os uteri.

For us practitioners, passing over for the moment the various lesions to which the womb and its annexes are subject, uterine catarrh is simply a discharge from the womb in a morbid state.

Uterine catarrh is the constant symptom of all diseases of the womb. It is of the highest importance then to examine the nature and peculiar character of the discharges, to discover the cause of the disease, and to apply the proper treatment.

The study of our subject will be much facilitated by its division into the seven following chapters :

1° Anatomical and physiological reflections on the uterine cavities ;

2° Causes of uterine catarrh ;

3° Symptoms of uterine catarrh ;

4° Diagnosis of uterine catarrh ;

5° Prognosis of uterine catarrh ;

6° Treatment of uterine catarrh ;

7° Cases.

CHAPTER I

ANATOMICAL AND PHYSIOLOGICAL REFLECTIONS ON THE UTERINE CAVITIES.

A. ANATOMICAL REFLECTIONS.

The womb, situated in the small or lower pelvis, in the hypogastric region, is accessible through the vagina, and its neck is easily exposed to view by the introduction of a speculum. We cannot here enter into the anatomical details of this important organ, all our attention must be concentrated on the uterine cavities.

It is admitted that there are two distinct cavities, that of the cervix and that of the body of the uterus. These two cavities are united by a narrow

space, which varies greatly in length and is known by the name of isthmus of the womb.

The cavities of the womb described together, present two faces, one anterior, the other posterior; the surface of the cavity of the body of the womb is quite smooth, whilst that of the cervix is remarkably wrinkled; these wrinkles converge towards the longitudinal columns and constitute what is called the *arbor vitæ*.

The uterine canal commences at the os uteri, and terminates in the angles of the womb at the commencement of the Fallopian tubes.

The uterine cavities present certain notable modifications in their respective dimensions according to the different ages : the young girl, the woman who has never given birth to a child, and the mother of one or several children.

The cavity of the cervix is always quite distinct from that of the body. In passing from one to the other of these cavities we meet with a naturally contracted part which has been so well described by Dr Bennet : this is the isthmus uteri.

This isthmus is about 6 millimetres in length and 4 in diameter.

Cavity of the Cervix.

This cavity has the form of a spindle, it is long, swollen in the middle and nearly pointed at the two extremities. Its height is about 2 centimetres, presenting on its two faces, anterior and posterior, the columns of the *arbores vitæ*. As Dr Guyon has so well described it, these two columns are disposed in such a manner that the *arbor vitæ* of the anterior fits exactly in that of the posterior face; it is to this reciprocal crossing of the columns, aided by the muscular contraction, that we must attribute the permanent occlusion of the cavity of the cervix uteri.

The external orifice of the cervix, circular or transversal according to the conditions of women, offers nothing of particular interest.

The internal orifice of the cervix commences at the point where the *arbores vitæ* begin to separate and extends across the part designated as the isthmus.

The prominent parts of the wrinkles of the mucous membrane of the cervix fit into the interstices of the opposite side and thus form a complete occlusion through which, except in a diseased state, an

instrument passes with some difficulty from the cavity of the cervix to that of the body of the womb.

Cavity of the Body.

This cavity is of a triangular form and presents three orifices, one corresponding to the isthmus, the other two indicating the commencement of the Fallopian tubes. The walls of this cavity are smooth, instead of being irregular and uneven as in the cavity of the neck. Its capacity varies with age and depends on the person having had or not having had children.

The vertical dimensions of the cavity of the womb vary between two and a quarter to two and a half inches. The total height of the two cavities is extremely variable. In young girls the cavity of the cervix predominates, whilst the cavity of the body becomes more developed and that of the cervix uteri is diminished in women who have had children.

From our experience we estimate the dimensions of the uterine canal in its healthy state, at from two and a half to three inches.

When the probe can be inserted to a depth of two and a half or three inches, the uterine canal may be considered as normally developed.

The Mucous Membrane of the Uterus.

The uterine cavities are lined with a most important membrane; it is not my wish to revive the long discussions upon the uterine caduque, but it is of the greatest importance to be thoroughly acquainted with the structure of this membrane to be able to understand the nature of the various affections of the womb. In uterine catarrh it is especially necessary to know from what particular glands the secretions which are discharged from the womb proceed.

A brief description of the uterine mucous membrane may be useful.

The mucous membrane of the womb is very thick and vascular. This thickness of the membrane is much less in the cervix and at the entrance of the Fallopian tubes than in the cavity of the body.

The fibro-plastic elements predominate in the structure of this membrane, but we find also fibres with their nuclei, an amorphous substance, glands, and capillary vessels. These glands are of considerable importance — the discharge that escapes from the womb is secreted by them.

There are two sorts of discharge, that from the

cavity of the body, and that from the cervix uteri.

The glands of the cavity of the body present the appearance of small tubes imbedded in the substance of the mucous membrane; their terminal extremities lie on the muscular layer; where these glands are flexuous, but at their openings, they are straight and placed one on the other. They do not terminate directly on the surface of the uterine cavity, but are united in groups of two or three and open into a small reservoir; these little reservoirs, when examined with a magnifying glass, give the surface of the mucous membrane the appearance of being riddled.

It is easy thus to understand how difficult it is to cure certain discharges which have their origin in chronic inflammation of these numerous organs. These glands contain a gluey white liquid in which are suspended polygonal cells.

The glands of the cervix, glands of Naboth, are situated in the substance of the mucous membrane which lines the entire extent of the cavity of the cervix. These glands are utricular and contain a very gummy tenacious liquid. When these glands are distended and their tubes obliterated, they form little cysts to which has been given the name of *ovula* of Naboth.

The glands of the uterine mucous membrane have important functions to perform; those of the cervix secrete a sort of gelatinous plug, which fills and shuts up the cavity of the cervix during the period of pregnancy.

Uterine Mucus.

There exist two sorts of mucus in the womb, that secreted from the cervix and that from the body.

Mucus of the cavity of the body. — This is a brownish grey liquid, semi-transparent, viscous, and gluey, in which a large number of epithelial cells are suspended. Sometimes this mucous substance is coloured by blood in a small quantity.

Mucus of the cavity of the cervix. — This liquid is transparent, viscous, very thick in comparison with the fluidity of the mucus from the body of the womb. It is secreted in small quantities only in the normal state and renders very great service during the period of pregnancy, as we have described above.

When the secretions of the uterine cavities are greatly increased, we have to contend with one of the most rebellious forms of uterine catarrh — the glands are diseased and it is very difficult to reach them with appropriate topics.

B. PHYSIOLOGICAL REFLECTIONS.

The cavity of the body of the womb is constantly closed and thus allows the mucous matter to accumulate in it.

The cavity of the cervix is a simple canal into which the uterine secretions penetrate after having passed the isthmus and they cannot return to the cavity of the uterus as the isthmus is immediately closed.

The secretions give more or less pain in passing the isthmus, which women correctly call uterine colics.

The independence of the two cavities and the occlusion of the isthmus explain why vaginal and cervical injections cannot enter the uterine cavity.

The neck and the external orifice of the womb are quite insensible. It is a known fact that they can be burned by actual cautery without the perception of the patient. The isthmus on the contrary is the seat of remarkable sensibility and it is at this point that the pain which accompanies catheterism of the womb is most felt.

The uterine cavity itself is also very sensitive. The contact of instruments produces sensations of

different degrees varying from uneasiness to violent colics, followed, in reflex action, by chills, vomiting, etc., symptoms which are quite independent of the influence of the peritoneal membrane.

It would be impossible to insist too much on this subject, for accidents occasioned by intra-uterine manœuvres have been too often considered as cases of peritonitis when these serious symptoms appeared. These symptoms occur also after passing a catheter into the bladder, and the affection is then called urethral fever.

Rudbeck and Haller long since demonstrated the irritability of the womb, making it contract under the influence of irritating agents. I myself have often witnessed the expulsive action with colics after intra-uterine injections.

It is familiar to all observers, that the uterine cavities into which a probe entered at first without any difficulty, meets with great resistance on a second trial from the evident contraction of the womb. (*See* Case n° 9.)

Those who have often had occasion to perform the operation of catheterism of the womb must be convinced of the sensitiveness of this organ and of its remarkable contractility.

I have already said that the isthmus of the womb is constantly closed by the fitting, one into the other, of the different parts of the *arbores vitæ* and by the tonic contraction of the muscular fibres.

The occlusion of the orifices of the two Fallopian tubes is effected by a similar mechanism and thus explains the peculiar sensations experienced by women when anything passes from these tubes into the womb as also from this latter into the vagina.

The preceding anatomical notions account for uterine colics and painful menstruation when the isthmus of the womb resists the passage of the menses. This explains also how it is that distension of the womb by intra-uterine injections produces so much pain and even sometimes formidable accidents follow.

It is easy to understand that experiments made on the dead body cannot be admitted to prove that intra-uterine injections do penetrate the Fallopian tubes and reach the peritoneum in the living subject. The relaxed state of the tissues and the absence of muscular contraction after death allow liquids to pass freely through the Fallopian tubes, but such is not the case in living bodies when all the passages close spasmodically on the approach of any foreign body.

To perform these injections then with safety it is necessary :

1° To proceed slowly;

2° To employ an instrument which can pass the isthmus easily;

3° To inject only three scruples or a drachm of liquid.

With these precautions and with well adapted instruments, intra-uterine injections are perfectly harmless. We shall have to return to this subject when we speak of the treatment of uterine catarrh.

The question whether liquids can or cannot penetrate the abdominal cavity consecutively to intra-uterine injections is of such a vast importance that we must mention the following fact.

Experiments on animals have constantly shown us that the injected liquid always flows back from the womb along the injecting tube and never enters the Fallopian tubes. We have never been able to inject any liquid into the cavity of the peritoneum.

CHAPTER II

CAUSES OF UTERINE CATARRH

Uterine catarrh, leucorrhœa, or whites are so many different expressions to indicate the same thing, that is to say, the flux of a variable quantity of a more or less coloured liquid from the genital organs. Uterine catarrh is idiopathic or symptomatic.

Without doubt, leucorrhœa is often the symptom of some organic lesion of the womb or of its appendages; but in the greater number of cases, uterine catarrh is the whole affection; it is a flux from the genital parts which cannot be attributed to any persistent lesion of the tissues, and which seems to be dependent on the generally debilitated state of the economy.

It is thus that we account for idiopathic uterine catarrh in girls and young women who present all the characters of a lymphatic constitution.

Women of a delicate constitution, with white skin and light hair, are particularly inclined to this flux, resulting from the great impressionability of their mucous membranes. The same persons are very subject to coryza. The most trifling accident causes a considerable increase in the normal secretions of their mucous membranes. We may mention among the accidental causes to which we allude, damp, cold, sudden change of temperature, moral influences of all kinds, etc., etc.

Among the direct causes of idiopathic uterine catarrh we mention also :

1° The age of the patient (this affection is rarely met with except in young persons) ;

2° Cold and damp climate ;

3° Unhealthy habitation ;

4° Bad food ;

5° Fatiguing or sedentary professions and all social circumstances tending to disturb and excite the nervous system.

To these general causes, which by themselves can produce uterine catarrh, we most add the organic lesions of the genital organs.

Some women, besides being pale and chlorotic, present a particular disposition of the genital organs which indicates a manifest atony of the womb. The vulvo-vaginal mucous membrane is pale and flabby, the follicles present gaping orifices, and the womb seems to have prolapsed, the ligaments which should support it having become relaxed. Under such circumstances it is evident that any experienced practitioner must pronounce this to be a decided predisposition to leucorrhœa.

The least local excitement will suffice to produce a flux. Uterine catarrh is thus often brought on, even in young girls, merely by horse exercise.

This affection often appears in young married women and is the frequent consequence of a miscarriage.

In many cases uterine catarrh must be attributed to functional imperfections, thus it frequently appears in young women affected with amenorrhœa or dysmenorrhœa.

With many women menstrual uterine congestions are often followed by leucorrhœa instead of the normal menstrual discharge.

The different displacements, particularly retroflexion of the womb, are frequently the causes of uterine catarrh.

In the majority of cases, uterine catarrh is symptomatic of a particular state of the womb which certain authors have described under the title of chronic metritis. In this case the womb is larger, the cervix in particular is of a considerable size and its orifice is almost always wide open.

It is important to note the facility with which catheterism is performed under these circumstances; the womb is considerably increased in size and the muscular fibres have lost their tonicity so that the occlusion of the cavities of the womb remains imperfect and offers no resistance to the passage of the instrument.

Having in a vast number of cases carefully examined the womb in this passive state, so directly opposed to any thing like inflammation, we are at a loss to understand how the term *chronic metritis* could be substituted for *engorgement of the womb*, which is a much more appropriate and exact expression.

No objection can be made to the word engorgement, which clearly means a stagnant state of the circulation of the womb; the tissues become swollen much in the same way as the lower limbs in cases of varicose veins.

This *ædematous* state of the womb is generally attended by atony of the muscular fibres; the mucous membrane is thickened, the glands are swollen and cease to empty their secretions, except by an overflow into the womb, which afterwards discharges itself into the vagina.

Engorgement of the womb means then stagnation of the circulation, atony of the tissues, and thickening of the mucous membrane with swelling of the glands that are inclosed in its texture.

If the disorder continues, and nothing is done to render the circulation more free, if the womb is not stimulated, — in a word, if the engorgement continues to increase, ulcerations in the cavity of the womb and on the cervix uteri must follow; it is under these circumstances that the discharge which comes from the os uteri is often mixed with blood and pus.

Engorgements are most frequently observed in women of a chloro-anemic or lymphatic constitution.

It would be a mistake not to admit that uterine catarrh may depend solely on an organic lesion of the womb. Though the general health must be taken into account, the local affection must also be attended to in the treatment of this disease.

We shall hereafter show how uterine catarrh can be modified by medical treatment.

It is not the less evident that by local treatment the morbid secretions of the mucous membrane may be changed and the contractility of the womb be revived; these are the only means by which engorgement of the womb may be removed.

With regard to engorgements dependent on displacements of the womb, these displacements must necessarily be remedied by an appropriate treatment, before any hope of relief can be entertained.

CHAPTER III

SYMPTOMS OF UTERINE CATARRH.

Women affected with uterine catarrh generally ask advice for symptoms which may be considered as sympathetic or concomitant phenomena.

When a young woman suffers pains and uneasiness in her stomach and complains more or less of painful sensations in her back, etc., the medical man may be led to suppose that the patient may have a discharge from the genital organs (whites), but the patient will rarely allude to anything of the kind from her own movement. In other cases of uterine catarrh patients complain of heaviness of the head, giddiness, nervous pains, etc.

We do not mean to say that all the morbid phenomena we have just mentioned are necessarily

the concomitants of uterine disorder, such is not our belief, but in practice we often find that the principal symptoms disappear, or at least that the patient experiences general relief by the successful treatment of the principal disorder, uterine catarrh.

We will now return to the symptoms, properly speaking, of engorgement of the womb.

Some women complain of more or less painful sensations which betray the existence of organic disturbance of the womb and its annexes: pains in the back, in the loins and in the region of the sacrum, in the buttocks, in the upper and inner parts of the thighs; other patients experience a heaviness in the anus, with frequent desire to make water; some suffer in the lower part of the abdomen, and are not able to lift the slightest weight without the sensation of prolapsus of the genital organs. A long walk or standing for some time will produce all these sensations, which sometimes become unbearable. Patients under such circumstances have the whites; but frequently they would never allude to anything of the kind if the physician did not call their attention to it.

The discharge is often so considerable that patients become aware that it must be a source of weakness, they then seek for advice and are easily

convinced that the sensation of heaviness and uneasiness of the stomach, the palpitations and other hysterical symptoms have their origin in uterine disorder.

The preceding symptoms may lead us to suppose that there may be some organic lesion of the genital organs, but it is only by a direct examination of these parts that other symptoms which are of the greatest importance to establish a correct diagnosis can be known.

Before passing to the examination of the internal organs, we must mention some particularities of the white flux which constitutes one of the important phenomena of uterine catarrh.

The discharge varies considerably in quantity; the flux is sometimes continuous, at other times it comes with a sudden rush.

Women on rising from their seats or on leaving their beds are conscious of the presence of a lump which escapes from the sexual organs. This discharge leaves stains of a grey or slightly yellow colour on their linen, it is never green; the linen seems as if it were starched in some places.

We must now proceed to the direct examination. Very little is to be discovered by digital examination; the relaxed state however of the

tissues becomes evident and they are bathed in mucus; the cervix uteri is more or less increased in size and sensitive; it has become more or less soft. We discover also whether the cervix occupies its normal situation, and if the womb should be displaced, in what direction it may be so, by an anterior or posterior flexion.

Examination with the speculum furnishes the most valuable information. We cannot too much recommend the use of the speculum with flat-valves similar in form to a duck's bill. This instrument whilst exposing the cervix uteri most perfectly, can be left in its place so that the surgeon may have both his hands at liberty for the introduction of the hysterometer or our instrument for retrograde injections.

The examination with the speculum shows the state of the vagina, exposes the cervix, showing it to be more or less voluminous — the os tincæ is generally wide open.

A viscous and slightly opaline liquid is seen to ooze from the os uteri; this viscous matter is very gluey and it is difficult to clear it away from the parts. By gently pressing the cervix between the two valves of the speculum a considerable quantity of matter of the same character is squeezed out.

In some cases, ulceration, vegetations, small cysts or ovula of Naboth, as they are called, are discovered, sometimes also small polypi.

In the majority of cases uterine catarrh is accompanied by a relaxed state of the isthmus which separates the two cavities — the cavity of the cervix from that of the body of the womb.

Sometimes the hysterometer is introduced with difficulty and causes much pain; this should be taken into consideration as a direction for the treatment.

CHAPTER IV

DIAGNOSIS OF UTERINE CATARRH.

The diagnosis of uterine catarrh is so very plain and easy to establish that it scarcely admits of any difficulty.

It does not require much experience to suspect the existence of uterine engorgement when we meet with the symptoms resumed in the last chapter, even though the patient may not refer to anything directly connected with the uterus and its dependences. But when advice is asked in cases of leucorrhœa, the surgeon's attention is at once directed to the part affected.

In all cases it is of the greatest importance that the genital organs should be carefully examined.

When the linen seems as if it were starched and is

stained with grey spots, the probability is that this discharge comes from the uterus; yellow or greenish yellow spots would indicate inflammation of the vagina.

In uterine catarrh the discharge has no smell, scarcely even that of warm starch. In cases of cancer of the womb, on the contrary, the discharge has a strong smell, sometimes it is very fetid; most frequently there is a small quantity of blood mixed with this discharge which the unfortunate women call whites.

The sensation of bearing down of the anus, the frequent desire to make water, and the weakness from which women suffer so much: all these disturbances may be occasioned by a displacement of the womb and there may be no uterine catarrh.

Before we can be sure that uterine catarrh exists, we must have examined the patient with a *speculum* and have found the viscous liquid, more or less coloured, passing from the orifice of the womb.

By digital examination we feel the engorgement of the cervix uteri, and the ulcerations formed in the cancerous tissues, but it is by examination with the speculum only that we may be sure that the cervix is not ulcerated, that it has

nothing of a cancerous character, and that the discharge from the womb is nothing more than the pathological hypersecretion of the glands of the uterine mucous membrane.

Uterine catarrh is easily distinguished from discharges which are occasioned by the presence of polypi or fibrous tumors.

In these latter cases the discharge is of a different character and blood is often evacuated; there is no blood in uterine catarrh. The presence of polypi and fibrous tumors is moreover discovered by a direct examination.

It is of importance to know whether the disease has attacked the whole or only a portion of the womb.

When the cervix alone is the seat of uterine catarrh, in addition to the symptoms we have already mentioned, it may be almost impossible to pass a catheter into the womb, for it would require a certain effort to make it pass the isthmus which separates the two cavities.

On the contrary, when the cervix and the body of the womb are at the same time affected, the fibres become relaxed and catheterism is then easily accomplished.

This part of our diagnosis is most important,

for though it is comparatively easy to overcome the catarrh of the cervix, it is very difficult to arrest the discharge which comes from the cavity of the womb.

It is a fortunate circumstance that as the disease becomes more serious, the introduction of instruments becomes easier, so that in cases which were very often a source of great embarrassment to the surgeon, we are now enabled to render the greatest service by intra-uterine injections.

CHAPTER V

PROGNOSIS OF UTERINE CATARRH.

We may now state that uterine catarrh is much more frequently the symptom of some uterine affection, than an idiopathic leucorrhœa. For this reason we should never think lightly of an affection which is too often neglected because it is said that most women are more or less troubled with whites.

The prognosis of uterine catarrh must be different in certain cases, depending on the origin of the affection: it may be occasioned by the general state of health of the patient (chloro-anæmia, lym-

phatic state), or it may be the sign of some lesion of the womb and its annexes. Though uterine catarrh does frequently disturb the digestive organs (dyspepsia) and affect the nervous system, it must be acknowledged that it exists also without interfering with the general health.

Uterine catarrh claims all our attention as one of the principal causes of sterility.

I am convinced that many young women remain sterile from the neglect of a chronic catarrh of the womb. I have two conclusive cases of pregnancy which lately took place after the cure of uterine catarrh, which had been neglected for several years.

A few physiological reflections will suffice to explain the importance to be attached to uterine disturbances as causes of sterility.

In order that fecundation may take place, the spermatic animalcules must reach the Fallopian tubes and penetrate almost as far as the ovaries. In order that this peregrination may be effected, it is indispensable that the vagina preserve for a time the prolific liquid in which the neck of the womb is bathed; now it is well known that when young women are affected with uterine catarrh, all the tissues are in a flaccid state and do not sufficiently

oppose the passage of liquids contained in the vagina.

Even if some favorable circumstance allowed the spermatozoons to penetrate the cavity of the cervix, the liquid in which they are carried would soon flow back again; for the orifices, instead of being closed, remain wide open, in almost every case of uterine engorgement.

Besides this unfavorable mechanical condition, there is another very important circumstance which must be examined here. If this spermatic liquid is placed in contact with the opaque whitish liquid which escapes from the os uteri in the case of leucorrhœa, it is evident that the animalcules must suffer; their movements are observed to become less vigorous and they soon cease to exist. It is thus ascertained that the prolific liquid loses its indispensable qualities before it can reach the ovules to be fecundated.

It should not be forgotten that this reaction of the uterine upon the spermatic liquids is one of the principal causes of the sterility of young women.

Uterine catarrh is not always exempt from danger; when leucorrhœa, instead of being mucous, becomes purulent, the catarrh is then complicated

with inflammation of the womb which may extend to the cellular tissue, to the Fallopian tubes and to the ligaments. Thus uterine catarrh, generally considered as a derangement of function, may assume the most alarming character.

CHAPTER VI

TREATMENT OF UTERINE CATARRH.

We have already had occasion to say that uterine catarrh may be dependent on the general state of health, or on the state of the genital organs.

The treatment of this obstinate affection requires :

1° A general medication ;

2° A direct action on the organs affected.

It would be a serious error to depend solely on any medical treatment for the cure of uterine catarrh.

Even in cases of simple mucous flux without any organic lesion, it is incontestable that a direct local treatment very much hastens the cure.

GENERAL TREATMENT

Uterine catarrh, as a general rule, requires a tonic treatment.

We generally prefer the ferruginous preparations, particularly the lactates and hypophosphites of iron for women of a chloro-anæmic and nervous temperament. The combination of iron with phosphorus at its minimum degree of oxidation appears to be the most advantageous preparation. I habitually prescribe the hypophosphite of iron first, which I continue about a fortnight, and then I change it for hypophosphite of manganese. This alternation of medicine is very beneficial; patients appear to be relieved by the change, and the treatment can be continued for a longer time without interruption (1). Under the same circumstances we often have recourse to mineral waters, such as Spa, Orezza, Bussang, Kreutznach and Luxeuil.

An hydropathical treatment and sea baths in the proper season may also be prescribed with advantage.

When the lymphatic temperament greatly predo-

(1) These two medicines are prepared specially by Mr. Swann, English chemist and druggist of Paris, No. 12, rue de Castiglione.

minates, a different medication will be required; under such circumstances, we recommend large and gradually increased doses of cod-liver oil, iodureted oil of dog-fish, antiscorbutic syrup, syrup of diplotaxis-muralis, the preparations of Peruvian bark, of quassia amara, of gentian, etc., etc.

We recommend also the frequent use of saline purgatives in small doses. In many of these cases patients derive great benefit from a season or two at Aix-la-Chapelle, Aix-en-Savoie, Bagnères de Luchon, Enghien, or Mont-Dore.

The different general medications we have thus briefly named must be successively employed under the direction of physicians, who alone can judge of their opportunity and of the various indications in patients of different temperaments and constitutions.

LOCAL TREATMENT

The local treatment is directed against the atony of the tissues and the consequent engorgement of the womb. All topics and local treatment must then act on the womb itself, exciting its contractility, rendering the circulation more free and modifying the state of the mucous membrane.

We must now revert to the distinction we so much insisted on when treating of the diagnosis :

1° Uterine catarrh is symptomatic of an engorgement of the cervix and its cavity only.

2° Uterine catarrh is symptomatic of an engorgement of the entire organ.

As we have already said, it is by direct examination only, aided by the hysterometer, by the speculum, etc., that the surgeon can be enabled to discover the anatomical seat of the disease and to establish a rational system of treatment with security and certainty. When the affection is confined to the cervix, the treatment required is generally very simple. Some astringent applications, such as the azotate of silver, the tincture of iodine, the perchloride of iron, generally suffice.

All topics should be introduced into the cavity of the cervix. The curved *porte-caustic* and our syringe for retrograde injections are the most convenient instruments for this purpose.

When these, the most simple remedies, to which we frequently add a small piece of wadding impregnated with some astringent and lightly placed on the os uteri, are not sufficient, we have recourse to a more energetic treatment.

The vaginal douche when substituted for the daily

toilet injections has a very powerful effect in exciting uterine contractions and in reestablishing the menses in cases of amenorrhœa.

When uterine catarrh is complicated with engorgement and hypertrophy of the cervix, when we discover ulcerations of a more or less fungous character, recourse must be had to repeated cauterizations with the hot iron.

The cure of uterine catarrh is advantageously concluded and confirmed by a thermal treatment, internal baths, and long continued irrigations, with thermal waters such as those of Plombières, Luxeuil, Saint-Sauveur, etc., etc.

When catarrh is symptomatic of an engorgement of the cervix and of the entire womb, recourse must be had to cauterizations with the hot iron or with the *caustique de Filhos*, which may then be most advantageously employed.

The treatment hitherto employed, in complicated cases of uterine catarrh, must always be continued for a long time and even then it often fails. In contending with difficulties of this kind we were driven to seek for other resources and thus were we led to employ intra uterine-injections.

Medical men have for many years past understood how necessary it is to act directly on the ute-

rine cavity, the interminable source of leucorrhœa, and in many cases this local treatment has been crowned with the greatest success. We must however add that sometimes patients not only did not derive any benefit at all, but were exposed to accidents of a more or less alarming nature so that this seductive method had to be abandoned.

Hourmann published a memoir in 1840 drawing the attention of the profession to the danger of making injections into the womb. The medical journals of that period contain long dissertations on the subject.

Intra-uterine injections became also the subject of great discussions in the Academy of Medicine.

In referring to these discussions we are struck with the preoccupation of professional men; whilst some feared that peritonitis must be the almost inevitable result of these injections, others were endeavouring to adopt some system by which the danger might be avoided.

In 1833, Melier proposed the use of a sound with two currents, on the principle adopted by Baron Cloquet.

Vidal recommended a small tube adapted to a syringe, and terminating in a ball similar to that of a watering pot.

These injections never became practicable however, and were abandoned for the following reasons. It was thought that the accidents arising from any cause, or mechanical defect, could not be prevented and consequently the intra-uterine injections were abandoned, altogether. New efforts were notwithstanding made to reintroduce these injections, though they met with the same opposition and the same arguments which are constantly being revived to reject this method of treatment.

Aran says he has made injections into the womb several hundred times without having once met with peritonitis; Scanzoni has had the same success.

I quote particularly Aran's opinion, because, more than any one else, he has employed the method which I consider the best.

Aran was well aware of the dangers which attend these injections, but he declares that they can be performed with sufficient safety to justify their recommendation when uterine catarrh has resisted the more simple remedies.

Before proceeding any further, I wish to make a few observations on the nature of the accidents which may be occasioned by intra-uterine injections.

Though most frequently women do not suffer any pain when injections, even of a strong solution of caustic, are made into the womb, yet it sometimes happens that symptoms which give great alarm to inexperienced persons do occur. The patient suddenly cries out, complains of violent colics, of pain in the womb, like that of labor; the abdomen becomes swollen, the face becomes pale, the extremities cold, the pulse small, and the patient is thrown into a state of great depression. These symptoms are sometimes accompanied with great trembling of the limbs and vomiting.

I have related a case of this kind at the end of this memoir, case No. 4. Such a train of symptoms is undoubtedly alarming in appearance, but is not followed by any fatal result.

What then is the nature of these accidents to which I have alluded? I do not hesitate to say that the penetration of the injected liquids into the peritoneum, passing through the Fallopian tubes, is to say the least very hypothetical, and with the most simple precautions, such an accident could not occur.

I have endeavoured to combine in my instrument all the conditions necessary to prevent the

possibility of peritoneal reflux, but I cannot admit that any one instrument hitherto employed is preferable to another; I allude in particular to the sound with a double current which we owe to Baron Cloquet. Melier applied this instrument to the womb, M. Huguier has adopted it also, and latterly it has been employed by M. Avard.

The chief defect of this instrument is its considerable size requiring the preparatory use of the dilator and it cannot be employed with any security or safety.

I must now return to the accidents caused by intra-uterine injections : I have had to encounter them, though only very rarely it is true, and I must state, as I have already hinted, that they are entirely the result of a reflex action.

All the accidents I have mentioned may, notwithstanding the greatest care, occur after a simple uterine catheterism. Medical men who have devoted themselves to the treatment of uterine affections know by experience that the introduction of the hysterometer is sometimes very painful, sometimes bringing on quite a convulsive crisis with swelling of the abdomen, vomitings and smallness of the pulse; all these symptoms appear instantaneously and cannot therefore be

attributed to peritonitis. This nervous perturbation generally passes off immediately, but it may last several days ; I have never however seen any fatal result follow it.

The accidents occasioned by injections are of the same nature; I have sometimes been able to trace them to the irritating nature of the liquid injected.

Idiosyncrasy alone can often account for these accidents. It is just as impossible to foresee that such accidents will result from the introduction of the hysterometer, on this or that woman, as on men in some cases of catheterism of the bladder.

. The conclusion to which I have come from practice, is that it is necessary to proceed slowly.

am very watchful of the sensibility of the womb of every patient with whom I have to deal. I first use the wax bougie, then the metallic hysterometer, and finally, when the sensibility is somewhat deadened, I commence the injections, being perfectly assured that the recurrent flow from my instrument is a perfect guarantee aganist the passage of any liquid through the Fallopian tubes.

As regards the nature of the liquids to be

injected, I here also proceed gradually; first I use warm water, then cold, and finally I inject astringent and even caustic liquids. In certain bad cases, I have injected with impunity 3 scruples of a solution composed of equal proportions of distilled water and of nitrate of silver.

Thus in the employment of injections adapted to the nature of the case, we may obtain the most beneficial results. I am inclined however to give the preference to solutions of the nitrate of silver.

In concluding this practical memoir, the result of my personal experience in the United-States and in Paris, I shall simply explain the manner in which I proceed and describe the instrument I use.

I have thought it useful to add a certain number of cases of different forms of uterine catarrh, which will explain, a great deal better than I could in any other way, the advantages to be derived from the employment of my syringe, which I had the honour of presenting to the Academy on Feb^{ry} 4th 1868.

The imperfections of the means hitherto employed led me to invent the instrument I have now exclusively adopted. Until then I had always made

use of a small India rubber sound with the syringe for hydrocele, the ordinary method which Doctor Gallard mentions in a recent letter to the Imperial Academy of Medicine.

METHODE OF OPERATION.

INTRA-UTERINE INJECTIONS.

The patient should be conveniently placed on a "*chaise à speculum*", or on the edge of a bed with each foot resting on a chair; the speculum, called "*bec de canard*" Duck's bill, may then be introduced after having been dipped in warm water and well oiled.

We prefer this speculum :

1st Because it is short and unfolds the walls of the vagina better than any other instrument, and the cervix is almost unavoidably placed between the valvules.

2° Because it is so disposed that when once introduced, it may be left without fear of its losing

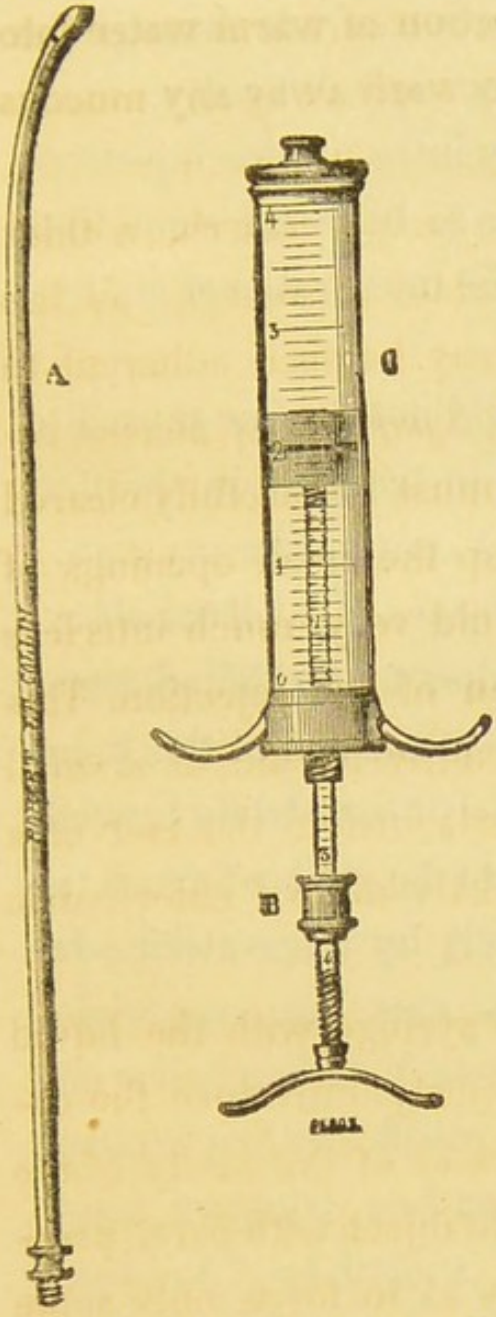
its position, and thus allows the operator the free use of both his hands.

This first part of the operation permits us to make a preliminary injection of warm water into the vagina if necessary to wash away any mucous matter from the os tincæ.

In cases of obstinate uterine catarrh, a thick mucus resembling the white of an egg, as has been described before, may be seen adherent to the os uteri (*see* Chap. III, *Symptoms of uterine catarrh*). This thick mucus must be carefully cleared away, as it might stop up the small openings of the syringe, and it would very much interfere with the immediate action of the injection. This may be best accomplished by the aid of a small brush of lint or sponge attached to the end of a whalebone, dipped in weakly diluted chlorhydric acid.

After having filled the syringe with the liquid to be injected, we cautiously introduce the canula until it reaches the end of the cavity of the womb, we then proceed to inject with care, pressing the piston gently so as to force only some drops of liquid into the uterine cavity. This must be followed by a pause, until we see some mucus presenting itself at the os uteri, indicating a ten-

dency to a reflux of the injection. A more effectual pressure may then be made on the piston to wash out the whole of the uterine cavity.



After this, if necessary, we introduce a simple or prepared tampion; the operation is then finished and the speculum may be withdrawn. Thus this operation is reduced to its greatest simplicity by the aid of the instrument represented by the accompanying figure and which I shall now proceed to describe.

It is composed:

1° Of a graduated syringe capable of containing a drachm of liquid, fig. B, C.

2° Of a tube, A, of the same length but with a smaller diameter than that of the ordinary hysterometer, pierced at its extremity with holes directed backwards towards the operator on the same prin-

ciple as that known as the urethral syringe of Dr Langlebert.

This mechanism, with a tube of small diameter, allows the injected liquid to retrograde through the orifice of the os uteri without any difficulty.

The success obtained by intra-uterine injections authorises us to affirm this to be at the same time the most efficacious and the most rational method of treatment.

But as I before stated I did not confine myself to the use of any particular instrument in the first cases of uterine catarrh that came under my care.

It is not my intention to reproduce all the observations and notes I made when in the United-States of America. I shall publish at the end of this pamphlet a few only of the cases I have lately treated, demonstrating the benefit to be derived from the treatment of uterine catarrh by intra-uterine recurrent injections.

CASES

Case I.

Madame L. V., aged 21 years, came under my care the 23rd of January last. She is a young woman of a strong constitution, has menstruated regularly, and has never been ill.

From the first part of the month of August 1867, she felt very great pains in the lower part of the abdomen, and soon after discovered her linen to be soiled and as if starched in spots by a viscous yellow matter. From this time her menses have been irregular and continue only 3 or 4 days instead of 7, as before.

Repeated injections of infusion of walnut leaves, have been regularly employed; she has also followed the general treatment recommended in

chlorosis without any marked benefit or amelioration.

By examination the genital parts are found to be impregnated with a considerable quantity of albuminous matter; the neck of the womb, about a third larger than in the normal state, is slightly ulcerated and impregnated with a white yellowish mucus.

I immediately made an injection of equal proportions of water and of nitrate of silver, the whole of which entered the cavity of the womb; a tampion was inserted and the patient advised to remain perfectly quiet.

Some hours after the injection, on the same day, the patient suffered from colics which however soon disappeared.

The following day the tampion was taken out and injections made with cold water.

Feb. 3. The menses reappeared, and were very pale.

Feb. 9. The white flux is stationary, the cervix continues large, the ulceration slightly diminished. Injection, tampion.

Feb. 17. Same state. Injection and tampion.

Feb. 27. Notable diminution of the flux, the ulceration continues to heal. Injection and tampion.

March 7. Appearance of the menses.

March 11. Less abundant flux, the cervix very sensibly diminished in volume, and the ulceration almost completely healed. Injection and tampion.

March 17. The flux disappears. Normal size of the cervix, scar covering completely the preexisting ulceration.

The patient continues the injections with cold water. Her menses returned in April and May last.

June 5. The flux has entirely disappeared and the patient is free from all pain.

Case II.

Madame X., 38 years of age, very nervous, thin, suffering during the past year with constant dyspepsia, *gastralgia*, and constipation, subject to a considerable white flux attended with excessive pain in the abdomen.

She has had two miscarriages in the space of three years. Her menses appeared for the first time at the age of 15; they take place now at very

irregular dates. During their intervals the patient is subject to a white yellowish flux, very thick and abundant.

Jan. 30. I discover at the external orifice of the genital organs, a quantity of mucus adherent to the parts. The neck of the womb has attained a considerable size and presents a large ulcer covered with mucus which it is very difficult to clear away.

I immediately washed the organ by a vigorous injection of cold water and then made a concentrated intra-uterine injection which penetrated, the whole of it, into the cavity of the womb, but part of it was repulsed.

A tampion was inserted and the next day the patient affirms that she had experienced no suffering; I advised injections of cold water into the vagina several times a day.

Feb. 6. Appearance of the menses.

Feb. 13. The white flux persists, but is diminished in quantity; the cervix is still impregnated with it and the edges of the ulceration show signs of healing.

A second uterine injection produces no pain.

Feb. 20. The ulceration heals slowly; the secretion of the white flux continues, without the abdo-

minal pains however; it is not so thick and comes off in lumps on the brush of lint.

Injection and tampion.

Feb. 27. Continued improvement.

Injection and tampion.

March 5. Ulceration almost entirely healed, the central part tinged with blood. The size of the cervix decreases, the secretion of the mucus continues but it is in much smaller quantity and of a more liquid consistency.

Fourth injection and tampion.

March 12. Menses.

March 19. Ulceration healed.

Fifth injection.

March 26. The cervix no longer out of proportion, the flux insignificant. I advised repeated vaginal injections with cold water, and the 2d of April I found the cure of the uterine catarrh to be complete.

I saw this woman again on the 20th of last May and she was then no longer subject to the functional disorders which had so much reduced her.

Case III.

On the 30th of January last I was consulted by Madame D. A., aged 23 years, never treated for any illness, her menstruation irregular and she is subject to a considerable white flux. A fortnight ago she had an abscess of the vulvo-vaginal gland which was immediately opened.

From this period the abdominal pains have increased as has also the white flux.

The genital parts are lubricated by a thick white or yellowish liquid; the neck of the womb is large, deeply ulcerated and impregnated with mucus, which lines a portion of the vaginal walls.

Injection and tampion without any consecutive suffering.

Feb. 10. Appearance of the menses.

Feb. 17. Diminution of the flux; injection and tampion.

Feb. 24. Decided improvement; injection and tampion.

March 4. The enormous ulceration of the cervix partly healed; there still remains a small uneven

surface slightly tinged with blood. The cervix is reduced almost to its natural state.

Injection and tampion.

March 11. The patient has had her menses the last two days. She says that the flux has evidently ceased.

March 17. Ulceration of the cervix almost healed; injection and tampion.

March 24. Formation of another abscess, which requires to be opened.

March 31. The cervix still large, scarcely a trace of the albuminous mucus ; the large ulceration replaced by a small uneven surface covered with bloody matter.

Injection and tampion.

April 1st. The cervix presents a healthy appearance, the flux ceases. I insert a tampion of dry wadding and I advise the patient to come to see me in two weeks.

April 17. I find a complete cure of the uterine catarrh. The cervix is rosy, it has recovered its natural size, and the white flux has not returned since its disappearance on the 1st of April.

Case IV.

On the 8th of Feb. I received a visit from Madame D. P., 34 years of age, a very stout person. She has had three children, has always been well menstruated and has never had any illness.

Her last confinement was in the month of January 1867. Since that period, her menstruation became very irregular and about the month of August of the same year, she became subject to a considerable white flux which lasted until February 1868, at which time she suffered from pains of the abdomen and kidneys. She had during this time the greatest disgust for all kinds of animal food. As the discharge continued and the menses did not reappear, the patient consented to be examined.

The cervix is large and deeply ulcerated; its orifice is wide open and gives issue to an albuminous mucus of a white-yellowish colour which covers partly the sides of the vagina and of the external orifice of the genital organs; it comes off in masses with the lint brush.

This is decidedly a case of uterine catarrh of a purulent nature. I immediately have recourse to

my injections of nitrate of silver, and as soon as the liquid enters the cavity of the womb the patient is seized with vomiting. For some hours afterwards the patient suffered with severe colics, and the abdomen was swollen and painful to the touch.

The next day the pulse was rapid, the patient had not slept and complained a great deal. I prescribed a bottle of seidlitz water and the continuation of the prescriptions of the preceding day. After the lapse of five days these accidents had disappeared, the cervix was very much swollen, the quantity of albuminous mucus was considerable and the ulceration still deep. I prescribed frequent injections of cold water and absolute repose.

Feb. 20. A second intra-uterine injection, which was not followed by any disturbance.

Feb. 28. No improvement. I make a third injection, which proved to be inoffensive as was the preceding although it had also penetrated to the cavity of the womb.

March 7. I discover with pleasure that the edges of the ulceration are healing, the flux has decreased and the cervix is not so large.

I made several injections of cold water followed

by an intra-uterine injection into the cavity of the body.

March 15. The menses having appeared, I made no injection.

March 22. I noticed a diminution in the ulceration, two thirds of which were covered by a white scar. A more fluid discharge oozed out from the os uteri and the cervix had almost regained its normal size.

The patient being obliged to leave Paris, I had not the satisfaction of ascertaining the final cure.

Case V.

Madame C. C. consulted me on the 10th of last February; she is of a weak and lymphatic constitution, she has been subject to a white flux for some years, the continuation of which occasioned great anxiety. She has never been well menstruated and has never had a child.

The cervix is soft and easily compressible by the finger; it is as large as a small apple. It is ulcerated throughout and is covered by an albuminous mucus of a yellowish colour.

Feb. 10. The injection having penetrated the cavity of the womb, some drops of the caustic liquid are repulsed when the syringe is withdrawn.

During the evening, some few drops of a bloody albuminous liquid appear at the external orifice of the genital organs.

Feb. 25. No injection, tampion.

March 3. The cervix still large, the ulceration not diminished. Intra-uterine injection.

This time the patient experiences pains in the lower part of the abdomen and in the kidneys du-

ring the day. The whole of the injection penetrated the cavity of the womb.

March 11. The cervix is still very voluminous, the ulceration appears to be healing, the flux is as abundant as before but it is less thick.

Injection and tampion.

March 20. Evident diminution of the cervix, and healing of the ulcers. Discharge still abundant. Injection and tampion.

April 1st. Gradual diminution of the cervix, ulceration almost healed. Considerable diminution of the flux. Injection, tampion.

April 9. The cervix has assumed quite a healthy appearance, the flux has entirely ceased.

The patient has had several injections of cold water into the vagina every day. The tampions were changed every 24 hours and quiet prescribed after each injection.

The patient has returned to me since and states that the flux has almost entirely ceased. The cervix has quite a healthy aspect and is reduced to its normal size.

Case VI.

Madame B. L., 20 years of age, naturally of a good constitution, but exhausted by over-fatigue, consulted me on the 10th of last February.

This patient who has never had a child, has always been healthy until 3 months ago, when her menses ceased and were replaced by a pale flux. Her physician prescribed quinquina wine with iron and *baréges* baths every two days.

The vulva is covered with a thick albuminous mucus. The cervix is slightly increased in size and deeply ulcerated, surrounded by a yellow gelatinous matter which adheres so much to the parts that it is difficult to clear it away.

Feb. 10. Injection, tampion. Colics and fever supervene with swelling of the abdomen. Linseed poultices with laudanum. Diet, soups.

The following day, a bottle of seidlitz water and continuation of the same treatment.

Feb. 13. The bad symptoms have entirely disappeared. I make no injection because there is a slight appearance of the menses. The cervix is still large, the ulceration is not diminished.

Feb. 26. The white flux continues, the cervix is still voluminous and the ulceration remains the same. Injection without disturbance, tampion. I prescribe vaginal injections of cold water to be repeated several times a day.

March 3. The ulceration slightly decreased, the linen less soiled by the flux; injection without inconvenience, tampion.

March 17. The cervix is considerably less hypertrophied; a white scar covers the edges of the ulceration, the albuminous matter diminishes in quantity. The whole of the injection enters and remains in the cavity of the womb.

March 24. Injection, tampion. Continued improvement.

April 7. The cervix has regained its normal state, the ulceration almost healed. Injection, tampion.

April 14. The cervix healed. The cure is complete. In this case six injections were thrown into the womb; the first injection only was followed by some disturbance.

In all the preceding observations the liquid injected was composed of equal proportions of distilled water and nitrate of silver.

Case VII.

Madame H. F., 23 years of age, presented herself to my observation on 1st of last March. She has all the appearance of being in good health ; she has never been ill, but her menses, which had hitherto appeared at fixed periods, have been entirely out of order since her confinement last year.

Since this period her menses have appeared only three times and they were always of a pale colour.

She had for some time a white discharge, but it was so insignificant that she scarcely paid any attention to it. This discharge has however increased so much since the beginning of this year, and has been accompanied with so much pain that she decided on asking advice.

I found by digital examination the neck of the womb to be voluminous, and easily compressed. The speculum shows it to be slightly ulcerated on the surface, and from its orifice, which is half open, hangs a drop of yellow albuminous matter.

After having introduced the hysterometer into the uterine cavity, I immediately injected a concentrated solution composed of equal parts of distilled

water and nitrate of silver. This injection thrown into the cavity of the womb, returned gradually from the os uteri guided by the extremity of the syringe; a tampion of dry wadding was inserted. I prescribed injections of cold water, and to remain in bed.

On my visit the next day I found the patient very comfortable, she had not suffered the least pain from the injection.

March 8. The flux is much diminished, the surface of the cervix slightly red and uneven; second injection, tampion.

March 18. Very little discharge, the ulceration has almost disappeared. Third injection, tampion.

March 28. The cervix is bathed in fluid mucus, the ulceration is entirely healed. Fourth injection into the cavity of the womb without any accident, tampion.

April 4. The patient is quite well.

Since that time I have seen M^rs^ H. F. and have had occasion to assure myself of the success of the treatment employed. Her menses appeared on the 6^th^ of April and on the 4^th^ of last May.

Case VIII.

Madame D., 24 years of age, of a weak and lymphatic constitution, consulted me on the 8th of last March. She has never enjoyed good health, always been badly menstruated, and has been subject to numerous hysterical attacks.

She was confined two years ago and since that time she has had a considerable white flux for which she has vainly tried iron, quinquina wine, and baréges baths.

She has been suffering for two months from pains in the lower parts of the abdomen and in the loins, and has thus been induced to seek relief from medical advice. She says that her linen is stained and as if starched by a viscous matter.

This latter assertion immediately made me suspect the existence of uterine catarrh, and my diagnosis was confirmed by an examination of the genital organs.

I found a large quantity of albuminous matter at the external orifice of the vulva. In feeling the cervix I found it large and flabby; the introduction of the speculum exposed a deep ulceration of al-

most the whole of the cervix, which was wide open, with a mass of gelatinous matter flowing from it.

I immediately made, with my syringe, an intra-uterine injection of a concentrated solution of nitrate of silver, in the proportions of an ounce and a half of nitrate of silver to three ounces of water, and I inserted a tampion of dry wadding.

I recommended absolute quiet and frequent injections of cold water until my next visit. Some hours after the injection the patient was seized with violent colics which announced the return of her menses; they were however not very abundant and were of a pale colour.

Linseed poultices with laudanum were applied to the abdomen; absolute repose with low diet, a little broth, and in twenty-four hours all pain ceased. The tampion of wadding is changed every twenty-four hours.

March 17. Second intra-uterine injection; again without any disturbance.

March 24. I find that the albuminous flux is still abundant and the ulceration of the cervix persists. Third injection.

April 2. The flux is less abundant and the ulceration is considerably diminished. Fourth injection.

April 12. Continued and increasing improvement. Fifth injection, no accident.

April 30. The flux has almost entirely ceased, the ulceration is three fourths healed. No injection, only a tampion.

May 2. The albuminous flux has entirely disappeared, and the ulceration is quite healed.

I have seen this lady several times since, and can affirm that she is radically cured. I advised her to take injections of cold water morning and evening, a wine glass of ferruginous bark wine morning and evening, and four tablespoonfuls of cod-liver oil every day.

All five of the injections penetrated the cavity of the womb, but the first injection only was followed by some slight disturbance, which may be attributed to a too great excitation of the uterine sensibility.

The foregoing cases show how easily the sensitiveness of the womb is overcome; the first or second injection produces some reflex phenomena, but the following cause no perturbation whatever.

Case IX.

Madame M. B. consulted me on the 26th of March 1868. This young woman has been ill for several years. She has had frequent hæmoptysis and has never been well menstruated. She has abundant discharges of whites accompanied with great pain in the abdomen. She was confined eight months ago and since then she has never menstruated.

The external orifice of the genital organs is impregnated with a yellow albuminous matter, easily cleared away with the lint brush.

The cervix is found by digital examination to be large and soft; the speculum shows it to be ulcerated, the os uteri giving issue to a mass of gelatinous substance which it is difficult to detach even with the lint brush dipped in a solution of chlorhydric acid.

This is a case of purulent catarrh of the cervix, and after sounding the womb I did not hesitate to make a caustic injection, all of which remained in the womb without occasioning the least disturbance.

Same treatment; tampion of wadding, vaginal injections of cold water, etc., etc.

April 2. Discharge still considerable, ulceration as large as ever. Second injection, tampion, no accident.

April 12. Discharge very sensibly diminished; the ulceration presents a more healthy appearance. Third injection without other accident than the difficulty I find in passing into the womb, and which obliges me to inject the cavity of cervix only.

April 21. The discharge has almost ceased, the volume of the cervix is diminished, the ulceration is healing. Fourth injection.

I penetrate into the cavity of the womb this time though not without difficulty; the whole of the injection remains in the womb, some drops of blood, evidently the effect of the resistance I had to overcome in passing the isthmus, appear at the orifice of the os uteri. Tampion.

The patient did not complain at all of any pain on the following day which could be attributed to the forced caustic injection, and I encouraged the hope of a speedy cure.

April 29. The external orifice of the genital organs is lubrefied by an albuminous mucus; the

ulceration of the cervix is replaced by a scar which will be complete in a few days.

I made an attempt to enter the cervix, but I was obliged to withdraw the canula of the syringe without penetrating the cavity and I made no more injections.

The menses coming on at this time, oblige me to postpone the examination with the speculum until the 5th of May.

At this date I found the ulceration quite cicatrized, the cervix reduced to its normal size, and the albuminous discharge had totally disappeared.

I saw the patient again on the 25th of May, and found her completely cured.

PARIS. — IMP DE V. GOUPY, RUE GARANCIÈRE, 5.