A handbook of uterine therapeutics and of diseases of women / by Edward John Tilt.

Contributors

Tilt, Edward John, 1815-1893.

Publication/Creation

London : John Churchill, 1868.

Persistent URL

https://wellcomecollection.org/works/z9vymgp7

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

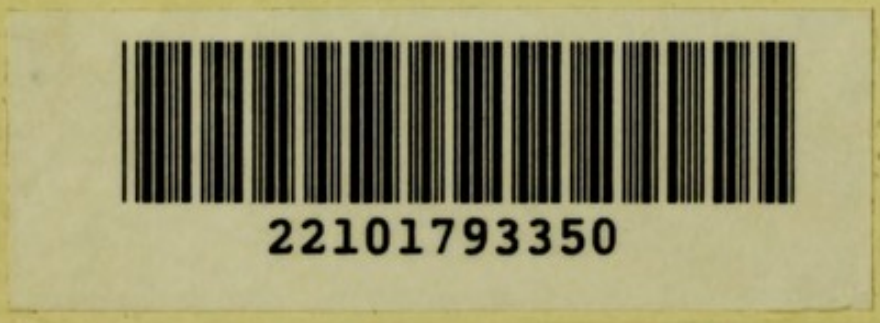
You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.

wellcome collection

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

I/I
Buch

155 D



Presented to the Library
by The Executors of
Dr J. J. Macan



A HANDBOOK

OF

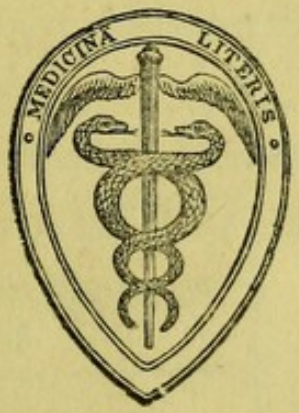
BRITISH MEDICAL ASSOCIATION CANCELLED

UTERINE THERAPEUTICS.

BY

EDWARD JOHN TILT, M.D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS;
CONSULTING PHYSICIAN TO THE FARRINGDON GENERAL DISPENSARY;
FELLOW OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY,
AND OF SEVERAL BRITISH AND FOREIGN SOCIETIES.

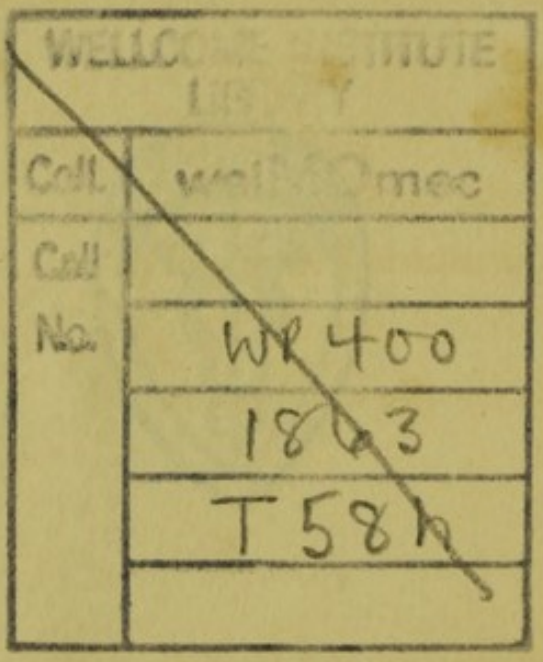


LONDON:
JOHN CHURCHILL AND SONS,
NEW BURLINGTON STREET.
MDCCCLXIII.

The right of Translation is reserved.

CANCELLED

M19758



LONDON:
SAVILL AND EDWARDS, PRINTERS, CHANDOS STREET,
COVENT GARDEN.

Library

PREFACE.

For many years I have sought to determine the real value of those various modes of treating inflammatory affections of the Womb, that have been more or less exclusively advocated by eminent practitioners during the last fifty years. In carrying out so extensive an inquiry, I feel that, notwithstanding the labour it has cost me, many of the subjects have not been adequately treated; nevertheless, I hope the work will increase among fellow-practitioners the knowledge of the best modes of treating the most frequent uterine complaints.

It is with pleasure that I acknowledge my obligations to Mr. John Chippendale, F.R.C.S., for his kindness in seeing the work through the press.

E. J. Tilt.

60, Grosvenor Street, Grosvenor Square, W.
February, 1863.

TABLE OF CONTENTS.

INTRODUCTION.

	PAGE
Difficulties besetting the study of uterine complaints	1
Lady practitioners and their chance of success	2
Diseases of women to be studied by the light of menstruation	3
Inflammation in uterine pathology	3
Helps to practice	5
Peculiarities of patients	5
How to succeed as a doctor	6
Examination of the patient	8
Therapeutical suggestions	12

CHAPTER I.

UTERINE DIETETICS.

Rest and exercise	13
Railway travelling and its dangers	15
Diet and the abuse of animal food	16
Stimulants and alcoholic practice	17
Theory of external applications	18
Poultices and other epithems	19
Stimulant and sedative liniments	20
Vaginal injections, and on the best way of using them	20
Irrigations	23
Enemeta and their uses	23
Suppositories	24
Advantages of bathing	24
Hip-baths, and alternate use of hot and cold water	26

CHAPTER II.

ANTIPHLOGISTIC TREATMENT.

Bleeding more valuable than fashionable	28
Utility and abuses of bleeding	29
Leeches, their advantages, and their application to the neck of the womb	33
Frequency of their application	37
Leeches to the vagina	38

PAGE
Leeches to the pudendum 38
Range of utility of leeches 39
Leeches to the pregnant womb 42
Counter-indications of leeches 44
Scarification of the womb 44
Purgatives 45
Alterative and fluidifiant medicines 46
Alkaline remedies 49
Counter-irritants 50
Setons and issues 51
Blistering the neck of the womb 52

CHAPTER III.

SEDATIVES.

Theory and modes of administration 55
Fomentations and liniments 57
Ointments and plasters 58
Endermic and hypodermic methods 58
Vaginal injections and suppositories 59
Enemata and suppositories 62
Sedatives, doses and range of utility 67
Choice of sedatives 69
Opium, henbane, and belladonna 69
Aconite, veratria, and chloroform 70
Indian hemp, hydrocyanic acid, and camphor 71
Lupulin and castor 73
Mesmerism 73

CHAPTER IV.

CAUSTICS.

Theory of caustic applications 74
Unanimity in favour of caustics 76
Tincture of iodine 76
Nitrate of silver, and modes of use 77
Range of its utility 79
Theory of substitutive applications 82
Caustics gifted with specific power 85
Dangers attending the use of nitrate of silver . . . 85
Theory and use of strong caustics 86
Acid nitrate of mercury 88
Comparative action of potash caustics 90
Potassa fusa cum calce 91
Range of utility of this caustic 93
Potassa caustica and its uses 96

PAGE
Mode of applying potassa fusa c. calce 97
Dangers attending this agent's application to the neck of the womb 101
Dangers attending the use of potassa caustica . . . 106
Influence of potassa fusa c. calce on parturition, when applied to the neck of the womb 110
Discussion of evidence 111
Influence on parturition of potassa caustica applied to the neck of the womb 116
The actual cautery and its application 119
Its utility and dangers 120

CHAPTER V.

TONICS.

Medicinal tonics 122
Hygienic and dietetic tonics 123
Cold water appliances and range of utility 124
Heat and the hot-air bath 127
Theory and range of application of the Turkish-bath . . 127
Change of air, a British tonic 130
Travelling and seaside residence 131
Mineral waters, and Aix-les-Bains 132
Mental activity and peace of mind 133
Marriage considered as a tonic 134

CHAPTER VI.

HÆMOSTATICS.

General indications of flooding 135
Bleeding and refrigerants 136
Mineral acids and astringents 137
Emetics, opium, and digitalis 139
Ergot of rye and turpentine 140
Revulsives 141
Surgical treatment 142
Plugging the vagina and the cervix 142
After-treatment of flooding 143
Preventive measures 144

CHAPTER VII.

EMMENAGOGUES.

Causes of amenorrhœa 146
Emmenagogue regimen 147
Tonics to improve system 148

CHAPTER XII.

PREVENTION OF UTERINE INFLAMMATION.

PAGE
Judicious system of education 265
Careful management of menstruation 266
Judicious marriage 268
Curative influence of pregnancy 270
Unusual precautions after abortion 272
Unusual precaution after parturition 273
Lactation in relation to uterine inflammation . . . 273

CHAPTER XIII.

INFLUENCE OF INDIA ON THE TREATMENT OF UTERINE INFLAMMATION.

Uterine disease frequent in every climate 275
Causes of uterine inflammation among the natives of India . 277
Causes of uterine inflammation among Europeans living in India 278
Frequency of dysentery and of abdominal complaints in India 280
Influence of tropical climates on the march of uterine inflammation 283
State of patients on returning from India 285
Uterine disease complicated by intercurrent affections . . 286
Treatment of uterine inflammation in the tropics . . . 287
Treatment of uterine inflammation on the patient's returning to England 288
Intercurrent diseases 289
Practical rules 291

FORMULARY.

Lotions and modes of applicaation 292
Liniments 294
Ointments and glycerine ointment 295
Plasters, and ready-made plasters 296
Injections 298
Enemata 300
Vaginal suppositories 301
Rectal suppositories 302
Mixtures 302
Pills 304

INDEX 307

A HANDBOOK

OF

UTERINE THERAPEUTICS.

INTRODUCTION.

"To the student in medicine there are few subjects which present greater difficulties than the study of the diseases peculiar to women. The reason of this is, at first sight, not very apparent; the diseases themselves are common enough, especially in the out-patient departments of any of the larger hospitals; there are also special hospitals for such cases, and there are abundance of works, English and French, devoted to their consideration. Whence, then, is the difficulty? That it is real, any one who will take the trouble to inquire may easily be assured; nor can there be any doubt that the defect, whatever it be, is one of serious importance, and often attended with very disastrous results. The student starts in practice having the most meagre knowledge of that great class of diseases, with some of which, we venture to say, if he has any practice at all, he will not pass a day without coming in contact; a wrong diagnosis is the result, and treatment worse than useless is adopted, his patient continues a sufferer, and she either seeks advice elsewhere, or her real condition being undetected she remains for the rest of her life a helpless incurable, seldom free from pain, and worn in body and mind. One great reason for this prevailing igno-

rance, is, no doubt, due to the great want of clinical teaching felt at most of our schools; in many of them there are no clinical lectures on this subject at all, and, however much may be gathered in the out-patient rooms, there is still a vast deal which can only be learned by careful watching at the bed-side, and note-taking from month to month. Observation among out-patients is at the best uncertain and irregular. Without proper clinical teaching, books confuse and are liable to be misunderstood, and it is only after the experience of actual practice that their real value is discovered and the assistance they offer is appreciated."*

Doubtless, however, the principal reason that the knowledge of diseases of women has so little advanced, is the fact that one sex only is qualified by education and powers of mind to investigate what the other sex has alone to suffer.

A Madame Boivin or Lachapelle are exceptional cases, which do not prove, in any way, that the mind of woman is well fitted for the medical profession; but, even supposing women made as good doctors as men, they would still be consulted by the weaker sex unless the relations between the two were entirely altered, and women ceased to look upon men as superior to themselves in mental capacity. That freedom of investigation and of explanation which has led to the accurate knowledge of the diseases of the lungs and of the heart, fails when the functions of the generative organs of women become deranged.

Female modesty, which is the best attribute of woman and the sure safeguard of society, raises such a barrier between the patient and the practitioner that she long conceals her sufferings; and when modesty bends to self-preservation and a sense of duty, she naturally prefers the elder practitioner, and thus deprives the younger of the average opportunities of studying her disease.

To be successful as a lady's doctor, a young medical man

* "London Medical Review."

should make women the study of his life, so as to understand their mental peculiarities and their motives of action. With equality of medical skill the senior practitioner will be much more successful in his treatment of women than the junior, because he has discovered how to bespeak their confidence, to stimulate their hope, and to keep up their perseverance until the recovery of health. The young practitioner should, therefore, read all books that treat of women, whether to praise or satirize them, and take up the study of individual characters as he would interesting cases; and unless he really loves his fellow creatures, he will be unable to bear with their caprices, despondencies, and mental infirmities, during the course of chronic disease. He will, of course, read all the medical books relating to women, particularly those written since 1816, when uterine affections were first studied according to the methods adopted for the investigation of other diseases, and I suppose I may be allowed to agree with a reviewer, who lately stated that the first two hundred pages of my last work,* is the best introduction to the study of diseases of women, because I have shown how they naturally spring out of menstruation as out of their physiological root, demonstrating that the study of menstruation, physiological and morbid, is the only key to unravel the complications of diseases of women. In the present work, my principal object is to discuss the many ways of treating the various forms of uterine inflammation.

It was doubtless an error to deduce all pathology from inflammation, but, in practice, inflammation is the main pathological condition ever present to the medical mind, as a reality to contend with, or an eventuality to guard against. In treating a case, we instinctively ask ourselves, Is the disease inflammatory; and, if so, is inflammation the sole disease or only one of its elements? If inflammation, of what

* "On Uterine and Ovarian Inflammation, and on Diseases of Menstruation." Third Edition. J. Churchill.

kind and type, and at what stage of its progress? This applies to diseases of the womb, and the question of their being inflammatory or nervous is the first to be asked; for with some exceptions, if not inflammatory we are to a certain extent reassured respecting their prognosis; whereas we know that, although uterine inflammation rarely leads to a fatal termination, chronic uterine inflammation is often an ever lapsing morbid condition, out of which arise diseases of menstruation, diseased and ulcerated mucous membrane, hypertrophy, sterility, and displacement of the womb.

It would be singularly incorrect to suppose that most diseases of women originate in inflammation of the neck of the womb, but besides the fact that many do, it must be borne in mind that the neck of the womb is its only accessible portion, and that the application of remedies to the cervix, is often the best way of curing inflammation of the body of the womb and of the ovaries. I disclaim all intention of reproducing all that has been said on the subjects in hand, rather wishing to embody the results of twenty-five years of practice and to give the pith and marrow of uterine therapeutics. I must, however, ask the reader to bear with me if I dilate on contested points, and sometimes treat slightly what he may deem important.

Theory seldom encroaches so far on practice, as to make practitioners rely entirely on one kind of medicine for the cure of a disease, but when it is a question of taking an account of our therapeutical stores, and of explaining to others their relative value under specific circumstances, it is advantageous to discuss each mode of treatment as if it were that on which we have to place our chief reliance. How far this plan is original I do not know, but I hope it will be found useful by those who wish to understand uterine affections; and I cannot help considering the repetitions to which it has given rise as advantageous, because it has enabled me to study the complaints under different aspects, as they are constantly occur-

ring in practice. Books, however valuable, are much less so than actual teaching, and as the means of studying diseases of women are still so scanty in this country, no one, who intends following this branch of practice, should think of settling down without having spent at least one year in the Paris Hospitals, which afford such large opportunities for studying diseases of women—opportunities so generously placed at the disposition of all. Better still, if the young practitioner can obtain permission to be dresser to some of the eminent physicians who particularly study uterine pathology, like Huguier or Bernutz, or under those who do duty at the "Hôpital de L'Ourcine."

On settling down to practice, he will find how different it is to watch disease in an hospital and to assume the responsibility of a case: he will feel the difference between medical science and medical art; that it is rather difficult at first to apply science to the good of his fellow-creatures, and woman will be a puzzle to him. He will see how difficult it is to obtain a full knowledge of the circumstances of a case, for instead of making it clear to him, the patient will often ingeniously evade his questions; or in her state of emotion, without meaning to deceive, she may say what is not true, so that he will be frequently led wrong, and his difficulty increases in proportion to the degree of refinement of his patient: indeed, information having important bearings on the case often comes out only after many interviews. He will find that some are "*malades tant mieux,*" taking an unreasonably sanguine view of their complaints, while others consider every symptom so despondingly, that they fully deserve to be termed "*malades tant pis.*" He will find that, until forced to remain in bed, many very young women will never own they are ill, partly from bashfulness, partly from a fear of being troubled and made to adopt precautions, while those who have passed forty, are often prone to exaggerate their occasional indispositions, being led to do so from overrating the

dangers that accompany the change of life. Different patients give us quite an opposite character, because they make us, to a certain extent, different from our usual selves. The cold suspicious manner of some paralyses one, so that it requires a strong mental effort to plan their mode of treatment; while the open, generous, confiding manner of others magnifies to a tenfold degree our power of curing them. So much for the patient: now for the doctor and his chances of success. He need not be handsome, but must not be ugly, and a forlorn dismal countenance is more suitable to an undertaker. He may have many good qualities, but unless he combine firmness with gentleness he will not get on. If rough, he will frighten his patient; if weak-minded, she will despise him. He must be married, or what right has he to know anything about women! He can allow himself no eccentricities in dress or manner; for in the estimation of women no amount of genius will excuse the eccentricities of an Abernethy. His behaviour to his patients should be quiet and expressive of kind sympathy, which will not be the less acceptable from being tinged with seriousness. Melancholy looks make a patient feel worse; a cheerful face is a good tonic; but one must laugh little *with* patients and not at all *at* them, and however ridiculous their fancies may be, they must be reasoned, not laughed, out of them. He should not only be quiet in manner but also in voice, which should never be loud and boisterous. He should be cool and collected, even when he has only ten minutes to give a patient: it is an additional reason to be quiet and collected, for a hurried speech and manner would flurry her, make her forget what she most wished to ask, and render her dissatisfied with the visit. Extreme neatness and cleanliness in all minor operations, and in the dressing of local complaints, can only be attained by practice. It is of the utmost importance, however, to strive to attain this neatness,—for patients, however rich they may be, will not pardon large stains being made on their towels or

personal linen, and are apt to consider them a proof of want of knowledge as well as of dexterity and practice. Few know the importance of a first visit,—how women suffering from uterine complaints have thought it over, what consultations have been held about it with friends and relations, and how many months or years it has taken to bring about this first interview, so important to both parties, as it will decide whether the patient can have confidence in the doctor. How is confidence to be inspired? An eminent consulting surgeon, now making a large fortune, assures me that a solemn oracular manner, and monosyllabic answers, makes most impression on his patients. Much as I value his friendship, I differ from his opinion; I believe that a minute and logical investigation of the facts of the case is the safest plan, and that the best way of convincing a patient that one is master of the case is to take the trouble of explaining it to herself, so that she may leave the consulting-room convinced that her complaint has been better understood than heretofore, and by one who is anxious to cure her: which places her in the best frame of mind to derive the greatest amount of benefit from his treatment. Another method of inspiring confidence is to be hopeful. It is the greatest consolation attached to an arduous, ill-requited profession, that we can conscientiously pass our lives in raising the hopes of sickening despondency. It makes amends for the fatigues, the perils, the ingratitudes that must be encountered, to be able so often, by a word, to dispel fear and restore a family to happiness. With rare exceptions, of which cancer is a prominent example, those who treat diseases of women may deal largely in hope, and I feel my duty is not well done towards a patient if she leaves me without the belief that her cure is certain, though it may be delayed. One great advantage of experience is, that it teaches us hope. In those early days of practice when it made me blush to receive a guinea, if I met with cases where the best treatment produced little or no good, I lost courage, and I infected the

patient with my own despondency; but now that I have repeatedly seen such patients recover, if one can keep up their courage, and make them persevere with more or less active treatment, during one, two, or even three years, I feel justified in instilling hope as the best way of working real cures. The hope that is held out will of course be proportionate to the nature of the disease and its duration, or the practitioner's reputation will be seriously damaged. If a case has lasted for many years under very unfavourable circumstances, perhaps long undetected, and then inadequately treated, it would be the height of presumption to promise a speedy cure, for long treatment may be required before making a decided impression on the case. When a farm has gone out of cultivation the farmer has to begin by weeding and picking out stones, and he knows a long time may elapse before he can get a return for his labour, however certain he may feel that he will ultimately do so. In like manner, with cases of long standing, we should tell the patient or her friends that however sure we may feel of ultimate success, it may be long delayed; and that, while convinced of the efficacy of surgical treatment to cure local affections, we cannot be answerable for the impediments thrown in the way by the patient's bad constitution, the result of inherited predisposition, or of adverse vital influences. In the treatment of chronic affections of the body of the womb I do not know a more difficult task than to buoy up the hopes of patients reduced to despondency by repeated relapses. It cannot be done without great faith in the powers of nature and in one's own skill, added to the patient's belief that her medical adviser is not only a skilful surgeon but a true friend. The art of interrogating female patients, so as to derive the greatest amount of information without in any way hurting their feelings or losing their confidence, is no easy matter.

In the first place, as a General always puts the sun in the face of an enemy, so should the practitioner always let the

light fall upon the face of his patient, where, as on a map, is often traced the outline and the character of disease—one look often better enabling him to unravel its manifold complications, than many a prolonged inquiry. The patient should be allowed to begin the account of her illness in her own way, or, if too much unnerved to do so, then the practitioner should take the lead, and ask what she has been suffering from; having succeeded in giving her confidence, he should listen with eyes bent down, or seemingly bent down by reflection, to all she may say, urging her on at intervals until the close of her story, for it is well worth the trouble of listening if even only one grain of corn can be extracted from much chaff. With respect to looking down, I do not suppose for an instant that any gentleman will rudely stare his patient out of countenance, but I mean that, at first, he should look at her as little as possible, for she must be already sufficiently uncomfortable at being obliged to apply to a stranger for advice, and would be still more so if under the full glance of one whom she supposes to be gifted with the knowledge of her organization. Besides, this veiling of the eye will sometimes assist the adviser to conceal his impatience at some long, rambling, unconnected tale, which is not unfrequently inflicted upon him,—an impatience which, if once detected by the patient, would take away from the efficacy of his prescriptions, and would destroy the faith which might have led to health.

Having listened to the patient, the practitioner will then have his turn; and, before beginning, he may warn the lady that, as he has not interrupted her, neither should she interrupt him. According to some method of his own, he should then take a general survey of the principal functions, the nervous system, sleep, the heart, the organs of circulation, the appetite, the digestion, leading to the inquiry of whether the bowels are regular, and as a sequence, "Is everything else regular?" If the reply be "Yes," then should be inquired, "If regular

every month?" "If to the usual amount?" "If there be much pain?" By this mode of inquiry we can generally obtain the necessary information, even from the young and the unmarried; for as they are not ashamed of having lungs or a heart, they feel at home with the doctor by the time he inquires as to the state of the bowels and their regularity, which naturally leads to those questions respecting the menstrual function; whereas, if these last had been abruptly put in a preceding part of the interrogation, the patient would probably have been flurried, and the doctor annoyed at her unsatisfactory answers. If, instead of depriving themselves, by the laxity of their interrogations, of those indications which would help them to unravel the entangled skein of morbid action, medical men were more particular in their inquiries respecting the menstrual function, they would oftener establish their fame by the recovery of the patient's health. In answer to the usual question, "Is everything else regular?" how often have I received an affirmative answer from a girl or her mother, when, on further inquiry, I found that the menstrual flow was either painful, profuse, or scanty. Sometimes, indeed, a patient has assured me that, it "was quite regular," "so regular, that it returned every fortnight or ten days;" while another, on the contrary, will affirm that "it was never regular, because it returned every three weeks."

Should the symptoms indicate some inflammatory condition of the womb, injections and other appropriate treatment can be ordered, without an accurate examination, as these remedies may suffice to cure the complaint; but should an examination become necessary, the reasons should be stated simply but firmly. The impossibility of working in the dark will appeal to the sense of the patient, and the assertion of inability to adopt further treatment without more precise information, will impart the clear conviction of its being a duty to submit to accurate internal examination; and the higher the rank,

and the more virtuous the patient, the less trouble will be found in making her understand the urgency of submitting to so disagreeable a necessity. But, while laying a painful duty before his patient, the medical attendant, to whom so much is confided, should at least show by his manner that he feels for her position. If not, the patient, though she may respect his talent, will deem him incapable or unworthy of comprehending the moral sufferings attendant on what was conceded to stern duty,—sufferings which he was unwilling or unable to relieve by considerate sympathy.

It is often said, and sometimes written, that, for our own protection, we should never examine a patient without the presence of a third party. I have taken a different estimate of woman's sense of honour, and have never had to repent of trusting her during a long course of practice. The amount of confidence shown to the profession by women in this respect varies extremely, but I may safely say that it is greatest in proportion to their rank and mental culture; for while the lower orders have not this delicate perception of implicitly trusting us, the higher feel, in general, that it is quite bad enough to submit to such an extremity without having the additional annoyance of having it witnessed, even by a mother. The best plan, therefore, is to let patients do just as they like, without objecting to or requiring the presence of a third party. We must of course be prepared to answer any questions, but it would be the height of indiscretion to put leading questions to patients on indelicate subjects, such as connexion for instance; for this is almost impossible in acute cases, and does no harm in chronic.

An experienced practitioner may quickly seize the salient indications of a case so as to meet its actual requirements: but a full hour is required to unravel the intricacies of one that has lasted for ten years, and even then it is best to give a guarded prognosis until he has ascertained how the patient responds to therapeutical agents, local and general; for he

cannot possibly know a constitution until it has been tried by the touchstone of remedies. Notwithstanding the length to which I have written on medicines, I give few, and avoid, as much as possible, obscuring their effects by prescribing many at the same time. Ten or twelve active ingredients in one mixture neutralize each other, and if the total affects the system it is by the nausea it gives rise to. It is also often judicious to consult patients upon the non-essentials of treatment, so as not to render medicine unnecessarily disagreeable by the addition of syrups, which to some are worse than the physic. It is not difficult to prescribe the average dose of any medicine, and the real practitioner is not afraid of giving large doses; but when he meets with exceptional constitutions, and nervous subjects who can bear neither large nor average doses, he tries them with very small quantities often repeated. Thus a patient of mine is driven wild by insomnia and headache from taking $\frac{1}{6}$ of a grain of morphia, but gets a moderate amount of sleep from taking $\frac{1}{40}$ of a grain several times in the course of the day. It is well to order only a small quantity, not more than two or three ounces, to those who can bear very little medicine, as they naturally feel annoyed at having to pay for a load of physic they cannot take.

To conclude: We must trust in nature, and believe that an Almighty power is operating in the human frame, ever working to restore health by successive changes and renewals, having definite laws and successful issues, often erroneously ascribed to our remedies. Let our motto be that of the father of French surgery:—

"JE LA PANSAY, DIEU LA GUARIT."

CHAPTER I.

UTERINE DIÆTETICS.

THE best plans of treatment will prove ineffectual for curing the various forms of uterine inflammation if the patient's mode of life be not regulated accordingly; for a judiciously arranged regimen and habits of life will suffice to cure the milder forms of uterine disease. This regimen comprehends many observances and restrictions, and it is not surprising that patients neglect them, more or less, so soon as the pain abates: indeed, on the disappearance of pain, the most sensible woman becomes thoroughly convinced that an internal complaint is cured. If told that there still remains considerable enlargement and displacement of the womb, and that the slumbering disease will soon wake up if precautions are neglected, they remain incredulous, neglect advice, and meet with relapses.

Although the remedies used in the treatment of uterine disease are numerous, their modes of application are few, and it is highly necessary to explain their nature and value. I shall briefly treat of, 1st, Rest and Exercise; 2nd, Diet; 3rd, External Appliances; 4th, Injections; 5th, Baths.

1st. *Rest and Exercise.*—In acute affections of the womb, particularly if the peritoneum is at all compromised, patients instinctively lie down, and only leave the bed for the sofa. Formerly, those suffering from even a moderate amount of inflammation of the neck of the womb were kept in bed for months,—a very objectionable plan: for want of air and exercise

impoverishes the blood, increases dyspepsia and constipation, and may thus have frequently done more harm than good to the uterine disorder. It is sufficient in such cases, and judicious, whenever the womb is diseased in any way, to advise resting on the sofa for two or three hours after lunch or the early dinner. The utility of the recumbent posture should be explained to the patient by exhibiting the diminished size of the veins of the hand when held up, compared to their more enlarged size on holding them down. Patients prefer resting on the sofa after a late dinner, but I insist on this being done in the middle of the day, for it makes a break in its fatigues, relieves, for a time, the fulness of pelvic congestion, and thereby diminishes the backache and other symptoms. Those who suffer much from uterine disease, instinctively assume the American attitude of repose, in which the lower limbs are placed higher than the pelvis; and a patient of mine, who has suffered much from complicated pelvic inflammations, has her bed made after this fashion. Another lady, with a large retroverted womb, was advised to remain always in bed, the knees being supported by an inclined plane; but this so increased the back pains that the plan was soon abandoned, and the patient allowed to repose as she liked. To enliven a tedious disquisition, it may be mentioned that continued lying on the belly has been recommended by high authorities as the best means of curing retroversion of the womb, while anteversion was pronounced curable by pertinaciously lying on the back. One of the first questions that a patient asks is, "Am I to walk?" Many have tried to walk off the back pains, many instinctively shrink from doing what increases pain, but are so pestered by relatives that they are obliged to give in. The decision of the question may be generally left to the patient's sensations; if walking so increases her pain that its excess does not abate soon after rest, it is a sign that she has walked too much. Moving about in a level suite of rooms is the first step on recovery;

the others must be taken gradually; and going up hill or up stairs will long continue to be a painful exertion. Much may be done by passive exercise in chronic inflammatory affections. The systematic rubbing and shampooing of the limbs, back, and abdomen is the best substitute for exercise. In summer the patient can be carried into the garden, and be left for hours in the warm sunshine. In colder weather, a lounge in a Bath-chair, boat, or carriage, can be managed. The carriage least liable to increase the pelvic pains, is the Hansom cab. Many patients suffer less from walking than from the easiest hung carriage, but horse exercise is objectionable in all forms and stages of uterine inflammation, though—for what rule knows no exception?—a patientin whom inflammation of the womb was complicated by uterine neuralgia, could bear horse exercise, while riding in a carriage habitually increased all her severe pains.

Railway Travelling.—Many who suffer even moderately from uterine inflammatory affections, feel an aggravation of pain from any sudden movement—from a jar, or a false step going up or down stairs,—so it is not surprising that railway travelling should often very much increase the patient's sufferings. I have known a long railway journey bring on premature labour, miscarriage, flooding in cases of cancer or fibrous tumour, and to greatly aggravate internal metritis. I have just had an opportunity of studying attentively the action of railway progression during a long journey on a dark December night, the railway being narrow guage, going at average speed. In badly hung carriages we went on pounding unevenly laid rails by that succession of up, down, and lateral concussions, which render railway travelling so much more trying than a carriage drive: the flattened, laminated state of the rails showing how they had been hammered by the carriages. When it is necessary to travel by rail, those who suffer from the more severe forms of uterine inflammation should avoid doing so during the menstrual

flow or its proximity, and even during the time when it ought to come, whatever may be the reason of its non-appearance. If the line be easy, and on the broad guage, the patient cannot do better than lie down as on a sofa; if the line be bad it is better to sit up, on an air cushion, for every part of the carriage that is leaned against for support replies by a more or less severe jar and concussion.

2. *Diet.*—When uterine inflammation and ulceration have not a traumatic origin, they often seem to depend on some hidden unhealthiness of the blood plasma, and purulent secretion may be considered as a process set on foot to purify the blood. Without neglecting the treatment of the local diseases, the physician must not overlook the state of the blood in which they may take rise, and in the absence of more precise indication, he must fall back on the recognised canons of hygiene. This is so true, that atonic ulcers of the legs often reflect the regimen of the patient. These ulcers will not heal if the supply of food is insufficient or indigestible; the same holds good with uterine ulcers. In other words, blood distemperatures keep alive inflammation, and if, as Dr. Addison has said, keeping peas in a sore protracts granulation and discharge, so does a perseverance in unwholesome articles of food. It must be also remembered that overfeeding interferes with the good progress of inflammatory exudation, and the surgeon finds that a quick, full pulse checks that adhesion of external wounds which is promoted by quiet circulation. The same holds good in uterine pathology. The food should be wholesome, sufficiently abundant, but meat is seldom required more than once a day. Patients are often condemned to take an amount of animal food which they know will disagree with them, because the public, in its ignorance of physiology, believes that a beefsteak diet which strengthens one woman will strengthen another; the profession, however, can understand that many nervous women are made more so by animal food; they know that the blood is

the stimulus of the nervous system, and that it can be fretted by blood made too rich in corpuscles, or overcarbonized. The majority of nervous women will derive greater strength from a spare diet and a small amount of animal food, than from generous living, because spare diet will give the blood the crasis that harmonizes best with an excitable nervous system. To such patients I advise poultry, game, or fish, with strong beef-tea or savoury jelly sauce.

Stimulants.—With regard to stimulants; few patients consult me who have not been drenched, at some time or other, with wine, ale, or porter, often in direct opposition to their safer instincts. I have seen young ladies rendered hysterical by undetected uterine inflammation, who were kept half drunk, for weeks, on stout and wine. However indispensable in certain cases of fever, large quantities of alcohol are highly objectionable in purely inflammatory affections. The worst of this system is, that it panders to the strong propensities of our race; for it must not be forgotten that we are akin to those nations whose early view of paradise was to drink perennial mead out of their enemies' skulls, and that our grandfathers generally brought festivities to a conclusion *under* the table. Even now, with all our boasted sobriety, we are the only civilized nation who, after taking as much wine as is good for us in company with the ladies, systematically sit down to drink, for the sake of drinking, so soon as the ladies have retired. There is nothing new in the alcohol mode of practice, for Pecquet, whose discovery soon followed Harvey's, gave his patients little else than brandy, and, consistently, killed himself by drink, and it would be indeed a pity if Brown were to revive amongst us under the cloak of transcendental physiology. In general, stimulants are to be simply considered as articles of diet, to be taken or avoided according as they have been found to agree or disagree, and to be left off altogether if they impair digestion or affect the head. Patients attach great importance

to the particular wine they are to take, and my advice is to take the wine they have found to agree best with them, believing that the kind of wine is of little importance when only one or two glasses are taken in the course of the day. This is so true, that doctors generally advise the wine that agrees best with themselves. Dr. Bennet orders claret, I recommend sherry. It is quite different with a man suffering from disease of the stomach or kidneys, for if he require a daily pint of wine it may be of great importance whether it be claret or port. In general, the state of the blood and of the digestion may be correctly inferred from an analysis of the urine: but this is not always the case in those suffering from uterine inflammation, for not unfrequently uterine inflammation so irritates the bladder as largely to increase its mucus secretion, leading to the formation of lithates and phosphates, the removal of which is to be sought more by curing the main disease than by the too prolonged exhibition of alkalies, as I shall mention when treating of the complications of uterine inflammation.

3. *External Applications*—If, as Dr. Carpenter maintains, the interchange of gases contained in the air and the blood on the cutaneous surface has a share in the production of the body's warmth, we can well understand one part of the mechanism of topical applications. It is even stated that peritonitis has been subdued by extensively coating the abdomen with an impenetrable varnish made with collodion 1 ounce, castor oil 4 scruples, and Venetian turpentine 30 grains. For this reason, the constant application of oil-silk may be sufficient to diminish or remove severe pain. When these tissues are applied over epithems, they retain their warmth and moisture which would otherwise soon pass away, as well as the action of the volatile agents that may be used. Thus, if the action of a chloroform liniment be not confined to the skin by some impervious tissue, it will be dissipated in the air. Oil-silk is very useful, but it adheres so firmly to the

skin that many patients object to envelope the abdomen in it. I therefore, for this purpose, recommend oiled calico, which is cheaper and more manageable. When a smaller surface requires covering, oil-silk or a thin tissue made of india-rubber and gutta percha are the best. Spongio-piline is also good; a square may be worn, like an apron, next the skin, a small quantity of laudanum or some other tincture being previously sprinkled over it. Of the two kinds, I prefer the thinnest, and even that is complained of as being too heavy during the acute stages of pelvic inflammatory affections: impermeable wash-leather and flannel are preferable.

Poultices.—In acute inflammation of the womb, and its peritoneum, there is nothing better than a large, thin, hot, and well-made linseed-meal poultice, freely sprinkled with laudanum, placed next the skin without any intermediate muslin, and renewed every two hours until the abatement of inflammatory symptoms. A good poultice and a clean-looking one can be made with rice, whole or ground. When inflammation is very acute, I order half an ounce of an ointment containing two drachms of extract of belladonna to an ounce of mercurial ointment, to be smeared over the abdomen, which is to be covered by a hot linseed-meal poultice; ointment and poultice to be renewed every two hours, while calomel and opium are given internally. This practice is assailed by the new school of therapeutics; but having *seen* the effusions of iritis, inflammatory as well as syphilitic, melt under the influence of mercury, I still believe that the same agent can remove the inflammatory effusions of other organs. Flannels wrung out of hot water, sprinkled with laudanum, and covered with oil-silk or spongio-piline, will better suit other patients. Some will derive more benefit from dry heat applied through well-heated bags of salt or bran. As inflammation abates, these remedies may be reserved for the night, or camphorated oil may be rubbed in twice a day, the smeared surface being covered with a large

square of wadding, the soft side of which should be applied next the skin.

Stimulant and sedative liniments can be sometimes made more efficacious by previously heating the skin with a flat iron, which enables it to absorb more of the medicated ingredients, and the nervous expansions are thus more powerfully acted upon. Mustard applications are often useful as household counterstimulants, the usual mustard plaster of equal quantities of wheat flour and mustard made into a thick paste with boiling water, and spread on brown paper, or a linseed-meal poultice sprinkled with mustard flour or with coarsely powdered camphor.

Plasters owe their utility to the warmth they impart as well as to their ingredients. They often quell pain, but they had better be replaced by other external applications if the patient has to take baths. In the chronic stage of inflammatory affections it is often good to well foment the abdomen with hot water, and then to apply the cold water compress to it, covering it with oil-silk. This may be kept on all day, or renewed two or three times a day, whenever it becomes warm and makes the patient feel uncomfortable. In acute ovaritis, when pain is intolerable and the patient too much reduced to bear leeches, I have sometimes advised the application of a bag of ice to the painful spot, and have had it kept on for many hours with marked though temporary benefit.

4. *Vaginal Injections.*—Vaginal injections are of vital importance, for by their judicious administration is one enabled more speedily to cure inflammatory diseases of the womb, and the patient can generally prevent inflammation by continuing their use. Very few of those who come to consult me have used injections in a rational way, and it is certainly strange that medical men, when advising injections, should ever recommend their patients to use a small glass or pewter syringe, with which scarcely two to four ounces of fluid can be injected. Should such an instrument be only once emptied,

its contents will not be sufficient to remove the uterine secretions from the vagina, if they be glutinous. There is no better instrument than Coxeter's vulcanized india-rubber syphon syringe, by which one or two pints of water may be injected and re-injected for any given time. The best instrument will be useless, unless the surgeon takes the trouble to well explain its object and its mode of use. It should be explained that injections are mere lotions applied to internal organs; that the tube should be introduced as far as possible without giving pain, in order that the lower part of the womb and the whole vaginal surface may be acted on; that the reclining posture on a hard sofa, with the edge of the basin under the seat, is the best way of using them; and that the liquid should be pumped up for at least five minutes. The temperature of the fluid should be warm or tepid in the acute stage of inflammation, afterwards as cold as the patient can well bear it. I should not dwell on these minutiæ if I did not believe that few patients derive their full benefit from the use of injections, and several have owned to me that they did not take proper pains with them until after two or three relapses of uterine inflammation. A good way of ascertaining whether injections are well made is, to tell the patient to inject a strong solution of alum just before coming to consult you. The surgeon will then be able to ascertain how far the injection has penetrated. When injections are advised to prevent relapses of uterine inflammation, or to prevent its coming on in Europeans who reside in a tropical climate, cold water alone is the best fluid to use. Injections may be ranged according to their strength, beginning with those that are emollient: water, milk-and-water, linseed-tea, solutions of borax, chlorate of potash, acetate of lead, alum, alum and zinc, or zinc alone, decoctions of oak-bark, a solution of tannin, &c. One drachm of the saline compound should be dissolved in a pint of water, and only ten to twenty grains of sulphate of zinc when it is prescribed alone. Emollient injections are

often usefully made three times a day; cooling injections are not required more than twice a day; alum injections not more than once if used as antiphlogistics, but, if as astringents, they may be required two or three times a day. When pain is complained of, it is well to add to each injection one drachm of laudanum, or an equivalent dose of other sedatives. Under ordinary circumstances, injections should be discontinued during the menstrual period; but when it is difficult to heal ulceration of the neck of the womb, and in obstinate cases of vaginitis, it is advisable to continue the use of medicated injections during menstruation, and no danger can attend them, provided they are used warm. When internal metritis causes the menstrual flow to be protracted, I do not hesitate to stop it, after it has lasted for the time habitual to the patient when in health, by alum and zinc injections, used first tepid, and then cold, two or three times a day. I have repeatedly known alum injections so long continued as a preventive of uterine inflammation, as to produce an irritable sub-acute inflammatory condition of the os uteri; and when astringent injections are long required, to enable a relaxed vagina to support the womb, I then advise injections of alum and zinc, and of acetate of lead, to be used on alternate days.

I find, as a rule, that women will not let injections be given to them, either by a nurse or a relation, so that in severe, or in chronic cases, injections are more or less neglected, because the patients are too weak to use them, and prefer suffering, to exposure before a third party. Others leave them off because they have not prevented relapses, but they can seldom be dispensed with: and to obviate the objections to their use on the score of personal exposure, the patient may avoid it by placing herself at the edge of the bed with a cloth and bed-pan under her, while the nurse, holding the basin containing two pints of the fluid to be injected, can pass the tube under the bedclothes, and after the patient has placed the tube in the vagina the nurse can pump in the usual way.

Irrigations.—When a large quantity of water is used, injections are called irrigations; they are useful adjuncts of surgical treatment, but their utility seems to have been exaggerated, insomuch that I have seen ulceration persist after gallons of water had been thus used twice a day for months. I sometimes advise copious injections of cold water to be made while the patient is in a warm bath. This can be done by placing across the bath a plank, and on it a pail of cold water, into which one end of an india-rubber tube is plunged, while the other is introduced into the vagina, without using a small speculum as some have recommended.

Rectal Injections.—These may be applied to a variety of purposes.

Enemata.—When used to relieve the bowels, cold water is usually sufficient, and there are several good instruments by which it can be injected. By a change of tubes, the syphon syringe may be used both for the vagina and the rectum. The tube to be introduced into the bowels should have a rounded extremity, be greased with cold cream, and gently inserted about two inches in depth; the water should be quickly injected, and retained long enough to bring away fæces, but not long enough to be absorbed. Patients have often done themselves harm by injecting too large a quantity of fluid; two or three pints for instance. This sometimes displaces and irritates the womb, gives pain by over-distending the intestines, or by stretching the peritoneum, if there has been pelvi-peritonitis. Half a pint of water is generally sufficient, and sweet oil, brown sugar, or salt may be added, should water be insufficient. I do not say soap and water, for I have seen it do great mischief, particularly when given in large quantities. The utility of small cold water injections, as antiphlogistics, will be spoken of hereafter, and the injection of iced water is a strong anti-spasmodic in hysterical fits. When sedative injections are advised it is better to put the solution into a two-ounce india-rubber bottle, and fill it with

warm milk, screw on the pipe, introduce it with care, and then freely squeeze the bottle and withdraw the tube.

Suppositories.—These may be given by the vagina or the rectum. When given by the rectum no instrument is required, they must be introduced by the finger; and it will be easier to do so, if, in the meantime, the patient strains. They should be well introduced into the bowel, because its sensitiveness is obtuse, whereas the suppository might irritate if left in the folds of the anus. I order them to be made like pills, for, if they be pointed at one end, and become hard, they may irritate by their hardened point, and it will be seen how I value this mode of giving sedatives. Vaginal suppositories are also useful, but the filthiness of the discharge which they usually cause renders them obnoxious to the patient. Cacao butter, at least that prepared in France, and which contains more stearine and less oleine than that prepared here, is a useful ingredient of suppositories, because it melts sooner than wax, but retains its consistency in an average temperature and does not get rancid. It has been long sold in France, made into large suppositories of conical shape, to be introduced into the rectum to procure evacuations; morphia and other medicated substances have been incorporated with cacao butter by French chemists, and Dr. Tanner has judiciously stated, that it is far superior to wax and tallow for the confection of vaginal suppositories. To avoid the filthy discharge occasioned by the usual vaginal suppositories, I use the proximate principles of plants instead of their extracts.

5. *Baths.*—When moving very much increases the patient's pain, as when acute pelvic peritonitis complicates inflammation of the womb, warm baths do more harm than good; but great good is to be derived from their use after the subsidence of the more acute symptoms of inflammation. In acute internal metritis, I have often more quieted distressing pain by making the patient stop in a hip bath at 96° or 98°, for three-

quarters of an hour or an hour every night before bedtime, than by opiates—camphorated oil, or some other liniment being well rubbed into the back and abdomen on leaving the bath. In chronic cases of internal metritis, and in acute inflammatory affections of the neck of the womb, the same plan is useful. The occasional use of the whole bath, given at a temperature ranging from 93° to 95° is also invaluable. Upon the score of baths, English society is imbued with the most ridiculous prejudices. Ten minutes or a quarter of an hour is the time that I find patients have been in the habit of stopping in the bath when ordered to use it. Those who are taking meat twice a day, with beer or wine, will gravely ask if it be not very weakening to remain in the bath half an hour once or twice a week. For cleanliness this may be sufficient; but unless the patient stop an hour in the bath, she cannot derive the full benefit from the remedy. Alluding to an hysterical patient, Pomme says, "It is so difficult to conquer prejudice, that I could scarcely persuade her to remain ten hours in the bath every day." What would he have thought of patients who stare when they are told to stop one hour in it, and who ask "if baths are not very weakening?" The strength of popular prejudice reacts on medical practice, and makes the profession forget the advantages of prolonged bathing for nervous affections, for the bath not only removes saline deposits from the skin, and dilutes the blood, but it also acts as a gigantic poultice, applying its warmth to all the peripheric expansions of the nervous system. In some hidden way the warm bath is a positive absorbent of nervous irritability, and a sedative to the nervous system; it is not only a gigantic poultice, but one which is perfectly manageable,—the temperature being increased or lowered, according to the patient's feelings and the practitioner's discrimination.

When I wish to obtain the sedative effects of baths, I direct the patient to take them heated to about 93°, and to remain

in two, three, or four hours, having warm water added at times so as to maintain a grateful temperature. A greater sedative effect will be obtained, by letting the water gradually cool down to 90°, or even lower, and the amount of water absorbed will be proportionate to the low temperature of the bath. This is thoroughly impressed upon my mind from having observed that, in those who suffer most from uterine disease the skin is cold, clammy, or dry, never perspiring: and so it is in the worst cases of mental disturbance at the change of life. This tallies with old experience, for Hippocrates says, "*Melancolici in tantum curantur, in quantum balneantur.*" Galen, Aretæus, Cœlius Aurelianus, and Celsus order hypochondriacs to drink cold water, and use fomentations and tepid baths. Hoffman and Baglivi admit that hypochondriacal affections are best cured by the continued use of tepid baths. Sanctorius has the following axiom:—"*Hypochondriaci, si frequentibus balneis eorum corpora reddantur perspirabilia, et vectu humido utantur, sani fiant.*" Pomme owed his reputation to the sagacious manner in which he used water as a medicinal agent, both internally and externally. He generally made his patients stop in the water three or four hours a day; and ten, or even sixteen, in very severe nervous affections. If the plan were not really beneficial, it would not have been recently revived and adopted, under a modified form, in the lunatic asylums of France.

Hip-baths.—In all chronic inflammatory conditions of the body of the neck of the womb, cold hip baths are very useful, taken immediately on getting out of bed, remaining in the bath only two or three minutes, so as to have the full benefit of the reaction, the occurrence of which will indicate the judiciousness of continuing the practice. In winter the temperature of the water should be raised to 60° Fahr. The French think that the absorption of interstitial deposits in the uterine tissues is promoted by the addition of half a pound of the common household soda to the hip-bath, or of two pounds

of the same to the full bath, and from four to six ounces of alum, or ferruginous alum, may be added, when an astringent action is required. Those who cannot bear cold hip baths or shower baths should sponge alternately with very hot water, and with water at 60°: and it is surprising how much good may be done, in this simple way, if proper precautions are taken. Two large basins, with very hot water in one and with cold in the other, and two large sponges, are all that is wanted; the patient will first freely use the hot sponge, and then the cold one, and so on alternately for a dozen times at least. The cold water may be occasionally made more exciting by the addition of a tablespoonful of common salt. What relates to the hygiene of the menstrual function, and to the organs of reproduction, will be found in the last chapter, as it bears more immediately on the prevention of uterine disease. When I am consulted by those who have suffered severely from this complaint, I conclude by advising them not to go out visiting, and to have no staying company, for if they do so they are obliged to exert themselves more than they ought, and to neglect some of the details of treatment. When disease has lasted for years it is hard work to get well, and those who will not take that trouble, have no right to complain if they do not recover.

CHAPTER II.

ANTIPHLOGISTIC TREATMENT.

No science exemplifies better than medicine, that waywardness of the human mind which leads it to despise its yesterday's idol, and then to gather up its broken fragments and set up its regilt statue on a new pedestal, as a fit object for adoration. Thus, at different periods, bleeding has been extolled as the best remedy in most diseases, and abused as the most pernicious of therapeutical agents; even within our own time, Sir H. Holland, writing in 1840, stated, that "current opinions and prejudices are wholly on the side of bleeding," and "that a physician needs all his firmness to decline the practice." Then the tables turned! Those who in their dogmatic writings advocate the utility of bleeding in certain well-chosen cases, now conform in practice to the general prejudice, and never bleed; and one may, for months, attend the medical practice of a large hospital without seeing a patient bled. Bleeding has gone out of fashion, because the profession, vividly impressed with the recollection of the excesses to which, at different times, it has been carried, has learned to substitute for it calomel and antimony; but is it not probable that, by totally neglecting bleeding in inflammatory affections, calomel, antimony, and other remedies do not exert their influence so speedily as if their exhibition were prefaced by moderate bleeding? Without stopping to discuss the subject, venesection must, undoubtedly, be considered valuable in active hæmorrhage, exerting its influence by its mechanical or hydraulic, as well as by its dynamic

effects. No pathologist denies that hydraulic effects are produced by bleeding, and that, by diminishing the quantity of blood, we slacken the energy with which it flows to some particular organ, or its momentum, and thereby diminish the liability to congestion. No pathologist has disproved the fact that by bleeding the blood is impoverished, and the number of its corpuscles diminished. No pathologist has shown that, by thus giving a smaller quantity of impoverished blood to the nutritive processes everywhere progressing, there is not a corresponding diminution of caloric and of vital energy. Because our forefathers bled too much, it is no reason why bleeding should not be sometimes useful. I find it just as much so now as twenty-five years ago, whenever acute inflammation of the womb is more or less complicated by pelvic peritonitis, and has caused fever and other symptoms in women of average strength. What mischief can be done, in such a case, by taking from the arm eight to ten ounces of blood? I believe, on the contrary, that this favours the action of other remedies, and shortens the duration of disease without protracting convalescence; so I do not feel disposed to give up the remedy which has stood the test of ages, notwithstanding the manner in which it has been abused. It diminishes the pressure on the blood-vessels, and weakens the impulse of the heart. Even those who, like my friend Dr. Bennet of Edinburgh, deprecate the practice of large bleedings to cut short disease, admit that moderate bleeding may be useful in palliating certain symptoms, and remark on the large amount of relief that frequently follows very small bleedings, which I also find to be the case in the treatment of uterine affections.

In plethoric patients bleeding may alleviate severe pelvic pains, and cause the menstrual function to be performed without dysmenorrhœa. The best time for bleeding, in such cases, is during the few days preceding the catamenia. Good results have followed this plan, whether the blood be taken from the

arm or the leg; but the practitioners of olden time asserted that the effects of bleeding are very different if the blood be drawn from the arm or from the saphena vein; such distinctions are now looked upon as hair-drawn, but it must be remembered that, owing to the discontinuance of bleeding, the medical men of the present day cannot bring the question to the test of experience. It was formerly the custom to draw blood from the vena saphena, in cases of suppressed menstruation during the active periods of woman's life, and the precept should be still followed. Romberg relates a case of suppressed menstruation causing distressing hiccough, which continued unabated notwithstanding the application of numerous remedies, until three ounces of blood were taken from the leg, when it suddenly ceased. Lisfranc's plan of taking three or four ounces of blood from the arm before the menstrual periods, in the treatment of chronic disease of the womb, has been altogether abandoned by his countrymen; but I think it often serviceable in the treatment of chronic uterine and ovarian affections, and Dr. G. Bedford has praised the taking away of two ounces of blood from the arm, every fortnight, in diseases of menstruation. It will be evident that the removal of this small quantity of blood cannot excite that nervous reaction determined by large bleedings, in women below the average strength; and this plan will be found less to weaken the patient than the endurance of pain.

If a redundancy of blood, of which nature has no means of disposing at the demise of the ovarian function, is an important element of disease at cessation, it follows that bleeding, so often effected by nature at this period of life, should not be neglected by those who pride themselves on understanding and on imitating her proceedings. Yet, only 5 of the 500 patients I examined on this point had been bled at this epoch, and 10 cupped, while 138 out of the 500 were flooded at the change of life, showing how frequently nature adopts this plan. The effects of the bleeding should be aided

by judicious regimen; for, doubtless, the necessity for bleeding even plethoric women would be considerably diminished if it were not so difficult to persuade them to break through accustomed habits, and if they would consent for a time to diminish their quantity of food, and refrain from what has been shown to be otherwise prejudicial to them. But the indication to bleed soon recurs in some women; it is then better to adopt a plan sanctioned by Tissot and Hufeland—to bleed in progressively smaller quantities, and at progressively longer intervals. Tissot mentions a case in which it was necessary to bleed for three years, after which the patient recovered her health. Hufeland used to bleed three times in the first year after cessation, twice in the second year, and once in the third. I frequently follow the same plan, which is a daguerreotype of a natural process, for in 171 women out of 500 the menstrual flow ceased naturally, that is, by a gradual smaller amount of discharge, occurring irregularly every two, three, four, five, or six months.

Plethora sometimes exists with apparent weakness, which may be relieved by bleeding. In seeking to determine the utility of this measure, it is well to be guided by the state of the pulse at the temples and at the heart, as well as at the radial artery, bearing in mind that, should there be much emaciation, the temporal and radial arteries would be brought nearer to the surface, and give a first impression of vigour when none exists.

At whatever period of life bleeding is resorted to, it must be borne in mind that "the nervous and circulating systems, though so closely connected in every function of life, have yet their separate powers. Even taking the whole of each system, these powers are not always, it would seem, in exact relation to each other; and this is more particularly true where the vascular changes, whether of inflammation or of simple congestion, are limited in extent. One may need, for relief, the change in circulation which bleeding affords, yet

may require, at the same time, that support or stimulus to the nervous power which is essential to the equal distribution of the blood, without which disorders of a new kind will supervene." What Sir H. Holland has applied to diseases of old age is particularly applicable to the treatment of diseases of women.

While the effects of bleeding are admirable in plethoric patients, they would be detrimental to those who are chlorotic and nervous. If women were formerly too frequently bled, it was because headache, heaviness, drowsiness, and giddiness—a group of symptoms which I have called pseudo-narcotism—frequently occur during the derangements of menstruation, pregnancy, lactation, and the change of life; and as they were considered to indicate a determination of blood to the head, bleeding was resorted to. When I first began the study of medicine, I saw the ill effects of such a plan of treatment at puberty and during pregnancy; and Mauriceau gives an insight into the fearful abuse of bleeding in France in about 1700, when he mentions that two women were confined at the full time of well-developed children, although one had been bled 48, and the other 90 times, during the nine months of pregnancy, for what he calls "*oppression de poitrine*," or the nervous sensations of suffocation at the pit of the stomach, which can be removed by sedatives and anti-spasmodics. The same symptoms, with headache and giddiness, are at the present day considered as indications for bleeding by Columbat and Auber; and though, in England, similar mistakes are prevented because nobody bleeds, yet the fashion will change again ere long, and then will occur the danger of mistaking nervous disturbances for plethora. It has been said that bleeding may act as an emmenagogue; it is also occasionally useful as an hemostatic, for when flooding occurs in strong plethoric women, and the pulse is full and hard, bleeding has often checked the blood flow.

Local Bloodletting.—This may be done by leeches and by scarificators of various kinds.

Leeches.—Contemporary scepticism has not yet sought to shake our faith in the value of local bloodletting by leeches, and no therapeutical injunction is supported by a similar amount of concurrent approval. While objecting to bleeding as only indirectly useful in inflammatory affections, Dr. Markham observes, that "there is a marked distinction to be drawn between the effects of bleeding in inflammation, and the local abstraction of blood from the inflamed part. Local abstraction of blood materially influences the inflammation reducing the most characteristic of its phenomena. But local abstraction of blood can only modify, in this way, the inflammation of internal parts, when there is a direct vascular connexion between the part inflamed and the part from which the blood is taken." When the various inflammatory affections of the womb and of its adjacent organs were all lumped under what was called *inflammation of the bowels*, leeches in large numbers were generally applied to the abdominal walls, or to the inner part of the thighs. It may now be done so with advantage when the peritoneum is inflamed, when it is desirable not to apply leeches to the womb, on account of the irritable condition of the vagina or its virgin state. Both on account of the loss of blood, and as a result of reflex action conveyed from the skin to the inflamed part by the vaso-motor nerves, leeches thus applied are certainly very serviceable; but the insular position of the womb evidently renders it less liable to be thus influenced than by leeches applied to the inflamed organ itself. Unanimity is out of the question in medicine, but the greatest amount of testimony favours the value of leeches in inflammatory affections of the womb, notwithstanding Lisfranc's doubts, whether fifteen or twenty applied to the womb did not rather increase than diminish its congestion, and Becquerel's preference of their application to the thighs, or venesection. This statement is in direct opposition to the experience of the many talented observers who practise in France, Germany, America, and in the

British empire. Dr. H. Bennet thoroughly believes in their utility as a means of diminishing the pains of uterine disease, although on comparing the results of his practice amongst the rich, to whom he applied leeches, and the poor, to whom he did not, he came to the conclusion that they have very little effect on the duration of the uterine affection. Ferguson's glass specula are the best for the application of leeches. After introducing it and wiping away the uterine mucus, the leeches should be taken up all together, quickly placed in the tube, and gently pushed down with the finger until they are felt to be in contact with the neck of the womb, then a ball of cotton wool should be rather firmly placed over them. It would tediously and uselessly complicate the operation to use the glass leech tube as well as the speculum, as is sometimes recommended. I have known leeches to pass between the valves of Coxeter's bivalvular speculum, and remain inactive between the metal tube and the vagina until they were withdrawn. This application of leeches is a tedious operation, and it may be safely trusted to a well-schooled nurse when the os uteri can be easily embraced by a full-sized speculum ; but when the vagina is undilated, as in the virgin, and when it is difficult to bring the os uteri within the field of the speculum, the practitioner ought to apply the leeches himself if he means them to be really applied to the neck of the womb, for I have repeatedly found that the leeches which I had ordered to be applied to the womb had been placed in the posterior cul-de-sac of the vagina, where the protuberant leechbites could be felt. By applying leeches to the womb, if the object be to diminish inflammation and congestion, they must be used in a sufficient number to relieve, and not to congest, the womb,—the number being governed, not only by the requirements of the case, but by the size of the speculum to be used ; it is useless to apply a large number of leeches through a small speculum, for when they have not sufficient room they refuse to bite, or those that have not taken inter-

fere with those that have. Indeed, I cannot understand the statement of writers who say they apply ten or twelve leeches to the neck of the womb, unless the leeches be very small and the speculum very large. I have often found the inutility of trying to apply more than four large ones by a moderate-sized speculum, more than six by a large speculum, and more than two by a small one. When a small speculum is used, it is better to have small leeches, as the loss of blood seems to depend less on the size of the leeches than on the number of the leechbites. In estimating the quantity of blood which will be withdrawn by the leeches, it must be borne in mind that if large leeches draw about half an ounce of blood, small ones will not draw half that quantity; so that the surgeon should state in his prescription whether he wants large or small leeches to be applied. Less blood is also to be expected from a cervix, which is hard and pale, than from one which is red and soft; nevertheless, a leech may accidentally fix on a distended vein or a small artery, and thus cause a large loss of fluid even from a small and hardened cervix. Sometimes leeches remain on a long time, fill well, and very little blood afterwards comes away from the bites; at other times the leeches soon fall off without filling, and a large quantity of blood subsequently oozes from the leechbites. In women of full habit, deficiently menstruated, the application of leeches may set up such a determination of blood that the patients will feel as if suffering from a sudden rush of blood, which may amount to flooding, and last for a few hours. Should the blood be in a healthy condition, the large clots that may be passed have occasionally awakened a suspicion of a miscarriage. Even when the bleeding is not considerable, a large clot is frequently passed soon after the leeches have fallen off, and blood will often continue oozing out for the two or three following days, so that the patient may lose by each leechbite from two to three ounces of blood. If it be advisable to promote the bleeding, injections of warm water may be used,

which will also disturb the blood clots obstructing the leechbites. Injections of a cold solution of alum, one or two drachms to the ounce, will often stop the bleeding when it is too abundant; and when it is urgent to shorten the procedure, a large number of leeches may be applied, and the bleeding stopped, when sufficient blood has been taken away, by the application of powdered alum to the leechbites. This operation may be very tedious, the leeches not being willing to bite, through opiate or astringent injections having been used previously to their application; the vaginal secretions should, therefore, be first removed by plain water. If the leeches are inanimate, it is useless attempting to make them bite; if they keep showing their heads between the speculum and the cotton wool with which it is plugged, it is often possible to make them take by forcing them down to the neck of the womb. Some do not bite because the others cover all available space, but are willing enough to do so where they find room.

When all have fallen off except one, it is better to apply a little salt. If he is not visible it is well, gradually, to soak up some of the blood with cotton wool, and then to withdraw very gently the speculum, which may bring the leech into view, and detach him from the vagina on which he may have taken. Sometimes he remains idle, because pressed between the speculum and the vagina. If the missing leech does not come away with, or immediately after the withdrawal of the speculum, the finger must withdraw him. If the finger cannot find him after careful search, one must admit that the leech has entered the cervical canal. I think with Aran that Dr. Bennet has exaggerated the ill effects of leeches taking on the inside of the uterine lips, for I have known this occurrence to be unattended with pain; but from what I have lately observed, I quite agree with Dr. Bennet that it is advisable to plug the os uteri with cotton wool to prevent this occurrence. Having applied six leeches to the neck of the womb of a young married woman, who had not borne children, and who

was suffering from chronic uterine inflammation, five fell off, the sixth was not to be found, and after waiting a long time I left the patient, who suffered cruelly, had an hysterical fit, which subsided after she had passed a leech, enormously distended with blood. This accident has not been observed by Drs. Bernutz and Goupil, but they state that similar cases have been met with by Devarge, Besnier, and Siredey. The leech is sure to find its way out, and the injection of a solution of common salt would kill it and bring it away from the vagina. The friends should be apprised of the probability of the application being attended by severe pain until the expulsion of the leech, but it would be most injudicious to tell the patient anything about it, as the idea of such an occurrence would be sufficient to send many women into hysterics. I have known three leeches cause atrocious pain, although they were placed on the outside of the cervix. Twice in one month Hervey de Chegoin saw leeches applied to the neck of the womb cause severe pain and syncope. So unusual an occurrence made him ask whether leeches are venomous at certain seasons of the year; whereas he merely met with two nervous subjects about the same time. Leeches to the neck of the womb produce nettle-rash in some women, but this soon disappears.

Frequency of Application.—I have met with many cases in which the patients had gone on being leeched by a nurse, every fortnight, for one or two years, and for a long time without medical supervision. Although this plan of treatment is followed by men who are considered authorities, I do not know of one more disastrous, for it is obviously wrong to order strong measures without watching their action. If the patients are young and delicate, the too frequent application of leeches will increase debility and nervous excitement, and may develop any latent constitutional tendency, such as phthisis, for instance. If strong, the frequent application of leeches makes the womb a permanent centre of morbid

attraction for the blood, and actually fosters the condition that it was intended to remove.

Struck by an accidental case, Scanzoni speaks in exaggerated terms of the dangers of the application of leeches to the vagina. Within the last two years I have frequently applied them, as I have stated in the third edition of my work "On Uterine and Ovarian Inflammation," and with the best effects. When the object is to relieve congestion of the pelvic organs, it is immaterial whether the leeches be applied to the vagina or the womb itself, and when the womb and vagina are very sensitive, it will give the patient much less pain to introduce the speculum two, than four or five inches. When the cervix is hard, it may yield very little blood to the leeches, whereas they may get a fair amount from the vagina. Again, in complicated cases, where ovaritis and internal metritis were associated with an inflamed over-sensitive cervix, I have repeatedly seen that three or four leeches caused flooding and severe pain to such an extent that I could not have repeated the application; while by applying the leeches to the vagina, I have been able to act on the disease without detriment to the constitution. This remedy is not more infallible than any other, and I have sometimes found leeches to be useless when relief was to be fairly expected.

When the object is to diminish the congestion of the pelvic vessels, and the use of the speculum is painful, I prefer the old plan of applying the leeches to the mucous and cutaneous surfaces of the labia. In the case of a lady, aged twenty-nine, suffering from acute metritis and ovaritis, which causes severe headache, sexual excitement, dreadful mental exasperation, and absence of the menstrual flow, I have several times applied six leeches to the vulva, notwithstanding the extreme debility of the patient. They bleed moderately, and the result is magical; the pelvic pains diminish, so do those of the head, and the mind and temper become calm, and this benefit lasts for a few weeks. The

leeches sometimes give excruciating pain until they fall off, but I think that this pain may have helped to produce the sudden abatement of the distressing head symptoms.

Range of Utility.—In those inflammatory affections of the neck of the womb constituted by uterine catarrh, with or without ulceration, or a moderate amount of ulceration, I do not apply leeches, agreeing with Dr. Bennet, and deprecating Scanzoni's plan, of applying five or six leeches every six or eight days in most cases of ulceration. In a deep-seated ulceration on a hard or a soft hypertrophic basis, seven or eight leeches repeated several times before or after menstruation, as I find on trial to suit the best, is the plan I adopt. In internal metritis, which I believe to be a much more frequent disease than is supposed, and to form the sole or principal pathological condition in many cases of dysmenorrhœa, in some of which, without being very painful, the menstrual flow is very scanty or very profuse, or alternately so, it is well to leech the womb just before the menstrual flow, or afterwards, supposing a scanty menstrual flow has left the womb congested. The practitioner can alone determine the number of leeches to be applied. It has been lately observed that very copious bleeding from leeches being applied to the womb was the way to cure internal metritis; but I cannot trace the recovery of any of my patients to this mode of treatment, and I think the practice dangerous. When it is a question of once applying four or five leeches to the womb, one should be more guided by the inflammatory nature of the complaint than by the state of the patient's strength. Much as I deprecate the application of leeches every fortnight, and still more the sending of a patient away to the country with this routine prescription, still I sometimes apply a few leeches when the patient is so weak and anæmic as not to have a drop of blood to spare, and with good results. I did so lately to a lady, who had been confined to her bed for more than two years by ulceration of the cæcum,

pelvi-peritonitis, and uterine inflammation. Four leeches applied to the vagina, by diminishing pelvic congestion, relieved headache and mental depression, and promoted sleep, removed sickness, and improved the appetite for several weeks, so that she was soon able to repair the loss of blood with interest. For acute ovaritis and pelvi-peritonitis, I deem it better to apply the leeches to the abdominal walls than to the womb, as advised by Aran and Bernutz; for I have, more than once, seen the application of leeches to the womb convert chronic peritonitis into acute, and Aran has seen scarification of the womb have the same result. Under similar circumstances the leeches might be applied to the vulva, or to the inner part of the thighs, or to the perineum. Scanzoni speaks very favourably of the application of three or four leeches every eight or fifteen days in menorrhagia and flection of the womb. He thinks it corrects the stagnation of venous blood in the veins and the friability of the uterine tissues which it produces, that it diminishes the serous infiltration of the tissues, which resume their tonicity. The same author states that metrorrhagia, which resisted the usual treatment, suddenly ceased on the application of a few leeches to the womb. I think the plan deserving of trial, as the quantity of blood taken away by the leeches is insignificant when compared to that otherwise lost. When fibrous tumours cause menorrhagia, it is likewise worth while trying the effects of an application of leeches to the womb before the menstrual periods.

The vascular system of the ovario-uterine organs is often permanently and actively congested, either from the menstrual molimen having been unsatisfied by its accustomed secretion, or by the retention of the secreted menstrual flow. In such cases, a few leeches before the menstrual period will often set things right. In some cases, amenorrhœa or metrorrhagia depends on congestion of the pelvic vessels; this may be inferred from the varicose condition of the veins of the vagina

and labia—and then leeching the vagina is of great service. Dr. Kennedy mentions, as a cure for the fortnightly menstruation, to forestal its appearance by the application of leeches a day or two before its occurrence; but I prefer giving di-sulphate of quina. Leeching the womb may be useful in uterine neuralgia, as in the following singular case:—

A thin, sallow-looking lady, the wife of a consulting surgeon, suffered from choking, epigastric pains, brow-ague, and uterine neuralgia, which began at the middle of the intermenstrual period, and lasted until the flow appeared, with great pain, and rendered her unable to do anything. The womb seemed perfectly healthy, but, though married several years, she had never been pregnant. She had taken Turkish baths without effect; opiates, advised to be locally applied, were not well carried out; but the application of six leeches to the neck of the womb very much diminished the distressing complaint, which was evidently in intimate relation to menstruation; for when that ceased, during a three months' residence in Germany, there was no uterine neuralgia.

I have seen the vomiting attendant on uterine disease to be very much abated by leeches applied to the womb; and Mr. Smith, of Weymouth, told me that one of his patients was invariably relieved from it, for a time, by this means.

In hæmatocele or hæmatic collections of blood in the pelvis, the re-absorption of the effused blood is greatly promoted by two or three applications of leeches at three or four days' interval, and by another application at the first sign of the ensuing menstrual period. In this case, it is better to apply the leeches to any easily-attainable and bulging portion of the vagina.

I was surprised to find that Dr. Ashwell advocates bleeding the womb by leeches as the best mode of depletion at the change of life; for to apply them at this period, except under peculiar circumstances, is to seek to prolong what nature wants to curtail. To check the determination of blood to the

womb is a culminating indication of treatment at the change of life; and even in cases of uterine inflammation, I seldom apply leeches, for I find that repeated small general bleedings are more effectual in checking the monthly turgescence of the womb which may take place long after cessation.

In the second edition of my work, "On the Change of Life," I have shown how useful leeches are, when applied to the womb, to restore the movement of limbs which had been paraplegic for several months at the period of cessation.

Leeches in Pregnancy.—Formerly bleeding was resorted to in order to remove the ordinary inconveniences of pregnancy, and it is even now recommended by Dr. Ramsbotham to prevent abortion in plethoric women. In like manner, leeches may be very useful in preventing abortion, when it has been repeatedly caused by a severe inflammatory condition of the neck of the womb, with distended varicose veins; indeed, nature occasionally shows the utility of the practice by the rupture of a distended uterine vein, leading to the occurrence of a red discharge. Under such circumstances it is well to apply four or six leeches to the womb, at two or three successive menstrual periods. By so doing, I have repeatedly conducted pregnancy to its full time in women who had previously always miscarried. My friend, Mr. Whitehead, has abundantly illustrated the utility of this plan in his work on "Abortion and Sterility," (pp. 262, 301.)

No one has so strongly advocated this mode of practice as Dr. H. Bennet, who states, in his fourth edition, (p. 368):—"I have repeatedly applied leeches to patients who were one or two months pregnant without being aware of the fact, and that not only without any bad result, but with actual benefit. This has emboldened me to apply them in the early stage of pregnancy in some females in whom repeated abortions had occurred, with a view to diminish congestion and to carry on gestation. I have done this repeatedly with decided success. Generally speaking, when a female who has repeatedly aborted

is found to be suffering from inflammatory disease of the neck of the uterus, the removal of the uterine malady is all that is required to modify the tendency. In the majority of such cases, the subsequent pregnancies are carried to the full term. It is not always so, however: the patient may continue to become pregnant and to abort, either at the same period of the pregnancy, or at irregular periods, notwithstanding the cure of all disease. It is in these cases that I have found the application of a few leeches to the cervix for one, two, or three successive months singularly successful in preventing the abortion. I usually choose the time that menstruation would be due, were the female not pregnant. I would remark that the application of leeches to the cervix, under such circumstances, is merely carrying out in a more rational and efficient manner the practice of the older accoucheurs, who recommend in these cases the monthly abstraction of a small quantity of blood by the application of leeches externally to the ovarian regions. If this plan of treatment proves successful, it is probably because it removes morbid uterine congestion, exaggerated monthly by an irregular menstrual molimen."

It would, of course, be illogical to attribute to the leeches a miscarriage that might follow their application when miscarriage has become habitual, and I have known them to cause miscarriage in a patient, in whom I overlooked pregnancy, on account of the absence of its usual signs and symptoms, and on account of the fact of the tumour being clearly limited to the left pelvic region. Even in this case it is probable that the miscarriage was caused by the patient having danced a great deal on the previous evening, although she had been told to keep quiet. Leeches should not be applied to the pregnant womb without its being plugged with cotton-wool, for their taking inside the cervix would be likely to bring on abortion. A friend of mine applied leeches to a patient in the fourth month of her pregnancy, and who was also suffering severely from extensive inflammation. Only four of the

six leeches were accounted for, and as the other two could not be recovered by the finger or by injections, it is almost certain that they took inside the cervix ; for the pain of their application did not subside until abortion had taken place on the following day. I have, however, heard of a case of obstinate vomiting at the fourth month of pregnancy, which, resisting every remedy, was suddenly cured by ten leeches applied to the cervix, which was of a deep red colour, and very hard.

Counter-indications.—The application of leeches to the womb is counter-indicated by very acute inflammation, and when the vagina is inflamed. Whenever a digital examination is very painful, the pain and fatigue of the operation will generally detract from the advantages to be otherwise expected from the application of leeches. By applying leeches to the inner part of the thighs, and the assiduous use of emollient injections to the vagina, inflammation will soon be sufficiently reduced to permit the application of leeches to the womb or vagina. I have seen chronic peritonitis become acute in consequence of leeches being applied to the cervix. Leeches should not be applied in cancerous or syphilitic affections of the womb, for fear each leechbite should become an ulcer. For a similar reason, they should not be applied to the womb when its inflammation is characterized by the production of pseudo-membranes. A patient, who had previously consulted another practitioner unacquainted with this uncommon variety of disease, applied leeches to the womb. Each leechbite became an ulcer, covered with a diphtheritic membrane, and the complaint was thus greatly increased by the injudicious application of a good remedy.

Scarification.—All that has been said of leeches applies, in limited measure, to scarifications, by which nature is imitated in so far as blood flows from the vessels of the neck of the womb. By the bistoury or the scarificator usually sold we cannot imitate the suction of blood by the leeches, but even

this has been attempted by Mr. Mayer in his "Scarificateur à Syphon." I prefer leeches, and seldom have recourse to scarification, and I warn the profession against the too frequently taking away even a small wine-glassful of blood. I have traced the extreme debility and emaciation of several patients sent to me from the country to their having had the womb scarified two or three times a week for six weeks or two months. This plan may satisfy the patient by the immediate relief it affords to the symptoms of uterine disease, but it only mitigates inflammation while it damages the constitution.

Purgatives, alteratives, revulsives, must now be briefly noticed.

It will be obvious that, in chronic uterine disease, enemata or the gentlest purgatives should be given, for fear of increasing the complicating irritation of the colon and rectum. One or two tablespoonfuls of salad-oil will often be sufficient to move the bowels, or a smaller quantity of castor-oil when it can be taken. I think highly of sulphur, which is considered a solvent and liquefacient by Pereira, Headland, and others. I often give the flower of sulphur, either alone, or to each ounce of it adding a drachm of sesquicarbonate or biborate of soda, and sometimes from twenty to forty grains of ipecacuanha powder. One to two scruples of these powders, taken at night in a little milk, is generally sufficient to act mildly on the bowels, and such combinations are very valuable when a continued action is required. Notwithstanding the contrary prejudice, I have seldom found sulphur give any unpleasant smell to the skin. It is generally classed among purgative remedies because such is its visible action, but it owes its chief value to an action which has long rendered it valuable both in hæmorrhoidal affections, where there is an undue activity of the intestinal capillaries, and in skin diseases marked by a morbid activity of the cutaneous capillaries. Whether sulphur cures, by acting on the nerves or on the blood-vessels, or by modifying the composition of

the blood itself, is difficult to tell, but it does certainly cure the diseases enumerated. Kemp and Hufeland recommend the following powder to be given to those who are advanced in years, and who complain of a tendency to vertigo; guaiacum resin, cream of tartar, of each half a drachm, to be taken at night. This will be found a useful laxative; so will the popular remedy, called the Chelsea Pensioner, of which Dr. Paris has given the following formula: Of guaiacum resin, one drachm; of powdered rhubarb, two drachms; of cream of tartar and of flowers of sulphur, an ounce each; one nutmeg finely powdered, and the whole made into an electuary with one pound of clarified honey; a large spoonful to be taken at night.

The compound rhubarb pill will suit many, or the compound extract of colocynth, and the sulphate of soda and magnesia, by diminishing the amount of fibrine in the blood, is a real antiphlogistic.

Alterative and Fluidifiant Medicines.—Though I believe in the utility of mercury as an antiphlogistic and as a means of acting on the liver, I quite agree with those who protest against its blind use as still adopted by many in this country; I mean, the plan of giving a *mild* course of *mercury* whenever a case is obscure and protracted. Some of my patients have not yet recovered from "the mild course of mercury" to which they were subjected twenty years ago; and Dr. Wright's analyses have proved how greatly the constituents of the blood can be injured by mercury. With regard to inflammatory affections of the womb, I have no doubt that the use of the bichloride of mercury is perfectly safe in Dr. Oldham's experienced hands, but I should be sorry to see the plan popularized, because a cure may often be effected by less dangerous means, and I restrict the exhibition of mercury to the syphilitic affections of the womb. In cases of chronic metritis I give it with much less hope of success, and after having tried antiphlogistic remedies. Those who pursue

this plan of treatment, adopt it, in all cases of uterine inflammation, in conjunction with vaginal injections and other judicious measures; and as many of the patients soon recover, the credit of the cure is given to the small doses of bichloride of mercury, whereas the patients would have recovered just as soon if that remedy had been omitted, provided the rest of the treatment had been followed out. Whenever I have tried the plan in well chosen cases, without advising any other measures, I have not found it useful, and my experience tallies with that of Dr. H. Bennet. Neither am I convinced of the utility of applying mercury to the neck of the womb, but those who try the remedy should use it inclosed in capsules, which are sold by Mr. Twinborrow. I am aware that some practitioners assert that mercury, pushed to salivation, will dispel hard hypertrophy of the neck of the womb, but I have not been more fortunate than Scanzoni in obtaining this result. In such cases I rather depend upon preparations of iodine given internally, such as iodide of potassium, or the syrup of iodide of potassium and iron, and on the saturation of the neck of the womb with tincture of iodine, on alternate days, during the healing of a wound made at the neck of the womb with potassa fusa.

When, however, all remedies have been exhausted, and the patients still continue to suffer from internal metritis, with chronic inflammation of the body of the womb, I think it right to try the effects of mercury pushed to full salivation. I have seen it effect a cure, so has Dr. Bedford Gunning, and Dr. Lever thought well of the plan. I have strongly advocated the use of mercury applied externally in all inflammatory affections of the womb, ovaries, and peritoneum, and have derived increased benefit from mercurial frictions, by mixing narcotic extracts, such as extracts of hyoscyamus, belladonna, and opium, with mercurial ointment, in the proportion of a drachm of one of the extracts to an ounce of the ointment. This is the most effectual mode of allaying the pain, which is

in itself a perpetual cause of irritation; and as camphor is acknowledged to have a cooling effect on the system, I combine it with the mercurial ointment, both on that account and because of its anti-aphrodisiac properties. My own experience is fully confirmed by that of numerous authorities; thus Mme. Boivin says that in several cases of inflammatory adhesions of the broad ligaments, accompanied by dysmenorrhœa, pains, constipation, and tendency to abortion, she relieved the patients by persisting in mercurial frictions over the ovarian regions; and she adds that this treatment not only stopped the pains, but re-established the proper catamenial discharge, cured the ovarian irritation, and imparted to the uterus the power of retaining its fruit until it was in a condition to be brought forth alive. Dr. Granville has also cured the tendency to that species of miscarriage produced by ovarian irritation by combining the internal use of castor-oil with mercurial frictions. Jahn employed an ointment composed of ung. hydrarg. two ounces, potass. iodid. three drachms, in a case which had lasted seven years, and was accompanied by amenorrhœa; there were two swellings: one disappeared, the other was much reduced. Pr. Pistocchi lauds the outward application of ext. conii, two drachms to an ounce of lard, with the addition of a small quantity of mercurial ointment.

I can safely recommend to the profession the use of this compound mercurial ointment; for at the public institutions with which I was long connected, it was my practice to prescribe it whenever a patient complained of deep-seated ovarian pains and pains in the pelvic region, extending to the loins and thighs—depending on deranged menstruation or previous severe labours. In the milder cases the pains subsided after the ointment had been used for a few days; and in many others, when the pains had followed severe labour, had been considerable, and had lasted for two or three years, I have seen them disappear after a continuance in the use of the ointment for six weeks or two months. In some cases, the

use of the ointment was followed by the cure of a leucorrhœal discharge, from which the patient had been also an habitual sufferer.

When the case is one of long duration, relapsing at menstrual periods, and particularly if it be possible to detect uterine or ovarian enlargement, I have faith in iodine preparations, one to five grains of the iodide of potassium being given twice a day in that bitter infusion which agrees best with the patient, and then three or four drachms of the iodide of lead or potassium ointment should be rubbed in, or smeared over the painful part of the abdomen: over this a large piece of oil-silk should be spread, and then the wadding poultice, or the fluffy side of a piece of wadding, sufficiently large to cover the whole abdomen—all this being kept in place by a thin but well-contrived abdominal bandage.

Alkalies.—M. Mialhe has proved that alkalies possess the property of liquifying the serum of the blood, and of thus diminishing its plasticity. Bicarbonate of soda has been given to diminish the tendency to plethora, and in this case practice is justified by theory. Dr. Parkes has shown that the action of liquor potassæ on healthy subjects varies according to whether it be taken before or after meals. If taken after meals, it acts as an antacid; it combines with the hydrochloric or lactic acid, and passes into the circulation without increasing the water, the solids, or the sulphuric acid of the urine. If liquor potassæ and other alkaline preparations, when given soon after meals, do not appear in the urine, we may conclude that they improve digestion and the crasis of the blood. Dr. Parkes and Dr. K. Chambers have shown that, when liquor potassæ is taken before meals, it has the power of reducing obesity. From thirty to ninety minutes after the liquor potassæ has entered the circulation there is an increased flow of slightly acid urine, which contains the whole of the potash and organic matter differing from that of ordinary urine, and a relatively large proportion of sulphuric

acid. In other words, an albuminous compound either in the blood itself or in the textures becomes oxidized; its sulphur, under the form of sulphuric acid, unites with the potash, and possibly with the changed protein compound, and is eliminated by the kidneys. The amount of albumen or fibrin thus destroyed by a few doses of liquor potassæ is doubtless small: but as the remedy can be taken for a considerable time, and its oxidizing effects can be assisted by exercise and by copious draughts of water, there is a possibility of removing superfluous matter from a patient without risk. I generally order a tablespoonful of a six ounce mixture, containing, amongst other ingredients, two drachms of liquor potassæ, to be taken half an hour before meals; and immediately after meals, from ten to twenty drops of liquor potassæ in a wine-glass of water, or a scruple of bicarbonate of soda in a mouthful of the same fluid. I have often continued this plan for weeks and months with occasional intermissions, the patients frequently returning to it of their own accord, because they find they cannot get on comfortably without it. The cooling effects of saline diuretics like the acetate of the nitrate of potash are often useful.

Counter-irritants.—The household remedies of this kind have been mentioned. The mustard poultices and turpentine epithems, when applied to the seat of reflex pain which accompanies the acute stages of uterine inflammation, often give relief; and these remedies may be again tried in the second stage of acute inflammatory affection of the womb, particularly when the peritoneum is implicated: but blisters are more useful, and in chronic affections of the body of the womb and its neck, I prefer painting the abdomen with caustic tincture of iodine every week or more frequently, or the pustulation of the skin by croton oil or tartar emetic, or its superficial cauterization by the Marteau de Mayor, a nummular metallic cautery, held in boiling water for two or three minutes, and applied to that part of the skin which covers the seat of pain

for from five to ten seconds. It is well to time the action of the heated steel watch in hand: for one can make it act as a blister or as an issue by prolonging its contact with the skin. When it acts as an issue, after having been quiescent for a few days, the skin around the cauterized spot inflames, and the wound discharges. After a few days the eschar falls off, and a considerable amount of irritation is kept up for about six weeks. In chronic uterine affections, with great and widely-spread neuralgia, the remedy is invaluable; and these painful external sores seem to divert nervous irritability from the deeper pathological centres of morbid action. Sir A. Carlisle, Drs. Corrigan and Day, Jobert de Lamballe, Mayor de Lausanne, Sedillot, and Bouvier have warmly praised the application of heat in the treatment of neuralgic affections which are, for the most part, superficial. Valleix made heat the basis of his treatment of such complaints, and Dr. Day praises its use in neuralgic affections of the aged, while Dr. Mitchell, of Dublin, thus relieves the lumbo-dorsal and other fixed pains to which women are peculiarly liable.

Setons and Issues.—Those who practised in England long before the present generation, frequently applied issues and perpetual blisters to those suffering from chronic complaints. They thought that, by these means, they could eliminate from the blood certain constitutional impurities; considering that in such patients the system had acquired the habit, and therefore the want, of some permanent irritation, and that by establishing a sufficiently active superficial focus of irritation, it might cause blood currents to set in habitually towards the periphery, and thereby relieve the deep-seated centres of pathological irritation. This doctrine has been credited from the oldest times; it may be true, but issues have gone so much out of fashion that, like myself, few medical men are able to speak from experience upon a medication which is very repugnant to the patients from being both painful and dirty. It was not at all uncommon towards the end of the

last century to apply a seton to the labia for the cure of uterine affections; I have no experience of this remedy, but I have applied three or four silk threads as a seton, above the pubis, in chronic affections of the body of the womb, setting the patient to shift the thread every day; and as it gives little pain and discharge, the plan is deserving of more extensive trial. I adopted it at the suggestion of Huguier, and think it has done me good service. An issue at the pit of the stomach is an heroic remedy for the incoercible sickness of uterine affections, and Dr. F. Churchill agrees with Fothergill in the utility of applying issues and blisters at the change of life to those who, in youth, have been relieved from cutaneous or other disorders by the establishment of the menstrual flow. He says, "I have repeatedly tried caustic issues, or perpetual blisters, and with the greatest advantage. They certainly aid the action of the remedies already mentioned, and, I think, prevent the recurrence of those irregular congestions which Dr. Fothergill has described." Gardanne and B. de Boismont likewise speak confidently on the utility of issues in preventing diseases at the change of life.

The application of issues to the neck of the womb itself is a modern idea, and a hard hypertrophied neck of the womb may be often advantageously modified by the application of potassa fusa c. calce; but this will be fully considered in the chapter on caustics.

I think the advantages of directly blistering the neck of the womb have been exaggerated by the late Dr. Aran and Dr. Robert Johns of Dublin, but I have sometimes found it subdue the subacute chronic irritation and swelling of the neck of the womb. I prefer Dr. Robert Johns' plan of painting the neck of the womb two or three times, with a camel's-hair brush steeped in a concentrated solution of cantharides in sulphuric ether, mixed with the ordinary solution of gutta-percha in chloroform, in the proportion of two parts of the former and one of the latter.

From his experience of the treatment now under consideration, Dr. Johns draws the following deductions:—

"1. That minor idiopathic affections of the uterus and ovaria are curable by blistering the cervix uteri.

"2. That symptomatic and sympathetic pains at the decline of uterine and ovarian diseases, and after the cure of those affections, are removable thereby.

"3. That ulceration of the cervix uteri sometimes quickly cicatrizes under this treatment.

"4. That the phenomena attendant and consequent on blistering the cervix uteri, are similar to those produced on other parts of the body.

"5. That it is an operation completely devoid of danger, and that it does not cause any unpleasant symptom towards the rectum, uterus, or other neighbouring organs.

"6. That irritation of the bladder is not necessarily a barrier to blistering the cervix uteri, as this unpleasant symptom is sometimes removed by it.

"7. That enlargement of the cervix or of the body of the uterus from engorgement, or hypertrophy, is not removable by blistering the cervix alone, but that it acts well sometimes in such cases as an adjuvant to other treatment.

"8. That the best and the most speedy way of blistering the cervix uteri is by a strong solution of cantharides, well and quickly rubbed in with a camel's-hair pencil.

"9. That the combination of some sedative or anodyne with the blistering fluid is essential to prevent pain.

"10. That chloroform, with gutta-percha, is preferable to any other medicament for combining with this blistering fluid, as, in the first instance, it increases its vesicating power, and afterwards relieves and removes the pain thereby induced."

CHAPTER III.

SEDATIVES.

The nervous system may sympathise so intensely with the inflamed womb that it may give rise to one of those affections which have been included in the term hysteria, and to many other morbid conditions of the brain and of the spinal cord, as well as to more or less intense pain in the pelvic nerves, which go by the name of uterine pains. There are many ways of subduing pain and nervous disturbance. Antiphlogistic treatment is every day resorted to; hysteralgia has been cured by marriage. Pain is cured by the sedative influence of cold, which in prolonged cold bathing acts as a general remedy whilst ice is locally applied. Pain is cured by heat, as has been stated in the preceding chapter: and Jobert de Lamballe has published several cases of long-continued distressing uterine symptoms, without any apparent structural change, in which a cure was effected by applying the red-hot iron to the neck of the womb.

Pain is quelled by continued pressure of abdominal bandages; and by firmly pressing the pelvis with cushions, Boerhaave checked an hysterical attack, and I have seen Récamier suddenly extinguish hysterical convulsions, by causing a lady's maid to sit on her mistress's belly. Pain is sometimes cured by surgical interference; the passing of a sound has sometimes cured neuralgia of the neck of the bladder: and in a case cited by Malgaigne, the woman was suddenly cured of

all her sufferings by the application of the intra-uterine stem-pessary, but it was found that the deviation still remained the same.

These indirect sedatives will come under consideration in the course of the work, and I have now to deal with the drugs that are received as sedatives. I do not believe that there is any sedative gifted with a special influence over the uterus. Wonderful effects in chronic uterine inflammation have been ascribed to extract of conium by Stoerk, and more recently by Prof. Pistocchi and Dr. Tunstall; it is a useful preparation, but not more so than hyoscyamus, which I generally give, and belladonna, which is much praised by Trousseau. The fact is, all these remedies are good, and we are each apt to overvalue the particular remedy which we habitually prescribe, and as most of our patients recover during its exhibition in combination with other judicious measures, we slip into a way of ascribing too much to the favourite remedy and too little to the rest of the treatment, and still less to the beneficent influence of that internal providence ever at work to withstand morbid processes and repair their mischief. In other words, I do not believe that any sedative has a special action on the ovario-uterine organs.

Modes of Administration.—When it is urgent to give opiates, two questions ever arise. What dose does the disease require? What dose will the brain bear?—and in many cases the complaint requires what the brain will not bear.

Neuralgia can generally be cured by the systematic treatment of the originating disease, though it often specially indicates the exhibition of sedatives; and then the question arises whether they should be exhibited so as to act first on the system, or whether they should be directed to the seat of pain. Doubtless a strong opiate, fully affecting the nervous system, has been known to remove the pain localized in some well-circumscribed spot, but in many cases it only procures a small abatement of the suffering, and the same dose cannot

be repeated sufficiently often to cure neuralgia without locking up the internal secretions, and entailing a state of semi-narcotism very distressing to the patient. For these reasons, when sedatives are used in neuralgic affections, they should be applied as near as possible to the seat of pain. The painful spot should be fomented with sedative fluids and rubbed with sedative ointments and embrocations; leaving them on the skin, so as to envelop the extremities of the sentient nerves in a sedative atmosphere. Opiates are applied to the denuded skin—they have even been injected with benefit into the tissues surrounding the agonized nerve. Although this principle is generally accepted as correct, it is not sufficiently followed in the treatment of diseases of women, and I propose showing what good results may be obtained by putting our practice in harmony with well-grounded theory. Suppose a patient, suffering habitually from nervous and uterine irritability, from bearing-down pains, vesical tenesmus and severe pains in the sacrum and thighs, the necessity for sedatives will strike every one. Most medical men will give them by the mouth, either in such moderate doses that the patient's sufferings will be long in abating, or, should the quantity have been sufficient to assuage the pain, the drugs may have acted so thoroughly on the system that it would take some days to recover from their poisonous effects. Afraid of this, others would apply sedatives to the pelvic regions or the loins; but before relief could be given much time must elapse, though, if the fomentation had been associated with sedative injections into the rectum, relief would soon have been afforded, without any subsequent ill effects, because the remedy, having been applied directly to the diseased nerve, the dose could be proportionate to the intensity of the pain. Is it not, then, better to give sedatives by the rectum than to leave a patient in an habitual state of suffering, or with the occasional variation of an over-dose of opium? This is applying the remedy to the right place, or

applying the sedative as near as possible to the suffering nerves. In severe cases of uterine or ovarian neuralgia one ought not to prescribe in the dark. An accurate examination must be made, and none is accurate unless the eye can confirm the testimony of the finger. Often the neuralgic affection has been caused, or at least kept alive, by some slight ulceration of the neck of the womb, which can be seen but not felt; and when this is cured by surgical treatment the neuralgia vanishes. At other times patients suffer greatly from abdominal neuralgia and slight uterine disease, which I have promised speedily to cure by cooling injections and slight applications of a strong solution of nitrate of silver at stated intervals. By these means the ulceration was soon cured, but the patient continued to suffer until the sentient nerves had lost their excess of sensitiveness by persisting in the topical use of sedatives. Sir H. Holland observes that "where true inflammation has not existed or has been removed, and where irritation or nervous sympathies are the sources of the distress that is attached to the spine and limbs, it is singular what good may be effected by opium, externally applied—not, however, in the careless and inefficient way which is common with external remedies, but sedulously, and with a sufficient proportion of opium in the forms employed."

The pelvic pains arising from uterine inflammation often make life miserable by their intensity and their long duration. It is possible to remove or greatly diminish them by one or more of the following means:—

Fomentations.—Fomentations with warm fluids or water holding an opiate in solution, are useful, but cannot be well applied without the assistance of an intelligent nurse, and are therefore not often had recourse to.

Liniments.—These are of frequent application, and when charged with a fair proportion of opium or some other sedative, and gently rubbed in for at least five minutes, they are

of great utility. They are still more useful if applied immediately after a warm hip bath, or after ironing the back with a hot flat iron, in which case much more of the liniment will be absorbed. What is applied to the back must be rubbed off, but it is well to leave the whole surface of the abdomen well greased with the liniment, covering it with flannel, cotton-wool, oil-silk or oil-cotton. During the day this is kept in place by the stays and dress, and I seldom advise these applications to be retained during the night on account of the difficulty of keeping them in place, for it is useless to attempt making women do, for any considerable time, whatever entails the frequent soiling of linen.

Ointments.—The last remarks should be borne in mind when prescribing ointments. The extracts of belladonna and opium make such filthy ointments that they seldom have a fair trial. It is better to dissolve the salts of morphia, veratria, and atropia in alcohol, and add them to lard as in the formulary at the end of this work. Those who can bear the contact of oil-silk next the skin, will find these remedies more effectual if they wrap a strip of it over the loins, one end being folded over the other, so that the lower part of the abdomen may be enclosed in a sedative vapour bath. It is necessary to add that ointments are more efficacious when applied to a heated surface, and when long retained in contact with it.

Plasters.—When patients can be made to practise cold sponging, or the alternate use of hot and cold water, it is wrong to apply plasters, which would become wet and disagreeable. Others, and those who are bedridden, are benefited by plasters applied to the back and chest, for it is well to keep the abdominal surface available for emergencies.

Endermic Method.—This is a well-known mode of exhibiting the potent vegetable alkalies that figure among the brightest conquests of modern chemistry.

Hypodermic Method.—I have found benefit in some trouble-

some cases from the injection of sedative fluids into the cellular tissue, according to the plan suggested by Dr. Alexander Wood. The instrument consists of a glass barrel, with a pipe made of silver, which screws on and off the barrel at pleasure: the end of the pipe being sharpened like a needle, and perforated on one side by an oblique opening, through which the drops of the solution are expelled. Having charged the syringe with the narcotic fluid, hold it in the right hand at the junction of the barrel with the pipe, and with the left hand take up, between the finger and thumb, a fold of the skin of the patient: having made it tense, let the point of the syringe be passed through it with a quick steady movement, and sufficiently deep that the point can be distinctly felt under the finger. The piston must now be pressed very slowly down with the thumb of the right hand, and the escape of the fluid into the areolar tissue will be indicated by a circumscribed elevation of the epidermis. After the instrument is withdrawn, a small strip of plaster should be placed over the aperture caused by the needle. It is well not to use more than half the ordinary stomachic dose for males, nor more than one-third for females. The specific action of any medicine is developed with much greater certainty when it is introduced hypodermically, chiefly because the whole quantity of a substance given in this way is absorbed, without being submitted to the dynamic influences of the gastric and intestinal secretions. *Intense sickness* may be a troublesome sequel of the hypodermic injection of morphia.

Vaginal Injections.—If carefully used, the injection of a drachm of laudanum in a pint of water, for five minutes, twice a day, is of real service; and so of other sedatives.

Vaginal Suppositories.—Those made with extracts of opium and of belladonna cause so filthy a discharge that patients abandon their use. I very much prefer incorporating the salt of morphia, atropia, and veratria with starch. Mr. Taylor, of Baker-street, has made some for me, which answer

well, and their composition is given in the Formulary. The patient has to introduce them by means of a suppository bone tube. I frequently leave a pledget of cotton-wool soaked in laudanum near the neck of the womb, when the pain is very severe, and I have occasionally applied acetate of morphia carefully by means of the speculum and forceps. It may, however, be applied without using the speculum, if the fore-finger of the right hand be introduced into the vagina in the usual way; the left hand can easily glide the forceps armed with the cotton-wool along this finger, until the neck of the womb be reached; and I have sometimes renewed the application every second day. In this manner it is easily understood that the fluids in the vagina dissolve the acetate of morphia, and that the solution acts on the neuralgic womb. The late Dr. Aran, of the Hôpital St. Antoine, extensively followed the same idea. His plan was to let fall one or two drachms of laudanum into the speculum previously introduced, fixing the fluid in the vicinity of the womb by a tablespoonful of powdered starch. Dr. Aran repeated the application every second day or every day, and has not seen the treatment followed by symptoms of narcotism. He found it effectual in cases of uterine or ovarian neuralgia subsequent to inflammatory affections, or complicating uterine deviations. He, like myself, found it useful in those singular and painful conditions of the womb which occur at the change of life.

Some six years ago I was asked to see a lady residing a few miles from town. She was married, about thirty, of diminutive stature, nervous temperament, dark complexion, and reduced to extreme emaciation, having been confined to her bed for several months by an excruciating pain in the back and in the lower part of the abdomen. The pain was constant, but with paroxysms most violent at the menstrual periods. The flow was scanty, and there was a semi-purulent vaginal discharge. She had slept but little for many months, and could digest scarcely any food. The pain in the back was so

intense that the late Mr. Lonsdale was consulted, and he is said to have called the case one of "hysterical spine." On examination, I found the womb exquisitely sensitive, its neck considerably swollen, and slight ulceration round the os uteri. Three leeches were applied to the womb; but the loss of blood they gave rise to, and the increase of pain they determined, prevented my repeating the application. I touched the ulcerated surface twice with the solid nitrate of silver, and afterwards with a strong solution at four days' interval; cooling injections were used; and in a few weeks after, the ulceration was healed, the uterine swelling had diminished, but the habitual pains had but little abated, and rectal injections could not be retained by the patient. Such being the case, I placed one grain of acetate of morphia in a little cotton-wool, folded it up, tied a piece of twine round it, and carefully applied it close to the neck of the womb. I then withdrew the speculum, leaving a piece of twine protruding, so that the patient might withdraw the little apparatus at the end of twenty-four hours, during which time no injections were to be made. Three days afterwards I applied two grains of the morphia salt in the same way; and four days afterwards, three grains. The day after this application there was a sudden abatement of the pains; and so great was the improvement, that the lady, who for months had only been able to crawl down stairs, to be carried back to her bed, was able to sit upright for several hours, and was not overfatigued by a two-hours' drive. This sudden amendment continued, so that in a few weeks she was able to leave for the seaside, and her health continued good until lately, when I was consulted for a slight return of the uterine inflammation.

When I have had to do with tractable patients, I have seldom found this treatment fail in cases of uterine neuralgia. Once, when it was caused by pregnancy, after trying various means, I resorted to this; but it brought on an alarming

paroxysm of tenesmic pain, which subsided on the removal of the cotton-wool. This patient continued to suffer until delivery, and I think pregnancy would not have gone its full time had I not found in the tincture of Indian hemp an admirable means of mitigating the severity of the pains.

In a case of internal metritis, a grain of acetate of morphia given in this way turned nausea into vomiting without diminishing the uterine pains. In a similar case, one grain of acetate of morphia thus applied produced all the symptoms of an over-dose of opium; the sickness became worse, the pupils contracted, the mind wandered, and there was great irritation of the skin. So there can be no doubt that the drug is absorbed when thus given. Becquerel has had morphia, codeia, atropia, &c., made into sticks like those of nitrate of silver, with powdered gum and a very small quantity of oil or castor-oil, and introduced them into the neck of the womb. The vagina has much less power of absorption than the mucous lining of the rectum, so the best mode of abating the pain which accompanies uterine inflammation is to give opiates by the rectum: and in making this statement I am glad to be borne out by Scanzoni, who observes that chloroform, when given by the rectum, is useful to quell pain, whereas it is of no avail when administered by the vagina. From twenty to forty drops of Battley's solution may be added to a little milk and injected, with any appropriate instrument, into the bowels, but I usually combine several sedatives, prescribing Battley's solution one drachm, tincture of hyoscyamus one ounce, spring water three ounces. Half an ounce of this mixture contains eight minims of Battley's solution and one drachm of tincture of hyoscyamus, and I order this, or double the quantity, to be put into a two-ounce vulcanized india-rubber bottle filled with warm milk, and injected as has been previously explained. The soothing nature of the fluid, and its small quantity, allows of its being almost always retained, and this can be repeated two or three

times a day. If ineffectual, I add to the four-ounce solution, from four to six grains of extract of belladonna, or from one to two scruples of tincture of aconite. This last medicine must be carefully given, for a friend of mine nearly killed a patient by ten drops of tincture of aconite thus exhibited. This mode of giving opiates is invaluable when pain complicates any uterine affection, whether it be cancer or displacement of the womb; and I have shown, in the second edition of my work "On the Change of Life," that many obscure nervous affections may be thus amended, and often cured, when they depend on the perverted action of the reproductive organs.

Suppositories introduced into the rectum suit some patients better than injections, and give less trouble, but it must be borne in mind that what will merely relieve pain when placed in the vagina may cause symptoms of poisoning if introduced into the rectum. The patient should be made to understand that they should be introduced beyond the anal sphincter, for they sometimes cause great distress if, instead of being placed in contact with a slightly sensitive membrane, they are left in the sphincter. The efficacy of a remedy depends on these minute details. Suppositories made of extract of belladonna and of henbane are very valuable remedies.

Range of Utility.—In those distressing conditions of the nervous system which are included in the term hysteria, I give two grains of the extract of hyoscyamus with or without a grain of Dover's powder, and a mixture containing tincture of hyoscyamus with some aromatic tincture or camphor julep. Small doses of morphia, with cherry laurel water, or with chloric ether are also useful. Musk and its analogous substances, castor, ambergris, sambul, often call forth nervous power, and are most useful in a host of those anomalous symptoms of cerebral disturbance which are caused by uterine inflammation. There are general conditions depending on

the ganglionic nervous system which can be controlled by the local application of opiates. When the patients complain of epigastric uneasiness, sinking and faintness, I first ascertain whether these sensations depend upon foul secretions requiring purgatives before ordering a sedative mixture before meals, and the alkali after meals; three grains of blue pill and two of extract of hyoscyamus every, or every other night; a mustard or a hot linseed-meal poultice, sprinkled with coarsely-powdered camphor, every other night; dry cupping as recommended by Galen, and oil-silk over a cotton-wool poultice, or a camphor bag, to be worn during the day on the pit of the stomach. If the pains continue, I prescribe a pitch, a belladonna, or an opium plaster, made soft, so as to embody from five to ten grains of opium to the square inch. The plaster should be left on, and should it fail to relieve I repeat it every four or five days, or I apply two—one to the pit of the stomach, and the other to the sensitive region of the spinal column; or I order, alternately, an opium or a belladonna plaster every fourth day. If there be sleeplessness and nervous irritability, I give from five to ten grains of Dover's powder every, or every other night; or the twelfth of a grain of acetate of morphia every one or two hours, until the induction of drowsiness. If, besides the sensation of prostration, there be downright pain, resisting the local means previously detailed, I sometimes have, with benefit, applied chloroform to the pit of the stomach. Having entered very fully into the remedies best suited to relieve the perverted action of the ganglionic nervous system in another work, I refer the reader to its pages.*

In confirmed hysteria, it may be necessary to give two or three grains of acetate of morphia, and to continue the dose until the remedy begins to tell on the disease. In like manner

* "The Change of Life, in Health and in Disease." Second Edition. pp. 222.

acetate of morphia must be given irrespective of dose, to quell intense pain. A patient suffering from internal metritis and neuralgia of the abdominal parietes, has taken from three to four grains of acetate of morphia every day for more than a month; it diminished the pain, but procured little sleep. I have seen patients driven to the verge of insanity by ovario-uterine excitement; and in proportion as it was assuaged by the systematic exhibition of sedatives, cerebral disturbance abated. Those most benefited by sedatives are the nervous and chlorotic, in whom there is often action without power—action requiring to be restrained until the system has gathered strength; and as the tolerance for a remedy is generally in direct proportion to the fact of its being required, it will be found that the thin, weak, and nervous are more amenable to the action of sedatives, and can be brought to tolerate the largest doses. Those of the plethoric type bear the solanaceous sedatives better than opium, unless this be given with ipecacuanha and purgatives; and calomel or blue pill should be combined with the sedatives given to women of a bilious nature. These observations apply to sedatives *internally* exhibited; but, as sometimes their poisonous effects are felt before the local sufferings are appeased, their *external* application may also be required for complete relief.

Whenever insanity is caused by ovario-uterine disease, it may be generally cured by the exhibition of sedatives by the rectum. Dr. Ferrus assigns great utility to menstrual medications, when insanity has coincided with, or has seemed to be determined by, the suspension of the menstrual flow; and he agrees with Dr. Conolly that, in such the prognosis is most favourable. Amongst others much benefited by this mode of treatment I may mention a patient sent to me by Mr. F. Brown, of Chatham, whom I only saw once. She was about 50, at the change of life, lived in complete seclusion, and was a prey to all sorts of strange delusions. As there was leucorrhœa, frequent uterine pains, and great

suffering on digital examination, there was a chance that sedative enemata might afford her relief; so I ordered them, with other measures, though without giving much hope to her husband. The success attending this treatment induced another lady to consult me.

In severe headache, megrim, and hemicrania, which so often occur in connexion with diseased menstruation and uterine affections, it is good to sponge the head once or twice a day with cold vinegar and water, and after half drying the hair, to rub in, for five minutes, sweet oil, or any pomatum the patient may prefer. If these refrigerant measures do not relieve, hot flannels, sponges, and hot irons to the temporal regions, can be tried with due caution. When the symptoms indicate a tendency to insanity, I have the head sponged with water, holding in solution 2 to 4 oz. of camphorated spirit of wine to the pint, with the addition of a little eau de Cologne or lavender water. Camphorated vinegar and water, or water in which camphor has stood, or the compound camphorated liniment well diluted, are excellent remedies. This last has been sold as "Ward's essence for the headache;" but a still better preparation is Raspail's sedative lotion, the formula of which will be found in the Formulary. This lotion may be used with a small sponge, or a pad of soft linen may be soaked in it, applied to the painful part of the head, and renewed as often as may be required. It reddens the scalp, causes burning sensations, and sometimes cutaneous eruptions; its action can be lessened by diluting it with water, but in severe cerebral affections, a handkerchief should be tied round the forehead to prevent the liquid running into the eyes, while copious spongings are made to the head of the reclining patient. Tincture of aconite is useful rubbed into the nape of the neck, or applied by means of lint and oil-silk. Cold cream should afterwards be rubbed into the scalp, or cold cream with one drachm to the oz. of camphor, and 10 drops of the essential oil of bitter almonds. In pseudo-narcotism amounting to

stupor, I have, in addition to other means, rubbed into the scalp eau de Cologne with as much camphor as it would dissolve. After rubbing it in for a few minutes the patient has come to herself. In a case in which these attacks of stupor frequently followed the epigastric pain, this was my only treatment during the attack. On recovering her senses, the patient felt as if her brain were "benumbed," and then succeeded a sensation of internal pricking, like "pins and needles." When this was complained of, I wrapped the head in a turban of flannel, and left the patient to herself. When, instead of being cool and feeling benumbed, the head is hot, painful, and the patient excitable, these stimulant applications make her worse.

In pelvic and spinal pains, whether they attend on menstruation or uterine disease, sedatives are invaluable, and opium our sheet-anchor. They should be given as soon as possible, for it is much easier to obviate pain than to relieve it when acute. Squire's solution of bimeconate of morphia is a very good preparation, and from five to ten drops may be given every three or four hours until the abatement of pain. This is only a new application of an old form of the same valuable drug, for Fothergill and Petit Radel long since gave, for painful menstruation, a pill composed of a grain of thebaic extract every hour, until the pain abated. From thirty to forty drops of vinum opii in three ounces of very thin starch, as an enema, may also be given, repeating the remedy, according to the urgency of the case, one, two, or three times a day. Opiates not only calm pain, but, as Dr. Gregory has remarked, often facilitate the menstrual flow, reminding one of the utility of opium in intestinal obstruction, still too frequently treated by drastics. When opiates are required to assuage the tenacious pains attendant on the cessation of menstruation, I have continued them for weeks without producing the toxic effects of opium; and I need not add that suppositories and liniments will be often useful.

In nymphomania and that spontaneous venereal orgasm which sometimes accompanies severe ovario-uterine inflammation in unmarried women with strong passions, I find opiates applied locally to be the most useful remedies. Generally, it is the mind dwelling on sexual ideas which leads to masturbation; but perfectly pure-minded widows have stated that they are awoke from sleep, or from half sleep, by sensations exactly similar to those experienced during connexion, this spontaneous orgasm of the reproductive organs being followed by an increase of vulvo-vaginal secretion. Many yield to the temptation, and masturbate; others, who are strong-minded and religiously tutored, resist the impulse, but great prostration is often felt the following day, the mind is distressed and the temper exasperated to the verge of mania. I have known this distressing mental state, and the sexual orgasm which caused it, to be cured by the occasional use of matrimony. Where this unfortunately occurs in virgins, the cure of the original complaint is, of course, the main point, and the judicious adaptation of hygiene to the particular case. Leeches to the vulva give temporary relief, and opiates are always useful: for instance, injections with borax and acetate of lead and nitrate of silver, have brought on this orgasm in a patient, who finds relief from injections of linseed-tea and laudanum, from suppositories containing opium, and from belladonna, given either by the vagina or by the bowels, from chloroform, and from warm baths. Powdering the sheets with camphor, its internal exhibition, as well as that of lupulin, is to be tried.

According to opposite states of the system, sedatives will be useful as emmenagogues or hæmostatics, as is shown elsewhere. In hæmatocele the external and internal exhibition of opium, until narcotism is produced, not only quells the vomiting and nervous excitement, but also the morbid impulse which impels the blood from the organs of reproduction. Should an ovarian abscess burst in the peritoneum, the con-

sequences must be combated by large doses of opium, as Stokes and Chomel have recommended in intestinal perforations—a plan of treatment which Graves found successful in a case of abscess of the liver, which burst into the peritoneum.

CHOICE OF SEDATIVES.

Opium.—One cannot too highly estimate the value of this blessing—a multiplex blessing; for its various preparations suit the many varieties of constitution, and their facility of combination with other remedies—such as mercury, ipecacuanha, mineral acids—renders it available in the treatment of many diseases. For internal exhibition, I sometimes give minute or large doses of the salts of morphia, though I generally prefer the comp. ipecac. powder, or 20 minims of the L. Pharmacopœia solution of acetate of morphia, with 20 minims of ipecacuanha wine, which is equivalent to 10 grains of Dover's powder.

Hyoscyamus.—This remedy generally agrees, and I believe in the soothing effects of from two to six grains of the extract. I give the tincture in mixtures and injections, but for external applications it is of less use.

Belladonna is seldom used internally; the dread of the singular hallucinations which it produces, when taken in poisonous doses, has prevented the internal use of a valuable drug. A knowledge of the beneficial results obtained in epilepsy from its use by Dr. Debreyne, led me to give it in its kindred affection, hysteria. By giving one dose in the twenty-four hours, the cumulative effect may be safely avoided; and I prefer the sulphate of atropia to the extracts, which are of such variable strength in our sunless climate. Externally used, I believe belladonna to be the best remedy we possess against tenesmus, whether the womb, the anus, the urethra, or the nipple be the source of forcing action. I have applied cotton-wool soaked in a solution of sulphate of atropia, to the neck of the womb, to quell the forcing pains of uterine tenesmus. The extract of belladonna combined

with extract of hyoscyamus makes an excellent suppository to be introduced into the bowels; it soothes without constipating, like opium; indeed, in France, the extract of belladonna, in very small proportions, enters into the composition of some purgative pills. It is best to use sulphate of atropia for vaginal suppositories.

Aconite.—The tincture of aconite is quite strong enough for medical purposes. Diluted with equal quantities of water, or even undiluted, a rag soaked in it may be applied to the seat of pain and covered with oil-silk.

Veratria.—This is useful as an external application in neuralgia: internally it acts more powerfully than digitalis.

Chloroform.—The inhalation of chloroform until the attainment of complete insensibility is sometimes necessary to investigate thoroughly uterine disease in highly hysterical women, in whom it would be otherwise impossible to do so; but it would be very wrong to seek in chloroform an excuse for roughness and want of patience, and I have known it to have been thus given where it was not wanted. In the same way, chloroform has been given to solve the spasms of the abdominal muscles, and cause the sudden collapse of what was at first supposed to be an ovarian tumour. I have been told by my friend Dr. Duncan Stewart, that, in dysentery, which so often causes miscarriage in India, and death in childbed, the inhalation of chloroform, so as to affect the brain without producing insensibility, has been found invaluable when other remedies had failed to allay the insupportable tenesmus that impels patients to waste their failing energies in efforts to pass fæces. I often follow the same plan to relieve tenesmus, whether it affects the womb, the bladder, or rectum, and also for vaginal pruritus when very distressing. I have likewise ordered it in a variety of anomalous cerebral symptoms of a neuralgic character, with excellent results. I pour one or two drachms of chloroform on the corner of a pocket-handkerchief, hold it to the patient's nostrils, and

withdraw it on the first intimation of loss of consciousness. When the patient has recovered her senses, I give another dose of chloroform in the same way, and so on until the violent pain or intense nervous exasperation is subdued and the patient is quiet and inclined to sleep. In this way I have often quelled in twenty minutes cerebral symptoms that had lasted for hours, when opiates and other remedies only made the patient worse. For teaching us the use of chloroform, mankind will pay to Dr. Simpson a grateful debt of recollection so long as suffering continues to be their lot.

Chloroform often soothes when given internally in a convenient potion: alone, it forms a good topical application, a small piece of lint being soaked in it and applied to the seat of pain and carefully covered with oil-silk. It forms a capital ingredient of liniments; and what is sold as soluble camphor, or three parts of camphor dissolved in one of chloroform, is a good external remedy for pain circumscribed in a small spot.

Indian Hemp.—This is a wonderfully useful drug to quell neuralgia or mental excitement, and often agrees when opium is not tolerated. I give it in pills, as will be seen elsewhere. It is said to be, with chloroform, the principal ingredient of chlorydine, which I have found useful.

Hydrocyanic Acid.—This sedative suits many patients, and I frequently give it, or the cherry-laurel water, to quiet general excitement, pain, and sickness.

Camphor.—Dr. Physick says, that "camphor was made for women, with whom it always agrees, while it always disagrees with men." This is an exaggeration, for I have met with women with whom it has disagreed, and it often agrees with men. Its subtle fumes seem to spread like an aura over the nervous system, stimulating it to increased action, causing the capillaries to eliminate with the perspiration whatever oppresses the nerves, whether it be a gaseous or an electroid fluid with which they are over-charged. The effect of this is a subsidence of pain, an increase of strength, and

sometimes a sensation of lightness, the patient feeling as if she could fly. Camphor seems to correct the toxic influence which the reproductive system has on the brain of some women; its anaphrodisiac properties have been often shown in priapism and nymphomania. It seems to abate the sexual sting by acting on the cerebro-spinal nerves of the external organs of generation, not on the testicle or ovary; for the testimony of Raspail is of great value, and he says, that habitual large doses did not prevent conception nor induce impotence. It is usually given in small doses, but Dumas, of Montpellier, gave—he does not mention how—one hundred grains in the course of a day. Raspail gave from five to ten grains in a wine-glass of water, with or without a few drops of ether; I give it in this way, or prescribe Sir J. Murray's fluid camphor. For external application, there is the camphorated oil, made with one drachm of camphor to one ounce of oil; the camphorated ointment, made with two drachms of camphor to one ounce of lard; and the camphorated vinegar, made by dissolving one ounce of camphor in a pint of vinegar, which is useful, when diluted with water, to apply to the head in headaches. A drachm or two of powdered camphor sprinkled on a linseed-meal poultice before its application will be found useful. If coarsely powdered and folded in cotton wool, it may be worn as a sachet at the pit of the stomach. It may be sprinkled on a belladonna or other plaster, and then applied where judged necessary.

After a full injection of tepid water has been returned from the rectum, three or four ounces of camphor water may be injected twice a day, but it would be better to give four or five grains dissolved in the yolk of an egg, as recommended by Lisfranc.

Raspail advised the introduction of camphorated ointment into the vagina, but I have no experience of this remedy. Camphor may be incorporated with violet-powder, and freely used to relieve pudendal irritation and flushes, when dry and annoying.

Lupulin.—I have long been in the habit of adding six drachms of the tincture of lupulin to a six-ounce mixture; and I am confirmed in my opinion of this drug by what has been lately stated by German and French practitioners, who have found that when from two to sixteen scruple doses of the yellow lupulin were given, it effectually quelled the erection of chordee. If these results are confirmed, it would certainly show a strong anaphrodisiac action, and justify its use in many diseases of women.

Castor.—The vegetable musks, like castor or sumbul, are useful remedies. Castor was given by the rectum by Aræteus, and although an old remedy, it holds its ground; the compound tincture of the Edinburgh Pharmacopœia is a very good formula.

Ambergris resembles castor, and is much used by perfumers; it is mixed with the haschish by the Turks, and Brillat Savarin's eulogium of its effects made me try it. I give ten to twenty drops of the tincture in a six-ounce mixture, and it certainly acts as a diffusible antispasmodic.

Mesmerism.—I am not prepared to discuss the many physiological questions suggested by this word. I have a patient who, for inflammation of the womb, which is prolapsed and retroverted, was mesmerized every day for two months without any effect; and I do not believe that mesmerism could have the slightest influence on the local disease. I can quite understand that the prolonged contact and gentle manipulations of one human being may irritate or soothe the nervous system, and even produce sleep in other human beings. When travelling in the East, I have frequently seen slaves gently tickling their master's feet and legs, who seemed soothed by the procedure; and nothing quiets down mental excitement in a patient of mine so much as having her arms tickled for an hour at a time by her sister or nurse. She remembers, when a little girl, having to do so for her father; and several of her aunts and uncles are soothed by the same process.

CHAPTER IV.

CAUSTICS.

To apply more or less irritating substances to the diseased surface of the womb, is to follow the example of those who have used the same agents to cure inflammation in other parts of the body. The utility of a solution of borax or chlorate of potash in inflammatory affections of the mouth caused them to be tried as uterine injections, and the same is true of acetate of lead. The utility of a solution of sulphate of zinc and of nitrate of silver in urethral diseases, demonstrated by J. Hunter, Sir E. Home, and Lallemand, suggested their employment in uterine catarrh ; and the sovereign utility of the solid nitrate of silver, when applied to cutaneous ulcers, caused it to be tried in uterine ulceration. When applied, these agents substitute a therapeutical to a morbid action, a temporary to a permanent action. Unless they be highly concentrated or too frequently applied, they seem to abate inflammation; but severe inflammatory action follows the application of caustics like the acid nitrate of mercury, potassa fusa c. calce, potassa caustica, and the actual cautery. When it is not possible to cure uterine inflammation by gentle means, I use caustics, with the view of substituting an ulcer which I know by experience will heal in a given time, to one which will often last for years. In treating of injections, I have enumerated the substitutive agents which are given largely diluted, as borax, chlorate of potash, chloride of lime, acetate of lead, tannin, alum, and sulphate of zinc. It has been stated lately that it was dangerous to long con-

tinue the use of injections of sulphate of zinc ; but this unsupported assertion is positively contradicted by my own experience, and by that of Dr. H. Bennet. Chloride of lime, in distilled water, in the proportion of one to ten, has been praised as a means of transforming old sores into fresh vermilion-looking wounds, with a strong tendency to heal.

Tannin and glycerine, in the proportion of four of the former to sixty of the latter, is said to form a good application for slight ulcerations of the womb ; but it is a nasty mess ; and Bouchut recommends to touch the ulcerations with a solution of one of creosote in one thousand of distilled water, which reminds one of the efficacy now ascribed to preparations of coal-tar to cure wounds and ulcers of the skin, and of Dr. Mackenzie's recommendation to use a weak solution of creosote for vaginal injections in the puerperal. If, instead of being largely diluted, these agents were given in a highly concentrated state of solution, their action would be analogous to that of tincture of iodine and nitrate of silver, which are called caustics by courtesy, but are scarcely more so than cantharides. As it has been stated that I use the strongest caustics in ordinary cases of uterine inflammation, it may be well for me to repeat what will be found in my other work, that most cases of uterine disease can be cured by the means above mentioned, and that it is only in a comparatively small number of instances wherein the uterine structures have been too deeply modified by disease, that strong caustics are required. They cause a loss of substance proportionate to the amount used ; they induce an acute but healthy inflammation in the tissues underlying the eschar ; and by the judicious management of this artificially-produced acute imflammation, the speedy cure of chronic inflammation is often effected.

Writers differ respecting the importance to be attached to pathological data : they may attack each other's theories, or assume the monopoly of discretion in the use of heroic remedies, of which they have only lately learned the advan-

tage; but, fortunately, when they come to the treatment of inflammatory affections of the womb, they are guided by the same principles of action. Notwithstanding Dr. Rigby's belief in the constitutional origin of uterine diseases, he admitted that uterine ulceration sometimes requires to be treated by potassa fusa c. calce, and even by potassa caustica; and although Dr. West has successfully persuaded himself how unimportant are those uterine inflammatory periods of which he has proved the frequency, he advises his pupils to adopt exactly the plan of treatment that Dr. Bennet recommends, including the strongest caustics. Those who first advised the profession to adopt the use of caustics in the treatment of uterine disease, had to encounter a general hue and cry; but now all practitioners of standing use them, although some prefer the nitric and muriatic acids, like Dr. Fleetwood Churchill, or others, with Dr. Evory Kennedy, the acid nitrate of mercury. Potassa c. calce is not energetic enough for Professor Simpson, who uses potassa fusa; and the French give the preference to the actual cautery. During the last fifteen years, the utility of escharotics for the cure of a host of surgical diseases has been amply shown by Bonnet, Pietrequin, Bouchacourt, and other skilful surgeons of Lyons, who have found an able exponent in Dr. Philippeaux, whose work on "Cauterization" I strongly recommend.

The profession has thus become more and more convinced of the great utility of caustics in many diseases; were it otherwise, surgery would be deprived of valuable remedies, and the obstetric art robbed of the only means of curing the most distressing cases of uterine inflammation; for many patients would then have to drag on, from year to year, their weary load of misery, with the only hope that the cessation of menstruation, by putting an end to the physiological activity of the womb, might also check its liability to inflammation.

Tincture of Iodine.—I use the ordinary tincture of iodine; but I shall be brief on this subject, as I shall have to refer

to it again in comparing it with other agents. Since I noticed the utility of tincture of iodine in uterine disease, volumes have been written upon its utility in the diseases of natural or accidentally developed closed cavities. Its local action is that of an astringent, if a slight application be made to the neck of the womb; and of a blister if the application be prolonged and repeated, at one and the same time. Thus applied, iodine enters the system, so much so that some persons will have its taste in the mouth after its application to the womb; and if this be repeated every third day, the alterative action of the remedy may reduce hypertrophy and check the growth of fibrous tumours. As an application to ulcerated surfaces, it cannot compete with nitrate of silver, but it better suits some idiosyncrasies and pseudo-membranous ulceration. I have frequently used it with advantage in chronic inflammation of the lining membrane of the neck of the womb, painting it well, every third day, with a sable brush steeped in the tincture. The fact that a solution of tincture of iodine has been often injected in fistulous passages, hydrocele, and ovarian cysts, without bad results, marks it as the best fluid to be injected into the body of the womb in the very rare cases requiring this treatment; for it has much less frequently been followed by peritonitis than a solution of nitrate of silver. I use one drachm of the tincture to an ounce of distilled water, injecting it by means of an instrument similar to that devised by Mr. Coxeter for the injection of fluids into the larynx, after having sufficiently dilated the neck of the womb by sponge-tents, to permit the free egress of the fluid injected. The caustic tincture of iodine is a good counter-irritant, the lower part of the abdomen being painted with it once a week.

Nitrate of Silver.—In an admirable book on Lunar Caustic, Mr. Higginbottom showed its power to cure various forms of cutaneous inflammation. Although the book was published in 1822, the remedy has lost none of its reputation; and Chas-

saignac's panacea for all wounds is, a solution of five scruples of nitrate of silver to an ounce of distilled water. In the preface of his work Mr. Higginbottom asks whether, "as the application of nitrate of silver is a means, under certain circumstances, of subduing external inflammation, it might not, on the same principle, be of service in the treatment of internal phlegmasia." Many eminent practitioners have answered the question in the affirmative. Brettonneau, and, more recently, Horace Green, have shown its utility in affections of the larynx and pharynx; Velpeau, its use in ophthalmic surgery; Trousseau, in infantile diarrhœa; several East Indian practitioners, in dysentery; Mr. Curling, in the affections of the rectum; and its advantageous application to the cure of the inflammatory affections of the urethra in the male has been abundantly established. As regards the inflammation of the mucous membrane of the female reproductive organs, Dr. Jewel, in 1830, strongly advocated its use; and he was supported by the late Dr. Addison, in a little work written to prove that the disciples of Abernethy were carrying too far the doctrine of the constitutional origin of local diseases; and I have no hesitation in saying, that nitrate of silver is the most valuable of all the agents by which it is possible to cure inflammatory affections of the reproductive mucous membrane.

Modes of Use.—The solution containing forty grains of nitrate of silver to the ounce of distilled water is what I generally use, though sometimes I employ a solution of two drachms to the ounce, the solid stick, or that made pliable by the chloride of silver; when required to be applied to a large surface it may be useful to have it melted into the shape of a minié rifle bullet. The solid caustic is of course more potent than its solution, and should not be applied more than once a week, but the solution cures with less pain, but requires to be more frequently applied. In all cases it is prudent to preface the use of the nitrate of silver by that of linseed tea, poppy-head, and cooling injections, in the same way that

Mr. Higginbottom repeatedly inculcates the utility of cold poultices previous to applying nitrate of silver to the inflamed skin.

Range of Utility.—Chronic uterine catarrh, or inflammation of the mucous membrane lining the neck of the womb, which pours out mucus from its innumerable follicles, seems to me the most frequent uterine disease, and the fruitful mother of many other diseases of the womb. Painting this diseased surface with a paint-brush steeped in a solution of nitrate of silver, forty grains to the ounce, every third day, during two intermenstrual periods, will frequently cure the complaint; but it has often lasted for years, and will not yield to mild measures. The free use of the solid stick is then advisable, and I have sometimes left about the eighth of an inch of the caustic in the cervical canal; so far, therefore, as my experience goes, should the stick accidentally break in the cervical canal, it need give no alarm. What cannot be removed will cause more pain, some loss of blood, and perhaps even a return of menstruation; but the patient may be repaid for greater suffering by a speedier cure. It has been stated by Nonat, that this mode of treatment has caused stricture of the uterine canal in his practice and in that of Richet. I have once met with this accident, and its occurrence would be prevented by the occasional passage of the uterine sound for a few weeks after this application.

As with the mucous membrane lining the cervix, so with that covering the neck of the womb: it may be of a dusky or of a livid hue, very sensitive on being touched, and secrete pus without there being the slightest abrasion. This condition may last for years, being sometimes better or worse; but it generally leads to more or less extensive denudation of villi, which gives an excoriated appearance to the lips of the womb, and these exulcerations, if numerous, may coalesce and become ulcerations. Such morbid conditions of the mucous membrane, with or without excoriation, can be cured by the

application of a solution of nitrate of silver every third or fourth day. Mr. Higginbottom, whose statements with respect to the action of silver deserve the highest consideration, affirms that its action does not extend beyond three days after its application; it is generally necessary to repeat the use of this agent so soon as the epithelial pellicle has fallen off, or every third or fourth day. In many instances this is the best way of ensuring a rapid recovery; but I do not recommend too strict an adherence to this precept, as it is often well to leave five, six, or seven days' interval between the applications, or the cure of the case might be retarded. Thus the too prolonged action of the solid stick might convert an excoriated surface into a superficial ulcer, which might be kept up by the too frequent application of the same agent. The persistence of the ulceration might suggest the urgency of stronger caustics, whereas the ulcer will heal if left alone; this should be borne in mind by the inexperienced, or they will blame the practice for the practitioner's fault.

Whether vaginitis occurs spontaneously, or as the result of uterine catarrh, it is best cured by the injection of a solution of nitrate of silver. This is an excellent idea of Dr. Jewel; but if the solution be sufficiently strong to do good it cannot be safely trusted to the patient. The patient being placed on her back, a small glass speculum should be introduced as far as possible, and an ordinary glass syringe full of the solution of nitrate of silver should be injected. The speculum should then be withdrawn to the vicinity of the vulva, the fluid being left in contact for three or five minutes, after which the speculum may be removed and the fluid received in a small cup. Sometimes I apply a speculum of appropriate size, and as I withdraw it, I pretty freely touch the vagina with the tough nitrate of silver, a modification of the plan recommended by Ricord.

I recommend these injections where there is evidence of inflammation of the womb, with excoriations of its cervix, in

virgins in whom the integrity of the hymen prevents the introductiou of a moderate-sized speculum. This plan should be first tried before dilating or incising the hymen—an operation which is very rarely required. I have made these injections in many cases, and I do not once remember having traced menorrhagia to their administration. I mention this, as it seems to have often occurred in the practice of Dr. Fleetwood Churchill. So many serious accidents have followed the injection of the solution of nitrate of silver into the body of the womb, that I prefer using diluted tincture of iodine whenever intra-uterine injections may be required. In very rare cases of chronic internal metritis, it may even be necessary to apply the solid nitrate of silver to the internal surface of the body of the womb, as well as to adopt other modes of treatment; for an account of which I refer the reader to the Treatment of Internal Metritis, as explained in my work "On Uterine and Ovarian Inflammation."

In follicular inflammation of the labia, in eczema, and prurigo pudendum, or pruritus, both external and vaginal, a piece of cotton-wool should be soaked in the solution of nitrate of silver, and carefully rubbed for two or three minutes over the diseased portions of the skin and mucous membrane. I can speak with confidence of this plan, for I have lately cured patients who had been suffering in this way for four, eight, and even thirty years. When cases have lasted so long, the pudendal skin looks and feels like parchment. It was so in the case of a lady in whom the disease had lasted thirty years. I first rubbed-in the solution every day, then every other day, then every fourth and fifth day, until the skin became soft and pliable, and the sleep was no longer disturbed by darts of pain flashing along the nerves. This patient was cured in three months, and has had no relapse during the following years.

This is one of the most disagreeable operations one may have to perform, and it is well to grease the fingers with cold

cream, to prevent their being stained, and to place an old cloth, many times folded, under the patient, or her clothes will be stained. After the application, it is well to tell the patient to interfere as little as possible by lotions, so as to prevent the premature removal of the thin medicated surface under which the diseased condition is to become healthy.

At L'Ourcine there is a ward for little girls addicted to masturbation, and whether or not this be the result of vulvitis, the habit is often cured by the free use of nitrate of silver to the pudendum—the pain thus caused acting as a lesson not to begin again,—even when there are no local lesions to remove. In some cases of severe ovario-uterine inflammation, with the occasional occurrence of spontaneous sexual orgasm, I have known this to be brought on by the use of nitrate of silver. If an abscess of the vulvo-vaginal glands has not been widely opened, so as to allow it to heal from its depth upwards, it will be necessary to inject a solution of nitrate of silver to promote the obliteration of the cavity.

Theory of Caustic Applications.—I trust I have said enough in praise of nitrate of silver; but in many forms of uterine inflammation much more severe agents are required to restore the womb to a healthy state. This fact is admitted by so many authorities at home, in America, or in foreign countries, that I am surprised to find the contrary asserted by Dr. Tyler Smith. After describing the evil effects of caustics in the treatment of uterine disease, this pathologist, in his work on "Leucorrhœa," p. 203, gives, as his opinion, that "there is no good which can be effected by the more powerful caustics which cannot be accomplished by the nitrate of silver, or by other means. It is true that, by the prolonged application of the nitrate of silver, loss of substance may be caused; but this is far less likely to occur with lunar caustic than with the more powerful escharotics. It is also true that some practitioners apply the more violent caustics so lightly that they do not exceed the milder medical action of the solid

nitrate of silver; but in such cases it would be quite as well to use the safer remedy where a caustic is required." And at p. 206, "In applying the nitrate of silver, the aim should be, not to produce any slough or loss of substance." Thus, it is clearly stated, that the slight application of the strong caustics is tantamount to the full action of the nitrate of silver in like cases of uterine disease.

My experience, on the contrary, teaches me not only that it is injudicious to aim at obtaining a slough with nitrate of silver, but that it acts very much like tincture of cantharides, as suggested by Mr. Higginbottom, although I admit that the phenomena of vesication have not been sufficiently studied by means of the microscope, to permit one to assert the identity of the two processes.

The distinction that Dr. Meigs draws between the antiphlogistic touches and the escharotic action of nitrate of silver does not bear examination. Leave it in the neck of the womb, it will cause more pain, loss of blood, and consequent discharge, but slight destruction of tissue, unless coagulated mucus mixed up with epithelial scales and insoluble chlorides of silver can be called such. Even when applied to a fungous ulcer, the slight loss of substance is as much due to the friction of a hard body on a pulpy surface, as to the chemical combination of the neutral salt and the diseased tissues; for I do not mean to assert, that by larding a soft hypertrophied tissue with bits of nitrate of silver, it might not be possible to obtain an eschar, but I believe similar results would occur if a stick were used in which the Spanish fly were incorporated with gum. A densely hypertrophied neck of the womb might be whitened with the solid nitrate of silver every fourth day until doomsday without much reducing its bulk. Indeed, I have seen such a plan of treatment injudiciously continued for a year or longer in a case of hysteralgia, the neck of the womb being healthy and of an average size, and the effects were rather astringent than caustic, condensing the tissues, narrowing the

cervical canal, and rendering its dilatation necessary and difficult. Thus, while nitrate of silver may be repeatedly applied without inducing other loss of substance than the shedding of epithelium, the slightest application of the potassa fusa to the neck of the womb produces an evident loss of substance; and therefore the two agents, however applied, produce totally different effects in similar cases. This is a question of surgical therapeutics which can be decided by any experienced surgeon. Writing on the treatment of stricture caused by gristly thickening of the urethral mucous membrane, Mr. Wade records his twenty-five years' experience of the comparative advantages of nitrate of silver and of potassa fusa, and he states: "I cannot let this opportunity pass without again calling attention to the fact, that the effects of the argentum nitratum and of the potassa fusa admit of no comparison, as they are totally dissimilar; that the former, when freely used, from its tendency to cause adhesive inflammation, has often been found to increase the urethral obstruction, whilst the remarkably solvent powers of the latter have no such tendency."*

The too free use of nitrate of silver to the inodular tissues of the urethra causes urethral stricture, as the too free use of it to the cervical canal might perhaps cause stricture of the neck of the womb, but without loss of substance. Indeed, if the whole range of diseases in which the nitrate of silver is now used be passed in review, it will be found that it always acts by its dynamic, astringent, and antiphlogistic properties; whereas escharotics can only raise the standard of the vitality of any given tissues by the previous destruction of their superposed surface. I maintain that there is one good to be wrought with the more powerful caustics which cannot be accomplished by the nitrate of silver; that is, to shorten the treatment of many cases in which it is *at first* judiciously

* Stricture of the Urethra. Fourth Edition, p. 117.

tried. Ulceration of the neck of the womb, on a hypertrophic basis, may doubtless be sometimes cured by the use of nitrate of silver, but the treatment might be indefinitely prolonged; whereas it can be very much shortened by one or two applications of the acid nitrate of mercury or of potassa fusa c. calce. When the inner cervix is chronically inflamed, nitrate of silver may enable us to effect a cure; but with that agent, however applied, cures are sometimes so tedious that it is well to resort to one or two applications of the acid nitrate of mercury or of potassa fusa c. calce. In fungous and varicose ulceration the nitrate of silver causes the surfaces to bleed profusely, and does more harm than good; whereas the acid nitrate of mercury and the actual cautery stop the bleeding and promote a cure. I think it right to be sparing of caustics to the neck of the womb in pregnant patients; but I have seen cases similar to those described by Dr. Bennet in which it was necessary to stop an abundant purulent and bloody discharge from a large varicose ulcer, and I have done so with the acid nitrate of mercury after doing more harm than good with the nitrate of silver.

In other words, caustics are not convertible agents: each of them has power to do what cannot be done by the others. One transcends another in the range of its peculiar efficacy, and the speciality of this power should prevent caustics being indiscriminately used in any given case of ulceration.

Dangers attending the Use of Nitrate of Silver.—So little are caustic agents and nitrate of silver interchangeable substances or therapeutical equivalents, that I find nitrate of silver in some cases to be positively poisonous, while potassa fusa c. calce conduces to recovery. In diphtheritic inflammation of the neck of the womb and of the vagina, nitrate of silver acts as a poison. In a case now under treatment, there is a small patch of false membrane on the posterior lip of the os uteri, and around it are numerous ulcerations. Were I to touch them with nitrate of silver, they would soon be covered

with false membranes. Tincture of iodine would not produce this effect, neither would the potassa c. calce; these, therefore, are the best means of curing this most tedious complaint, of which Dr. Bennet has seen about thirty instances in ten years, and he would endorse what I affirm of such cases. Occasionally we meet with cases like two I am now attending, in which an extensive superficial excoriation of the neck of the womb bleeds profusely, even for the two following days, when only touched with the solution of nitrate of silver, which likewise makes the sore more angry. In these cases, I have nearly effected a cure by dressing the wound with tincture of iodine or the acid nitrate of mercury.

Nitrate of silver applied to chancres of the neck of the womb in their acute stage, causes them to become fungous and to resemble epithelioma. Cases have been published as chancre developed on a cancerous basis, which were only instances of of chancre rebelling against caustic treatment. Amputation has been performed, in the belief that the disease was cancerous, both in Germany and in Paris.

ON THE USE OF STRONG CAUSTICS IN THE TREATMENT OF UTERINE INFLAMMATION.

That strong caustics can be applied to wounds without adding fuel to the fire is doubtless singular, but nevertheless, while steel-made wounds are often followed by erysipelas, phlegmonous inflammation, and purulent absorption, these secondary affections seldom attend those made by caustic. The knife reduces the temperature of the diseased surface by emptying its bloodvessels, and by opening debilitated veins and lymphatics to the decomposing fluids in which their open orifices bathe; whereas caustics obliterate the capillaries before pus and fetid fluids have been formed, and rather increase than diminish the temperature of the part.

Caustics are evidently substitutive agents, for besides the destruction of one portion of the diseased tissues, the remain-

der is converted into a simple acutely inflamed ulcer, in which the standard of vitality is raised to so restorative a pitch that it rapidly heals. When ulcers have become chronic, they are generally covered with a thick, luxuriant growth of irregularly developed epithelial cells, and the destruction of this upper growth by caustic places the old ulcer in the condition of a fresh wound striving to heal rapidly. If an eschar about two lines in depth, and of about a sixpence in diameter, be made by potassa fusa c. calce in an hypertrophied neck of the womb of which the mucous membrane may be perfectly healthy, it will frequently occur that, during the ensuing month, while the ulcer is healing, the neck of the womb becomes gradually softer and diminishes in size, the fibroplastic interstitial deposit melting away, and the uterine structure resuming its healthy elasticity.

Such is the fact. Before attempting an explanation, I may be allowed to allude to the well-established fact, that every vessel has its attendant nerve, to be found in what anatomists generally describe as connective tissue. My friend Dr. Beale not only entertains the same belief, but he has demonstrated it by the microscopical examination of the vessels and nerves of the bladder in the frog. When paralysed by some morbid influence, these vaso-motor nerves let the vessels dilate, so as to produce congestion and hypertrophy; and it is probable that the application of caustic, and the subsequent dressings of the wound by the solution of nitrate of silver, restores the tone of the paralysed nerves, makes them contract the afferent capillary vessels, and thus cures congestion by stopping the supplies. Whenever there is a morbid process going on in the congested tissues, ulcerated or not, I also believe that caustics advantageously modify the vitality of unhealthy tissues, as was first suggested, I believe, by Dr. Filhos, in 1847, who observes that there is a want of tone in a great number of ulcers, and that the superficial action of caustics is often useful to change the

mode of vitality of the ulcerated surface. It is also stated by Lebert "that life and nutrition become more energetic whenever assailed by the partial destruction of tissue, and that this explains the rapid healing of internal ulcers to which Vienna paste is applied."

Mr. Wade also remarks, p. 99: "Potassa caustica appears to me to act beneficially upon structure by relieving irritability and inflammation, by promoting absorption, and stimulating the congested vessels to contraction, and also by its dissolvent powers." And again, page 105: "It has always appeared to me, that the great value of the caustic potash consists in its powerful solvent effect upon the tissues forming the obstruction:" and he very truly adds, "had potassa caustica been called a solvent instead of a caustic, it would have been accepted by those who are too prejudiced to adopt it."

It is well thoroughly to explain what is to be understood by the solvent or melting properties of the strong caustics, for some who argue against their use in surgery evidently can conceive no other melting away of fibro-plastic deposits in the neck of the womb than the absolute destruction of the vitality of the cervix by an adequate quantity of caustic. So much on the twofold effects of strong caustics; the destruction of redundant, and the softening of hypertrophied tissues; and now I must briefly relate their uses and abuses.

Acid Nitrate of Mercury.—This was introduced by Récamier, was the only caustic used by Lisfranc, and is now frequently used in the treatment of lupus and other diseases of the skin. It is strong, and should be used with care. It is an anti-hæmorrhagic, like all acid caustics, and coagulates the blood that may exude from the surface of an ulceration, and is therefore well suited as an application to fungous or varicose ulcers, and to those which have an unhealthy aspect. I sometimes apply it to the inner cavity of the neck of the womb when nitrate of silver has been found insufficient to effect a cure. To apply this caustic, after carefully drying

with cotton-wool the ulcerated surface, I place near the rim of the speculum a pledget of cotton-wool, moistened in a solution of bicarbonate of soda, to protect the vagina from the risk of being touched by the acid; then I steep a small pledget of cotton-wool in the caustic, and after well pressing it against the neck of the bottle, I apply it firmly to the diseased surface. A white eschar is thus made, which should be left to dry for a minute or two. If the caustic is to be applied to the cavity of the cervix, a small sable-hair pencil should be used. With some patients this caustic has not a stronger action than nitrate of silver; others soon experience a metallic taste in the mouth, just as some *taste* iodine soon after it has been applied to the womb. Salivation or an attack of dysentery has been observed in very susceptible subjects, and when the caustic has been applied at once to a large surface; should this be necessary, only a portion of the ulcer should be successively touched, at a few days' interval. Orfila has stated, from experiments on animals, that metallic caustics, when absorbed, seem to work their way out of the system by increased intestinal secretions. In the case of a lady, who had been off and on for a year under treatment for inflammation of the cervical mucous membrane, I applied the acid nitrate of mercury with due care; but in the evening she was taken with severe pelvic pains and incessant passing of blood by the bowels. This lasted two days, notwithstanding the exhibition of opium, mercury, and acids. The patient had purulent uterine discharge for a few days, was convalescent in a week, and never suffered from uterine disease during the following eighteen months. The possibility of such accidents occurring explains the utility of recommending the patient to keep very quiet after the applicatien of the caustic. If this little operation leaves bridles in the vicinity of the os uteri, it shows that the caustic has been allowed to run on to the vagina by an unskilful operator.

I have no experience of another form of caustic mercury

used by Plenk, and which is formed of two parts of corrosive sublimate to one of camphor and ten of alcohol. In follicular inflammation of the labia, Trousseau strongly recommends a large pinch of a powder made with equal parts of this salt and sal-ammoniac, to be dissolved in a pint of water and used as a lotion or as vaginal injections, first twice, then once a day, each containing a drachm of the powder.

Potassa Caustica and *Potassa Fusa c. Calce.*—Potassa caustica was first used for the removal of cancer from the neck of the womb by Récamier. Gendrin first tried this caustic in non-malignant diseases of the womb. It is still habitually used for the same purpose by Professor Simpson and Dr. Whitehead of Manchester. Vienna paste—that is, potassa c. calce, or powdered caustic potassa, mixed with from thirty to fifty per cent. of quicklime—had been used by Récamier for the treatment of uterine disease; when Dr. Filhos had the happy idea of melting two portions of lime and one of potash into the shape of a stick, which, being solid, could be easily handled. This caustic has been principally used by Amussat and its inventor. Without rendering it less manageable, Dr. H. Bennet increased the efficacy of this agent by combining two portions of potassa with one of lime. I prefer this to the caustic potash; but I shall discuss the merits of both caustics at the same time, because their chemical action and their therapeutical results are similar, although not identical. They differ as the concentrated differs from the diluted sulphuric acid, and as this latter is generally used for medicinal purposes, so I prefer the potassa fusa c. calce for surgical use. It fortunately happens that two sets of observers, without being aware of each other's labours, have studied the effects of potassa fusa, under somewhat similar circumstances, during the last thirty years; for while surgeons were treating stricture by potassa fusa, Récamier and his pupils were testing the effects of potassa c. calce on ulcers of the womb, and their conclusions agree.

The use of potassa fusa c. calce, in the treatment of uterine disease, always suggests to those who have not given much attention to diseases of women the scooping out of a cavity in the uterine tissues, and their extensive mutilation. That such erroneous notions should be generally entertained is not surprising, since some who profess to be conversant with the action of this caustic confound it with that of potassa caustica, speaking of them both as of agents that are only used for the wholesale destruction of the tissues of the neck of the womb. I distrust the testimony of those who talk of being able to melt down the neck of the womb by potassa fusa c. calce, simply because I have been unable to do so. In cases of fungous or unhealthy ulceration on a hard, hypertrophic basis, I have repeatedly found how very difficult it is to cause a sufficient loss of substance by means of this caustic; and in such cases, instead of the potassa fusa c. calce, I occasionally use potassa caustica, a much more powerful agent, and one which really does at once melt down tissue. My experience on this point is evidently that of Professor Simpson, and has led him to adopt potassa caustica in preference to the potassa fusa c. calce in most cases of uterine disease requiring caustic treatment. The fact is, that in potassa fusa c. calce the caustic is effectually fettered by the fifty per cent. of lime with which it is combined, which causes it to be so valuable an agent, permitting its use with the same facility as the lunar stick, for one can thus let loose at will the corrosive agent, graduating its application to the surface where it is wanted. Thus potassa fusa c. calce is an agent capable of being applied superficially; and even when more energetically used, one can only destroy tissue layer by layer, as the surgeon cuts through tissues when opening an abscess implicating a vital organ. I do not, of course, deny that it would be possible, by the long-continued friction of a large piece of potassa fusa c. calce against the neck of the womb, to cause considerable loss of substance; but the very difficulty with which this result would be obtained,

and the time it would take, will amply convince anyone that this agent is little calculated for the speedy destruction of tissue, and that it can only be used advantageously as a superficial caustic.

Dr. H. Bennet has advised the application of potassa fusa c. calce to the hypertrophied womb, so as to produce a deep slough: still he does not admit that any good is effected by the destruction of tissue that ensues, and he depends solely and entirely on the inflammation subsequently set up by the caustic for any diminution in the size of the hypertrophied cervix. In this, it seems to me that my esteemed friend is over-anxious not to wound prejudice against the caustic treatment of uterine disease, for I cannot understand how a deep slough can be obtained without real loss of substance in the first instance, and a subsequent loss by the suppuration which follows.

My experience thus coincides with that of Dr. Phillipeaux, who, comparing the effects of both caustics on the many diseases to which they have been applied, says of potassa fusa c. calce, that it does not run like potassa caustica, so that its action can be well limited, that the phenomena attending the elimination of the eschar are more active, the wound firmer, redder, giving less suppuration, and that, for these reasons, it is destined to replace potassa caustica.

Although I seldom use potassa caustica, I think Dr. Routh has singularly exaggerated its ill effects, in stating that it produces an ulcer as difficult to cure as that which it was intended to heal; for, leaving out of the question Dr. Bennet's and my own experience, this agent could not have been employed so extensively by Professor Simpson and his pupils, if it made ulceration more permanent; and Mr. Wade would have long ago given up its use for the cure of those urethral indurations which cause stricture.

Having thus explained the gradually destructive action of potassa fusa c. calce as distinguished from the more sudden

melting down of tissues, for which potassa caustica is more suitable, I shall state what are the cases of uterine disease in which I have found it right to use potassa c. calce.

Range of Utility.—When there is an unhealthy condition of the lining membrane of the neck of the womb without ulceration, so far as it is possible to ascertain, but nevertheless undermining the patient's health by the severity of the symptoms it determines, I try in succession tincture of iodine, nitrate of silver, and the acid nitrate of mercury; and if they fail, I pass the stick of potassa fusa c. calce into the neck of the womb, leaving it in contact from five to fifteen seconds. When there is a more or less extensive fibro-plastic deposit or hypertrophy in the vicinity of the os uteri, leading to repeated ulceration and to the persistence of uterine symptoms,—of which ulcers Lebert truly says that they will not heal of their own accord; that they require the knife, compression, or caustic—they may be often healed over by the nitrate of silver and the acid nitrate of mercury, but the surface will frequently break out into ulceration unless a layer of the unhealthy uterine tissue be removed by potassa fusa c. calce. The disappearance of the hardness depends, however, not only on the destruction of tissue, but also on the subjacent absorbents being stimulated to increased and healthy action. If, after the subsidence of all inflammation, hardness still remains, I renew the application, for, until the fibro-plastic deposit be absorbed, the superposed mucous membrane will break out into ulceration on the slightest morbid impulse.

This is the safest mode of treatment, but it takes time, and may require to be spread over six months. When time is an object, and when there is a large amount of fibro-plastic deposit, it may be preferable to melt down at once a large portion of the hardened tissues by means of the potassa caustica instead of prolonging the treatment by repeated applications of the potassa c. calce.

In those forms of highly irritable ulceration with soft

hypertrophy, which are differently described by authors as soft engorgement of the neck of the womb, with frequent sanguineous discharges, as a doughy, boggy swelling of the womb, or as an erectile condition of the womb, it would be very bad practice indeed to irritate the diseased surface by repeated applications of the solid or liquid nitrate of silver, which would increase the suffering, the discharge, and the extent of ulceration. The speedy destruction of a diseased surface, and the extra vital power with which the subjacent tissues then become endowed, is what is wanted in such cases, and there is no better agent than the potassa c. calce.

This practice is confirmed by Mr. Wade's report of his experience of potassa fusa applied to similar ulcers situated in the urethra. "The good effects of potassa fusa are often strikingly manifested in highly irritable and very vascular strictures, which readily bleed upon slight pressure of the bougie. In many cases, three or four mild applications of the caustic will be found to remove both their irritability and their hæmorrhagic disposition so as to render them dilatable."

In diphtheritical ulceration of the neck of the womb, there is no better application than the potassa fusa c. calce, dressing the sore afterwards with tincture of iodine. Simple hypertrophy of the neck of the womb, without any morbid condition of its mucous membrane, may cause many distressing symptoms, and be so little influenced by leeches, scarifications, astringents, mercury, and iodine, that it may be advisable, in some cases, to seek to effect a cure by applying an issue to the hypertrophied tissues. I wish it, however, to be distinctly understood, that I do not advise this mode of treatment in ordinary cases of hypertrophy, but only in exceptional cases. Then I apply an issue to the solid uterine tissues, in the same way as an issue is applied to the skin: and as I want to produce a speedy and a deep loss of substance, I use potassa caustica. While the wound is healing, I freely saturate the tangible portion of the womb with tincture of iodine every

third or fourth day. It will thus be seen that I seldom use potassa caustica; and I strongly advise those who are feeling their way in the treatment of uterine disease by real caustics, not to try it at all until they have familiarized themselves with the use of potassa c. calce, which is so much more manageable.

It has even been recommended by Amussat to apply potassa fusa c. calce to the inner surface of the body of the womb in cases of chronic internal metritis, leading to repeated flooding, and he states that he has often done so with success. I have no experience of the plan, and while admitting that desperate measures are warrantable in desperate cases, I have found the abrasion of the internal mucous membrane with the curette to be sufficient in such cases. They, however, sometimes require the application of the solid nitrate of silver, or the acid nitrate of mercury.

Amussat having seen uterine cauterizations unintentionally produce the replacement of a retroverted uterus, by causing the neck of the uterus to adhere to the vagina, purposely cauterized the neck of the womb and the corresponding portion of the vagina, and in this case he completely succeeded in setting right a retroverted uterus. Dysmenorrhœa was likewise cured, and the effects of the operation did not interfere with parturition. This plan has been repeatedly successful in the hands of its originator, but it has not been generally adopted. The fear of not being able to control the effects of the caustic applied to the vagina, the danger of parturition being interfered with by extensive cicatrices, and the fact that the cauterization did not always produce the desired effect, have justly prevented the adoption of this plan of treatment.

I think no better of Professor Faye's, of Christiania, suggestion for the cure of retroflexion of the womb, although it is said to have given favourable results in its originator's hands. He cauterizes the inner cavity of the cervix with

the stick of potassa fusa c. calce with the view of rendering it subsequently less liable to inflammation, and of enabling it to bear, with impunity, the presence of a stem pessary.

This caustic has been applied to the vagina to narrow its diameter, and thus to support a prolapsed womb; the acid nitrate of mercury has been used for a similar purpose, but I prefer the removal of a longitudinal strip of the vagina to the use of caustics, in the rare cases requiring severe measures. When the neck of the womb simulates prolapsus, and is so long as to interfere with health or with matrimonial relations, I have twice removed about one inch and a half by potassa caustica, and the patients did well. By using potassa caustica there was no great loss of blood, and the relief is as effectual as if the knife had been used—a plan strongly advocated by Huguier, who has lately drawn attention to the complaint.

Potassa fusa is a valuable means of safely opening pelvic abscesses, for adhesive inflammation spreads all round the eschar formed by the caustic. I have cured an ovarian cyst by the repeated application of the caustic potash, so as to open the cyst after the establishment of adhesive inflammation between the opposite peritoneal surfaces all round the opening; but I should not repeat this operation, now that injections of iodine have been often found to cure the monolocular cysts, and that ovariotomy has taken rank among legitimate operations. I have cured vomiting which yielded to no other remedy by the application of caustic potash to the epigastrium, and by keeping the wound open.

I might have devoted more space to explain the utility to be derived from potassa fusa c. calce, but as this has been so amply done by Dr. H. Bennet, I refer with pleasure to his work: it is well that I should do so, as some other writers have borrowed largely from it, repaying the loan by scanty acknowledgments, acidulated praise, or invidious criticism. For having clearly proved the utility of potassa fusa c. calce

in a certain number of otherwise almost incurable cases, Dr. H. Bennet will ever be entitled to grateful recollection by the profession in this country; and if he may deserve blame, it is for not having more forcibly stated the dangers attendant on the injudicious use of strong caustics, so as to diminish the likelihood of their occurrence. Upon this head scarcely too much can be said, so I shall now proceed to explain with what precautions potassa c. calce should be used under all circumstances.

Mode of applying Potassa Fusa c. Calce.—Comparing potassa fusa c. calce with the chloride of zinc and other strong mineral caustics, Dr. Philippeaux extols the former caustic because, although energetic, it gives little pain, produces slight reaction on the adjacent tissues, and because its compounds can have no dangerous action should they be absorbed. To a great extent this is true of potassa fusa c. calce, when applied to uterine diseased tissues; and I believe its use would be followed by few accidents, if the patients kept quiet for the following few days, and if the remedy were never applied without a searching examination of the pelvic organs, to ascertain that there is no inflammatory action lurking in the womb or in its adjacent organs: this is a most important point, and should never be lost sight of by the practitioner whenever he intends to take a real caustic in hand. From neglecting this golden rule, I have seen chronic ovaritis become an abscess, causing death by suddenly bursting into the peritoneum; and in a few instances it has turned chronic pelvi-peritonitis into acute. It is likewise injudicious to apply the strongest caustics without having previously tested the susceptibility of the uterine tissues, by the previous use of the milder ones. In these statements I am fully borne out by Aran, who has seen the potential, or the actual cautery, cause death by acute peritonitis in several patients, in whom the previous existence of inflammation of the ovary and oviduct, had been overlooked.

With respect to the time to be chosen for the performance of the operation, it is well not to fix on a day too near a menstrual epoch past or to come. More than once of late, however, I have applied potassa fusa c. calce to the neck of the womb a few days after menstruation was due. The caustic acted as an emmenagogue, bringing on an unusually abundant flow. The physiological function and the therapeutical process did not interfere with each other, and I have noticed a singular immunity from pain in such cases. Another point of great importance is, never to apply potassa fusa c. calce, and still less potassa caustica, unless the diseased part of the womb can be brought well into view, and easily retained there. When a speculum examination is performed with difficulty, potassa fusa c. calce should not be thought of; one must wait until, as a result of time or treatment, the position of the womb so alters as to facilitate its examination. Last spring a lady was under my care, for hypertrophy of the neck of the womb, with an inflammatory condition of its internal lining membrane, causing yellow discharge, constant abdominal pains, nausea, and hysterical symptoms. I improved her state by the use of nitrate of silver, and by the acid nitrate of mercury; these remedies were however insufficient to cure; potassa fusa c. calce was wanted, but the womb was so anteverted that I could not safely apply this caustic. I sent the patient out of town for three months, to recruit her general health; and when she returned in the autumn, the womb had so recovered its right position, that I could bring it fairly into view, and one application of the potassa fusa c. calce was sufficient to effect a cure. The patient being placed on her back, and so disposed that full light may be thrown on the spot to be operated upon, one should choose a smooth bit of potassa fusa c. calce, one without efflorescence or loosely adherent particles, and therefore not liable to break or splinter during the operation. This is of importance, for I have known a loose particle of the caustic fall on the labia and

cause a small ulcer, which gave greater pain to the patient than the much more severe internal application by the same caustic. For these reasons I seldom use the small-size sticks, as they are more liable to effloresce and to break. When the caustic is fixed in a long-handled caustic-holder, the operator has full control over the caustic, and does not feel afraid of its falling from the speculum forceps, which it might do, when that instrument is used. One or two thin, elongated pledgets of cotton-wool should be steeped in vinegar-and-water, and well pressed to free them from all surplus fluid; these should be neatly jammed between the rim of the speculum and that portion of the neck of the womb on which it rests, so that they may catch and combine with any caustic solution which might accidentally run down to the vagina, severely inflame it, and cause cicatricial bridles, which would remain a lasting proof of the operator's awkwardness, although without detrimental influence to the patient's future health. These preparatory steps being taken, I dry with cotton-wool the spot to which the caustic is to be applied, for moisture is the solvent which will let loose the corrosive agent, and too much moisture will cause the caustic to run, and so prevent its limitation to the diseased surface. Then firmly holding the caustic with the holder, it should be gently pressed to and fro on the diseased surface for from ten to thirty seconds, according as a slight or a deeper action is desired, or, until the operation is interfered with by the surging up of blood from the cauterized capillaries—blood which remains liquid, because it is the property of all alkaline caustics to liquefy the blood. I then withdraw the caustic, and with cotton-wool soak up the blood, and dry the eschar, to ascertain what has been done. If further loss of substance be necessary, I again take in hand the caustic, after wiping it clean with cotton-wool, and I rub it again on the part already cauterized. It may even be necessary to repeat this surface contact of the caustic three or four times with the

same precautions, and at last, after carefully absterging the eschar, I remove the protecting acidulated pledgets, and introduce a much larger one, well saturated with vinegar-and-water, and a teaspoonful of laudanum, and sufficiently large to overlap the eschar at every point of its circumference, so as to protect the vagina from any uncombined caustic which might still remain upon the eschar. This cotton-wool cake should be firmly pressed against the eschar by the speculum forceps while the speculum is being withdrawn, and round this pledget should be previously fastened a bit of twine, the ends of which are tied together in a loop, left sufficiently long for the patient to be able to withdraw it herself after a few hours. As potassa caustica breaks down more tissue, and as portions of this caustic may remain uncombined in the midst of the pulp it has produced, it is right to follow up its use by the free injection of acidulated water into the vagina; and, as a preliminary step, it is well to whiten with the solid nitrate of silver all such portions of the neck of the womb as the melting caustic might possibly run upon.

When potassa fusa c. calce is to be introduced into the cervical canal, the outer portion of the stick is immediately dissolved by the mucus, so that it is judicious not to leave the caustic in contact so long as when it is applied to the surface of the neck of the womb: five seconds may suffice, but a longer time may be required. If a mere cold-water vaginal injection has been known to cause peritonitis, it stands to reason that it is impossible to apply an heroic remedy to the neck of the womb without running the risk of a temporary aggravation of suffering, and of inducing complications which may be far more serious; therefore the application of potassa fusa c. calce to the neck of the womb must be spoken of to the patient and her friends as a serious operation, generally followed by an aggravation of the habitual sufferings, and by much more dangerous symptoms if imprudences be committed. Unless a very small portion of the neck of the womb has been very

slightly touched with potassa fusa c. calce, I keep the patient in bed, or on the sofa, for a week after the application of the caustic, even when there has been little or no aggravation of ordinary symptoms; and I do so, because I have seen pelvi-peritonitic symptoms come on twelve days after the application of the potassa fusa c. calce, and after the patient had several times walked half a mile from her house to mine without any inconvenience. Another patient felt so little the application of this caustic to the neck of the womb, that, contrary to my advice, she took a walk on the following day. This brought on pelvi-peritonitis, vomiting, fever, and laid her up for ten days. I tell the patients to keep quiet, to remove the cotton-wool in a few hours, and I prescribe a full opiate at night. Linseed-tea injections, to which laudanum may be added, are all that is required until the wound is dressed on the seventh day after the operation; for it is useless to make an examination before that time, as no treatment is requisite until the eschar falls. If the potassa fusa c. calce has been applied to the cervical canal or the lips of the os uteri, it is necessary to make the patient clearly understand that she must return in a week to have the wound dressed, in order to prevent the retention of the menstrual flow. The occlusion of the os uteri and uterine stricture are easily prevented by passing the uterine sound, or a paint-brush charged with a solution of nitrate of silver, through the os uteri and into the cervical canal; and this should be done every third or fourth day for the following six weeks. On the falling off of the eschar, the subjacent surface would often heal of itself, but it does so more speedily when dressed with a solution of nitrate of silver every fourth or fifth day. Should the case require another application of the potassa c. calce, it is well to wait a month, or even two, if the patient be not pressed for time.

Dangers attending the Use of Potassa Fusa c. Calce to the Neck of the Womb.—With regard to the ordinary results of cauteri-

zation by potassa fusa c. calce, all habitual abdominal pains are increased, sometimes to an alarming extent, without, however, depending upon peritonitis; for if this were the case, the pain would not soon yield to a large warm linseed-meal poultice, well sprinkled with laudanum—to vaginal injections with a pint of warm water, containing a dessert-spoonful of laudanum—and, what is better still, to twenty drops of Battley's solution, given by the rectum, with an ounce of warm milk, to be repeated if required. To prevent pain, Piedaynel has advised mixing one part of morphia with three of Vienna powder made into a paste with chloroform; but I prefer my plan of dressing the wound with acidulated laudanum.

In extremely rare cases, when slightly touching an ulcerated womb with the finger sets the patient off into hysterical convulsions, it is justifiable to examine under the influence of chloroform, so as to be able to treat the disease by the only effectual means. But I have known it to have been unnecessarily used on patients of mine, to avoid giving pain, when soothing local measures and the use of a small speculum, with great caution, would have been sufficient to carry out the treatment. Slight fever may ensue, but will soon yield to diet, effervescing draughts, and moderate action on the bowels. Potassa fusa c. calce applied to the neck of the womb has a strange depressing influence on some patients, without this exhaustion being caused by pain. I have known this loss of power to last, more or less, for two or three days, and to produce fainting. This stupifying influence of potassa c. calce has been noted by Professor Rust, of Berlin; and Mr. Wade alludes to the *sedative action* of even small quantities of potassa fusa applied to the gristly tissues of confirmed urethral strictures, diminishing the patient's liability to retention of urine. I have not seen debility assume an alarming import; and diffusible stimuli, wine or brandy in small quantities, will correct this state, which will seldom last more than a day or two. Great confusion has

been created by those who have confounded the results of the application of potassa fusa c. calce to the neck of the womb with those of potassa caustica applied under similar circumstances; so I shall carefully distinguish the results of both caustics.

Acute inflammation of the body of the womb is the accident one would expect as most likely to occur, but I have only once observed it. Gendrin and Richet, of Paris, have met with this accident, but I do not remember its occurrence being dwelt on by other authors. Flooding I have observed several times in those subject to metrorrhagia; and occasionally there will be a slight oozing of blood from the wound left by the fall of the eschar. This might be detrimental if it were allowed to continue, but I have always been able to stop it by styptic injections, or by a slight application of the acid nitrate of mercury. I have once seen the use of this caustic followed by a sharp attack of pelvi-peritonitis, and I suspect that this occurred in another case. When I ceased my attendance, this patient was doing well, and the other recovered without permanent damage. Dr. H. Bennet has twice seen his application of potassa fusa c. calce followed by pelvic abscess. Gendrin and Dr. West have had several cases brought on by the same cause; and Dr. Aran has seen it produce ovaritis, which proved fatal after many months of suffering.

Partial or complete retention of the menstrual flow I consider to be an avoidable accident of cauterization of the neck of the womb with potassa fusa c. calce. This accident may depend upon too severe cauterization of the cervical canal, and on the operator's neglecting to pass a paint-brush or a sound through the os uteri and into the cervix, every fourth or fifth day, until the menstrual flow has twice recurred after the application of caustic, or on the patient's neglecting to apply for treatment, as in the case of a dispensary patient, on whom, many years ago, I made an energetic application of potassa fusa c. calce to the os uteri, and who, from not

attending to have the wound dressed, suffered at the next menstrual period from very severe pains of menstruation without the flow making its appearance. At the following period, the pains were so intense that she came back to the Farringdon Dispensary; and, on examination, there was a livid mark in a membranous tissue covering the os uteri. I made a small crucial incision, which gave issue to a teacupful of dark syrupy blood. It was sufficient to touch twice the edges of the divided tissue with nitrate of silver to prevent the recurrence of the accident, and there was no further impediment to the menstrual flow. Similar cases have been seen by Dr. H. Bennet and by Mr. Williams—*London Medical Gazette*, 1850. In these cases the obstacle was formed by a membranous tissue uniting the lips of the os uteri, for it was easily divided. If the potassa fusa c. calce were too severely applied to the cervical canal, it might lead to an agglutination of the walls of the canal by adhesive inflammation, and to a permanent or an occasional obstruction of the menstrual flow, necessitating its dilatation. This has been noted by Dr. H. Bennet and Dr. Bernutz, although the application of strong caustics to the cervical canal is not mentioned as a cause of uterine stricture in Professor Simpson's valuable lecture "On Obstructive Dysmenorrhœa." The fibro-vascular tissue of the womb is very different from the vagina, which is only a modified skin, so that while potassa fusa c. calce, when applied to the os uteri, leaves no trace after a few months, unless considerable loss of substance had been made, the caustic, if applied to the vagina, produces bridles of inodular tissue, like the cicatrices of the skin which has been severely burnt. Potassa fusa c. calce must have been very unskilfully used for it to run on the vagina surrounding the neck of the womb, and will severely inflame it. This inflammation will be followed by a cicatrix or bridle, extending from the womb to the vagina. The thickness of this adventitious growth will be proportionate to the amount of caustic allowed to run; but

I have never met with firm adhesions strongly binding down the womb to the vagina after the use of potassa fusa c. calce, and I believe they are always to be attributed to the use of potassa caustica. Such adhesions, if firm and extensive, would probably interfere with parturition, but those I have seen have had no detrimental influence on the patient's health, or on parturition.

It has been asserted by Dr. Tyler Smith, that in the use of violent caustics the death of the patient has been caused by perforation of the vagina behind the posterior lip of the uterus, and the occurrence of fatal peritonitis; but he omits to say what caustic was used. I can understand the occurrence as the result of the bungling use of too much potassa caustica; but to produce such a result with potassa fusa c. calce could only be a wilful act on the part of the operator. One might as well object to the application of the acid nitrate of mercury with a small paint-brush to an ulcer of the os uteri, because, in a case recorded by Boivin and Dugès, a surgeon perforated the vagina by leaving behind the posterior lip of the os uteri a lump of charpie, well soaked in this caustic. It is mentioned by Dr. Nonat, in a work recently published, that out of twenty-eight applications of potassa fusa c. calce made by Richet, a Paris surgeon in high repute, one patient was flooded, two suffered from acute metritis, and three had pelvi-peritonitis. In the absence of all details, I can only express my surprise at such results, neither do they accord with Dr. Nonat's experience of potassa fusa c. calce.

I have recorded all I know against the use of potassa fusa c. calce; and if, after reading the list of accidents attendant on its use, it should be said, "Why play with a two-edged sword?" I have only to reply, that I effectually cure most of my patients by milder measures, but if, as in a small number of cases, I find these ineffectual, I consider myself obliged to try to cure them by an ascending scale of stronger remedies, well knowing that, however well applied, accidents are some-

times inevitable. To the assertion that nitrate of silver is the only caustic required in the treatment of uterine inflammation, my practice gives an emphatic contradiction, re-echoed by the voice of authorities too numerous to be mentioned.

Sir Everard Home freely used nitrate of silver in cases of stricture of the urethra; nevertheless, he states, in his work on strictures, that "in cases of failure, from the strictured part having become so hard and thick as not to be destroyed by the nitrate of silver, it is to be regretted that we have not a more powerful caustic capable of being applied to the urethra, since that is all that is required for their removal." Mr. Whately first showed the practicability of safely destroying the gristly texture of the urethra by potassa caustica. This plan of treatment has been sanctioned by Professor Lizars, and by Dr. Gross, of America; its advantages have been admitted by Mr. Campbell de Morgan, and powerfully advocated by Mr. Wade, to whose statements I shall repeatedly refer.

Why use potassa fusa c. calce? It might as well be asked why surgeons continue to treat prolapsus ani by the excision of the surrounding folds of the skin, since, in incautious hands, this excellent plan has been known to produce stricture of the anus! If practice is to be shaped on exceptional cases, the use of every heroic remedy must be renounced.

Dangers attending the Use of Potassa Caustica.—Although less able to treat fully of these dangers, from want of sufficient personal experience, my attempting to do so may be eminently useful in rendering it imperative on others to fill up an imperfect sketch. Professor Simpson has explained his preference for potassa fusa, and his mode of using it, in the treatment of inflammatory induration of the neck of the womb, in the following terms:—"Latterly he had abandoned other escharotics, and now always used the common potassa fusa. He had found it far more manageable, speedy, and certain than any other method. He used it, of course, through the speculum, applying a stick of it freely, with a proper

caustic-holder, to the ulcerated and indurated tissues. It required to be rubbed or held *strongly* for a time against the part which was to be destroyed. *In general a piece three-quarters of an inch or an inch long was melted down. The decomposition produced by it often caused a hissing sound.* If the induration is extensive, and the whole cannot be removed at once, increased action and absorption are set up in what remains. Absorption in this way is truly one of the results or consequences of inflammation, though still an undescribed termination. In some aggravated cases two or more applications of the caustic are required at intervals of eight or ten days. He had never seen pelvic cellulitis or any other bad results follow. The appearance after the operation is as if a portion had been clean cut out with the knife. A large quantity of vinegar-and-water is immediately thrown up through the speculum to neutralize the potassa, and prevent it from injuring the sound parts."

Since this statement was first published, in 1847, in the *Edinburgh Monthly Journal*, his very short communication has been reprinted, in 1855, in Professor Simpson's collected works, and without any comment: so it must still be believed that, up to that time, he had never seen any bad result follow the application of an inch of potassa caustica to the neck of the womb, even when reapplied at eight or ten days' interval. In giving to so powerful a plan of treatment the sanction of his name, it is deeply to be regretted that Professor Simpson did not put those who would be sure to imitate him more on their guard; for though, doubtless, in his experienced hands, potassa caustica may be a very useful agent, it might be a dangerous weapon in the hands of inexperienced pupils and junior practitioners, who would be anxious to follow so distinguished a teacher. Professor Simpson has entered fully into the subject of caustics applicable to the treatment of cancerous affections of the womb, in his Clinical Lectures, published in 1859, and the judicious

manner in which he has treated the question makes one regret that he has not also devoted a lecture to the use of potassa caustica in non-malignant affections of the neck of the womb, the more so, as one of his most enlightened pupils, Dr. James Duncan, who practises in Edinburgh, informs me that he has pretty certain knowledge of potassa caustica having caused the death of patients by pelvic abscess and perforation of the peritoneum. Dr. Macrae, in large practice at Calcutta, assures me that he has seen many cases exemplifying the injudicious use of potassa caustica by enthusiastic pupils of Professor Simpson, who have passed from his class to the up-country stations in India.

If even potassa fusa c. calce occasionally produces the serious accidents which I have just enumerated, who can believe it possible that inexperienced practitioners can apply an inch of potassa caustica to the neck of the womb without sometimes causing still more formidable accidents? Although this practice has been followed by the numerous pupils formed by Professor Simpson during the last thirteen years, still very few untoward accidents have been brought to the knowledge of the profession. On this side of the Tweed, the surgical misfortunes of medical men are brought to light by the journals, by medical societies, and by coroners' inquests; but surgical failures are unheard of on the Scottish side. It would seem as if, in that happy land, heroic remedies were harmless, surgeons infallible, and women made of cast iron, were it not that occasionally there come from across the border the details of cases which go far to prove that human nature is everywhere alike.

It must be evident to all, that potassa caustica gives rise occasionally to all the untoward accidents which will sometimes follow the application of potassa fusa c. calce. The risk of producing bridles will be greater; these bands of cicatricial tissue will be stronger; and Dr. H. Bennet has stated, that wherever the vagina had been compromised, in

the cases that had come to his knowledge, potassa caustica had been used. The chances of occlusion of the os uteri are greater, and I was not surprised to learn from Mr. Whitehead, of Manchester, whose skill is well known, that "in a number of cases wherein it was applied, both to the surfaces of the indurated labia and around their inner circle, the reduction of bulk, after healing, was attended by total closure of the orificium uteri: so complete was the occlusion, that he found it necessary to reopen the orifice with a lancet, and use means to keep it open until the healing was complete. He has the record of several such cases, some of which have been since fertile, parturition having been unattended with difficulty." It is obvious that when it is a question of sudden destruction of tissue, by *a hissing caustic*, inexperienced hands will be liable to destroy too much, and remove the neck of the womb as well as its diseased tissues. This was evidently done by a talented pupil of Professor Simpson, by the repeated use of potassa caustica in a lady now under my care. In this case, the projecting portion of the neck of the womb has totally disappeared from view, nor can it be felt by the finger. At the end of the vaginal cul-de-sac there is a minute opening, scarcely permitting the introduction of a filiform bougie. This constricted passage does not, in general, prevent menstruation being regular and painless, but it must have prohibited conception, and supposing this to occur, I do not think parturition would be safely performed. Dr. Tyler Smith has met with two similar cases, in which the lower part of the neck of the womb was destroyed by potassa caustica. Almost irremediable sterility must be expected in all cases similar to the three I have last mentioned, and should parturition ever take place, worse consequences would ensue.

I should be very sorry to saddle potassa caustica with the responsibilities of potassa fusa c. calce; but from what I have witnessed, and from a knowledge of the potent action of

potassa caustica, I feel persuaded that this agent was used in most of the cases brought forward as instances of the injurious effects of caustic treatment. The important question which I raise, and upon which I seek to be enlightened, will doubtless be taken up by some of the distinguished men who do honour to Scotland's most illustrious obstetric authority, so as to satisfy the profession respecting the relative action, and the danger of using, the two caustics under notice.

Influence of Potassa Fusa c. Calce and of Potassa Caustica on Parturition, when applied for the Treatment of Uterine Disease.—It has been gravely asserted that the use of all strong caustics to the neck of the womb so interferes with parturition as to render it difficult, if not dangerous; and as every woman must be considered as *a possible* mother until menstruation has ceased, the inquiry into the truth of this assertion is of so much importance, that I shall give a few pages to its consideration.

That certain caustics injudiciously applied to the neck of the womb should have a prejudicial effect on parturition, might be anticipated from our knowledge that adhesive inflammation of the neck of the womb, and its occlusion, have been the results of very severe labours, of shoulder and other bad presentations, and of the unskilful use of the forceps; but when we come to sift what has been stated on this subject, it is surprising how much it has been obscured by vague assertions. For instance:—Dr. Rigby, "On the Constitutional Treatment of the Uterine Disease," p. 114, says that "he had seen in a number of cases caustic treatment produce severe uterine inflammation and its chronic induration." An assertion is thus made unsupported by facts, and even without mention of the particular caustic which had acted so injuriously on the uterine tissues: for evidently, as Dr. Rigby's object was to prove the injudiciousness of surgical treatment, and as he had a large practice as an accoucheur, he would have naturally considered it a duty to have brought forward

whatever cases exemplified the injurious effects of caustics in parturition.

This sweeping assertion of Dr. Rigby's to a certain extent guided Mr. Thompson of Westerham, in his interpretation of an interesting case—*British Medical Journal*, Dec. 12, 1857; —and although I view it in a different light, great credit is due to this observer for having started the subject. In the casealluded to there was occlusion of the neck of the womb, its orifice being only marked by an indentation, through which the late Dr. Lever bored a passage. Learning that twelve years previously the lady had caustic applied to the womb for several months, but without knowing what caustic had been used, or for what disease, Mr. Thompson jumps at the conclusion that the caustic treatment caused the occlusion of the os uteri, and the thick, gristly, unyielding hardness of the cervix; as if hard hypertrophy of the womb was so rare a disease, occurring without any previous treatment, and sometimes impeding parturition, as in Mr. Highmore's case—*Lancet*, vol. ii. 1852, p. 174—and in Dr. Roe's—*Lancet*, 1851, p. 569. Mr. Thompson sought to strengthen his position by quoting an instance published by Dr. Mayne, of Leeds. This distinguished practitioner related—*British Medical Journal*, 1857, p. 925—the case of a woman who, after having had children, suffered from uterine disease, "was treated on Dr. Bennet's principles" for a few weeks, was soon restored to perfect health, and who, two years afterwards, when at the fifth month of pregnancy, went to Manchester by an excursion train, which brought on adhesive inflammation of the neck of the womb and its absolute obliteration. Labour came on at full time, and Dr. Mayne made an incision into the uterus, and extracted the child, without any unfavourable result either to it or to its mother. Upon this case Mr. Thompson remarks, "that it is impossible to read Dr. Mayne's case without a suspicion as to whether the treatment of the previous disease had not a share in producing the hardness and contraction of

the part." Entertaining doubts upon this point, I wrote to Dr. Mayne, who replied: "Mrs. W. came under my care at the close of 1855, and was restored to health so far as the *os uteri* was concerned, by the application of *potassa fusa c. calce* for about two months. I delivered her on January 5, 1857, by which it appears she enjoyed good health from the beginning of 1856 till four or five months after she became aware of her pregnancy, which must have taken place early in the April of that year; so that, for about eight months after the application of the *potassa* she was in full health. The fancied 'hardness and thickening' of the cervix, had they existed, would, I imagine, have attracted the patient's attention in some way, but they did not; whereas the jaunt to Manchester, in her fifth month of pregnancy, by a cheap excursion train, with its excessive privations and annoyances, especially in *her* condition, were amply sufficient, as I judge, to excite active inflammation in an organ already disposed to that state. Mrs. W. was again delivered by me of a healthy child on Dec. 18, 1858. Last April she again presented herself as experiencing some uneasiness, and, on examination, I discovered neither 'hardness' nor 'contraction,' but only a slight degree of ulceration of the orifice of the womb, for which I treated the part with the *nitras argenti*. She soon got well, and I *suspect* is again pregnant."

This case, when fully elucidated, instead of telling against the use of potassa fusa c. calce, confirms its innocuity, and the obliteration of the os uteri from inflammation occurring after conception, is doubtless very rare, but it has been admitted by Burns, Desormeaux, and Paul Dubois. An instance has been published by Mr. Shepperd—*Lancet*, p. 317, 1851—in which the obliteration of the neck of the womb, requiring an incision to deliver the patient, was caused by hypertrophy and chronic inflammation, without any previous surgical treatment of the disease. Dr. Tyler Smith's remarks are open to the same objection of vagueness, for he treats of

"violent caustics" as if they all produced the same results, whereas each has its particular mode of action; and indeed his own facts are sufficient to convince that, at least, one energetic caustic was much less dangerous than another. To say that parturition was rendered difficult by "caustic treatment," does not enable one to form definite ideas of the value of each caustic. *Caustic* treatment may mean nitrate of silver, the acid nitrate of mercury, potassa fusa c. calce, potassa caustica, the actual cautery, &c. What should we say to a book against narcotic poisons, in which the writer, in his cases, omitted stating what particular narcotic was fatal in one case and what in another?

Having thus explained how a simple question has been rendered obscure, I shall now inquire *What is the influence of potassa fusa c. calce on parturition, when applied to the neck of the womb for uterine disease?* Evidence on this question must be chiefly derived from those who have been in the habit of using this remedy in certain given cases, and who have had to confine women, to whom they had previously applied potassa fusa c. calce for the treatment of uterine disease; for those who repudiate this mode of treatment, only know of its influence on parturition from a very limited number of bad cases, about which they may have been consulted. Imperfectly acquainted with the antecedents of the case, they are liable to attribute to potassa fusa c. calce conditions which may have existed previous to its use. Personal knowledge has more weight with a jury than the recorded statements of the most reliable witnesses; so I shall first relate my own experience:—

It is sometimes stated that potassa fusa c. calce interferes with parturition by the hard cicatrices by which its application to the neck of the womb is followed. To this I can only say, that those who make the assertion cannot have carefully watched the action of potassa fusa c. calce for a few months after its application. On the falling of the eschar, the wound

gradually contracts, and heals without any hard cicatrix. The surface of the ulcer becomes coated with a membrane which, if it be not a perfect mucous membrane, fulfils the office remarkably well, and some months afterwards it is impossible to tell, either by tactile sensation or ocular demonstration, where the caustic has been applied. I only repeat what Dr. H. Bennet has already stated; for he observes that even when a deep slough has been formed by the action of a powerful caustic, such as potassa fusa or the actual cautery, in the course of a few months, or even weeks, all trace of the cicatrix disappears, and the cervix again becomes soft and supple. A slight indentation may, however, mark the spot where the caustic was applied, but I have never traced induration of the womb to the use of potassa fusa c. calce, and I have never seen it interfere with parturition by inducing rigidity of the neck of the womb. If, as has been stated, two or three applications of potassa fusa c. calce could produce a semi-cartilaginous condition of the neck of the womb, small quantities of this agent would not have been found so useful by Mr. Wade and Mr. Campbell de Morgan, in softening the indurated tissues, which render the urethra impervious. "The fact is, that the cicatrices of mucous membranes do not appear to have that tendency to contract and remain firm and rigid like the cicatrices of the skin," as was lately observed by Mr. S. Lane, in alluding to the possibility of re-removing large portions of the mucous membrane of the rectum without causing its permanent stricture. I have repeatedly applied potassa fusa c. calce to an indurated womb, and have known pregnancy to become apparent before the induration was entirely removed. In those cases parturition was not unusually complicated. Pregnancy is a wonderful solvent: as it softens the healthy cervix, so it softens limited fibro-plastic deposits, and will often melt down a hard hypertrophied neck of the womb so as to render parturition safe; but like every other vital endowment, the solvent power of

pregnancy, as in Mr. Shepperd's case, has its limits, and it cannot always soften a "dense fibrous semi-cartilaginous ring." I have confined several patients in whom the awkward use of potassa fusa c. calce had left bridles of cicatricial tissue extending half an inch from the os uteri to the vagina; and I have seen these bridles soften and elongate so as in no wise to interfere with parturition. I may have attended twenty-five or thirty women whom I had cured of various forms of non-malignant uterine disease by potassa fusa c. calce, and in these cases, parturition presented no difficulties which could be traced to the caustic. In Dr. Bennet's extensive practice, this was never once found to be the case; and in those of his patients whom I have attended, for the last ten years, during his prolonged absences from town, I never came across one in whom so much of the neck of the womb had been destroyed as to compromise the safety of parturition. I mention this, because it has been stated that this distinguished practitioner only cured his patients by mutilating them. Dr. Gendrin's experience tallies with that of Dr. H. Bennet and my own; and Dr. Mayne and Dr. Protheroe Smith inform me that they have applied potassa fusa c. calce in many instances, and that in no case did it have a prejudicial effect on parturition, or on the organization of the part cauterized. Mr. Bouchacourt, of Lyons, informs me that he finds the actual cautery more efficacious than the other caustics to reduce chronic inflammatory swellings of the womb; and that recently a patient who had been thus treated, was confined, in her forty-seventh year, without the slightest impediment to the dilatation of the neck of the womb. He adds, "I know of no facts proving that parturition had been made more difficult by previous application of caustics to the womb; and that objection, if at all available, would rather hold good against the use of chloride of zinc and the actual cautery, than against potassa c. calce."

Those who maintain that the use of a corrosive agent

causes parturition to be dangerous, rather deal in vague assertions than in facts. I only find one very questionable case in Dr. Tyler Smith's work on Leucorrhœa, p. 102—a strong proof that potassa c. calce has no untoward influence on parturition. When it is borne in mind that, a few years ago, in a controversy with Dr. H. Bennet, he objected in the strongest terms to the use of potassa fusa c. calce and other caustics, except in malignant diseases of the womb, where, by the bye, they are of little or no utility, one might naturally expect that his position as an eminent accoucheur would enable him to prove the truth of his assertion by a certain number of undeniable facts; but out of those he has brought forward potassa c. calce was only used in two cases, and then in conjunction with other means. In one deplorable instance in which excessive cauterization had produced irregular cicatrisation, and a condition of the upper part of the vagina similar to that which follows sloughing after instrumental labour,—a condition calculated to prevent safe delivery should conception have taken place,—the use of potassa fusa c. calce was conjoined with the frequent use of *potassa caustica*, and the anterior lip of the womb had been likewise removed by the knife. It is singular that so acute a reasoner should not have perceived that he had not brought forward one case to justify his oft-repeated statements respecting the dangers of using potassa c. calce, and its prejudicial effect on parturition.

What is the Influence upon Parturition of Potassa Caustica applied to the Neck of the Womb for the Treatment of Diseases?—That potassa caustica used for the treatment of uterine disease has often no unfavourable effect on parturition, is clear, or some of Professor Simpson's numerous pupils would have raised their voices against their teacher's recommendation; and I know from my friend Dr. Whitehead, that several patients to whom he had applied potassa caustica for the treatment of hypertrophy of the womb had become fertile,

and that in those cases parturition had been unattended by any difficulty. I therefore submit that, cautiously applied, potassa caustica has often no untoward effect on parturition; but if what I have stated respecting the dangers attending this caustic be correct, it stands to reason that one inch of potassa caustica cannot be applied to the neck of the womb, by those whose experience is limited, without risk of so great a destruction of the parts as to compromise safe delivery. Such is the case of a patient already mentioned, in whom the neck of the womb had been destroyed with this agent by another practitioner. Two similar instances have been brought forward by Dr. T. Smith as the result of the application of potassa caustica. It was also used with potassa fusa c. calce, in another case related by the same author. There is no case on record of parturition having become impossible owing to the previous injudicious use of potassa caustica; but I believe this to depend upon the fact of such patients having been rendered barren by the unwarrantable use of this caustic. I cannot help thinking that the neck of the womb was devised with some very useful reference to parturition, and I believe its destruction, in the four cases alluded to, would have prevented safe delivery. These patients have been made to resemble those in whom the neck of the womb is *congenitally* deficient, as in Mr. Hutton's case, when it was necessary to make a crucial incision of the presenting portion of the womb, and to extract the child with the craniotomy forceps. These four examples of the injudicious application of potassa caustica have been seen and made known to the profession in England, where this caustic is used by very few practitioners. Do not similar cases occur in Scotland, where potassa caustica is frequently used? If so, why are they not published? If, on the other hand, we do not know how to use potassa caustica with safety on this side of the Border, let us be distinctly told what to do to prevent the recurrence of such painful cases; for there is little to be learned from that one sibylline page on potassa

caustica which will be found among the 1700 which Professor Simpson has contribnted to the advance of medical science.

Strange to say, that even in his lecture on "Closures and Contractions of the Vagina"—*Medical Times and Gazette*, vol. xxxvii. p. 130—there is no mention of the possibility of their originating in the injudicious application of too large a portion of strong caustic to the neck of the womb. Nor is the subject alluded to in his elaborate lecture on the use of caustics for the removal of cancer, which appeared in the same journal. Thus my own experience and the facts adduced to show the dangers to which parturition is liable from the use of all "violent caustics," prove that potassa fusa c. calce is comparatively harmless, while great dangers may attend the use of potassa caustica.

Has potassa caustica, applied to the neck of the womb, for the cure of uterine disease, induced premature delivery?—I have seen no such cases, nor have I heard of any, except of one given as such by Dr. Tyler Smith; but notwithstanding my prejudices against potassa caustica, I do not see how this agent can be said to have caused the premature confinement of the lady in whom the melting down of the os and cervix uteri is said to have been followed *by extensive giving way of the cicatrices* upon the occurrence of pregnancy; and on referring to the history of the case, at page 70, it will be found that the author is no longer positive, and merely says, "*it appeared as though the cicatrices of deep cauterizations had given way.*" The case is a good illustration of those severe forms of uterine inflammation which occur occasionally during pregnancy, and was more likely to recur in a woman who had previously suffered severely from uterine disease. That previous treatment by potassa caustica *which had done good*, should be blamed for the recurrence of the disease and the premature delivery of the patient is rather singular. To say that the relapse was caused by the caustic treatment used to cure the disease at an earlier period, seems to me like attributing a

severe attack of bronchitis to the antimony given to cure a previous attack. In the midst of the deep fissures and excavations of a varicose ulcer dipping deep into the cervical canal, I think the author will admit the difficulty of identifying a cicatrix and the fact of its having given way. It would have been interesting to have known what treatment was adopted, and whether nitrate of silver was sufficient to effect a cure; for I find that such cases can only be brought to a safe delivery by successively touching limited portions of the extensively diseased surface with the acid nitrate of mercury.

The Actual Cautery.—Although I make very little use of the actual cautery in the treatment of uterine disease, this caustic is so much used in France, that a work on the treatment of uterine disease would be incomplete if it did not explain the action and examine the value of this remedy—which is excellent in itself; but as it requires the display of live-coals, bellows, and red-hot iron, it reminds the public of mediæval tortures, peculiarly repulsive to the British mind. The actual cautery is not more efficacious than potassa fusa c. calce, nor more destructive than potassa caustica, which can be applied without an assistant, whereas the actual cautery requires the presence of one or two assistants, which is unnecessarily wounding the delicacy of our countrywomen.

If one application of the actual cautery were sufficient, it might be a motive of recommendation, but it generally requires to be repeated from four to six times, like potassa fusa c. calce; and the fact of its being easier to acquire the art of using this caustic than that of the actual cautery, is an additional motive for advocating the use of the former.

Such are the reasons which lead me to prefer the mineral caustics to the actual cautery, although it be the least painful of all the caustics. Indeed, the principal pain of the operation is produced by the firm pressure of the rim of the speculum on the womb, previous to the application of the cautery.

In uterine practice two forms of cautery are used, a nummular one, about the size of a shilling, for flat surfaces, and one like the uterine sound, with an olive-like extremity. They must be heated to a white heat, or they would adhere to the cauterized surface, and could not be withdrawn without laceration, causing pain and loss of blood. The olive-like cautery is used to cauterize the cavity of the cervix, into which it should be passed and withdrawn as rapidly as possible; deep cauterization is found dangerous. The cauterization of the presenting mass of uterine tissues by the nummular cautery may be superficial or deep. The superficial cauterization is done by applying the instrument very gently. Deep cauterization requires the firm pressure of the heated cautery to the diseased womb; and when it is voluminous, Jobert de Lamballe often makes two or three cauterizations at the same sitting. Specula made of ivory, horn, china, or wood, have been recommended, but an ordinary round metal one will do, for it does not become sufficiently heated to injure the vagina. After the operation, a plentiful supply of cold water should be injected, and the patient must keep her bed.

The slough is proportionate to the intensity of the heat and to the length of its application; it falls off from the seventh to the tenth day, leaving a wound which seldom heals before the third week.

Range of Application.—The actual cautery is most justifiable in cases of spongy softening of the neck of the womb leading to considerable loss of blood—a form of disease in which other caustics act less heroically. It is often applied to exuberant fungous ulcerations, whether they rest on soft or on hard hypertrophied tissues. The actual cautery is also used when considerable hypertrophy causes repeated relapses of uterine catarrh.

Dangers of Application.—The application of the actual cautery may be attended by all the accidents which occasionally follow the use of other strong caustics. It has caused

death by metro-peritonitis, pus being found in the womb on a post-mortem investigation. It has caused pelvic abscess, uterine stricture, and stricture of the vagina. The actual cautery has been applied with success to the pit of the stomach, by Moscati, to cure obstinate vomiting, and superficial cauterization of the skin has been found beneficial in a host of nervous affections.

Meissner mentions in his Treatise on Diseases of Women, that Sadler applied a moxa over an ovarian inflamed tumour, and repeated it five days afterwards, which considerably diminished the size of the tumour, and was so far useful as to enable it to withstand the impetus of menstruation. This is sharp practice.

CHAPTER V.

TONICS.

WHATEVER may be the cause of constitutional debility, if it be prolonged it impairs the healthy nutrition of the tissues, and often leads to a low inflammatory condition of all the mucous membranes. The uterine mucous membrane forms no exception to this rule, and inflammation thus originating may, without any other cause, pass into ulceration, and lead to hypertrophy and displacement of the womb. On the other hand, it is clear to most practitioners, that constitutional debility of the gravest import and prolonged duration may have no other origin than uterine inflammation, and is the evident result of frequently occurring sanguineous and muco-purulent discharges, of long-continued pain, of despondency, and of the inability to take the accustomed food and exercise. Hence it will be evident that a plan of treatment tending to invigorate the vital powers, and reconstruct the frame by improving the processes of nutrition, is indispensable in the treatment of uterine disease, and is often sufficient to cure it without any other agency; and when I say tonics, I mean not only medicinal agents, but hygienic and mental tonics.

Medicinal Tonics.—Every well-educated practitioner knows as well as myself how to give the several preparations of steel and quina, and of other tonics; so it is quite useless to do more than express my conviction of their great utility in the treatment of uterine inflammation. I have no doubt they often cure slight uterine disease, but they have little influence

on ulceration of the womb. I am daily called upon to treat, by surgical measures, patients who have been drenched with steel and bark, under their most approved forms, for many years; so their inability to cure severe uterine disease is to me an indisputable and often-ascertained fact. In chronic internal metritis, I have known steel to increase pain and flooding; and the fact of steel not being so well borne in hot as in temperate climates, is one of the reasons which so often oblige those who suffer from uterine inflammation in India, to return to England. It will be seen in the Formulary that I frequently prescribe the syrupy preparations of steel and quina. In summer it is well to give these drugs in an effervescing state, and the most convenient way of doing so is to prescribe the granulated effervescing citrate of quina, and citrates of iron and quina, which have been brought out by Savory and Moore; and I frequently give the hypophosphite of soda as a nervine tonic, believing in its efficacy, so far as it is possible to estimate the value of a drug the action of which is slow, and always associated with other remedies.

Dietetic Tonics.—Common sense teaches us that an abundant supply of good food is a potent restorative, but this supply must be suited to the powers of digestion. Those who consult me for inflammation of the womb have frequently been taking meat three times a day to remove debility, whereas this too abundant use of animal food often increases debility by causing dyspepsia and phosphatic urine. The same remark applies to stimulants: a glass or two of the wine that agrees best with the patient is to be commended, but it is not judicious to seek to restore strength by large quantities of beer, port wine, or brandy; at all events, I have found that, although the plan was long continued, it only gave temporary excitement without curing uterine disease.

Hygienic Tonics.—Muscular exercise under various forms has already been considered, and its scientific application will be treated of under the head of Gymnastics as the means of

preventing Uterine Disease. Cold and heat I shall consider under the terms of Hydropathy and Turkish Baths.

Hydropathy.—Considered now by some as a panacea for all complaints, the more or less systematic use of cold water is as old as Hippocrates. When cold is maintained in contact with the body for a time, which varies in different constitutions, it acts as a sedative, whereas the sudden plunge into cold water only drives warmth to the great centres of vitality, to make it rebound to the surface with additional force.

Many have sought to cure inflammation and ulceration of the womb by the more or less forcible and prolonged injection of cold water, and various means have been devised to give uterine douches. The prolonged use of the syphon injection-apparatus with a quart of water ought to answer the purpose.

Another mode of applying cold was much used by the late Dr. Aran; a large speculum being introduced, he was in the habit of plugging the vagina with coarsely powdered ice, after which the patient returned to bed, and this was repeated every day or on alternate days. I have questioned some of his patients, who stated that it sometimes increased for a time their habitual pelvic pains, but that in general it diminished them, at least for a few hours. I can understand the utility of the plan, but I do not think sufficiently highly of it to oppose the prejudices to which it would give rise. Dr. James Arnott had already suggested the utility of ice in cancer of the womb. It does not cure the complaint, but it sometimes abates the intensity of the pain; and I may as well mention, that I have sometimes derived benefit from the application of a bag of ice when burning pain was complained of in the ovarian region.

Sponge Bath.—One cannot too much advise patients to continue its use, unless incapacitated by sickness. In winter the temperature of the water should be brought up to 60° by the addition of warm water, a remark which applies to all cold-water applications in winter.

The Cold Hip Bath, or Sitz Bath.—If the patient does not stop more than a minute in the cold water, there will be a strong reaction to the skin, and the internal organs may be benefited thereby; whereas if the patient remains from five to ten minutes in the cold water, a sedative effect is produced. Unfortunately this sedative effect may disagreeably affect the system and increase the congestion of the diseased womb. This is how I explain my having often found uterine disease in delicate women made worse by the prolonged Sitz bath. A handful of bay-salt or alum, or half a pound of the ammoniated iron-alum, introduced by Mr. Davenport, can be added to the water, and this can be discontinued when the skin shows signs of irritation. The Sitz bath may be taken before or after the sponge bath, and those who can sit in it from five to ten minutes should have a blanket thrown over their shoulders, and their limbs well rubbed on leaving it.

The Cold Bath.—There is nothing so invigorating as plunging into cold water before the body has lost the warmth of the bed, and if this does not bring on chilliness, shivering, and headache, it may be taken for granted that it is well borne.

Range of Utility.—I have often had patients, who for months have been in the habit of daily injecting into the vagina several gallons of cold water without curing ulceration of the womb or its hypertrophy; hence I contend, that however useful as an adjunct, it is insufficient to cure uterine inflammation. During the progress of recovery, the medicated injections already mentioned are preferable; but when the patient is well, nothing gives more tone to the mucous membrane, and diminishes the liability to relapses, than copious injections with cold water every morning, and it is still more necessary that it should form part of the morning toilet of all those who reside in tropical countries, as I shall show hereafter. If by injections of cold water and by douches, it is possible to keep in check uterine congestion, so as to

diminish hypertrophy, it may also cause a displaced womb to return to its normal position, render menstruation more healthy, increase the chances of conception, and diminish the tendency to abortion.

Of the prolonged use of hydropathy in severe uterine disease I have slight experience. There was a marked improvement obtained after many months' residence in a hydropathic establishment in three cases, in which uterine inflammation and neuralgia were elements of very complicated pathological problems; but when it is a question of a remedy continued for six or twelve months, one must remember that in that space of time the disease might have abated of itself. Moreover, many invalids who leave home to live six months in a year with new and pleasant people, in a novel and a well-regulated manner, amid new and beautiful scenery, would get quite well without the agency of cold water.

With regard to the action of cold water during menstruation, I am unable to speak from personal experience, because I have not felt justified in recommending its use during the menstrual period; but I cannot help thinking that we exaggerate the power of cold applications on the menstrual flow. If these cold applications are not sufficiently energetic or prolonged to check reaction, I do not see why the menstrual flow should be thereby interrupted; for the cold that so frequently causes diseased menstruation and uterine inflammation, acts on the system so as to chill the vital organs and impede their healthy action.

Descending from theory to facts, it is well known that the presence of menstruation does not prevent fisherwomen and bathing-women from entering the sea. Sanctorius affirms that the cold bath promotes menstruation. Pomme advised for menstrual colics, to cover the abdomen with cold epithems, and to give repeated draughts and enemata of cold water. Patients of Priessnitz have told me that he did not allow menstruation to interfere with his cold-water prescrip-

tions; and Dr. Fleury, an eminent Paris physician, who has written a good book on the use of cold water, states that cold uterine douches may be given during the menstrual flow; that they do not interfere with it when healthy, and that they bring it back to a healthy type if it be abnormal. This is a question for future investigation.

Turkish Bath.—It has been seen that the safety of cold-water applications generally lies in the reaction they determine, and this reaction may be effectually increased by the quick alternate use of cold and hot water. A basin containing cold water, and another containing hot, with a sponge in each, forms a simple but wonderfully useful contrivance, in a *host* of cases; for there is no woman too sensitive to be thus treated, and I have often found it highly instrumental in restoring delicate children to health. With the view of increasing reaction, and as it were cooking a man with his own heat, Priessnitz devised packing. I have found the *half-pack* useful, by which is meant, wrapping the lower half of the body in a large towel wrung out of cold water, and a blanket enveloping all.

Packing is a tedious, clumsy way of procuring copious perspiration, which may be safely effected by placing a spirit-lamp under a chair, on which the patient sits naked, with a blanket fitting tightly round her so as to retain the heat. When she is sweating freely, she may receive a shower-bath or a douche of cold water over the loins and pelvis. This was the plan adopted by the late Dr. Aran, and the Administration des Hôpitaux fitted up convenient premises for its application at the Hôpital St. Antoine.

The Turkish bath embodies the same principle. On remaining with scanty clothing in comparatively dry air, heated from 100° F. to 120° F. for about twenty minutes, the temperature is pleasant, and the skin becoming moist, soon breaks into copious perspiration. The head saturation-point of the system is, however, sooner reached by passing from the first room

into another heated up to 150° F. This is at first felt to be hot, but one soon gets familiar with it, and the sweating is more abundant. Air heated up to 180° F. feels like a furnace, and brick and wood feel burning. Notwithstanding what is said by those who have not tried the Turkish bath, one can breathe freely in these high temperatures. A man, aged forty-eight, weighing under 11 stone, being in tolerable health, and without spare fat, can stop an hour in dry air at 125° F., without the slightest discomfort, losing above a pound in weight, which is soon restored by a keener appetite and unusually sound sleep. His usual pulse is 60 per minute, and after remaining in half an hour, it becomes fuller and rises to 80, and an additional half hour does not disagreeably impress the organs of circulation. If, instead of remaining in a temperature of 125° F., he passes to a room heated to 150° F., the pulse rises to 100° or more, is full and bounding, and the heart is felt to be acting strongly, its sounds being audible. The same sensations are more forcibly felt in air at 180° F. Faintness at the pit of the stomach, a kind of fainting quite different from syncope, and called leipothymia by older authors, is the result of stopping too long in too great heat; vomiting may occur, and headache is frequent. I had one for three days after remaining too long in a bath at Damascus. On leaving the hot room the bather lies down in one less heated, to be carefully shampooed; after which he is washed with warm water and soap, and then receives a cold shower-bath. This done, the bather retires to the cooling-room, and reclines for half an hour, the object of which is, to rid the system of the superabundant caloric which would break out again into perspiration if he dressed immediately. The immediate effects of the Turkish baths, at least on me, are, to make me feel lighter and stronger, and to improve my appetite and sleep. The fear of catching cold is groundless, for I have often protracted my walk home to inhale a little longer the coldest air of winter, without ever being the worse for it. The advocates

of the Turkish bath state that it is so efficacious, that no disease can resist its influence, and so harmless that it can do no mischief. From the manner in which my heart thumps against the chest when I remain for a few minutes in a room heated to 170° F., no one will persuade me that it will not do mischief in organic diseases of the heart, or where there is a tendency to congestion of the brain and large vessels: in cases of consumption it has increased the frequency of hæmoptysis, so I do not think that the Turkish bath should be taken without medical supervision, though with that proviso, I do not see what harm it can do.

In the Turkish bath the whole organism is saturated with heat, which causes the more rapid circulation of the fluids that move sluggishly in the depth and breadth of our tissues. The kneading of the muscles increases nutritive processes in innumerable capillaries; the shedding of the outer coats of epidermis essentially assists the depuration of the blood. The result is a loss of weight, which is soon made up by an increased activity of digestion and nutrition; and it is this acceleration of organic processes which suggests the hope that the Turkish bath will be found useful in many constitutional complaints by combining it with judicious food and medicines. For if a jockey can lose a stone by remaining in the bath three or four hours for several consecutive days, eating little and drinking less, it stands to reason that Medicine might adopt the same process of training to renovate the diseased constitution. For the last three years I have watched the influence of this high temperature on the shampooers, who remain in the bath about twelve hours a day, and they are strong, active men, not stout, but in good condition. One who weighs 13 stone loses about 10 lbs. a day in the bath, which loss is daily compensated by food, water, and other fluids; the same man has lost as much as 13 lbs. in the day by stopping four hours in a very hot room, but immediately afterwards he walked five miles with perfect

ease. Lest it should be supposed that these are exceptional cases, I may mention having met with gentlemen who have taken the bath every day for six weeks, and that it rather increased than diminished their strength. I have entered into these particulars to justify the assertion that every hospital should have a Turkish bath attached to it.

The application of the Turkish baths to the treatment of uterine affections is very limited, and I advise my patients not to use a higher temperature than 125° F., which can do no harm.

When neuralgia of the pelvic nerves survives inflammation and ulceration of the neck of the womb, the half-pack is useful, and Aran used to give his patients a course of twenty douches of cold water on the loins, the body being previously brought into a state of sudation by sitting over a spirit-lamp. The Turkish bath twice a week is useful in such cases. In chronic inflammation of the body of the womb there is often a state of languor and debility that predisposes to relapses, and I have found that Turkish baths taken twice a week brought up the vital powers to the utmost limit of their capability in the shortest possible time. My worst cases of uterine inflammation—those accompanied by obstinately distressing pain or singular nervous symptoms—occurred in women who had a deficient action of the skin; those who were always cold, and never perspired. This indicates the Turkish bath, and in some cases it was useful, though not borne in others. The treatment of chlorosis is proverbially tedious, and may be greatly curtailed by combining steel with the use of the Turkish bath. I have given the Turkish bath to remove fat from stout and unhealthy women, combining it with abstinence from farinaceous food and the endurance of thirst. "It is the drink that makes the weight," said a trainer to me.

Change of Air.—There is sterling philosophy in the popular belief in the efficacy of change, for it is capable of curing half the minor ailments to which we are liable. The idea is tho-

roughly English, for the French equivalent, "aller aux eaux," embodies the notion of medicine with that of change. Man degenerates when confined to one air, one food, one occupation, and one idea; with change, his powers expand, and the most versatile are the most powerful. Change of air means change of habitation, water, food, habits, and mental associations; and so great is the utility of change, that rather than have none at all, it is better for a man to remove occasionally from a healthy to a less healthy set of influences, provided the stay be not too long. Healthier conditions are generally sought for in change: the lungs obtain purer air, the appetite is sharpened by new food, the imagination is enlivened by new scenes and faces, late hours are changed for early rising, and the cares of home for the freedom from home duties. Such are the circumstances that give such tonic influence to change of air; and their definition is useful, since to them is to be attributed a large share of the benefit derived from travelling, seaside residence, mineral waters, hydropathy, and even from marriage.

Travelling.—Travelling is change of air multiplied by change of air, and of the numerous benefits ascribed to it; but one should travel with prudence, for if countries are "*done*" with furious haste, the mind is often overstrained, and the strength exhausted in a way more calculated to cause relapses of chronic uterine affections than to promote their recovery.

Seaside.—In addition to change of air, there is its mixture with saline particles, by which the skin and lungs are doubtless influenced. Sea-water may be used in the sponge-bath, alone, or with one half of spring-water. This may be also occasionally useful as a vaginal injection. Hot sea-baths can be obtained for those who are too weak to bathe in the open sea; but sea-bathing is an admirable tonic, though it differs greatly—for how different it is to stew for hours in the hot brine of the Mediterranean at Biarritz from plunging for a

few minutes in the bracing billows of the Atlantic! The former might suit those who have slight powers of reaction; but the latter is most beneficial to the generality of women. There is virtue in all living water, and it is freely imparted to those who seek tone in its bosom; even river baths are of great value: and, perhaps, one day, there may be seen in the Thames large well-conducted floating baths, similar to those in Paris, where so many chlorotic girls recover their health; and whether the patient merely plunges into the sea, or receives the shock of the coming billow, or swims, she should keep to the golden rule of stopping within the limits of her powers of reaction; and not think that because it is good to stay five minutes in the water, it would be better to remain an hour. Brill's swimming-bath for women, at Brighton, is an excellent institution.

Mineral Waters.—If change of air and travelling benefit the health of those who have been long suffering from uterine inflammation, it is obvious that a residence at any of the mineral watering-places will serve the same purpose. This is why patients suffering from chronic inflammatory affections of the womb will often recover at any kind of spa. As Dr. Willemin practises at Vichy, he of course is convinced that it is better than any other watering-place for these complaints; but with admirable candour, in his Introduction, he quotes the opinions of some twenty-four hydrologists of France and Germany, where each maintains that his particular spring is the most efficacious for the same complaint.

Drs. Petit and Willemin own that Vichy is useless in the acute stages of uterine disease. I can quite understand that it may improve the health of those who suffer from dyspepsia as well as from uterine disease; but I do not believe the Vichy waters have any specific influence on uterine affections, and although recommended by Petit, he admits the necessity of returning to Vichy for several successive years. Steel and sulphur are useful in the treatment of chronic uterine diseases,

the one as a tonic, the other as an alterative and skin improver; and I believe the mineral waters that contain these remedies are the most useful, particularly when the springs are thermal. I should, therefore, rather recommend Tunbridge Wells, Spa, Harrogate, or Aix les Bains in Savoy, where will be found very active mineral waters, which are called sulphureous: but they differ from others of the same name by the hydro-sulphuric acid being *free*, instead of combined with soda or any other base; so that if exposed to the air for a time there would remain a saline mineral water, which may be given in large quantities as a purgative. The temperature of the water is high, and the establishment contains the most approved appliances of modern hydrology. The fact of its being placed at two days' journey from London, and within a few hours' drive from Lyons, La Grande Chartreuse, Geneva, and the splendid scenery circling Mont Blanc, enhances its value.

Mental inactivity is a positive debilitant of the human frame, and nutrition derives a healthy stimulus from mental exertion. Many women become really ill from having nothing to do, and these can be cured by some engrossing occupation. In whatever sphere they may be placed, they should seek the benefit of this tonic, so far as their strength will permit.

The sight of vigour is positively invigorating, and debility is contagious. This explains why I have not been able to cure some patients until they removed from home, and from the constant society of valetudinarians.

The depression of adverse circumstances prevents the curability of chronic uterine affections, as I have given clinical proofs in another work. It is difficult to calculate the power of that anxiety which is the last to close the day, ever on foot, on waking from troubled sleep, and ready dressed to accompany one through each successive day,—anxiety that poisons every mouthful, passes into the blood, circulates with it, and incessantly revolves round the human body,—anxiety

that spoils the nutrition of every tissue, becomes part of the frame and more particularly of the nervous system, which responds inordinately to the mildest pathological stimuli, spontaneously breeding nervous disorders which surprise us by their singular pertinacity and independence of rule.

Success is another tonic of potent energy, for the wounded conqueror escapes the typhus which decimates the vanquished. Professional men, of strong constitution, try London for a few years, and retire with shattered health, ruined not by the smoke, nor by the fogs, but by the depression which, like Prometheus' vulture, gnaws at their vitals day by day till it can be stood no longer. On the other hand, success has enabled many a weakly frame, if tempered with moderate prudence, to live on for years in the midst of vast labour. For women, success is marriage; and as our social state prevents the marriage of thousands of healthy, blooming women, it follows that, while they perform their part in the routine of daily duties, the canker, disappointment, often gnaws their vitals, and saps their strength in the innermost machinery of the nervous system. In marriage, considered as a tonic, we must take into account this mental satisfaction of success, the emotional stimulus of affection given and returned, the physiological stimulus of matrimonial intercourse on the whole frame, and the complete change of circumstances in which the bride is placed. An enlarged field of observation convinces me that the profession has not in any wise exaggerated the influence of marriage on women, and that its dangers are infinitesimal as compared with those of celibacy.

CHAPTER VI.

HÆMOSTATICS.

On being called upon to attend a patient losing blood from the vagina, the first impulse of the practitioner is to see that she is lying horizontally, without a pillow under her head, and on a hard mattress, with light covering, in a cool room. He will ascertain whether the hæmorrhage occurs at a menstrual period, or can be explained by a miscarriage. It seems to me that the comparative immunity from the evil effects ascribed to menorrhagia has been rather dictated by theory than gleaned from personal observation; and if the actual loss of blood is at first better borne, the ultimate results are equally disastrous whether the blood flows at a menstrual, or any other time. A firm, wiry pulse will show that bleeding may be permitted to proceed; a soft, broad, and very compressible pulse, or one that feels like a fluttering thread, implies, on the contrary, that no time should be lost in checking the hæmorrhage by simple means, such as the application of cloths steeped in iced vinegar-and-water, drinking iced water, swallowing little lumps of ice, or even holding a large lump of it in the hands may be sufficient. This will give time to remember the many numerous conditions which may give rise to flooding, and to ascertain, by a digital examination, whether it is the result of cancer, polypus or fibrous tumour, or whether there be inflammatory softening or fungous ulceration of the womb. Should abdominal enlargement coincide with suppressed menstruation and other signs of pregnancy, uterine hydatids and placenta prævia will be thought of.

If none of these conditions can be discovered, the case must be considered as a morbid impulse of blood to the uterine lining membrane, and this must guide the treatment in young and unmarried women, when the case cannot be cleared by an examination. This morbid impulse may occur both in those who can bear loss of blood, and in the chlorotic, who can ill afford to lose any portion of it.

Having determined the cause of the loss of blood, it will be necessary to choose appropriate measures amongst the medicinal and topical remedies which I shall briefly pass in review.

Bleeding.—It is recommended that the flow of blood from the womb should not be too soon arrested, if the persistence of the patient's strength shows that the bleeding is an effort of nature to relieve the congestion of the pelvic bloodvessels, or to modify the crasis of the blood. Bleeding is fully justified by the same reasons, and may be well prescribed when the continuance of flooding does not contract that hard jerking character of the pulse, which indicates what Bordeu called the hemorrhagic cachexia. The best practitioners of the last century found that, under these circumstances, moderate bleeding checked the flooding; and the same facts will be reproduced when a change in medical fashion shall again permit medical men to open their eyes to the benefits to be derived from venesection. I do not advise bleeding to syncope, for it will be sufficient to take away from eight to ten ounces of blood, and I have seldom found it necessary to repeat venesection. Scanzoni has checked flooding by the application of leeches to the cervix uteri. I have no experience of the practice, and think it difficult of application and less advantageous than other plans.

Refrigerants.—Ice is the first thing to try, ice in every form; it is not only effectual, but clean, and grateful to the patient. Ice pills to be swallowed, or ice water to be frequently taken in small quantities; vaginal and rectal injections

of iced water; the leaving of an elongated lump of ice on the vagina, a bladder of it placed on the abdomen; or I have known flooding to cease on the patient letting a lump of ice melt in her hand. The congelation of the neck of the womb, by the application of powdered ice and salt, according to Dr. James Arnott's plan, may be tried when it is difficult to check the flooding of cancer.

Thus employed, ice acts as a sedative; but when hæmorrhage is suddenly checked by sprinkling cold water on the abdomen or the vulva, the favourable result is due to the closing of the opened mouths of the bloodvessels by reflex action, to which the ganglionic nerves are now proved to be amenable. The action of ice is unanimously admitted. Cullen deemed it the most powerful of astringents; Récamier scarcely used any other remedy in menorrhagia. It has been stated that, when bleeding, ice to the hypogastric region, &c., have failed to stop flooding in nervous patients, the tepid bath has been successful. B. de Boismont also praises baths the temperature of which is gradually lowered.

Mineral Acids.—These are valuable agents when given largely diluted in mixtures or lemonade, according to the formulæ given at the end of this work, and one of the compounds of sulphuric acid; alum can be given as alum whey; acetate of lead can be given associated with opium and digitalis, but however valuable as an external agent, acetate of lead given internally is less reliable, and should be given with an excess of acetic acid to prevent lead poisoning. Nitrate of potash has likewise been recommended, in large doses, such as half or a whole ounce, which would act injuriously on the blood, and I have only given it in small doses as a diuretic and preventive of hæmorrhage.

Astringents.—The mineral acids and their salts, which I have mentioned as refrigerants, are classed as astringents by many writers. Sulphate of zinc is very useful as an astringent injection, when largely diluted. I generally associate

it with alum in the proportion of two drachms of the former to an ounce of the latter, which is divided into eight powders, one of which is dissolved in a pint of water. My friend Sir R. Martin frequently advises the Sand-Rock Spring chalybeate to those who suffer from hæmorrhage and leucorrhœa on returning from India, instead of this mineral water, which contains the sulphate of iron and alumina; from two to six grains of the ammoniated iron-alum may be given, in some bitter infusion, twice a day.

Perchloride of iron is used externally as a powerful hæmostatic, applied alone, by means of a pledget of cotton-wool or mixed in equal proportions with collodion. This forms a treacly-looking substance, to be applied with a stiff brush to the bleeding surface of the womb; an application which is very powerful. Steel is useful as an astringent in cachectic hæmorrhages which occur in chlorotic women: the sesquichloride of iron in sulphuric acid largely diluted is a good preparation.

Vegetable Astringents.—Red roses, whortleberry, oak-bark, oak-galls, kino, catechu, rhatany, logwood, tormentilla, matico, —all owe their value to the tannin and gallic acid they contain, differently associated and flavoured, so that one may be frequently substituted for the other. With regard to the constitutional effects of these astringents, it is admitted that gallic acid so acts on the ganglionic nerves as to contract the involuntary muscles existing in the middle coat of the arteries and the walls of the capillaries, thereby diminishing their calibre and checking hæmorrhage, just as they restrain mucous secretions by constricting the capillaries. Some admit that tannic acid has a similar general action, and that it passes out into the secretions as gallic acid. At all events, gallic acid is the strongest vegetable astringent that we ever administer internally, although it will of course be ineffectual if the loss of blood depend upon organic lesions. Tannin, on the contrary, is more useful as a local application, and I

sometimes add one or two drachms of it to a pint of water as an injection.

Emetics.—These are now seldom given, though they were formerly much resorted to in the sthenic forms of menorrhagia. Some sought to promote vomiting, which plan should not be imitated; the more prudent gave antimony and ipecacuanha, until nausea was induced, which is said to check the flow speedily. The combination of ipecacuanha with acetate of lead is sometimes useful.

Opium.—The value of full doses of opium to check flooding is well recognised by the profession, one, two, or three grains of the extract being given at intervals of one, two, or three hours, according to the case, and the pain to be lulled, which will of course be an additional commendation to the remedy. Opium quells the irritability of the whole system, gives sleep or quiet, and prevents the undue determination of blood. What renders opium so valuable an agent in all bleeding from the reproductive organs is, that in organic disease, a slight operation, a few leeches applied to the womb or to the labia, may set up a rush of blood to the part affected. This is described by the patients as a forcing action, and is spoken of as a rush of blood which is distinctly felt, and which may be ultimately injurious, by the quantity lost, should it not be checked. In such cases opium should be given in suppositories and enemata, which will check diarrhœa, should it aggravate menorrhagia.

Digitalis.—This has been so much praised in various active hæmorrhages, that it is not surprising that Mr. Dickinson and Mr. May have found it useful in menorrhagia. Mr. Dickinson's attention was called to the remedy, by its having been given for the relief of a cardiac affection in a patient who was also subject to menorrhagia, and in whom it entirely arrested the discharge. This led to its further use; and in every case of uterine hæmorrhage unconnected with organic disease requiring the employment of active remedies, that was

admitted into St. George's Hospital after October 1854, foxglove was had recourse to as the sole treatment, and the discharge was invariably arrested by it. The time that elapsed before the hæmorrhage subsided varied with the dose in which the remedy was exhibited. When large doses were given, as an ounce to an ounce and a half of the infusion, the discharge never appeared after the second day; when smaller doses were used, it never continued beyond the fourth day. In uterine hæmorrhage connected with organic diseases, the remedy acted with less certainty; its exhibition was required for a longer time, and the effect was transient. In the hands of others in this country, its effects have been equally striking; and I find also that M. Brugmans states in the Parisian *Medico-Chirurgical Review*, that "its influence on the generative organs of man is very powerful; it is only necessary to take it for four or five days, and complete flaccidity and loss of all virile desires will be produced."

To check menorrhagia I have seen Aran give veratria, half a grain, divided into four pills, to be taken in twenty-four hours.

Ergot of Rye.—This agent seems to influence the capillaries of the whole body, since it has been found useful in hæmorrhage from many organs. Its specific action on the womb seems well established, although there is no reason why it should not be associated with opium and other measures. Récamier gave two grains every three hours; I give scruple doses three times a day; and the remedy has been lately highly praised by Dr. Graily Hewett. Bayle has published—*Bibliothèque Thérapeutique*, vol. iii.—70 cases of post-partum menorrhagia. He gave a scruple four times a day, and cured 67 out of 70 cases.

Turpentine.—If a drop of spirits of turpentine be applied to a cut finger the bleeding stops, and nothing checks hæmatemesis so speedily as a little water on which float ten to fifteen drops of turpentine. I have used turpentine as a topi-

cal application to check bleeding from various ulcerations of the cervix; and a liquid sold as "Ruspini's Fluid," which contains substances analogous to turpentine, is one of the best agents to be applied to stop the bleeding from broken-down cancerous tissues. It appears that J. Hunter thought highly of turpentine taken internally in cases of active hæmorrhage. My friend Dr. Copland commends the practice; and it will be found that resinous substances enter largely into the composition of many of the medicines which have been praised as hæmostatics. Turpentine, cubebs, and copaiba have been given in menorrhagia. Judging from the effects I have observed, these remedies deserve to be fairly tried, but their repulsive and undisguisable flavour is against them. The fact of their having been accused of causing amenorrhœa is in favour of their efficacy as hæmostatics.

Cinnamon.—Pereira drew attention to this drug in uterine affections on the faith of German authors; Drs. Tanner, Aran, and Gosselin admit its efficacy in menorrhagia, and give from half an ounce to an ounce of the tincture, with five ounces of water. This testimony is sufficient to suggest the combination of this agreeable aromatic with other medicines; but it would be wrong to rely on it when there are so many more effectual remedies.

Revulsives.—The remedies which are intended to check hæmorrhage by the induction of reflex action on the part of the ganglionic nerves, should be more extensively used. Hot pediluvia and maniluvia, with or without the addition of mustard, will be sometimes sufficient to check menorrhagia. Mustard-poultices, stimulant embrocations, even urtication of the limbs, has been advised; and Becquerel stopped severe menorrhagia by a large blister to the abdomen. That the accoucheur does not leave the house until the child has been applied to the nipple of the new mother, shows how strongly the uterine vessels contract from mammary sympathy. This may be, to a certain extent imitated, by applying

embrocations and mustard-poultices to the breasts, and by dry cupping.

Surgical Treatment.—This has already been partially discussed, and would require a separate volume to be thoroughly investigated. Common sense teaches the folly of instituting a complicated plan for treating flooding, if it can be almost immediately cured by twisting off a small polypus, or by the removal of a larger one. The scraping away of the fungoid growth which spreads on the mucous membrane in the ulcerative variety of internal metritis, to check dangerous flooding, is an illustration of the same judicious mode of practice.

Dr. West has shown the utility of intra-uterine injections of a solution of gallic acid, or an infusion of matico, to stop continued flooding, after all other means had failed, in a woman of 51. This is rarely required, but the acid nitrate of mercury is not unfrequently useful to stop a continual oozing away of blood from varicose ulceration of the neck of the womb.

The actual cautery was frequently applied by Récamier to destroy erectile growths of the neck of the womb, and Scanzoni has, in several instances, thus stopped entirely, for a few months, the flooding of cancer of the womb. The actual cautery in these cases destroys the large superficial vessels, and by setting up inflammation induces the exudation of products which coat the bloodvessels and so prevent the escape of blood. Should these remedies fail, or the loss of blood have so told on the patient's strength as to render it incumbent to stop it in the shortest possible time, it will be necessary to apply strong pressure to the uterine vessels.

Plugging of the Vagina.—This may be done in the usual way, by introducing a silk handkerchief into the vagina, and gradually filling it with balls of tow, retaining the whole mass by a well-applied bandage. Dr. H. Bennet has proposed the introducing of the speculum, and then plugging the vagina in

the usual way; but I have not derived great advantage from that plan; and as the instrument may have to be left in the vagina for many hours, the handles of the instrument interfere with the scanty comfort the patient can have under such circumstances.

Plugging the Cervix.—This is an excellent idea of Dr. H. Bennet's, but a great deal too simple for general adoption. The os uteri being well brought in view by means of the speculum, small pledgets of cotton-wool are successively introduced into the neck of the womb, so as to fill it as much as possible. As the muscular tissue of the neck of the womb soon yields, and as it may be necessary to plug it again, I leave the speculum and plug the vagina. At the end of seven or eight hours I remove the wadding from between the valves of the speculum until the os uteri is in view. This I plug again with cotton-wool, after which I withdraw the speculum and plug the vagina, but not so as to distend it painfully, and then I apply the bandage. Caseaux has seen many women die several hours after puerperal hæmorrhage had been stopped, too little blood having been left to stimulate the brain and nervous system, so as to enable them to perform the indispensable vital acts of respiration and circulation. In such cases he recommends circumscribing the blood into the smallest possible space, by bandaging the four limbs, and by pressure to the aorta. Transfusion of blood might be required.

Uterine hæmorrhage, like all others, leads to two indications—1stly, to restore the health dilapidated by loss of blood, and for this I refer to the chapter on Tonic treatment; 2ndly, to prevent a return of the flooding. This may depend on a cachectic state of the system, as in chlorosis, when a combination of steel with astringents becomes an obvious indication. It may depend upon a peculiar hæmorrhagic tendency of the vessels, alike independent of chlorosis and of plethora. Such cases often resist all treatment; but I have

found opium in large doses to be most effectual. The flooding may depend upon plethora, as is frequently the case at the change of life. I then follow the example of Fothergill, Hufeland, and Lisfranc, and prevent the floodings of cessation by taking very small quantities of blood from the arm, in the few days that follow the flooding, or on the non-appearance of the menstrual flow. Three or four ounces of blood taken in this way, at successive months, often prevents great mischief; and it must be borne in mind that at the dodging-time, or after cessation, no ganglionic centrifugal currents should be encouraged by pediluvia, hip-baths, mustard poultices, and similar applications to the lower extremities.

Hæmorrhage, however, as often depends upon the perturbed action of the bloodvessels as upon plethora; and although other measures may be indispensable, the return of many hæmorrhages can only be prevented by a judicious use of sedatives. A sedative mixture, a full dose of Battley's solution, or of a solution of acetate of morphia, taken at night, will therefore be found useful; and as the blood is directed with a strong impetus to the womb, there must be some centre of morbid attraction there which requires to be lulled and stupified, so that it may no longer disturb the calm tenour of the circulation. This may be done by giving sedative injections by the rectum, until the nervous irritability of the reproductive apparatus is quelled. Saline purgatives and small doses of nitre are also indicated. The regimen must be carefully regulated. It is best to advise bland and farinaceous food, fish two or three times a week, a diminution in the usual quantity of beer and wine, saline purgatives, an occasional warm bath, moderate exercise, and the avoidance of hot rooms.

CHAPTER VII.

EMMENAGOGUES.

THERE is no chapter so unsatisfactory as that relating to such remedies in treatises on therapeutics. No substances will as certainly cause the menses to flow, as purgatives will cause the bowels to act; and my estimate of emmenagogues may be inferred from the comparatively small space held by drugs in the following scheme of emmenagogue treatment, but this does not prevent an emmenagogue medication being as successful as many others.

- **Emmenagogues.**
  - **Indirect.**
    - Tonics . . . . — To increase the quantity of the blood. / To improve the quality of the blood.
    - Bleeding . . — To quell inflammation. / To draw blood to the lower half of the body.
    - Sedatives . . — To quell pain and spasmodic action.
  - **Direct.**
    - Mechanical . — Puncture of imperforate hymen and occluded os uteri.
    - Uterine Stimulants . . — Pelvic succussion by exercise. / Caloric. / Cutaneous stimulants. / Intestinal stimulants. / Mammary stimulants. / Matrimonial intercourse. / Vaginal injections. / Dilatation of cervix, and surgical treatment. / Electricity and nervous shocks. / Drugs—Aloes, savine, cantharides, ergot, &c.

With regard to the action of these remedies, some, with Dr. Headland, restrict their action to the determination of uterine contraction, as a result of strong intestinal contractions pro-

duced by purgatives. It must be remembered, however, that injudiciously large doses of savine have not only violently purged the patient, but caused great agitation, syncope, delirium, and high fever, which cannot be considered as symptoms of superpurgation, but rather point to a specific action of the drug on the nervous system. The substances recommended as emmenagogues are almost all acrid stimulants, and it is not surprising that some should have an elective influence over the reproductive organs, although the quality and measure of this influence has been, in many cases, exaggerated and misinterpreted. Whether this specific influence is the result of the action of the remedies circulating in the blood on the reproductive organs, or whether the remedies influence the nerves of the ovaries and of the womb, so as to cause the determination of blood and the menstrual flow, it is impossible to say.

It is often supposed that the delicate health of a young woman is caused by the absence or the irregularity of the menstrual flow; but the practitioner will be aware that both the debility and the absence of menstruation often depend upon the want of good food and tonics, which may cure both. Neither will he think of giving emmenagogues until the alteration of the voice, the enlargement of the breasts, and the whole appearance of the patient intimate that the system is ripe for a new function. Should there be symptoms of inflammation of the reproductive organs, antiphlogistics are the best emmenagogues. Should menstruation remain absent notwithstanding a fair trial of these measures, it becomes incumbent on him to make an examination, particularly if there be considerable abdominal enlargement. On examination, it may be ascertained that there is no womb or an undersized one; the menses may be intercepted by an imperforate hymen, requiring to be punctured, or by stricture of the cervical canal, which may require to be dilated. The fact of the menstrual flow being occasionally brought on by any

kind of instrumental interference, has led me to dilate the neck of the womb as an emmenagogue, even when the cervix freely admitted the uterine sound. In a limited number of cases, I have inserted a sponge-tent in the cervix at the time the menstrual flow was due. The pain that it caused, and the efforts made by the womb to rid itself of the foreign body, have been sufficient, in the majority of cases, to bring on the menstrual flow. For an account of the means of dilating the womb, I refer the reader to the chapter on Sterility. The persistent globular enlargement of the body of the uterus with a characteristic softening of its neck will point to pregnancy. In the latter case, it is well to avoid all active treatment and gain time, which will clear up the temporary obscurity of the diagnosis—an obscurity which may be immediately dispelled if the patient be married. One should bear in mind that abdominal enlargement, caused by double ovarian cysts, may forbid the menstrual flow. Should the patient be about forty-five, one should think of the change of life, and alleviate the symptoms by mild measures, avoiding all active treatment. The absence of the menstrual flow being unexplained by any of the previous conditions, I should refrain from emmenagogue medicines, but prescribe an emmenagogue regimen.

During the four days previous to the probable period of the appearance of the flow, the patient should take one or two of the aloes and myrrh pills, to produce moderate action of the bowels, in imitation of that by which nature so often begins, or accompanies, the menstrual discharge; the legs should be placed in a *pail* of hot water on going to bed, or a warm hip-bath may be given, with or without the addition of mustard-flour; mustard-poultices may be applied to the inner part of the thighs and to the breasts on alternate nights, but they must not be left long enough to blister the skin. Linseed-meal poultices should also be applied to the lower part of the abdomen, so as to cover the uterine and ovarian re-

gions; and something warm should be taken by the patient when in bed. These measures should be repeated for several successive months, and if unsuccessful, in addition to the above, six or eight leeches may be applied to the labia, and removed after they have drawn blood for ten minutes, an enema of hot water being given immediately after, and then a hot hip-bath. Should this be unsuccessful, to the emmenagogue regimen may be added vaginal injections of a teaspoonful of liquid ammonia in a pint of warm milk, or aloetic enemata, according to Aran's plan.

Whenever a patient lies prostrate, in a state of hysterical apoplexy from the sudden suppression of the menstrual flow, hip-baths are out of the question, but hot bottles may be put to the feet, and large mustard-poultices to the legs and thighs. Stimulating enemata should also be given, containing two ounces of decoction of aloes, and two scruples of oil of savine. The hypogastric region and inner parts of the thighs should be rubbed with a liniment containing oil of savine and tincture of cantharides.

As soon as the patient can swallow, an additional attempt should be made to bring about or to increase the menstrual flow, by an emmenagogue potion, which I have sometimes given with good effect, containing tincture of cantharides and oil of savine.

Having sketched the line of conduct to be pursued, I shall now comment on some of the elements of this medication.

Tonics.—Steel is decidedly the best tonic medicine, and I have so often seen it cause uterine congestion, or flooding, when the womb was inflamed, that I admit its stimulating action on the womb in many women. What has been said of the influence of change and travelling should be borne in mind. Ferruginous mineral waters will be useful, and I can add nothing to what I have already said of the tonic influence of marriage. Long-continued anxiety and fear have so often

caused amenorrhœa, that the beneficent influence of cheerfulness and a happy state of mind is obvious.

Antiphlogistics. — These are evidently the best emmenagogues when congestion and inflammation prevent the menstrual flow, even when the patient's strength is scarcely above the average. If there be plethora, they are still more useful, and in such cases venesection has been speedily followed by menstruation. Bleeding from the saphena vein, in the days of bleeding, was considered more efficacious than bleeding from the arm, because it sent a current of blood to the lower part of the body. When leeches are used to bring on the menstrual flow, in the absence of inflammation, their mode of action is complicated: they set up a blood-current towards the uterine vessels, so as to let blood flow from the uterine surface. Doubtless, in former days, too frequent bleeding often caused amenorrhœa; but it is quite unnecessary to enforce the moderate use of a remedy which is now cast into the limbo of discarded theories. When leeches are applied every month they induce a call for an habitual loss of blood from the pelvic vessels, which the womb may afterwards let flow from its own. Leeches applied to the cervix may also act as stimulants to the body of the womb, causing it to resume a forgotten function. I prefer the old fashion of applying them to the more sensitive labia, for it causes a stronger reflex action on the part of the uterus. In either case it is well to apply five or six leeches, and make them drop off when half gorged, and to stop the bleeding by touching the leech-bites with salt or alum, so as to congest the womb: some recommend the removal of the leeches to be immediately followed by vaginal and rectal injections of hot water.

Pelvic Stimulants.—I include under this head a variety of measures which in one or the other way cause a determination of blood to the pelvic bloodvessels.

Exercise and Pelvic Succussion.—Falls on the sacrum, blows on the abdomen, jumping, the jolting of a bad cart on

a rough road, have often brought on menstruation before its time; quick walking and dancing have the same effect with some, and riding on horseback is often an admirable means of inducing the regularity of menstruation. The same result may be obtained by a long-continued sytematic course of gymnastics; and the administrators of the Paris hospitals have shown their wisdom in founding a gymnastic institution in their large hospital for children. The emmenagogue results of these exercises are mentioned in their reports by the physicians who attend this institution.

Caloric.—Heat is the most widely diffused of all stimuli, and the supreme ruler of animated nature. Its influence on menstruation is shown by the appearance of the menstrual flow about two years earlier in Hindoo women than in the Danish; by the first appearance of the menstrual flow usually coming on in the summer in the temperate regions of the globe; and by the premature or too frequent occurrence of menstruation in young women exposed to the unusually intense heat of kitchens and washhouses,—facts that I have dwelt on in my contributions to the physiology and the diseases of menstruation. On the other hand, the utility of caloric applied to the lower half of the body, in various ways, to promote menstruation is shown by the menstrual flow being usually checked by the sudden or permanent action of cold on the lower limbs.

Hot pediluvia, hip-baths, and large linseed-meal poultices to the abdomen are the usual modes of applying warmth to the lower limbs. Douching the sacrum and the inner part of the thighs with warm water has been found useful. Sitting over hot water, and warm vaginal injections have succeeded; and warm ascending douches to the womb have been praised. Neither should the habitual maintenance of abdominal warmth, by drawers and flannel, be neglected, for how often this has sufficed to cure the patient. I have known a few vapour or

Turkish baths, accompanied by energetic rubbing and shampooing of the loins and lower limbs, bring back menstruation; and in a case in which amenorrhœa was accompanied by paraplegia, both were cured, and the patient was able to walk after having been helpless for two years.

Cutaneous Stimulants.—These act by the warmth they determine, and also by their more permanent irritation of the nerves of the skin. Mustard-flour is the household stimulant usually added to the pediluvia and hip-baths. Liniments containing turpentine or other stimulants may be carefully rubbed over the abdomen. Stimulating plasters, like the pitch plaster, may excite the ovaries to healthy action. The utility of these measures explain how amenorrhœa has been cured by dry cupping the inner part of the thighs for seven days before the menstrual flow is due. While investigating the phenomena of menstruation, I found that the liability to cutaneous eruptions of the pudenda accounted in a few cases for the too early appearance of menstruation, and for its too frequent occurrence.

Mammary Stimulants.—Irritation and even tumours of the breast have preceded the return of menstruation; titillation of the breast, with or without stimulating liniments, warm and stimulating poultices, and dry cupping, have helped to restore the menstrual flow. Drs. C. Loudon and Scanzoni have approved of these measures.

Uterine Stimulants.—It is difficult to apportion their relative amount of influence, on the menstrual function, to the several influences of marriage; but however well-proportioned the organs may be, connexion occasionally induces menstruation. Some women never menstruated until after marriage, and in a larger number of instances marriage has made menstruation regular. If the organs are disproportionate, the pelvis shallow, and the vagina short, the effects of connexion may be still more marked.

Surgical Treatment.—Any kind of surgical interference—the passing of the uterine sound, the application of mild or of strong caustics—will occasionally be followed by the menstrual flow. Hypogastric acupuncture is recommended by Hufeland; but it is more suitable for Chinese patients. A teaspoonful of liquid ammonia in warm milk may be injected into the vagina once a day for a week. Turpentine has been used in a similar fashion, and aloetic vaginal injections might be tried. Dilatation of the neck of the womb by means of a sponge-tent, or gentian root, even when there is no cervical stricture, will sometimes bring back menstruation. I apply the sponge-tent just about the time when the menstrual flow is due: it often causes pains similar to those of menstruation, and is sometimes successful.

Intestinal Stimulants.—The close relationship of the reproductive organs and of the lower portion of the intestine sufficiently explains why their spontaneous irritation and diarrhœa have been frequently known to precede the menstrual flow, and why strong purgatives have had the same effect. It has been seen that purgation forms an important item in the monthly regimen previously recommended. Aloes is the purgative to be depended on, and as it seems to have some specific action on the womb besides its purgative power, I shall postpone my observations. Cases are on record of the menstrual flow becoming regular, after having been absent for years, very soon after the removal of large quantities of intestinal worms by appropriate remedies.

Nerve Stimulants.—Unwelcome news, a sudden emotion, the flurry of a party, have been known to bring on menstruation in some women. Electricity is more manageable, and the late Dr. Golding Bird found even static electricity very effectual. If the patient's strength were sufficiently recruited, a few electrical shocks passed from the sacrum to the pubis were sufficient to bring on menstruation. Sometimes only one shock would suffice, the remedy being

applied when the flow was due; and he was in the habit of using a jar of the capacity of three pints. Since his valuable observations, inductive electricity has been extensively applied to medical purposes, and it may be used in many ways as an emmenagogue. One pole of the instrument being applied above the pubis, the other armed with an aura-brush, may be used to irritate the inner skin of the thighs and of the pelvis. Electrical foot-baths and hip-baths have been advantageously employed, and the galvanization of the deep muscular tissues of the lower limbs; so I am surprised to see that galvanism has never once succeeded in Scanzoni's hands. The reader should bear in mind what has been written on sedatives; for I have occasionally seen the administration of opiates, internally and externally, followed by the return of menstruation which had been absent for many months, and I gave all the credit of it to the opium, as its exhibition was not accompanied by any other active treatment.

Therapeutical Uterine Stimulants.—The medicines commonly called emmenagogues are aloes, savine, cantharides, ergot of rye, rue, madder. The list might be increased by many others less deserving of credit; and it is well to observe that the doubt which clouds their appreciation is explained by the fact of menstruation being the most autocratic of human functions, coming on in the teeth of the greatest obstacles, and remaining absent in the midst of the most favourable appearances of health. Another reason for our imperfect knowledge of emmenagogues is, that no judicious practitioner would give any of these drugs without associating it with other agents of emmenagogue medication, which alone might have produced the desired effect. It must be noted that two of the most reputed emmenagogues, cantharides and ergot of rye, act on the male as well as on the female reproductive organs.

Aloes.—When one sees the large influence that fashion exercises over medicine, and that therapeutics have quicksands

which undermine and bury facts that seemed firmly established, it is a comfort to meet with drugs that survive systems, and cannot be put aside by change-loving human nature. To me it is some satisfaction to learn that Melampus of Argos cured one of the Argonauts of sterility by giving the rust of his spear; that camphor was used in India as a nervine before Alexander defeated Porus; that cold and the actual cautery were held in higher estimation by Hippocrates than by ourselves. These thoughts were suggested by reading that from time immemorial it has been an Indian practice to apply a solution of aloes to the os uteri to bring on menstruation, a remedy which is reported to have often succeeded, and never to have done harm. Aloes has long been supposed by the best practitioners to be an emmenagogue, and has formed part of a host of popular nostrums; and I believe it to be the best purgative that can be used to solicit the return of menstruation, and that the aloes and myrrh pills deserve their high reputation. The well-established belief that aloes often causes hæmorrhoids may be exaggerated: it implies, nevertheless, that the drug has an elective affinity for the rectum. Aloes has been given in enemata by Schönbein and Aran to cure amenorrhœa; thus given, it purges less, and has a stronger local effect. Aran gave 75 grains of the extract, with 15 grains of Castile soap previously dissolved in three ounces of boiling water, as an enema, every other day for a fortnight, after which he omitted the remedy on account of the prevalence of tenesmus. This tenesmus is doubtless important, and tends to set up a corresponding action in the womb. Aran says, that by this means he has often been able to cure long-standing amenorrhœa in seven or eight days. I have found the remedy to be useful in a limited number of cases, but it is painful.

Aloes might be tried in vaginal injections and suppositories, as an emmenagogue by those who hold hospital appointments.

Savine.—Therapeutists have exaggerated the ill effects of this drug so much, that the belief has got abroad that it is only given with a sinister intent. Dr. Copeman, of Norwich, has published, in the Journal of the Medical Association, three cases, in which five, ten, and thirteen drops of the oil of savine were given in cases of amenorrhœa which had resisted other measures; none of the patients suffered from the drug, and it evidently brought on menstruation in two cases. I have given twenty drops, twice a day, and without poisonous effects; but according to Dr. Loyer-Thèse, Paris, 1831,—an overdose of savine has caused syncope, delirium, great agitation, and high fever. Like other remedies, it may fail without causing these symptoms, in the same way that cases are on record in which large doses failed to cause abortion. Aran admits that savine acts on the womb like ergot of rye; and as this has been often given for flooding, so has savine been successful in two cases of menorrhagia. It will be seen that I give the oil of savine in some suitable mixture, and that I have also had it incorporated into a plaster to be worn over the ovarian regions. How far this contributed to the desired effect, I cannot say.

Ergot of Rye.—That power of contracting the gravid womb which has so often been injudiciously used during parturition, renders it almost certain that it exerts a similar influence over the unimpregnated uterus; and that, according as this contracting force is used on different conditions of the womb, it will stop menorrhagia, or cause the menses to flow. Moreau, of Tours, and Guersant, have cured paralysis of the bladder by ten to twenty grains of this ergot in the course of the day, and in cases of paraplegia it has been known to cause involuntary emissions of semen. It may be given in powder from five to ten grains, two or three times a day, or the tincture may be administered; but I never depend on its sole influence, and associate it with other drugs, as will be seen in the Formulary.

Cantharides.—Perhaps I have been too fearful of the action of cantharides on the bladder, but I have seldom given them. It appears, however, that they have been administered in amenorrhœa by Hippocrates and Galen; and Dr. Mackintosh says he cannot speak too highly of them. He was in the habit of giving ten drops of the saturated tincture three times a day, gradually increasing the dose to thirty, forty, and even sixty drops. The evil effect of cantharides should be met by giving linseed-tea, camphor, and henbane.

Rue.—This acts in the same way as savine, and may be given in the same doses.

Sulphuret of Carbon.—This is considered by Bouchardat to be a strong emmenagogue. Milne-Edwards and Vavaseur assert, that a few drops sprinkled on the abdomen of a woman in labour will reawaken uterine contraction, even when ergot of rye has been ineffectual, and that by so doing hysterical patients are promptly brought to their senses. It is very volatile, and may be given in emulsion of almonds, but I have not tried it on account of its offensive smell.

Saffron.—This drug was so much in vogue in the seventeenth century, that it enters largely into Sydenham's laudanum; indeed, some have erroneously ascribed to the saffron, and not to opium, the return of the menses brought about by the use of enemata containing laudanum. Saffron has been too much praised as an emmenagogue: it is a warm pungent aromatic, like castoreum, vanilla, mugwort, wormwood, and madder, which have each found advocates as emmenagogues, and may, like other stimulants, excite circulation, and thereby help the action of other measures judiciously applied at the menstrual epoch; but I am not at all convinced that the menstrual flow would follow the exhibition of these substances, even in large doses, independently of other means. Saffron has been often combined with aloes—in the compound tincture of aloes, in the compound aloetic pills of the German pharmacopœia, in the popular remedy known as hiera picra, in

the pills of Rufus, which were formerly much in vogue, and in a very good emmenagogue, elixir of Paracelsus. Saffron is given in infusion and in pills; the tincture is a convenient form, and the syrup of saffron of the French code, which is made with a vinous infusion of saffron, is not disagreeable.

CHAPTER VIII.

SPECIFIC TREATMENT.

This chapter ought to be the longest of all, according to those who believe that inflammation of the os and cervix uteri cannot be a primary disease, reacting strongly on the system; and that inflammation of the cervix, to use Dr. Rigby's own words, as truly shows a constitutional diathesis as the gouty toe, the rheumatic knee-joint, or the enlarged strumous gland. With a very strong bias towards vitalism, I have earnestly sought to discover what amount of truth was contained in this paradox. Dr. Rigby has attributed certain cases of dysmenorrhœa to a rheumatic or a gouty constitution; but although he so firmly believed in the constitutional origin of inflammatory affections of the cervix, he has not enlightened us respecting the precise nature of this constitutional taint, and his practice leads one to infer, that for him it was nothing more than that general debility which is the origin of many diseases wherever situated,—a debility requiring to be treated not by any specific remedies, like gout, but by a combination of restorative and tonic measures, already discussed at a considerable length. Careful investigation of the causes of uterine disease convinces me that constitutional debility—as evidenced by a life of continued ill health, a great tendency to affections of the mucous membranes, a highly nervous temperament, and particularly an innate defective putting together of the reproductive organs, shown by menstruation having been all through life more or less morbid—is the chief cause of uterine inflammatory affections; but in very few instances does

uterine inflammation stand in the same relation to some specific poison as a gouty toe does to gout.

General debility being a frequent cause of uterine disease, the utility of tonic medications is obvious, and I have already stated that they cure slight inflammatory uterine lesions which would have also yielded to nature. When, however, inflammation has taken a firm hold of the uterine system, and has given rise to ulceration, steel and quinine, taken in whatever quantities, will have no effect on the disease unless assisted by surgical treatment.

These tonics are admirable to remove *temporary* debility, the result of incidental disease in persons of average health; but they are of little benefit in improving the strength of those whose constitutional debility dates from the cradle, and who are often subject to uterine inflammation. In such women, debility must be accepted to a great extent as a condition of their existence, which can only be improved by the slow workings of nature as life advances, and by more fortunate conditions of life. To attempt to raise their strength above its usual standard by steel and tonics only increases their sufferings, and has been often very detrimental to patients who implicitly continue to follow, for too long a time, in the country, an opinion once taken in town. Little as tonics can be trusted in such cases, they constitute the basis of all good treatment of specific diseases, and sometimes are their sole remedy. Thus in the more doubtful forms of specific action, the herpetic, rheumatic, and false membranous affections of the womb, what more can be done than to renovate the system by the best plan of treatment that can be devised for each case? In the scrofulous diathesis one can only add iodine to tonics; in syphilis, mercury alone or combined with iodine.

The constitutional treatment of cancer is reduced to a most lamentable simplicity, and while quacks trumpet forth their nostrums to the eager belief of suffering human nature, the

conscientious physician knows that he has only tonics to advise in this instance. Writers have recognised cancerous, syphilitic, scrofulous, rheumatic, herpetic, and diphtheritic forms of uterine inflammation. The first three are of practical importance, and deserve separate consideration; but the others may be dismissed with a passing comment.

Uterine disease is doubtless often caused by rheumatic influences, by cold and damp; but they impart no tangible character to the inflammatory lesions, and suggest no peculiar remedy. Writers noticed the occasional occurrence of the same form of eruption on the womb as on the skin of the same patient, and have admitted herpetic disease of the womb: thus my friend Dr. Bernutz has observed a kind of psoriasis on the neck of the womb in a woman who had evident psoriasis of the skin. I do not remember to have ever noticed on the womb any eruption similar to what the patient bore on the cuticle; but I have occasionally observed that women who had often suffered from cutaneous affections, had a corresponding frequently recurring tendency to inflammation of the womb. This evidently shows that there was some constitutional taint at the root of both complaints; but it gives no clue to their remedy. As sulphur is good in both cutaneous and mucous affections, it may be judiciously given, but more reliance should be placed on the several modifications of tonic treatment.

I have shown in another work* that several forms of disease had been confounded under the name of diphtheritic ulceration of the womb. With regard to the ulcero-membranous disease of the womb, which is the most common of these very rare cases, it doubtless depends on some specific agency. Dr. Bernutz has seen it coincide with a similar state of the velum palati and of the gums; but as there was nothing similar and no sign of cachexia in my patients, I can recommend no other treatment than tonics.

* "On Ovarian and Uterine Inflammation," Third Edition, p. 220.

Syphilitic Treatment.—The ravages of syphilis do not require to be exaggerated. It has been asserted that there is a great deal of syphilis in the common run of uterine inflammatory affections; and some have sought to prove this assertion by elaborate statistical accounts of every morbid symptom and lesion to be found in women suffering from syphilis, which is made to bear the blame of all that is found amiss. All that is true in this position is, that syphilis is a cause of uterine inflammatory affections, the frequency of which, in conjunction with syphilis, had been observed by all those who, during the last twenty years, have attended the clinical wards of Ricord and Cullerier. Most of their patients had led a life in which misery and debauchery alternated, and besides its special poisoning influences, syphilis had induced a cachectic state of the fluids tending to inflammation and ulceration, in which there is nothing specific. Mercury and the exigencies of a prolonged treatment are powerful debilitating agencies; and thus one can easily understand that syphilitic women, more frequently than others, suffer from uterine catarrh, which is not at all syphilitic, and from ulceration of the os uteri, which is no more syphilitic than the soreness of the nostrils caused by coryza.

In other words, syphilitic affections of the womb have distinctive characters, and should not be confounded with the non-specific lesions with which they are frequently associated. My disbelief in the syphilitic nature of a considerable amount of uterine inflammatory lesions of the neck of the womb in syphilitic patients is based on the records of observations made in a large City dispensary, and on the range of extensive practice in the upper and middle classes of society, and this only confirms the statements of Ricord and of the elder syphilographers. My conviction is strengthened by the fact of its being entertained by men like Drs. Bernutz and Goupil, who have lately studied the whole subject in the hospital especially set apart in Paris for the treatment of women who

suffer from syphilitic diseases and are not prostitutes. In answer to my question, these observers state, that syphilitic diseases of the womb are very rarely met with in ordinary practice, and that of all the syphilitic diseases of the neck of the womb, the true Hunterian chancre is the most frequently met with; and as in nineteen cases out of twenty chancre on the neck of the womb is accompanied by chancre on the external organs of generation, the diagnosis is singularly simplified. Secondary affections of the womb are much less frequently observed—I mean mucous tubercles similar to those better known to appear on the velum palati, roseola, and a papulo-squamous eruption similar to what appears on the skin. Tertiary symptoms are even still more uncommon on the neck of the womb.

The question was worth discussion, for the belief in the syphilitic nature of uterine inflammatory affections necessarily implies the indiscriminate administration of mercury, as the difficulty of distinguishing the precise cases would lead to its being given in all. It would be indeed a calamity, if, when we have just escaped from the lamentable belief that it was good to give mercury in all obscure affections of the stomach, we should be led, by a false interpretation of facts, to admit the urgency of giving it in the majority of inflammatory affections of the womb.

General Treatment.—It has been stated that ulceration of the neck of the womb can be speedily cured by surgical treatment, and is but slightly benefited by constitutional remedies, whereas, on the contrary, under mercurial influence, syphilitic sores heal without local treatment. Mercurial treatment is called for, not only by chancre on the vagina or womb, which is of rare occurrence, but also by secondary symptoms, and no doubt women have suffered from the conviction, so long taught by Ricord, that secondary symptoms are not transmissible. By marrying a man imperfectly cured of syphilis, many women have been infected so as to present

syphilitic eruptions, loss of hair, sore-throat, and blighted progeny. When chancre, mucous tubercles, or vegetations on the neck of the womb lead to the belief in syphilis, the husband must be carefully examined, and the circumstances of the case explained to him, in order that he may place himself under treatment; but it will be obvious to every medical man that, unless he wishes to be kicked out of the house, he had better merely tell the lady that her liver is gorged with bile, and that she will not recover without a course of mercury. Of the several good preparations of mercury, I prefer the proto-iodide, which agrees best with the stomach, made into a pill with one grain of extract of henbane, to be given morning and night. It is quite necessary that the gums should be decidedly touched, avoiding, as much as possible, severe stomatitis and abundant salivation; and I deem it advisable to continue the mercury till the disappearance of the specific symptoms, and for as much longer as they took to disappear. Cases occur in which it is judicious to associate tonics and cod-liver oil with mercurials, or with arsenic, when the skin is affected. Twenty grains of iodide of potassium, given in a bitter infusion every morning, is of great use in rupia—which often marks the passage from the second to the third stage of syphilis—and in gummata and other tertiary symptoms; but although they often disappear rapidly under the influence of this valuable medicine, they are liable to return unless it be associated with proto-iodide of mercury, one grain to be taken every night, after which the various preparations of bark are often invaluable in recruiting the system.

Local Treatment.—If chancres of the cervix are imprudently cauterized in their acute stage, they enlarge and give a fungous appearance to the neck of the womb, so as to make it look like an irritated epithelioma. Cases of this description have been published as instances of chancre grafted on cancer, and in Germany and Paris amputation has been resorted to.

It is only in the reparative stage of chancre that it can be judiciously cauterized, and then only slightly and with nitrate of silver. Cleanliness must be scrupulous; the patient should take a bath every day, emollient injections three times a day, and the introduction into the vagina of lint or cotton-wool soaked in aromatic wine, are the best means of preventing the appearance of other chancres on the vagina, labia, and perinæum. The same scrupulous cleanliness is necessary in secondary symptoms; the mucous tubercles require to be touched with nitrate of silver, and the iodide of potassium is usefully given in injections and gargles. Tertiary affections of the womb give rise to leucorrhœa, and require astringent injections; and although it is most prudent to give mercury, one must bear in mind that even syphilis has a natural tendency to heal, which explains the variety of opinions entertained respecting its treatment, and that this natural tendency is favoured by improved circumstances and by better food.

Blennorrhagic Internal Metritis.—This is a most difficult disease to cure. Copaiba and cubebs should be given, and astringent injections used as well as injections of nitrate of silver. The direct application of the nitrate of silver to the internal cavity of the womb by Lallemand's caustic-holder is a warrantable procedure, but it may be attended by very dangerous accidents.

Treatment of Cancer.—When convinced that a patient is affected with cancer of the womb, it would be dishonourable not to inform her friends of it, and still worse, to hold out hopes of ultimate recovery, though the result of such conduct will be, that the patient will soon seek other advice, for it is in human nature to trust to the faintest hope held out, and to submit to any torture rather than admit the incurability of disease.

Constitutional Treatment.—Medicine has discovered no remedy so efficacious against cancer as mercury is against syphilis, or even as iodine against scrofula. When cancer

was confounded with chronic inflammation of the womb, one might have been justified in admitting the specific influence of leeches, extract of hemlock, and of similar sedatives; but this is no longer possible, and the most we can do is to keep up the patient's strength by the most judicious combination of restorative and tonic measures. If steel agrees, let it be given in as large doses as the patient can bear, with the precaution of frequently changing one form for another, or combining it with the administration of cod-liver oil. To be called upon to detect cancer of the womb before it is too extensive to be entirely relieved is rare; but should cancer be so limited to the os uteri as to admit of its safe removal, it might be done by the knife, the écraseur, or strong caustic, and it is incumbent on the practitioner to enforce the tonic plan of treatment to the very utmost of his power. A fair trial might also be given to Donovan's solution of iodide of arsenic and mercury, each drachm of which contains one-eighth of a grain of protoxide of arsenic and one-fourth of a grain of protoxide of mercury. Half a drachm may be given twice a day in a china spoon. I have tried this remedy at the recommendation of Carmichael, and although it has done no good in uterine cancer, its exhibition was followed by marked improvement in cases of lupus. Extirpation of the entire womb, even if it ensure the removal of the cancerous diathesis, is too dangerous a remedy to be recommended, for only two survived out of nineteen patients who were operated on. Récamier's patient lived twelve years after the operation. The operation itself is attended by great risks on account of the fragility of the uterine tissues, and the danger of breaking down the conterminous peritoneal adhesions, which renders peritonitis, cellulitis, and hæmorrhage almost inevitable. The removal of the diseased portion of the cervix by an incision made in its healthy tissues is a justifiable operation in cauliflower excrescences and in other rare cases; it is sanctioned by Scanzoni, although he gives no details, and by Professor Simpson. I do not remember

having seen a case in which there was an ulceration evidently cancerous limited to the surface of the neck of the womb. If I did, I should certainly attack it with the actual cautery, which would rapidly cure the ulcer should it not be cancerous. If necessary to cauterize the diseased tissues very deeply, I should be sorry to use the actual cautery, as it has been condemned by those who have had the courage to try it under these circumstances. This applies to the use of chloride of zinc and other strong caustics, for it is very difficult to limit them to the diseased tissues on account of the abundant secretion.

Palliative Treatment of Cancer.—Much may be done to keep up the patient's strength and alleviate her sufferings by astringents, hæmostatics, sedatives, or by ice, which last, however used, is only a palliative. I have known congelation of the neck of the womb to be continued twice a week for a year without checking the usual growth of the disease. In this case it seemed to have prevented hæmorrhage, and its application was not painful. I mention this because I have been obliged to give up the remedy in other cases owing to the pain it determined.

Lotions.—Prolonged irrigation with cold water is not open to this objection; and if it be so arranged as not unnecessarily to wet the patient, it is very soothing, and takes away the offensiveness of the discharge. To prevent this, however, it is often necessary to have recourse to the solution of chlorinated lime, one ounce of which should be added to each pint of fluid to be injected; but I generally use Condy's fluid, a solution of permanganate of potash, of which I advise one teaspoonful to the pint of liquid. To this it is necessary to add a drachm of laudanum, and sometimes a tablespoonful of glycerine, without which these agents are frequently not borne. Similar proportions of laudanum and glycerine may be added to any other cooling injection that it may be necessary to try, such as linseed-tea, a solution of borax, chlorate of potash alone, or combined together, acetate of lead, alum,

and tannin. Another appropriate lotion will be found in the Formulary; and all these remedies have been found useful in promoting the healing of the ulcerated surface, and in restraining the abundance of the discharge, which is both weakening and disagreeable.

Hæmostatics.—The topical agents mentioned under this heading are all more or less available, but may require frequent application. The bleeding surface may be painted with tannin or nitrate of silver, each dissolved in its weight of water, or with a solution containing one ounce of the perchloride of iron to nine of distilled water. Ruspini's styptic, in which a pledget of cotton-wool is to be soaked and well fixed to the ulcerated surface, by means of the speculum, is a good preparation; and I have applied the acid nitrate of mercury with benefit.

Sedatives.—Who would have to treat cases of cancer without the aid of sedatives? If I do not dwell on them, it is because I should have to re-write the chapter on Sedatives, which should be well kept in view in the treatment of cancer. Sedatives given as suppositories, injections, poultices, all find application; and it is better to give chloroform to anæsthesia than to let a patient be driven to madness by an indescribable irritating pruritus of the vagina or by unbearable pain.

Treatment of Scrofulous Ulceration.—It frequently occurs that the only evidence of a cancerous diathesis is a cancerous ulceration of the neck of the womb; the same remark applies to syphilis; whereas, on the contrary, the fact of ulceration of the womb being scrofulous is not clearly written on the neck of the womb, and is only to be inferred from the appearance of the patient, and from her having been scrofulous at previous periods of life. In other words, I have frequently seen ulceration of the neck of the womb in scrofulous subjects, but I do not remember to have ever seen a scrofulous ulcer of the cervix, an ulcer in which broken-down tubercular matter could be detected. I have occasionally met

with what Lisfranc has described as tubercular or scrofulous ulceration of the womb; but the microscope has shown that the matter assumed to be tubercular consisted of epithelial cells in a fatty substance, and resting on a hard irregular ulceration, in which epithelial and fibro-plastic cells were abundant. This form of ulceration would thus seem to be akin to those described as cancroid, and similar to the ulceration of lupus, and to what Huguier has described as esthiomène of the vagina. In lupus the secretion being exposed to the air forms crusts, whereas in the pseudo-tubercular ulcer of the womb the secretion is continually moistened by mucus, and retains a curd-like appearance and consistency. These ulcers are fortunately very rare, for they are difficult to heal, and require the use of strong caustics.

With regard to ulcers met with in scrofulous subjects, I have already said that they present nothing specific, and they do not require any modification of the usual surgical treatment of such cases. It would be well, however, to attempt to remove the constitutional taint, by combining the internal exhibition of preparations of iodine with judicious tonic treatment. Iodide of potassium in a tonic mixture will do well, but I prefer the iodide of iron given in a syrup, from thirty to sixty drops, in a little water, twice a day after meals.

CHAPTER IX.

UTERINE ORTHOPÆDICS.

A HOST of remedies for any complaint implies their inefficiency, and of the large number of pessaries that have been invented most are useless, some dangerous, and very few have been adopted by any other practitioner than their inventors. That aptitude for all mechanical contrivances which characterizes the British mind has been brought to bear on the treatment of uterine displacements. One of the best bandages has been invented by Hull; Mackintosh taught us how to dilate the neck of the womb; and several pessaries have been invented by Professor Simpson. An undue development of this mechanical tendency gave rise to a system of uterine orthopædics, in which the incontestable symptoms of inflammation of the womb were accounted for by its displacements. Patients were found sufficiently docile to lie on the back for a year, if the womb were anteverted, and on their belly if it were retroverted. Practitioners entertained the singular notion that they could permanently restore the womb to its right position if they replaced it by means of the uterine sound every day for two or three months. The absurdity of this plan led Professor Simpson to devise his intra-uterine pessary, which he advocated with the same enthusiastic spirit that made him take up chloroform for midwifery, tallow for consumption, numismatics, or revivals. No contagion is so catching as enthusiasm, and the new panacea was extensively tried both at home and abroad. Unfortunately it caused the death of women, if not in Scotland, at least in England and in France.

Seven fatal cases that occurred in France were brought before the Imperial Academy of Medicine, and the treatment of displacements by intra-uterine pessaries was discussed at great length by the most talented men in Paris, and almost unanimously condemned. Professor Simpson seems to have acquiesced in the judiciousness of this decision, for he entered no protest against the statement of Depaul, who observes in his report to the Academy,—" J'ai vivement regretté, quand j'ai voulu connaître les résultats obtenus par M. Simpson, de ne trouver que des assertions sans preuves; je me suis adressé directement à lui, mais au lieudes observations que je reclamais je n'ai reçu que des instruments." Intra-uterine pessaries have indeed fallen into such disrepute in France as well as in Germany, that they are not even mentioned by Dr. Goupil in the second volume of the work he is publishing in conjunction with Dr. Bernutz. I shall not be able to pass over so lightly this dangerous mode of treatment, as it is still countenanced by Dr. Simpson and by many of his pupils.

The displacement theory is founded on a most fallacious assumption; for I maintain with Lisfranc, P. Dubois, Depaul, Gosselin, Bennet, Bernutz, and Goupil, that, with the exception of prolapsus uteri, uterine displacements have no proper symptoms, and that the pain and other symptoms that accompany them are to be explained by congestion or inflammation of the womb, of its mucous lining, or of its serous envelope. It is by neglecting antecedents so important as cellulitis and peritonitis, or by undervaluing their agency, that the importance of flexions and versions of the womb has been exaggerated, whereas the womb has been disposed so as to admit of being twisted and turned with perfect impunity so long as it is not diseased, and flooding is often the first indication that the womb has been long subjected to extensive displacement by fibrous or ovarian tumours. I established the innocuity of uncomplicated uterine displace-

ments in the papers which I published in the *Lancet*,* and I refer the reader to Dr. Goupil's contribution for a still more elaborate proof of the same position. Firmly believing that the displacement theory is an absolute fallacy, it is a duty to protest against it, because it appeals so forcibly to popular prejudices. The pain caused by a dislocated joint is so evident and severe, that a dislocated womb will be received as a sufficient reason to account for any amount of internal suffering by those who do not know better, and might be made the motive for instituting unnecessary treatment.

It is quite useless for me to state that most of the practitioners who have adopted the mechanical treatment of uterine diseases, have only been guided by the honest desire of curing their patients, but no theory more easily admits of being improperly taken advantage of by the unscrupulous. Redness of the neck of the womb, its being eroded or ulcerated, are tangible conditions to be discovered by those who know how to look for them, but unless uterine displacement be very considerable, no two practitioners will agree about it, for one will call considerable what another will consider slight. I have known practitioners lose their patient's confidence on account of the undue importance ascribed by a consulting authority to such a moderate amount of displacement as attends the overweighting of the womb by long-continued inflammation. If it be so difficult to form a just estimate of uterine displacement in those who have borne children, it is much more difficult to do so when the vagina and the abdominal walls have not lost their virgin tensity and firmness. Neither is this great diversity of opinion respecting uterine deviations to be wondered at, when one remembers the position occupied by the womb, and the fact of its being a moveable organ amongst other moveable organs; and as the womb is not examined until its position has been altered by long-continued suffering, one is ignorant of what, in health, would

* *Lancet*, 1856, vols. i. and ii.

have been its right position, and one is therefore deprived of a positive standard by which to gauge the amount of displacement. When the practitioner was only guided by the sense of touch, the affections of the neck of the womb were involved in great obscurity, and as it is impossible to bring the sense of vision to bear on the diagnosis of uterine displacements, their pathology is full of contested points, and their treatment is equally unsettled. Nothing more satisfactorily proves the imperfection of our acquaintance with uterine displacements than the fact, that anteflexion of the womb, which was first recognised as frequent by Velpeau, and considered by him to be a malformation, is only an exaggeration of the normal bend of the unimpregnated womb. It was Dr. Bouland who, in 1853, established, by studying the development of the womb in the fœtus, and by numerous post-mortem examinations, that anteflexion is the normal condition of the womb in infancy and in the young unmarried woman; and this is freely admitted by Verneuil, Gosselin, Caseau, Aran, Goupil, and Dr. H. Bennet.

The womb is poised upon the vagina, the walls of which, in the healthy subject, are in close apposition, so that the womb is really supported by a muscular column, which is firmly implanted in the perinæum. It has been correctly observed, that the perinæal floor forms the apex of a large inverted cone, of which the diaphragm is the basis, its sides being formed by the pelvis and by the elastic abdominal walls. Thus enclosed within the abdomen, the womb, standing on its apex, has an axis which is the continuation of that of the vagina. The womb is slightly anteverted, so that its axis is oblique from above downwards, and in an antero-posterior direction; it has a certain limited range of mobility in the pelvis, so that its axis varies in different women, and in the same woman, according as the bladder and intestines are severally empty or full; but to say with Cruveilhier that the uterus has no proper axis, is as incorrect as to say that there is no average

weight, size, and form for the various parts of our frame. The womb is maintained in its average position by the vaginal column, by the ligaments of the womb, and its surrounding organs.

If the round ligaments exist in the only animal that has the privilege of standing erect, it must be to a certain extent to steady the womb; but to suppose that they are ever stretched sufficiently to keep the womb in its normal situation, and that anteversion of the womb depends upon these round ligaments being too short, and retroversion on their being too long, is an assertion too *square* to be in harmony with the real facts of the case. It is repeatedly said that, in cases of retroversion, if the patients are left on their backs for a time, the uterine ligaments recover their former tension, and are enabled to retain the womb in its right position; but if this may be asserted with some show of reason of the round ligaments, which contain muscular fibres, how can it be said of the broad ligament?

If the womb is partly kept in its place by its ligaments, the same result is brought about even more effectually by the pressure of the surrounding organs. Thus, if the normal axis of the womb is inclined from above downwards, and in an antero-posterior direction, it is caused by the greater capacity of the recto-uterine peritoneal pouch than of the vesico-uterine pouch, so that the bunch of intestinal folds hanging above and before the sacro-vertebral angle presses on the posterior surface of the body of the womb, and retains it in its right position. It may be said that unmarried women, after some unusual muscular effort, sometimes feel the ligaments give way; but the correct way of interpreting this sensation may be, that the womb has been suddenly forced under the intestinal mass.

Thus poised on the vaginal column, the healthy womb maintains its position in virtue of the arrangement of forces to which it is exposed. All impulse resulting from the con-

traction of the diaphragm, the base of the large inverted cone, rebounds from the elastic perinæum, and the womb, by its pyriform shape, presents its surfaces so appropriately that it is steadied and supported by the various impulses it receives. The situation of the womb once determined, if without departing from its normal axis it descends into the vagina, it is said to be in a state of *prolapsus* and *procidentia*. This malposition and inversion of the womb were described, by medical writers of the latter part of the last century, as the only uterine displacements. Prolapsus frequently occurs in those who have had children, but it is not so frequent as was supposed. Huguier has demonstrated that it had been often confounded with hypertrophic elongation of the cervix uteri.

The body of the womb may be bent on its neck so as to appear curved like a retort, thus constituting various deviations from its normal axis. These deviations are called inflexions: if the body of the womb is bent towards the rectum, the womb is in retroflexion, and in anteflexion if the body of the womb is bent towards the bladder. The axis of the womb considered in itself remaining normal, the womb may be displaced *in toto*, and incline to become horizontal, the patient being in the erect posture. Anteversion is frequent, as might be inferred from the frequency of anteflexion; retroversion is less frequently observed in those who have not borne children. Latero-versions are also of frequent observance. My views respecting the treatment of uterine displacements will be imperfectly understood if I do not touch on some of the parts connected with their causes, and the symptoms ascribed to them.

Causes of Uterine Displacements.—The enormous distension of the vagina by parturition is the principal cause of prolapsus; for not only is the vaginal column weakened, but the muscular perinæal floor and the perinæal fascia in which it is set are often much weakened by over-distension, if not by laceration of the perinæum. Having thus lost its tone, the perinæum no

longer sufficiently antagonizes the diaphragm, and the womb is steadily pushed down the vagina. Successive labours only increase prolapsus, notwithstanding Moreau's assertion to the contrary. The additional impulse determined by any kind of over-exertion, by violent fits of laughter or of coughing, will expedite the result; and the more shallow the pelvis, the shorter will be the vagina, and therefore the more easily will the womb be forced through it. Abortion leads to prolapsus in the same way, and prolapsus occurs in the unmarried, because menstruation is a powerful cause of all uterine displacements. This would have been better appreciated, had those who have written on the subject borne in mind that menstruation is the prototype of parturition, and in every respect a miniature parturition. The womb, the vagina, each portion of the generative canal, is abundantly congested with blood for about a week in every month; a substance is expelled—expelled by forcing pains, which faithfully represent the more energetic pains of labour. Thus the process of menstruation relaxing the vagina, and rendering the womb more weighty, favours its tendencies to prolapsus, which will be sooner effected in proportion to the frequency and intensity of the forcing pains.

A liability to uterine displacements is also the result of most diseases of the reproductive organs. The morbid stimulus favours the congestion of the whole generative intestine, it relaxes the vagina, and adds to the weight of the organ which it was intended to support. I have known the womb to be suddenly forced outside the vulva after long-continued forcing pains in a young lady, aged twenty-five, who was suffering from chronic internal metritis, although the vagina was not more dilated than is usual in the unmarried. The coincidence of hernia with prolapsus or procidentia of the womb would show its dependence on a general relaxation of the fibres, and the utility of tonics and hydropathy.

The body of the womb may be in its right place, the

vaginal cul-de-sacs may have their proper depth, yet the os uteri may project from the vulva. If the uterine sound penetrates easily from four to six inches, it will be evident that there is an unnatural elongation of the supra-vaginal and vaginal portions of the cervix. This is sometimes congenital, but it seems generally caused by post-puerperal peritonitis, which checks the involution of the uterine tissues, and thereby causes an hypertrophic elongation of the cervix. Abortion produces the same results. I have several times met with very considerable elongation of one lip of the os uteri. I have attended a lady in whom the vaginal portion of the cervix resembled a large sausage four inches long, and its extremity protruded from the vulva. Generally speaking, however, the elongation depends on that of the supra-vaginal portion of the cervix.

With regard to cases of exaggerated anteflexion and retroflexion of the womb, I believe, with Jobert de Lamballe and Caseau, that many of them are congenital. Malgaigne, in a case inspected after death, found that the body and neck of the womb were folded on each other like the leaves of a book: but when put in the right position, it was maintained. Sometimes the retroversion of the womb also causes its body to bend on its neck, continued pressure causing actual loss of substance in the parts involved in the flexure; they may become atrophied, and the flexed point is then reduced to a mere fold or hinge. In other cases, on the contrary, the flexed parts have been found softened and in a state of fatty degeneration. Inflammatory action causes interstitial deposit, the flexure is more curved, and the infirmity becomes permanent. These anatomical conditions have been found chiefly in women who had borne children, and they depend sometimes upon irregular involution of the womb after parturition, causing the permanent retraction and atrophy of some of its muscular fibres, and the persistent enlargement of other portions of the womb; hence a loss of the balance usually existing

between the body and the neck of the womb, and the bending of one on the other, from causes which otherwise would not have produced this effect. Softening and hardening of the uterine tissues at the point of flexion may be caused by partial post-partum inflammation of the muscular tissues of the womb. Guerin has shown how certain deformities were caused by the inflammation and subsequent retraction of some muscular fibres; and it may be admitted that sometimes limited patches of inflammation in the muscular structure of the womb determine its permanent deformity, by the retraction of some of its muscular fibres. The womb is thus less able to meet the pressure of the adjoining viscera, and so the uterine deformity is increased. The frequent, obscure, and often undetected inflammation in the uterine tissues subsequent to abortion sufficiently accounts for the frequent occurrence of flexions. The uterine deviations occurring in the unmarried can be accounted for by the fact, that if the vessels of the womb be fully injected after the removal of the organ from its body, it becomes anteflexed, leading one to infer recurrence of anteflexion from the congestion determined by a scanty menstrual flow.

Matrimonial intercourse is certainly a cause of anteversion of the womb, particularly when the pelvis is shallow and the vagina short. This cause had escaped notice until it was pointed out by Dr. Rouband, and Dr. Bennet has lately insisted upon its influence. In a case related by Levret, the shortness of both the round ligaments is said to have caused anteversion of the womb, which was mistaken for stone in the bladder.

The most serious cases of retroversion were, I believe, first explained by W. Hunter. About the third or fourth month of pregnancy, when the womb becomes completely retroverted, it is then just large enough to be jammed in between the sacrum and the pubis. Insurmountable constipation and

the impossibility of passing urine render it urgent to replace the womb in its right position, and its further increase of size is sufficient to prevent the recurrence of retroversion. Such cases are very rare, but the womb, after parturition, has a tendency to be retroverted. This is favoured by the relaxation of the various connexions which kept the virgin womb in place, whereas stronger bands would be necessary to support the additional weight of the womb after gestation.

Retroversion is, however, frequently observed in the unmarried after uterine disease of long duration; after violent efforts; after a fall on the sacrum; after prolonged fits of laughter; after, in fact, any violent or sudden pressure to the abdominal organs. These exciting causes of retroversion are exactly the same as those which cause prolapsus, so the mechanism of retroversion should be sought for in its predisposing causes.

In those subject to prolapsus there is frequently a short vagina, a straighter sacrum and a shallow pelvis; whereas retroversion is generally observed where the pelvis is deep, the sacrum long and greatly curved, and the vagina long and more than usually curved, so that the womb is placed higher than usual. The anterior wall of the vagina and part of its lateral walls are firmly attached to the pubic arch, and it is obvious that for the vagina to be long and curved there must be considerable development of its posterior wall. Now, if retroversion occur, it depends not only on the womb being overweighted, but on something having debilitated the posterior wall of the vagina. In pregnancy, this is evidently the result of increased distension, having for its object the possibility of the child's safe passage through a narrow channel. In abortion and in menstruation the same explanation holds good to a limited extent. What is thus done by a physiological process, is likewise effected by a morbid; and in chronic affections of the womb with frequent forcing pains, it is found greatly relaxed and dilated, while a less marked alteration

takes place in the length of the anterior wall of the vagina. Thus the womb is placed higher up than usual, less forcibly retained in its place by local connexions, and poised on a vaginal column the posterior portion of which is less solid than usual; and retroversion will occur in proportion to the intensity of the exciting causes already mentioned.

If the womb is kept in position by the pressure of the distended bunch of intestinal folds on its posterior surface, then retroversion ought to be produced by prolonged dorsal decubitus, in which the inflated intestines will tend to rise above the womb, and to depress it gradually lower and lower. This is confirmed by observation; for in two patients in whom prolonged dorsal decubitus was necessary for the cure of fractures, Huguier found the womb lying flat on the pelvis under the intestines; and Robert also cites two cases of complete retroversion of the womb in two women who were long obliged to lie on their backs, one for paraplegia, the other for typhus fever. It will be easily understood, that if the mesentery, from which depend the intestinal folds, or the folds themselves, are shorter than usual, the displacement of the womb will be facilitated. The *modus operandi* of a fall, in producing retroversion, deserves our attention.

I was once called in to see a poor woman who had left her bed the day after her confinement, and who fell down upon her back. This was followed by great abdominal pain, and an inability to pass urine. On examination, I found the womb in complete retroversion. After placing her on her hands and feet, I introduced the whole hand into the vagina and replaced the womb. This fall on the sacrum caused the weighty womb to subside to the lowest part of the pelvis. The passing of the womb under the intestines was facilitated by the relaxed state of the abdominal walls.

An unmarried lady related to me that a few years previous, after unusual exertion, she felt something give way within her; that, ever since, when not in bed, she has suffered more

or less from pains in the back and in the inguinal regions, with constipation or urinary disturbance, and the inability to walk. On examination, I found the womb retroverted. If the ligaments of the womb really retained it in position, a fall on the sacrum, or a great muscular strain, might impart a concussion, but would not cause any displacement; whereas one can better understand that by a fall on the sacrum the more solid womb may be forcibly impelled under the half-inflated intestines, and there remain; one can likewise understand how, on a woman making some sudden strain to take hold of an object high placed, by the rapid violent concussion of the abdominal walls, the solid womb may be forced to pass under the intestines. The sensation felt is as if something had suddenly snapped within the body—as if something had given way. This is caused by no rupture of a ligament, for such rupture has never been found, but by the sudden displacement of the womb; and on replacing this completely retroverted womb, in the last case alluded to, I felt the womb return so rapidly to its right place as if by a kind of suction, that my first impression was that I had perforated the intestine.

Post-puerperal metritis, which checks the physiological process of bringing the gravid womb back to its original size, is perhaps the main cuase of that overweighing of the womb which leads to its retroversion.

If the increased weight of the womb, by gestation or parturition, contributes to produce retroversion, it will be evident that whatever increases the weight of the womb beyond certain limits will produce the same result. The swelling following inflammatory affections of the womb must therefore be admitted as a cause of retroversion or anteversion. It would be difficult to understand how so simple a proposition can have been lately denied, because Velpeau proved long ago that inflexions of the womb were frequent, and had been frequently mistaken by Lisfranc for engorgement of that organ.

Velpeau lately affirmed that there is no such thing as a partial swelling of the womb by congestion of blood. I still believe that this condition is occasionally met with; and admitting that one may be deceived in supposing that a uniformly swelled womb was larger than it ought to be, a well-educated finger cannot have betrayed me, when I feel on one side of the posterior wall of the uterus a distinctly marked elevation. Velpeau says, "show me the uterine swelling on the dead body." He might as well have asked for the anatomical lesions of many cutaneous diseases, when death has extinguished the morbid stimulus which drew and retained blood to limited spots of the skin. Indeed, a French surgeon of distinction once extracted, as cancerous, a womb which was only engorged. I cannot help thinking that personal feelings somewhat interfered with the habitual rectitude of scientific vision for which Velpeau made himself illustrious, and that in this attempt to sweep away what Lisfranc had constantly in view, my friend was unconsciously influenced by the remembrance of the unparliamentary manner in which Lisfranc waged war with all his competitors. Congestion of the womb is a frequent cause of retroversion, and this in its turn increases the engorgement, by causing mechanical impediments to the venous circulation. In the same way retroversion will induce rectal and vesical tenesmus, which energetically contribute to the displacement of the womb.

Latero-flexions of the womb are the most frequent of uterine deviations. They are often observed in infants, and should have been rectified by the changes of the womb caused by puberty, but some persist irrevocably. Thus Tiedemann gives drawings exhibiting an extreme degree of uterine obliquity, arising from the unequal development of the two halves of the womb.

Morgagni found the uterus forcibly deviated to one side of the pelvis by the diminished length of the corresponding broad ligament: there was no tumour, no trace of previous

inflammation to explain the malformation. The lateral flexion of the womb was produced by the absence of the round ligament in two bodies examined after death by Huguier. Such cases are rare; but there is an evident cause of uterine deviations, which has been too much lost sight of—that of pelvi-peritonitis.

Pelvi-peritonitis is frequent after miscarriage and parturition. Many such cases are not distinctly recognised by the medical adviser—many never come under his observation. Nature often works a cure, but the consequences may be ever after felt by the womb. Numerous anatomo-pathologists have noted the frequency of the sequelæ of peritonitis in the pelvis; and lately Bonnet, the celebrated surgeon of the Hôtel Dieu at Lyons, has asserted that, after examining the state of the pelvic organs of all those dying at that vast hospital, he found that in four out of five who had complained of what are commonly called uterine symptoms, there was pus or thickening and false membranes about the broad ligaments, causing deviations of the womb which no pessaries could correct. This cause of uterine displacements has been alluded to by Prichard, and has been demonstrated superabundantly by Drs. Bernutz and Goupil in their second volume.

Symptoms.—The latest works on uterine deviations include a very long account of symptoms. It seems as if the authors had ransacked works on uterine pathology to discover all the possible symptoms of the various forms of uterine disease. Dyspepsia, intercostal neuralgia, partial paralysis, hysteria, have all furnished symptoms which have been adopted as those of uterine deviations; and mental derangement has been accounted for by a twist in the womb. If writers have done so, it is because uterine deviations have no proper symptoms; and in their anxiety to enlarge their subject, they have been led to refer to uterine displacements all the symptoms of the uterine diseases by which they are often complicated.

In asserting that there are no pathognomonic symptoms of

uterine deviations, I only assert for uterine deformities what is admitted for spinal and all other deformities of the human frame. The symptoms most complained of by women are, feelings of uneasiness, or weight, at the lower part of the body, with bearing-down sensations towards the anus. There may also be pains in the back, in the inguinal regions, or in the inner part of the thighs. These pains are much increased by walking; over-walking renders them intolerable, while the reclining posture relieves, and often lulls them completely. Partial paralysis of the lower limbs, and all the nervous symptoms produced by uterine diseases, are often noticed. Constipation and urinary disturbance may also exist. Disturbance of the menstrual function is also not uncommon—the discharge being either too abundant, too scanty, or too painful. These symptoms are more constant in extensive retroversion, and occur now and then in cases of anteflexion, which are in general harmless, as stated long ago by Velpeau. Scanzoni has somewhat exaggerated the influence of uterine flexions in producing dysmenorrhœa by the interruption of the menstrual flow, and my experience teaches me that anteflexion is unnoticed by the patient, unless there be uterine congestion and inflammation of its lining membrane. Retroflexion does not appear to cause dysmenorrhœa.

Such are the symptoms attributed to uterine deviations; but exactly the same symptoms often attend early pregnancy, miscarriage, and many uterine affections: some women will even present these symptoms without it being possible to trace them to any structural change of the womb, whose nerves are alone affected, as in uterine neuralgia or hysteralgia. Indeed, it is now admitted by almost all authorities, that the womb may be bent in various ways, and anteverted or retroverted to a considerable extent without determining any symptoms. This I daily find to be the case; and in lately discussing the subject with some of the Paris physicians, who have vast opportunities for observation, I found

that they also had been led to the conclusion that uterine misplacements gave rise to no suffering, unless they became complicated by some uterine affection. In Germany the belief in the innocuity of uterine deviations is so gaining ground, that it has been actually proposed to induce retroflexion of the womb by means of the uterine sound, in order to cure prolapsus.

These cases of uncomplicated uterine deviation are very frequent, because the final destination of the womb necessitated such arrangements as would ensure to it the greatest possible latitude of movement in the midst of organs which receive support and a healthful stimulus from such movements—organs so constructed as not to feel pain, or to have their functions disturbed, by very slight alteration in the shape or position of the womb. The uncomplicated cases are only accidentally discovered; the complicated come to us, and are variously examined, interpreted, and treated by medical men. An idea of the complications most frequently met with may be gathered from the statistics published by Dr. Saussier. In 102 cases of uterine deviations, he found it complicated by

Ulceration of the os uteri in	67 cases.
Engorgement of the body of the womb in .	53 „
„ „ neck of the womb in .	39 „
„ „ broad ligaments in .	68 „
Extreme uterine sensibility in	91 „
Uterine catarrh in	71 „

Dr. Goupil found pelvi-peritonitis in 16 out of 36 women who had borne children, and in whom the womb was anteverted.

As I believe that the symptoms accompanying uterine deviations express some complicating uterine disease, it would be out of place to treat them in detail, with the exception of those which are most frequently complained of. Unless the womb be inflamed, its displacement has little influence on

micturition. The bladder has been constructed and endowed to bear with impunity extremes of pressure externally and internally applied, and it is unjustifiable to explain vesical symptoms by moderate displacement of the womb; when, however, a voluminous womb lies right across the pelvis, it so presses the bladder as to render its frequent evacuation urgent. Under similar circumstances the pressure of an enlarged womb is a mechanical cause of constipation which is most marked in retroversion, but is not always met with.

The sensation of a weight and forcing down towards the perinæum is often complained of; it is not pain, and still it is often said to be more distressing than pain. Theory states that this sensation should be most felt in cases of procidentia of the womb; but practice teaches that, when the womb is visible between the thighs, women complain greatly of exhaustion, incapacity for exertion, but they do not complain of bearing-down pains, and are often able to move about. Theory states again, that fibrous tumours of the womb, by their pressure on the rectum, ought to produce the bearing-down sensations; but very frequently this is not the case. The bladder and rectum are often forcibly pressed without the patient experiencing any great inconvenience; or, in other words, the sensations of weight are not always felt when the womb is forced through the body, or when it is pressed down by solid tumours. Women suffering from uterine catarrh, from erosions, from ulceration of the neck of the womb, do not in general complain of forcing-down pains. Women in excellent health often suffer much every month from forcing pains just before the menstrual discharge, and during the first day or two of its flow. These forcing pains are signs of the ovarian nisus compelling the womb to rid itself of blood, and represent the stronger pains by which the womb is forced to rid itself of the produce of conception. Women suffering from habitual congestion and enlargement of some portion of the womb often complain of the sensation of weight. A few

minutes after a patient affected with retroversion of the womb has left her bed she will sometimes complain of bearing-down pains, and on examination the womb will not be found more retroverted than when the patient was previously examined in bed; yet her sufferings last until she again lies down. Such being the facts relating to this symptom, how is it to be explained?

It is easy to say that bearing-down pains are caused by the dragging of the ligaments of the womb, but as the forcing-pains are often absent in procidentia of the womb, when the uterine ligaments are most strained, this explanation falls to the ground. In women, at the approach of menstruation, in those, at least, who are affected with chronic congestion of the womb, the forcing sensations are in direct proportion to the determination of blood to the womb. When the forcing sensations occur in women affected with uterine deviations, if they assume the erect posture, they are probably caused by a change in the hydrostatic condition of the womb, and by the over-distension of its bloodvessels deprived of valvules. In other words, it is congestion alone or complicating uterine catarrh which causes the pain attending uterine displacements, and the pain is relieved by whatever relieves congestion, as the pain of varicocele is relieved by a suspender. This explains why dysmenorrhœa frequently attends all deviations, and why patients are often met with in whom permanent uterine displacement causes no other mischief than painful menstruation. If the menstrual flow is scanty, the congestion is greater and the pains proportionally worse.

Continued pelvic pains whenever the retroversion is considerable may be explained by the stretching of the peritoneum, and by the long-continued strain on the broad ligaments. The ovaries are often more or less irritated in cases of retroversion by the strain on the broad ligaments, and by some obstruction in their returning circulation. Dr. Rigby has pointed to ovaritis as a result of long-continued pressure

of the womb on the left ovary. Dr. Saussier found engorgement of the broad ligaments in 68 cases out of 102, and many of the distressing symptoms attending retroversion are to be referred to these complications. In many cases the uterine deformity is slight, and still the pains are very severe. Sometimes the same pains exist, without any appreciable alteration of form and structure of the womb. This brings me to the consideration of uterine neuralgia.

Limbs recovering from contusions or inflammatory affections often remain long affected with annoying sensations of distension, heat, itching, or pain. This may be the case with the womb after its inflammatory affection has been cured. There may remain a neuralgic affection, which must be treated as such. Neither must the fact be ignored that many women suffer much from uterine deviations which are unconnected with any uterine inflammatory lesions, nor that the same amount of uterine deviations which will be tolerated by some patients will give rise to serious disturbance in others. This is but a repetition, in uterine pathology, of what holds good with every other organ. The same amount of morbid lesion will at times be unheeded by the nervous system, while at others it will awaken a host of nervous symptoms; thus, in certain constitutions, the uterine deviations so react on the uterine nerves as to induce hysteralgia. The nervous symptoms bear no proportion to the amount of the uterine deformity, being sometimes intense when the deviation is slight, or when the deviation is extensive the uterine neuralgia may be slight. The nervous symptoms are often cured by various modes of treatment, while the uterine deviations persist, and will again and again wake up the neuralgia.

With regard to prolapsus, it may take place to a great extent without the usual symptoms of the falling of the womb, and unaccompanied by inflammation of its lining membrane; usually, however, there will be forcing pains and

disturbance of the bladder and rectum. Half the misery caused by the complete expulsion of the womb from the vagina depends on cystocele and rectocele, and on the inflammation of the mucous membranes in both cases. If the hypertrophic elongation of the cervix is so great as to make it protrude, it may become excoriated and ulcerated, causing great pain and interfering with connexion.

Uterine flexions are not incompatible with pregnancy, although this is less probable, on account of the coincidence of inflammation of the inner cervix, particularly at the point of flexion. The chances of conception diminish in proportion as retro- or anteversion is more complete, but a limited amount of prolapsus rather increases the chances of pregnancy.

The diagnosis of uterine displacements was almost impossible before Professor Simpson showed the mode of using the uterine sound, and the admirable results to be obtained from this proceeding, the utility of which had already suggested itself to Récamier and Osiander. It was by means of the uterine sound that Huguier was able to establish the distinction between prolapsus of the womb and elongation of the cervix; but I think it highly injudicious to use this instrument under ordinary circumstances, as I shall hereafter state. Retroversion of the womb would not have been considered so frequent if practitioners were in the habit of examining the same patient both in the standing and in the recumbent posture; for the womb which is found anteverted when the patient is standing, will sometimes be found retroverted when she is lying down.

The progress of those cases of uterine deviations which come under our notice may be inferred from what is known of the march of chronic uterine inflammations, and the uterine affections which most frequently complicate deviations. The progress of many cases of uterine deviation shows the neuralgic character of attendant sufferings, the symptoms suddenly subsiding, while the deviation remains the same. This sudden

subsidence is sometimes caused by a serious illness, a reverse of fortune, or, in other words, an imperative necessity for exertion, and a sudden shock to the nervous system. In other cases, these pains, which keep so many women on the sofa, wear themselves out, and gradually disappear at the change of life. Few women from forty to fifty consult for uterine deviations, which still, however, exist. After the cessation of menstruation, the ovaries cease to be the powerful centres of nervous power and the periodical centres of attraction for the blood, and of prolonged efforts to expel it; therefore the womb becomes atrophied, cylindrical, and less weighty, its deviations become less and less apparent, and the vagina has a tendency to contract.

Treatment.—All cases of uterine deviations are complex problems—problems embracing various elements, each one of which has more particularly struck various practitioners and guided their practice. The result has been, that one of the indications of such cases being often alone attended to, partial relief has alone been afforded. The radical cure will be more frequent when all the bearings of the case are taken into consideration. The only way of solving complicated problems is to eliminate one by one all their component elements; but before doing so I shall make a few remarks applicable to most of the cases under consideration. With regard to constitutional treatment I have nothing new to add, and its utility is obvious. It is not always necessary to abstain from connexion, but I have known patients who only suffered from uterine deformities for the day or two which followed connexion, and others who are never well except when their husbands are absent for a few months. There is also another precept easy to explain and difficult to enforce—the considering the monthly period as a disease. Some patients never suffer except during menstruation, a few days before and after, and I have considerably abated their sufferings, and sometimes removed them, simply by persuading

them to remain in bed or on the sofa for a few days, using hip-baths and large warm abdominal poultices.

General Treatment of Displacements.—It will be obvious from what precedes, that displacements of the womb would require little or no special treatment if the congestion, inflammation, and neuralgia by which they are complicated were successfully cured by the measures discussed in the preceding chapters. Thus, on examining carefully women who have suffered much from uterine deviations, it is found that some are likewise affected with inflammatory congestions, erosions or ulcerations of the neck of the womb. The pathologist then infers that the pains experienced depend upon these inflammatory lesions. At all events, the indication is clear—to treat all ulcerations by the surgical modes of treatment on which I have dwelt, and to subdue inflammation, and by so doing the uterine deformity will, in some cases, be entirely removed, though in others the patient's sufferings will be only diminished. It is also equally true, that in other patients the inflammatory affection of the neck of the womb may be cured, and yet they may still continue to suffer. The sequela of inflammation, the chronic enlargement of the neck of the womb or of its body, must not, however, be treated by halves, for there are patients who continue to suffer from nervous symptoms so long as there remains the smallest nucleus of organic mischief. A course of mercury or iodine may therefore be necessary, as well as local astringent measures.

The importance I have attached to the relaxed state of the vagina in the mechanism of retroversion and anteversion explains the importance I attach to such treatment as may correct this state—astringent injections carefully made, either with Coxeter's syphon-syringe, or with Mr. Whitehead's prolapsus tube, the changes being rung on strong solutions of alum, sulphate of zinc, or tannin. The action of such remedies should be maintained by placing pledgets of cotton-wool soaked in one of these solutions high up in the vagina, removing these

applications several times in the course of the day. There is another mode of applying astringents which is even better than the above. It is to enclose in cotton-wool a little lump of alum or acetate of lead, about the size of a hazel-nut, and to tie round it a piece of string long enough for the ends to hang out of the pudendum, when the alum ball is placed as high as possible in the vagina, which may be done without using the speculum. The cotton-wool imbibes the vaginal fluids, and they dissolve the alum by degrees, which thus acts strongly for a long time on the walls of the vagina. So great is the astringent action, that it becomes difficult to pass the finger through the vagina so as to reach the neck of the womb. I tell the patient to remove the cotton-wool on the second day, and to inject water freely, so as to bring away the thick coagulated mucus, which would diminish the effect of the subsequent injections. This mode of applying astringents, I have likewise found extremely useful in the treatment of metrorrhagia.

The well-known constricting power of cold when permanently applied to animal tissues suggested its trial, and it is often useful when given as rectal or vaginal douches, for fifteen or twenty minutes, two or three times a day. Douching the loins while the patient is perspiring freely from the use of the spirit lamp or Turkish bath, has been insisted on as useful by Fleury and Aran, and before these practitioners were born Récamier recommended cold enemata and injections, and cold water compresses to the abdomen. Indeed, my experience of these measures convinces me that much may be done to remove the neuralgic symptoms of deviation by cold-water treatment; and that to attempt to relieve uterine displacement by instrumental interference susceptible of doing mischief, without having previously tried these remedies, is injudicious.

Having arrived at the conclusion that uterine deviations are often complicated by neuralgia, the indication is to treat

such cases by the means found useful in neuralgic affections. Thus I have removed, or much alleviated, the sufferings of many affected with uterine deviations by the use of sedative injections into the bowels: generally prescribing from fifteen to thirty minims of Battley's solution, with a drachm of tincture of henbane, in a teacupful of warm milk. No remedy is so effectual against the various forms of neuralgia as heat, as elsewhere shown.

Some were struck with the fact that patients only suffered from uterine deviations when they were standing or walking, and were free from pain at night. The inference was, that prolonged repose in the horizontal posture would restore strength to the weakened ligaments of the womb. Lisfranc's prescription, therefore, was, to lie on the back for a year or more; but this was found to weaken the constitution without strengthening the uterine ligaments or curing the deviation. This plan was countenanced by Dr. Rigby, but is, I hope, gone out of fashion. Resting from three or four hours on the sofa in the middle of the day is, of course, advisable to diminish pain and pelvic congestion. The long physiological rest of the womb from monthly congestion during pregnancy and lactation, I believe to be eminently calculated to cure, or, at least, favourably to modify uterine displacements. It has not always prevented the reappearance of congenital flexions, but marked anteflexion of the womb disappeared after parturition in one case; in three cases considerable anteversion, and in two of retroversion, were removed by the changes which take place in the puerperal womb. Scanzoni mentions three cases of anteflexion being cured by parturition; and Goupil also states that on careful examination of two women, three months after their confinement, he could find no trace of that retroflexion of the womb which he had distinctly ascertained to exist before pregnancy. While pregnancy rectifies uterine flexions and displacements, nutrition is so wonderfully active in the uterine tissues, that those diseased portions which caused the

unimpregnated womb to bend readily, may be replaced by sounder tissues, which will enable the uterus to start on a new career in a right position. Thence the obvious indication to consolidate this improved position of the womb by keeping the patient on her back a much longer time than is usual after her confinement, and I have done so for several months; it is also right to continue lactation as long as possible. I further prescribed astringent injections twice a day for months after the confinement. In the after-treatment of parturition, I do not think we sufficiently enter into the views of nature, and forget that the womb is then more amenable to treatment on account of the absence of the menstrual congestion, which, at other times, so frequently undoes our work.

Bandages.—The object of those who enforced the absolute repose of the whole body was to ensure rest to the womb, which can often be procured by bandages. Practitioners were struck with the fact, that uterine deviations were generally most painful in married women in whom the abdominal walls had been greatly distended by gestation, and it rightly occurred to them that if they could artificially restore to the abdominal walls the tone they had lost by being over-distended, the patient's suffering would be appeased. It is, moreover, impossible not to admit that the excessive mobility of the womb sometimes causes all the uterine sufferings of women, since they are entirely relieved by merely wearing hypogastric bandages, which support the womb, while every other circumstance of the case remains the same; this is why the same hypogastric bandage is equally useful in all varieties of uterine displacement, except in prolapsus, wherein it would be injurious.

Methodical pressure has dispelled many of those fibrous tumours of the breast that used to be confounded with cancer. I have seen the inflamed testicle return rapidly to its usual size on being firmly strapped every day with bands of diachylon, and if it were possible to apply pressure in a similar

way to a congested womb, its deformities would give less trouble. We therefore do our best to apply pressure by bandages and by pessaries.

It is usually stated that bandages relieve the womb from the pressure of the intestines: this explanation had been questioned by Chassagnac, and Dr. Barnier has lately ascertained experimentally that bandages diminish the abdominal capacity, render the womb less moveable, and decrease its tendency to prolapse. I have assured myself, by a minute examination of patients, that they do not make straight an inflected womb, and do not replace it where it is displaced: if they give relief it is by coming to the rescue of the over-dilated abdominal walls. They diminish abdominal capacity, and stimulate the perinæum to support the womb by the more powerful contraction of the perinæal muscles, while all the abdominal viscera are firmly pressed together, as in a well-formed healthy woman. This is so true, that I have patients with uterine flexions, who, when thin and out of health, suffer from the usual train of uterine symptoms, but when they grow fat, they cease to suffer. Why? Because the deformed womb is better supported in the midst of pelvic organs well cushioned and padded with fat. When the deviations of the womb determine excessive irritability in the nerves in connexion with it, these sufferings are best appeased by all such measures as will render the womb less moveable. It is only an exemplification in uterine pathology of a general law, which renders the slightest movement agony for those having a sprained ankle, a gouty limb, or whose heads are racked with nervous headache. The value of *rest* in surgical diseases, on which Mr. Hilton has so ably written, is of such paramount importance in uterine surgery, that I believe all the utility to be derived from most of the pessaries hitherto invented, is to be ascribed to the more or less effectual way in which they fix the womb. The well-made abdominal bandage presses the womb downwards, the pessary presses

the womb upwards, and their combined effect is to fix the womb.

Many hypogastric bandages have been invented. Dr. Hull's hypogastric bandage has been highly approved of both at home and abroad. It acts by applying increased pressure to the womb, and may sometimes slightly correct the uterine deviations; but in many cases, though the bandage may have effectually removed the pains, I found, on examination, that anteversion was just as extensive whether the bandage was on or off. It therefore relieves nervous symptoms by steadying the womb, and is equally useful in uterine inflections as in retroversion and anteversion. Some patients accustom themselves with difficulty to this bandage, and this may be in consequence of some obscure inflammatory affection. Let this be allayed, and then try the bandage again, encouraging the patient to persist in its use for a few days. This bandage is useful for women who have considerable abdominal weight to support; I have found it useless and not easily borne by those who are thin and flat-bellied. In Dr. Hull's bandage, the pressure is applied to the womb and the lower part of the abdomen; but in other abdominal bandages, methodical pressure is applied to the whole of the walls of the abdomen. Mr. Bourjeaurd has invented a beautiful belt and air-pad supporter: it is made with vulcanized india-rubber tissue, and resembles his hernia belt. These bandages have the great advantage of being as well borne by thin patients as by the fat; but there are patients who can never accustom themselves to the lighter and best made bandages, on account of the irritability and discomfort they occasion, and I have known them to cause erythema if not frequently left off.

This interpretation of the action of abdominal bandages is confirmed by the utility of abdominal pressure in several nervous conditions. Thus Boerhaave recommended methodical pressure to the abdomen by cushions and bandages to cure hysteria, and I have known Récamier cut short a violent

hysterical attack by making a lady's maid to sit on her mistress's belly. It is stated by Meigs that "in not a few instances I have put a stop to the paroxysms of hysterical passion, by balancing the uterus upon the point of my index finger, and thrusting it as far as I could carry it into the upper parts of the pelvic excavation; thus relieving the innervation temporarily from an irritation of the reproductive apparatus proceeding from a prolapsus of the uterus, from which probably radiated the whole of the phenomena of the hysterical attack." Such cases would, of course, admit of another explanation; but Negrier has relieved the nervous symptoms of subacute ovaritis by continued pressure with both hands to the painful ovarian region. The manner in which the use of the abdominal bandage relieves the prostration that follows parturition is well known; and it is said that when the late Emperor of Russia loosened his stays, the sudden collapse of the tightly pressed viscera caused him for a short time an extraordinary prostration of strength.

Pessaries.—Rest is useful because it ensures the repose of the uterus; the hypogastric bandages fulfil the same object; and pessaries are useful by raising and steadying the womb, often, however, while they relieve the patient's sufferings, the displacement remains unchanged, the pessaries being found filling the concavity of the sacrum behind the womb; pressure being thus applied to it internally through the vagina, and externally by hypogastric bandages.

The first pessary we read of was that used by Hippocrates, who supported the womb by placing in the vagina a small pomegranate, pierced through the core, and steeped in wine, flavoured, doubtless, with turpentine, according to the Grecian custom: the pessary was then inserted as high up as possible. The form of this pessary rendered it incapable of wounding, and its stimulating properties were well calculated to excite the contraction of the walls of the vagina. The Hippocratic pessary has even lately met with a faithful imitator in a

French surgeon, who uses, for a pessary, an unripe orange or a small lemon.

A host of pessaries have been invented and forgotten, but the frequent return to the globular form and its general adoption give it a sanction that other pessaries do not possess. I think it better to introduce a globular body into the vagina, because it is the form most easily borne by the pelvic viscera, and that by which we can best exert on the womb the pressure required to steady it. I thus adopt the opinion entertained by many eminent men, that what we have to do is to raise the womb as high as possible by a body which will fill the upper part of the vagina and the concavity of the sacrum. If after correcting the uterine deviation by means of the finger or the uterine sound, we raise the womb as high as possible, then the weight of the intestines will fall on the posterior surface of the womb, and will help to retain it in its right position, a result which will be eminently promoted by a well-adapted abdominal bandage. Globe pessaries are made of box-wood and of ivory, but those made of vulcanized india-rubber are preferable.

The idea of supporting the womb by air-distended appliances is not new; for Columelle, after introducing an empty bladder into the vagina, used to fully dilate it with air, and he was in the habit of leaving it thus distended till the tenth day, when he perforated and withdrew it. If I am correctly informed, Mr. Keate of St. George's Hospital first suggested M. Bourjeaurd's making india-rubber air bougies for some diseases of the rectum, and this led him to construct air-pessaries.

This idea has, however, been more fully carried out by Dr. Garriel, of Paris, and his apparatus consists of a bag of india-rubber, introduced empty and then filled with air contained in a large bag, which is then removed. When the patient wishes to withdraw the pessary from the vagina, she has merely to let out the air; the bag collapses, and can be easily withdrawn. This apparatus is being extensively used in

Paris: and in many cases the idea may be worked out in a cheaper manner by an elastic ball made of vulcanized india-rubber, and permanently filled with air. In cases of prolapsus, or where the vagina was dilated, I have made use of them well filled, but on other occasions the pessaries were only three-fourths full of air.

The advantages of this globular air-pessary are sometimes to raise the womb and diminish its pressure on the bladder and rectum, and in all cases to steady the womb. There are numerous cases on record of wooden pessaries having become encrusted with salts, and having inflamed the womb, the rectum, or the bladder, even when they did not determine recto-vaginal or vesico-vaginal perforations; their extraction has often been a serious surgical operation; if, by any unpardonable neglect, the air-pessaries were left for months in the vagina, their presence would be less formidable, their extraction easier. They should, however, be removed frequently, and, if the patients could learn how to replace them, it would be well to remove them once a day, to prevent any possible accumulation of secretions.

Even when removed every day air-pessaries increase vaginal secretions, and distend the vagina, so that it becomes necessary to increase their dimensions. While recommending the elastic globe pessary until something better has been found, I am not blind to the imperfect mode in which it fulfils some of the indications of treatment to be derived from the study of uterine deviations. In health, the vagina is a column of support to the womb; the dilatation of the vagina is one of the causes of uterine displacements. The rational course is, to remove all uterine complaint, and by strong astringents seek to restore its lost tone to the vagina. It is only when the vagina is irremediably dilated, that, not being able to contract it by astringents, we consent to fill up the distended portion of the vagina, in order to fix the womb, and relieve the patient's sufferings.

To derive the full amount of benefit from air-pessaries it is advisable to have a selection at hand, so as to be able to adapt the right instrument to each particular case. The small ones with very thin walls will be useful in unmarried women, when the passage is irritable, the larger and more solid ones when the vagina is largely dilated. They cannot be well applied by the patient, if she has not the air-bag or bellows to inflate the pessary, which she has placed as high up as possible, for to fill it by blowing into the tube she must sit up, which would force down the bowels and drive the pessary lower down in the vagina. After using an injection the pessary should be moistened with water or white of egg, not with oil, and then introduced while the patient is lying on her back. It should then be distended with air, and after removing it at night, an astringent injection should be used, and the pessary placed in cold water. My statements are borne out by the experience of Paul Dubois, who mentioned to me having occasionally been consulted by women who had not been able to walk for years, but who suddenly acquired the power of doing so by the application of an air-pessary, and that after wearing it for a few weeks or a few months, they were able to do without it, although the uterine displacement still continued the *same*. From this it appears that the pessary may remove some neuralgic condition of the womb, and I have placed it with that object in women who suffer from uterine neuralgia, without any deviation or any other appreciable change of structure. A young married lady consulted me for continued pains in the sacrum and loins, and for bearing-down pains, increased by the slightest exertion, so that walking was intolerable to her. Her sufferings had commenced two years previously, after her last confinement. Many persons had been consulted, but they had found nothing the matter with the womb, no organic lesion or deviation, and I came to the same conclusion. Cold-water douches, sedatives, or injections gave little relief; it therefore occurred to me to

examine the patient in the standing posture. The womb did not appear prolapsed or deviated, but on raising it with the tips of two fingers introduced into the vagina, the patient exclaimed, "You have taken away all my sufferings." I applied an air-pessary, which gave permanent relief, and was worn for six weeks, at the end of which period the patient was able to discontinue its use. Subsequent examination has not enabled me to detect that the pessary had produced any alteration in the elevation or position of the womb. In this case I was guided by another, previously related to me by Dr. Debout, the editor or the *Bulletin Thérapeutique.*

An unmarried lady, belonging to a wealthy provincial family, had been literally reduced to the last stage of inanition by continued abdominal sufferings. Dr. Debout took her to several of the first obstetric authorities in Paris. They detected no uterine lesion or deviation; the various methods of treatment advised were of no avail. It occurred to Dr. Debout to examine the lady standing; and on raising the womb, the patient exclaimed, as mine did, "You seem to have relieved me of my sufferings." This suggested the employment of the air pessary, which relieved the pains, permitted food to be taken, sleep to be enjoyed, and will, in all probability, be the means of restoring to complete health a young lady whose case was almost given over by the faculty. Experienced men could detect no uterine deviation in this case; but by supporting and steadying the womb its nerves soon lost a habit of suffering, although the neuralgia had lasted for years.

An hysterical unmarried woman became amaurotic on sitting up, and after many other means had been tried, Debout applied an air-pessary, which effected a cure. At page 253 of my third edition "On Uterine and Ovarian Inflammation," will be found a case exemplifying the utility of air-pessaries in chronic metritis when there is an inability of walking from the overweighting of the womb. One of my

patients is about fifty, and about ten years ago another practitioner inserted a boxwood ring-pessary, which has remained in the vagina ever since. I lately tried to remove it, but menstruation having ceased for the last two years, the vagina had become contracted, and I could not do so without breaking up the pessary, which was crusted with saline deposits. This shows how wrong it is to leave instruments in the vagina at the change of life;—they generally become incrusted with saline deposits, which often cause fetid discharges, and may perforate the passage. At the Salpêtrière, which is a large asylum for incurable old women, it is not at all uncommon to find long-forgotten and irremovable pessaries on making post-mortem examinations.

The action of a sponge as a pessary is similar to that of the globular air-pessary: it is also found useful by steadying the womb. A regular oval sponge, about two inches in diameter with a well formed cup, should be chosen, for the natural surface of the sponge irritates the vagina much less than the cut surface of the same sponge. A thread being tied to it, the patient should introduce it as high as possible. It should be removed at night, well cleaned, left in rose-water, and reintroduced the following morning. The sponge may be previously steeped in a solution of alum, tannin, or perchlorine of iron.

Uterine Flexions.—These very rarely require any treatment, for although they diminish the chances of conception, they seldom interfere with menstruation, particularly in cases of retroflexion. Anteflexion may be so complete that the cavity of the womb may not be able to empty itself of the products of menstruation: it will then be justifiable to seek to rectify the bend of the womb, so as to give passage to the retained menstrual fluid when this retention is demonstrated by the sudden gush of fluid after severe forcing pains; but this should be done by means of an elastic catheter, used with very great care, and after sedulous preparation of the case by antiphlogistic measures; for uterine flexion is generally com-

plicated by chronic uterine inflammation. The forcible use of the uterine sound is to be deprecated, for when anteflexion is congenital, or the result of fatty degeneration, and made permanent by peritonitis, it is impossible to rectify the womb, and would be useless, as the flexion would recur on the withdrawal of the sound.

Retroversion and Anteversion.—It cannot be too often repeated to the junior members of the profession, that both these displacements generally cause no other disturbance than that arising from complicating diseases. Exceptional cases may require treatments which may be *extra uterine*, like that already described, or *intra* uterine.

EXTRA-UTERINE TREATMENT.

To begin with the simplest methods of treatment. It was natural to suppose that varying the shape of the air-pessaries might render them more efficacious; but after numerous trials, Dr. Garriel returned to those of a globular form as the most efficacious, the best borne, and the most easy to introduce.

Caseau has stated that he has seen cases of retroversion cured by Hervey de Chegoin's pessary, a kind of shovel which is made to support the womb. The cup and ball pessary was generally recommended by Récamier and Paul Dubois, but the stick of the instrument has a tendency to irritate the vulva. Roser's hysterophore has been modified in various ways: as recommended by Scanzoni, the instrument consists of an abdominal plate and an ebony ball, having a diameter of four centimetres, which is supported in the vagina by a stem which articulates with the abdominal plate, so as to allow it a limited amount of mobility. The object of this is to press the anterior wall of the vagina against the pubis, and thus support the womb; but if the posterior wall of the vagina is much distended, this result is not obtained. The ball has been replaced by a cup, with questionable utility, and the ebony ball has been replaced by an air-ball by Dr. Goupil,

These instruments are very expensive, require to be carefully watched, and easily get out of order. To conclude the list of justifiable mechanical measures in the treatment of retroversion, I will mention Professor Simpson's metallic dilators: their stem is slightly curved and bulb-ended, and as they do not interfere with the movements of the womb, they will often be borne in the exceptional cases which do not yield to milder modes of treatment. I must now treat of some very dangerous measures, which have been so enthusiastically praised that many still believe them to be useful.

INTRA-UTERINE TREATMENT.

The Uterine Sound as a Therapeutical Agent.—Will it be believed that, at no very distant period, respectable practitioners thought they could cure a retroverted womb by using the uterine sound, to rectify its mal-position, every day for weeks, and for months? They might have tried till doomsday, for the womb always relapsed on the withdrawal of the instrument. It was the death of a patient from peritonitis caused by this practice, that brought the intra-uterine treatment of displacements before the Imperial Academy of Medicine. As a therapeutical agent the uterine sound is a deception, and I quite agree with Scanzoni, Paul Dubois, Bernutz, and Goupil, in cautioning the profession against the use of the instrument, unless it be absolutely required for diagnosis, in which case I prefer that of Huguier to Simpson's, because it takes the natural direction of the womb and has no exaggerated curve.

Pregnancy is so easily overlooked or mistaken for a morbid affection of the womb during the first months of gestation, that precision of diagnosis may then be purchased at the expense of abortion. This occurred twice to Nonat, once to Huguier, once to Valleix; and as for one medical man gifted with the moral courage to own a mistake, it may be safely said there are many who keep it to themselves, so doubtless abortion has not unfrequently been unwillingly brought on

since the uterine sound has been popularized, particularly when we remember that it is easy to confound early miscarriage with profuse menstruation. Aran told me that, on one occasion, after introducing the uterine sound into the womb, although using it cautiously, he felt that he had perforated the womb, and that the uterine sound had penetrated for several inches into the peritoneum. Slight colics occurred, but no other symptom. The same gentleman mentioned the names of two other eminent practitioners, to whom a similar accident had occurred, without giving rise to any bad symptom. The immunity from peritonitis, in many cases of gastrotomy for the removal of enormous ovarian tumours, enables one to understand why the perforation of the peritoneum was in some cases harmless, but it will not do to rely on similar results in other subjects, and these facts are calculated to impress prudence. In Dr. Broca's case, the use of the uterine sound caused death by peritonitis; Huguier has had a similar fatal case. Severe uterine colics, menorrhagia and peritonitis may occur from the use of the instrument in experienced hands, and fatal would it be if handled by those who know little of uterine disease. After using the uterine sound, it would be well in all cases to prescribe immediately twenty or thirty drops of laudanum to be given in a little milk by the bowel, as well as a warm bath, and on quitting it a linseed-meal poultice and perfect rest.

Intra-Uterine Pessary.—It has been seen that the desideratum earnestly sought for by those who have considered this subject, was how to place the womb in a state of perfect rest, and many have asked themselves if some instrument could not be devised to do this. In 1827, Amussat made use of an intra-uterine stemmed pessary, and although it was provided with a flexible stem, and every precaution taken, acute peritonitis followed rapidly. The sudden death of this patient, in the prime of life, thoroughly disgusted Amussat with his idea, and deprived him of the courage to follow it up. With-

out having any knowledge of Amussat's attempt, it also occurred to Velpeau to keep the womb in its right position by an intra-uterine stemmed pessary. It was equally unsuccessful in his hands, and Velpeau's complete abandonment of it is a much more eloquent protest against the plan than the qualified support he has lately given to it. The same idea occurred to Dr. Simpson, of Edinburgh, and was carried out with great ingenuity, and perseverance worthy of a better cause. He found a zealous disciple in the late Dr. Valleix, well known by many valuable works, and from whom Dr. Simpson's uterine stem supporter received several modifications: thus he diminished the length of the stem, and gradually reduced it to one-half the length given it by Dr. Simpson, till at last the instrument could no longer fulfil its original purpose of making the womb straight; for Huguier affirms that in a certain number of women by whom this intra-uterine pessary was said to be well borne, the stem was found out of the womb and in the vagina.

I am prepared to adopt the assertion made by the chief obstetric authority in France, Baron Paul Dubois, who affirmed that "the stem pessary had never fulfilled the promise of its name, either in his own patients or in those of M. Valleix, whom he examined after treatment, or in those patients of Dr. Simpson, by whom he had been consulted; for as soon as the instrument is withdrawn, the deviation becomes as marked as before the employment of the instrument." Aran states, that he has never seen a case of anteversion or retroversion cured by intra-uterine pessaries. Scanzoni was obliged to relinquish their use in all those cases where they had been so enthusiastically lauded by Simpson and Kiwish in uterine flexion, and in anteversion and retroversion. He abandoned their use because they were dangerous, and because, placed in the same field of observation as Kiwish, he had become convinced, by an accurate examination of many of his patients in whom these instruments had been long and skilfully applied,

that neither the patience of the sufferer nor the skill of the physician had been rewarded by the slightest improvement in the uterine displacements. The intra-uterine pessary has been reprobated in equally severe terms by Ashwell, Oldham, Montgomery, Fleetwood Churchill, and even in Scotland by Dr. Ritchie. With Dr. West I deeply deplore that Dr. Simpson should have allowed his original papers to be reprinted without noticing the very dangerous results of the use of the stem-pessary in the practice of many eminent men, without noticing their fatal cases, and those which may, perhaps, have happened in his own extensive practice, during many years.

The intra-uterine pessary leads to *hazardous* practice. Caseau stated that he had examined after death seven or eight women in whom the womb was inflected or doubled up. In some, the uterine tissues were so softened at the angle of inflexion, that it was easy to restore the womb to its right form, but it speedily became inflected when mechanically unsupported in the proper position. In other cases, the uterine tissues were so dense at the angle of the womb's inflexion, that it was impossible, without tearing them, to give the womb its proper form. In the first set of cases, the intra-uterine pessary might have punctured the softened tissues, and if it did not do so the benefit could only be temporary. In the others, the straightening of the womb would be impossible, and its rupture must have necessarily followed the determination to correct its inflexions, an accident which has occurred more than once. Thus, in inflexions of the womb depending on the relative disproportion of one side of it compared with the other, the intra-uterine pessary would be quite useless or fatal. When the womb is retroverted or strongly drawn to one side by false membranes, the frequent result of partial pelvic peritonitis, great mischief might be inflicted on the patient by the use of the intra-uterine pessary; and in the most favourable cases, the uterine deformity returns when the instrument is withdrawn.

The intra-uterine pessary is *dangerous*. Admitting that patients have derived benefit from the use of intra-uterine pessaries, sometimes by transforming chronic uterine inflammation into acute inflammation, which was then energetically treated; sometimes, by the flooding they caused, or by causing pelvi-peritonitis, or by modifying, beneficially, the abnormal sensitiveness of the womb, just as the passage of a sound cures neuralgia of the neck of the bladder, or as the bistoury cures some neuralgic affections of the anus. Admitting even that in some cases it has acted as was intended, mechanically, and has been of great benefit to women without causing any serious accidents. Admitting all this, I say the risk is far too great to warrant the use of the stem pessary. The fourteen deaths which are known to have occurred in France, America, England, and Scotland, from the prudent use of the intra-uterine pessary, ought to prevent its use when it is considered that the victims were in the prime of life, and that life is in nowise compromised by uterine deviations. Some of these cases were most praiseworthily reported by the operators themselves; some, however, were only accidentally brought to light; so it may be fairly supposed that all the fatal cases that have occurred are not known. These fourteen deaths are backed, however, by a large phalanx of cases in which life was jeopardized, and only saved by most energetic treatment. In the first place, the plan of treatment requires the preliminary and frequent use of the uterine sound, which, even when handled by experienced hands, has not unfrequently led to fatal results. In the most prudent hands the stem pessary has, in some cases, perforated the womb; and, in others, produced flooding to a dangerous extent, agonizing colics, metritis, peri-uterine inflammation, ovaritis, and inflammation of the broad ligaments, or peritonitis, or metro-peritonitis. But the patients were saved. True—taught the dangers of too active treatment, they now seek surgical interference as little as possible; but the lives of many of them will be curtailed by the sequelæ of peritonitis and other pelvic

inflammations. This is an answer to what is sometimes said, "If you will not use the stem-pessary, there are women whose sufferings you cannot relieve." Supposing it to be true with regard to a very few women, are we justified in risking the life of so many others? Evidently not.

Dr. Moir has lately advised another mode of treating retroversion of the womb, entailing the extensive dilatation of the cervix, and the sojourn of an instrument which, even in the inventor's skilful hands, caused flooding and cellulitis. I have not tried the plan, and Dr. Routh says it has not answered in his practice.

It has been seen, that at the point of flexure in some uterine deviations, the tissues appear hardened and retracted by an inflammatory process. Récamier sought to imitate this in a case of uterine retroflexion, by cauterizing the internal surface of the anterior portion of the womb so as to excite the retraction of the fibro-muscular tissue, and thereby bring back its body to the right place; but I object to the plan, although Aran mentions its having been tried, and with good results, by Professor La Faye of Christiania.

In discussing the influence of severe caustics on parturition, I stated that Amussat had cauterized the neck of the womb and the corresponding portion of the vagina, to cure retroversion by the bridles which would follow the use of the caustic, but I do not advise the method.

To complete my review of the plans devised to cure uterine deviations, I shall mention that Ricord replaced the stem of the intra-uterine pessary by a kind of forceps susceptible of grasping the neck of the womb. I have not seen the particulars of the case; but Ricord says "it was an unfavourable one," and the result of the treatment was indeed unfavourable, for the neck of the womb mortified.

One word on rectal pessaries. In retroversion, it occurred to an esteemed authority to stuff the rectum with tow, or by an air-distended tube, and to ask the patients to retain the

fæces as long as possible. That was called a rectal pessary! Those who have tried the plan say that rectal pessaries are not well borne by the patients. The same practitioner recommended, for anteversion, that women should retain their urine as long as possible: plans of treatment requiring no comment.

Prolapsus.—This kind of uterine displacement more than any other has distinct symptoms which often justify mechanical treatment and surgical operations. The fact of the hypertrophic elongation of the cervix having remained so long unnoticed, sufficiently shows that it often requires the same treatment as prolapsus, with which it has been confounded.

In the first place, the womb should be lightly touched with nitrate of silver if it be ulcerated, and then replaced so soon as possible: this may not only quiet severe pain and exhaustion, but it will prevent the uterus from being irrevocably fixed in a false position, which would occur if pelvi-peritonitis set in before the womb was reduced; and when it is really prolapsed it slips in without pain, whereas, on attempting to force back a very elongated cervix one can only curve it and strain the uterine ligaments, and on ceasing the effort the womb will again project. To keep up a moderately prolapsed womb, much may be done by the frequent use of cold astringent injections, alternately using decoction of oak-bark and a solution of alum. For instance, a lady, forty years of age, who had borne three children, consulted me, two years ago, for moderate prolapsus of the womb causing very distressing sensations. After strengthening the walls of the vagina, by injecting a solution of nitrate of silver twice a week, I advised the use of alum and acetate of lead injections on alternate days. This has been sufficient to prevent the recurrence of the symptoms of prolapsus, although the judicious advice of three eminent practitioners had previously failed.

The pessaries which forcibly distend the vagina, like the elytromochlion of Kilian or Dr. Reid's gutta-percha spring-

pessary, are objectionable on account of the vaginal irritation to which they give rise, and I prefer those that support the womb without forcible dilatation of the vagina. The old ring-pessary, or that of a circular or an oval shape, is often sufficient: those made of vulcanite stand the secretions well, and those made of vulcanized india-rubber distended with air are commendable for their softness and lightness. A heavy, considerably prolapsed womb is often well supported by Mr. Coxeter's gutta-percha stem-pessary. It resembles a funnel, its mouth is covered with thin vulcanized india-rubber for the womb to rest upon, and it is pierced with holes for the passage of the secretions through the tube. This can be easily introduced by the patient, can be worn without discomfort, and its frequent demand is a proof of its value. Similar to this is another and still lighter pessary devised by Mr. Coxeter, which he calls a spring pessary, but the spring only serves to distend a thin india-rubber cup destined to support the womb. The other end of the pessary is so easily fixed in the perinæal band that the patient can remove and fix it, and draw aside the band without unfastening its straps; a greater convenience than would be at first imagined. Both these pessaries are cheap. Mr. Bourjeaud's mushroom or pyramidal pessary is formed of smooth india-rubber, and is, after being introduced into the vagina, inflated by a tube to such an extent as may be necessary. When the apparatus is distended, it is well calculated to receive the neck of the womb in the depression on the upper part of the instrument, and through the hollow stem any discharges may escape. The apparatus is secured by elastic bands, which may be fastened to a narrow abdominal belt, and seems well calculated to fulfil the objects of a pessary; two of its advantages are, the possibility of regulating its size, and the avoidance of vaginal irritation.

Zwanke's pessary is one of the best that has been hitherto invented to support a voluminous descending womb. When introduced, it is something like a large bean, and the flanges

of the expanded instrument resemble the cotyledons of the germinating seed. Mathieu, a Paris instrument maker, had the ingenious idea to effect the opening and folding up of the instrument by means of a screw placed in its stem, of which it does not increase the bulk. The hole in each cotyledon is quite sufficient for the free passage of the secretions. It is well that this, as well as all the other instruments I have described, should be removed every night and placed in cold water; if this be done, I do not see the utility of coating the instrument with vulcanized india-rubber. The Americans, to support the womb, distend the vagina by means of variously curved metallic bars, which they call *lever pessaries;* these ought to be tried on this side of the Atlantic.

The extent of the prolapsus, or the wash-leather consistency of the vagina, may render these measures unavailable, and have suggested various operations, having for their object the narrowing of the vagina or the vulva.

Cauterization.—In 1823, M. R. Gérardin proposed to form contractile cicatrices, and thus to narrow the vagina and increase the resistance of its walls. He went still further, and advised the complete obliteration of the canal. In 1833, Professor Laugier employed cauterization with acid nitrate of mercury. In 1835, M. Velpeau applied the actual cautery. The objections to cauterization are, the difficulty, especially with the actual cautery, of limiting the extent of the part acted on, and the danger of injuring neighbouring organs, which renders it necessary to cauterize superficially, and hence often insufficiently. Success may be expected from cauterization in a few cases; but it requires to be carried further than prudence allows.

Excision.—Drs. Heming and Marshall Hall propose the removal of an elliptical piece from the anterior wall of the vagina, the edges being immediately united by suture. Mr. Ireland recommends the removal of a quadrilateral flap on each side. M. Velpeau prefers removing pieces both before

and behind, so as to treat the rectocele and cystocele which he observes to habitually accompany prolapsus uteri. In the few cases in which excision has been practised, the prolapsus has returned in a few months. The tediousness and difficulty of this operation, its liability to injure the bladder or the rectum, and the chance of purulent infection, are objections to its performance. It is not even effectual, for Scanzoni has produced a contraction of the vagina in thirteen cases by means of this operation, but it did not prevent the recurrence of the prolapsus.

Suture.—M. Bellini, an Italian surgeon, proposes to include a fold of the vagina in a suture, so as to produce sloughing. But the fold may be too deep, hæmorrhage may be produced; or the long presence of the sloughs may irritate the organs, and expose the patient to the risk of purulent infection.

The instruments used by M. Desgranges are small self-closing curved forceps, furnished at the end with projecting teeth: a holder resembling a pair of lithotomy forceps, but having the end of one branch channelled, for the purpose of applying the small curved forceps; a trivalve speculum; a lithotomy gorget; a pessary to distend the vagina, and a double T-bandage.

The patient having been prepared by rest, bathing, gentle purgatives, and an enema, is placed on her back, with her thighs widely separated. The trivalve speculum is then introduced, with the handle turned towards the pubis, and the valves are separated to a circumference of about six inches. The vagina usually projects between the blades; but sometimes, when the tissue is less lax, it remains stretched. The cervix uteri must be carefully looked for, as it may lie between the valves of the speculum, like the portions of the vaginal wall.

Through the speculum, the vaginal forceps, with strings passed through their handles, are introduced by means of the holder; and by strongly pressing on the handles of the latter, the blades of the forceps are separated. They are then placed

on the projecting membrane of the vagina, and by relaxing the hold of the handles, they are made to take firm hold of the tissues. Each projection between the blades of the speculum, or, as is sometimes found, each flat portion between them, may receive two or three of these forceps, so that from six to nine altogether are applied. The speculum being withdrawn, the pessary is introduced, and is firmly fixed by means of some turns of a double T-bandage, of which the vertical bands meet the transverse one at the level of the hypogastrium: each of the vertical bands turns over the upper part of the thigh, to rest on the great trochanter. The string which attaches the pessary to the bandages ought to be rather behind than in front, as the passage of urine may otherwise be impeded or prevented by the pressure of the urethra against the pubis. The strings attached to the forceps are collected, tied together, and fastened to the bandage. The patient is then put to bed, and perfect rest is enjoined. The forceps generally fall off from the fifth to the tenth day, sooner or later, according to the size of the fold of membrane which they have seized.

This operation is repeated on other parts of the vagina, the speculum being employed until the walls no longer project between its valves, or its being opened causes pain or hæmorrhage. The gorget or finger must then serve as a conductor. The gorget is passed in on the finger to the part intended to be operated on, and is turned with its convexity towards the vaginal wall. The vaginal forceps, fixed in the holder, are then introduced along the groove in the gorget. When they have arrived at the end, the conductor is withdrawn, and the forceps are made to seize the membrane. When the finger is used, the forceps are introduced along it, taking care that the finger be not wounded. On arriving at the destined spot, the blades are separated and pressed against the vaginal wall.

The instrument is most easily applied on the posterior wall

of the vagina; with more difficulty on the lateral walls; but, in regard to importance, the lateral walls have the preference. M. Desgranges has never made more than *ten* applications of the instrument. He says, that the surgeon must be guided by circumstances in judging of the proper number of applications, but that it is better to make too many than not enough.

The pain, he says, is not great, unless the cervix uteri be seized; pain then is severe, radiating to the loins and abdomen. The free extremities of the forceps may cause excoriations, unless the tissues be protected by diachylon plaster.

Results of the Operation.—The febrile reaction is slight and of short duration, and requires no treatment beyond low diet.

When the forceps have fallen off, a small suppurating wound is left. By digital examination, small hemispherical projections are felt, varying from the size of a pea to that of half a nut.

The vagina gradually loses its calibre and its mobility. At a later period, it becomes covered with inodular bands; the narrowing goes on until the finger can scarcely be introduced without a disagreeable sensation. In process of time, the nodosities become smaller, and even disappear: the vagina regains its suppleness, and with the exception of its calibre, it returns far towards the normal state. The cervix is in the axis of the vagina, and the contraction affords no impediment to *coitus*, and in one case did not prevent delivery.

Narrowing of the Vulva. — Dieffenbach excised a series of longitudinal folds round the orifice of the vagina. This only converts procidentia into prolapsus; but it would be a great point gained if the patients were freed from the pain produced by the displaced uterus at the same time as from the projecting tumour. The merit of the operation is, however, doubtful. M. Malgaigne believed that the excision of the anterior or the posterior semi-circumference of the vagina would be of more advantage than other methods; but

the only case on which he operated in this way was unsuccessful. Scanzoni excised a portion of the vulva in five instances, but it did not prevent the recurrence of the prolapsus.

Fricke, of Hamburgh, proposed to unite the walls of the vulva. He pared the internal faces of the labia majora, and united them by suture, as in perinæoraphy. It is recommended to leave an aperture behind for the passage of the fluids, and one in front for the performance of the generative functions. The uterus is thus sustained by an artificial floor; but this is too low, and the radical cure is only the substitution of one grave infirmity for another.

When the prolapsus is caused by laceration of the perinæum, the only chance of a remedy is to be found in the several operations advised for its repair by Stoltz, Bosjeman, Dr. Savage, and Mr. I. B. Brown, which will be found well described in his last edition.

Hypertrophic Elongation of the Cervix.—So long as it is possible to contain the cervix so as to prevent its projection between the labia, no operation should be countenanced, neither would I do so if the patients were old and the inconvenience bearable. In the last case I have met with, the cervix could be seen on separating the labia, and still the lady managed very well with a perinæal pad. Should this infirmity occur in a young woman so as to prevent her earning a living, should it lead to matrimonial disunion by being the impediment to connexion, then the operation advised by Huguier is justifiable; the more so as he has performed it in thirteen cases without one fatal or dangerous hæmorrhage. If the case be one of considerable elongation of one lip of the vaginal portion of the cervix, its amputation may be considered a safe operation. These cases are, however, rare, and in two I have imitated Montgomery, and preferred to remove the redundant tissues by potassa caustica. Judging from Huguier's experience, the cases which would justify amputation are those in which the supra-vaginal portion of the cervix

is elongated. It is then necessary to separate the cervix from the bladder by careful dissection, which endangers the perforation of the peritonæal cul-de-sacs, and might bring on acute peritonitis; for these reasons, the operation must be reserved for very exceptional cases. Further details may be found in Huguier's memoir, or in Dr. H. Bennet's fourth edition; but I must remark that, instead of the knife, it is better to remove the dissected cervix by the écraseur, or better still, by means of Maisonneuve's *serre neud.*

CHAPTER X.

UTERINE COMPLICATIONS.

The important relations of the reproductive organs, their close vicinity to the pelvic viscera, and the painful and chronic nature of uterine complaints, sufficiently explain their frequent complications. Those which I propose to consider briefly are, First, inflammation of the adjoining portions of the reproductive apparatus; Secondly, diseases of the breasts; Thirdly, diseases of the bladder; Fourthly, gastro-intestinal disorders.

Although divided into distinct portions for special adaptations, the reproductive canal should be considered as pathologically one from the ovary to the vulva, as it is anatomically *one* in most of the lower animals.

As a natural result of the solidarity that unites the different portions of the reproductive apparatus, the serious inflammatory lesion of one portion of it endangers the health of that which is situated above and below the part diseased. Inflammation passes to the oviducts more frequently than is supposed, and may terminate in an abscess. Inflammation thus passes on to the peritoneum from the point where the mucous and serous membranes unite, and the subserous tissues of the ovaries may even thus become inflamed. For a detailed account of the treatment of these affections I must refer the reader to another work:* but it stands to reason that the very means employed to cure uterine inflammation are eminently conducive to dispel that of the ovary, a fact

* "On Uterine and Ovarian Inflammation," Fourth Edition.

which has doubtless led some pathologists to ascribe almost every feminine ailment to inflammation and ulceration of the cervix.

Hence inflammation is much more frequently complicated by inflammatory affections of the lower portion of the reproductive tract, and for this reason—that inflammation is not only propagated by continuity of tissue, but also by the more or less frequent outflow of irritating secretions. Thus, vaginitis is a frequent complication of uterine disease, to be cured by injections, and even requiring the use of nitrate of silver, as already stated.

Follicular Inflammation of the Vulva.—This is also a frequent complication, often receiving exclusive medical attention, yet maintaining its ground for years, notwithstanding varied local treatment, should the practitioner ignore the uterine inflammation in which it originated, and by which it is fostered. Notwithstanding the most judicious surgical treatment of uterine disease, follicular inflammation of the labia will occasionally arise in the course of the treatment; this requires varied remedies to meet the pertinacity of the disease. Great cleanliness is indispensable, and is not easily attained, for I have often found, in bad cases, that the deeper portions of the labial depressions were covered by a sebaceous secretion, although the patient washed several times a day. The most diseased parts were on that account but tenderly touched, and the lotion or ointment, not coming in contact with the diseased tissues, did no good. Warm hip-baths are very useful in such cases, for the water will sodden the concretions, so that the patient can remove them by the impulse of the water, or by the gentlest application of the finger. Careful and frequent washing with a tepid emollient fluid, milk-and-water, linseed-tea, or poppy-head decoction, and the application of glycerine after each ablution, will be sometimes sufficient; lotions with borax, chlorate of potash, acetate of lead, or sulphate of zinc, to which laudanum or hydrocyanic

acid can be added, are often necessary, and their efficacy is increased by steeping a bit of old fine linen in one of these, and applying it carefully so as to make it fit into the labial depressions; but as the patient has to do this herself, it is seldom well done. Nitrate of silver may be required, and should be applied by the surgeon; I have carefully described the process at page 81; but after the application has been made, the patient should remain quiet, use no wash or injection on that day, and with great gentleness on the following. I know that some of these cases are prolonged by over-anxious interference on the part of the patient, just as ulcers on the leg will not heal if too frequently dressed. A curative process progresses under the thin muco-metallic pellicle deposited by the solution of nitrate of silver, and it should be allowed to stop on as long as it will. The bowels should be kept regular by saline purgatives; rectal sedative injections or suppositories should be given once or twice a day; and though this plan of treatment never failed me, on the faith of Trousseau's recommendation, I should have no hesitation in trying, as a lotion, a pint of water, in which is dissolved a large pinch of a powder made with equal portions of bichloride of mercury and sal-ammoniac. He also recommends, first, two vaginal injections a day, then one of a solution of bichloride, one drachm to the pint of water; but I should try smaller doses.

Irritable Tumour of the Urethra.—This is a rare complication of uterine inflammation; but I may mention its having been unusually distressing to three patients, now under treatment, who have been exceptionally severe sufferers from various forms of uterine inflammation. When moderate in size, I touch the irritable tumour with concentrated nitric acid; when larger, I draw out the tumour with the forceps, cut it off with curbed scissors, and check the bleeding with caustic, if it be too considerable.

The vulvo-vaginal glands sometimes become inflamed, and if the canal through which their secretion passes to the

vulva becomes obliterated, a more or less distinctly defined and round hardness, of about the size of a large walnut, will be found in one or in both labia: it may be either a cyst or an abscess, but in either case it is useless to waste time with leeches or iodine, and best to open the cavity very freely with the bistoury on the mucous surface of the labia, and touch the edges of the wound with nitrate of silver. It will be necessary to inject the cavity with a solution of nitrate of silver or tincture of iodine every other day, and to prevent the premature healing of the lips of the wound. Abscess of the labia, the consequence of diffused phlegmon, requires speedy opening and careful dressing, so that the opening may not close too soon.

I have occasionally met with repeated crops of boils in the labia of those who have long suffered from uterine disease: hip-baths and emollient topics often suffice, but I have sometimes been obliged to open them freely with the lancet, in which case the bleeding prevents their recurrence; the distress they occasion is out of all proportion to their danger.

Cutaneous Irritation.—When the skin is over-sensitive, or the uterine secretions very irritating, there is often an extensive excoriation of the nates, which greatly adds to the patient's sufferings.

Sometimes a seemingly inoffensive discharge will produce great excoriation, and nothing causes it so much as the watery discharge of acute internal metritis. Great cleanliness, emollient injections to dilute the acrid secretions, and the washing of the excoriated surfaces with very thick linseed-tea, a portion of which is left to dry, and thereby form a protecting coat against the irritating discharge, is almost always successful; the free use of violet-powder is serviceable, and the lotions recommended for labial inflammation would suit this emergency.

Pruritus.—This may affect the vagina, the labia, the clitoris, or all alike; and the inexperienced practitioner has no conception of the amount of misery caused by this symp-

tom. It rather depends upon the susceptibility of the patient's nerves than upon any peculiar form of inflammation, for it may exist independently of it, or it may accompany all its varieties. The amount of pruritus does not measure the amount of inflammation; indeed, my worst cases were allied to chronic and slight uterine inflammation. It is so in a single lady of 50 years of age; it is brought on by the slightest fatigue or worry, and often wakes her, resists the application of cold water and other remedies, and makes her pass the remainder of the night in pacing the room. When pruritus settles in the clitoris and labia, masturbation may be practised independently of sexual desires. If often repeated, this cannot take place without awakening these desires, and sometimes to considerable extent. My own observation leads me to believe that in the frightful cases of onanism related by Tissot and others, the morbid stimulus would have been found in uterine inflammation, if the means to detect it had been then available. A patient who suffers severely from acute inflammation of the body and neck of the womb is often woke up at night by venereal orgasm, which is a spontaneous symptom and not caused by dreams: being a woman of strong mind and of virtuous habits, she does not give way to the impulse, but the conflict between instinct and conscience causes fits of deadly prostration and great debility during the following day.

It is obviously indicated to pursue inflammation wherever found lurking in the reproductive apparatus, by leeches and the injections pointed out as useful for vaginitis. The application of strong astringents like alum in powder, first used mixed with its weight of white sugar and then pure, being introduced on a pledget of cotton-wool, which can be left in for some hours, removed by an injection, followed by a reapplication of a similar topic, and so on for a week, will be found useful: this plan is praised by Scanzoni, who also speaks well of painting the walls of the vagina and of the vulva with

a chloroform liniment, two scruples of the sedative being added to an ounce of almond-oil.

These remedies will not be always effectual. I have shown at page 80 that vaginal pruritus is best cured by the injection of a strong solution of the nitrate of silver, or by painting the vagina with the tough nitrate of silver. Even this has not cured the lady whose sufferings I mentioned, but it relieved them for a time: when the pain is bearable, she prevents its increase by resting with her feet high up, *more Americano*, by cold-water injections, and by belladonna suppositories placed in the vagina. In this case, pruritus is associated with general hyperæsthesia of the nervous system, the skin being often subject to a similar distressing irritation. Pruritus of the vagina is one of the distressing symptoms of uterine cancer.

Mammary Complications.—Though in women the breasts are far removed from the womb, they are so closely allied to it, and enter so largely into the venereal orgasm, that their pathological relationship might be inferred. More or less intense pain of the breasts is a frequent complication of uterine inflammation; and more particularly when the body of the womb is affected, an aching, burning pain attacks the breasts, occasionally mammary tenesmus, or the breasts are swollen, sometimes secreting mucus or a milky fluid, and repeatedly discharging a muco-lacteal secretion at the menstrual periods. In one case, the breasts were so enormously swollen, hot, tense, and glistening, that I feared an abscess, particularly in the right breast, where there had been one fifteen years before. The avoidance of pressure from ill-made stays, the application of cotton-wool to the breasts, and anointing them with camphorated liniment will be found beneficial; but the most powerful remedy is the extract of belladonna diluted with glycerine.

Vesical Disturbance.—To understand clearly the rationale of the sexual and rectal disturbance caused by uterine inflam-

mation, one must remember how the womb is placed between the bladder and the rectum. The inflamed womb acts in the same way on both organs, congesting or inflaming them so as to increase their secretion of mucus, and causing boils and abscesses in the cellular tissues surrounding the orifice of both passages. The irritable tumours of the meatus are analogous to hæmorrhoids, and forcing pains are characteristic of uterine action, whether physiological or morbid; but the same uncontrollable impulse to eject is an attribute of the anus and of the urethra, so that tenesmus arising in one of the three orifices often spreads to the others, making them act like one organ. With regard to the urinary passages, the meatus unrinarius forms part of the vulva; its mucous membrane is deeply folded to form a reservoir for the urine; and the lower half of the bladder and urethra are united to the anterior surface of the neck of the womb and to the vagina, both organs being fed by the same vessels and endowed by the same nerves, hence the frequency of vesical complications. The disturbance of the functions of the bladder is generally of a nervous character, but it may amount to hyperæmia and inflammation. The nervous or functional affections of the bladder which often complicate the various forms of uterine inflammation are, heat, uneasiness, or slight pain felt above the pubis; the frequent spasmodic contraction of the bladder to pass but little urine, the tenesmus accompanying micturition being a spasmodic contraction of the urethra preventing the passage of urine, and sometimes rendering imperative the use of the catheter. The nervous character of these phenomena is clear from the fact of their spontaneous subsidence and of their frequently easy removal by warm hip-baths, by warm abdominal fomentations, by a linseed-meal poultice sprinkled with laudanum or with powdered camphor, by abdominal friction with opiate liniments, or by the use of cold water abdominal bandages. When the inability to pass water is not removed by these measures, I

have generally found it to depend on inflammation of the urethra, which can be felt enlarged to twice its usual size, and very painful when touched with the finger. In this case cooling injections are requisite, and dilution with linseed-tea or with some other mild drink. I have seen a small abscess form in the areolar tissue surrounding the urethra, and discharge a teaspoonful of matter after giving great pain: this occurred three times to the same patient during a long course of chronic uterine inflammation. The foregoing statements relate to the influence on the bladder of an inflamed womb occupying its right position; but if it be anteverted, it will press the bladder, and a portion of this sac will be somewhat displaced by a moderately retroverted womb. This is daily observed without giving rise to any vesical symptoms, for the bladder is constructed to bear with impunity extensive pressure and displacement.

When the womb is so completely anteverted as to lie flat across the pelvis, it may account for vesical disturbance; but to pretend to cure vesical symptoms by futile digital attempts to give a right position to a moderately displaced womb is absurd. It is well that the practitioner should carefully intimate to the patient the existence of any amount of uterine displacement; for if she heard of it for the first time from a new doctor, she would naturally conclude that he had found the key to sufferings hitherto inexplicable; the difference between the two practitioners being, that the second attached undue importance to the necessary result of long-continued uterine congestion, which sometimes greatly distends the vesical veins. Inflammation of the bladder is of very rare occurrence as a complication of uterine inflammation, except when the womb has fallen outside the vulva. I have, however, seen a case in which there was a frequent desire to micturate, with exquisite pain on passing urine, continuing unabated for seven months. The patient was told by an eminent surgeon that it was caused by uterine ulceration,

but the vesical symptoms were not cured by uterine treatment. Other advice was likewise inefficacious. Beyond habitual congestion and dysmenorrhœa, there was nothing amiss with the womb; the urine, analysed by Dr. Beale, contained bladder epithelium and pus; its specific gravity was 1015, and 1000 grains contained twenty grains of urea, showing that the patient suffers from chronic cystitis. I gave sesquichloride of iron with tincture of hyoscyamus in an infusion of quassia, injections of acetate of lead and laudanum, a strong belladonna ointment to the pubic region, and eight leeches were applied above the bladder.

The urine should be examined, for its constituents may direct treatment, though I do not believe that the phosphates so frequently found in it indicate a morbid condition of the blood. The superabundant vesical mucus acts as a ferment in the urine: it decomposes the urea into carbonate of ammonia, renders it alkaline, and phosphates of lime and ammoniaco-magnesian phosphates are deposited as well as insoluble carbonates. However low the patients may be reduced by chronic uterine disease, the urine does not deposit phosphates, unless there be a superabundant quantity of mucous secretion. When in the course of uterine disease, urates are found in the urine, they are the result of fever, and mucus is not abundant. Sesquichloride of iron is very useful in cases of chronic irritability of the bladder, and has even been looked upon by some practitioners as exerting a specific influence on the genito-urinary mucous membrane; suppositories of opium or belladonna, either vaginal or rectal, are then invaluable, and when the urine cannot be passed, I have given ergot of rye in five-grain doses every third or fourth hour with advantage, also small quantities of nux vomica or strychnia.

Cystitis is of rare occurrence, for it seldom occurs in connexion with uterine disease unless the womb be prolapsed or inverted. I may, however, mention that it is sometimes caused by pelvi-peritonitis, by ovarian or fibrous tumours of

the womb, and that it merges in the general wreck of cancer. When the womb has so fallen as to be in the vulva, it entails vesical tenesmus and a difficulty of passing urine and fæces; if it hangs below the vulva, it generally withdraws the bladder from its normal situation, thus inducing cystocele. Thus situated at the upper and anterior portion of the pendent mass, the bladder is liable to be wounded, and it is still more liable to become inflamed, owing to the stagnation of urine, sometimes causing calculus and frequently excoriation of the nates. In a similar manner, the anterior portion of the rectum may be drawn into the tumour, and the inflammation of these cavities often causes the chief misery of procidentia: hence it will be evident that cystocele is to be cured by treating the main complaint. It will be moreover useful to sound the bladder frequently, and for this purpose the male catheter should be preferred, and introduced so that its concavity may be directed forwards and downwards.

Gastro-intestinal Complications.—The frequency and persistency of the gastro-intestinal complications of uterine disease are well explained by the close anatomical connexions of the reproductive and digestive organs, and by their intimate physiological relations—relations so intimate that, as I have established in another work,* menstruation is almost always accompanied by some disturbance of the bowels, which are usually relaxed. The complications that I shall pass in review are first, Dyspepsia; second, Nausea and Vomiting; third, Intestinal Irritation and Enteritis; fourth, Diseases of the Rectum: and although I am obliged to take them separately, they are often combined in the same individual.

1. *Dyspepsia.*—Whether the body or neck of the womb be inflamed, it seldom continues long without compromising the digestive functions, on account of their close relationship; for the patient is not only more or less distressed in mind and body, but deprived of her usual exercise. It would take a volume

* "On Uterine and Ovarian Inflammation," p. 178.

to describe the varieties of gastric and uterine disturbance that might arise; but their treatment must be sought for in the chapter on Tonics, and in well-known works. I again, however, take the opportunity of impressing upon the rising generation of practitioners, the almost impossibility of curing the confirmed dyspepsia of uterine disease by high living or by tonic medicines, unless they be combined with the surgical treatment of the ruling complaint. In some of the worst cases of chronic uterine inflammation, the mildest tonics act as poison, and I am obliged to depend upon wine or brandy.

2. *Nausea and Vomiting.*—Amongst the uncommon symptoms of uterine inflammation none are so distressing as long-continued nausea, even if unaccompanied by repeated vomiting. It lowers the strength, by depriving patients of their usual amount of food, and produces a permanent state of nervous irritability and despondency. Those who can bear pain with unflinching fortitude will burst into tears while asking for some new remedy for this distressing ailment, which has even sometimes caused the thoughts of patients to dwell on suicide.

Sickness, as a symptom in uterine pathology, is based upon its frequent occurrence in many acts of the function of generation. It will suffice to mention that sickness is the most common sign of pregnancy; that it occasionally occurs, during sexual congress, as a sign of conception, in the midst of parturition, and during its monthly prototype — menstruation. Furred tongue, flatulency, acidity, and slight nausea, are the frequent accompaniments of menstruation; and, on extensive inquiry, I find that vomiting accompanies first menstruation in about nine per cent. of cases, that it is a symptom of fully established menstruation in seven per cent., and of its cessation in twelve per cent.; it being clearly understood that, in these cases, I was unable to detect disease in the ovario-uterine organs, and the sickness was therefore referred to some untangible predisposition of the nervous system. Mucus,

acid mucus, or mucus mixed with bile, is brought up, and vomiting may be repeated during the whole menstrual period, but it generally takes place during the first part of the menstrual epoch, and during the early part of the day. At cessation, vomiting is generally associated with biliary derangement of an obstinate character. If sickness be very severe and long continued during menstruation, uterine disease may be suspected, as in a case which will be subsequently given. Sickness may only accompany menstruation for a certain number of months, or years, but I have known it last from the date of early marriage until cessation, and to recur from the first to the last menstruation. A preponderance of the biliary apparatus is certainly a predisposing cause to sickness at menstruation, but in some of the worst cases I have attended, there was no sign of biliousness; the tongue was clean, and no bile vomited, so the sickness could only be considered as a reflex symptom. It is almost needless to remind accomplished practitioners, that sickness frequently accompanies *diseased* menstruation; amenorrhœa, with or without chlorosis; dysmenorrhœa, whether it depend upon mechanical contraction of the os uteri, or on irregular nervous action; and sometimes menorrhagia.

Vomiting accompanying *diseased menstruation* is frequently severe and long continued, and resembles so much the sickness attending inflammatory affections of the womb, that I shall treat of both at the same time. Sickness may accompany all uterine affections, and is independent of the severity of the affection or of the size of an organic growth. It is frequently unassociated with cancer of the womb, or with large fibrous tumours of this organ, while it may accompany a small one, to a distressing degree, independently of peritonitis, which will be an additional cause of sickness. This symptom is very rare in the inflammatory diseases of the mucous membrane lining the neck of the womb, whether it be excoriated or ulcerated; while, on the contrary, it is fre-

quently observed, in whatever disease affects the body of the womb, which is, as it were, the stomach of the reproductive intestinal canal. Thus, out of fifteen patients now under my care, who suffer intensely from nausea and vomiting, I attribute it to chronic inflammation of the body of the womb in nine cases, in which there is an enlarged womb, the seat of constant pain, increased by the patients' movements and by pressure of the finger, with brown or purulent discharges before or after menstruation, which is either too abundant or scanty, and of a brown or green colour; the neck of the womb, the os uteri, and the vagina, being either sound or not sufficiently diseased to account for these symptoms. In one case there is an obstinate inflammatory state of the lining membrane of the neck of the womb, with purulent discharge, although ulceration of the neck of the womb has been cured. In another, a moderate-sized fibrous tumour of the womb, at the change of life, is the cause of vomiting. In a third, most distressing nausea and vomiting are evidently associated with relapsing inflammation of the neck of the womb, which is only a part and portion of a general cachectic condition. In a fourth, sickness is associated with hysteralgia, enteralgia, and other anomalous nervous symptoms.

The slightest application of the finger to the os uteri is sure to cause retching in a lady who has had a remarkable tendency to vomiting all her life. In another case, nausea is distressing in a highly nervous lady, in whom the generative organs are so strangely constituted that sexual intercourse, seldom repeated, during two months after marriage caused internal metritis, and a state of irritability of the genital organs which lasted two years, puzzled several other practitioners besides myself, and is now slowly subsiding. Vomiting is said to have been epidemic in 1859 in Brazil, where an unusual number of pregnant women suffered severely, and some died. Vomiting, or nausea, may be expected whenever the peritoneum is implicated, when morbid ovula-

tion causes pelvi-peritonitis, in peri-uterine phlegmon, in hæmatocele, and more so in the menorrhagic variety than when it is caused by menstrual retention.

Nausea is much more frequent than vomiting. The patients loathe food, even in idea, and refuse it unless it be forced upon them. It is most troublesome in the morning, often going off after breakfast or dinner, and is increased by worry, excitement, the fatigue of dressing, or by moving about.

Mrs. A—— complains of habitual nausea; worry, even taking a little more exertion than usual, will bring on vomiting. Lying on her back increases the nausea; she sleeps on her side, and if perchance she turns on her back, vomiting will awaken her. In this case nausea is always worse a week before the menstrual period, and much better the week after the subsidence of the flow.

I have described the more frequent forms of the symptoms; but in two cases vomiting was incessant, not only of mucus but of almost all the food taken, reducing the patient to a perfect skeleton. In a patient of Sir Charles Locock, whom I occasionally attended when he was out of town, sickness lasted for eight years, with scanty intermission, ultimately causing death from exhaustion. In this case, I was induced, like other practitioners, to attribute the sickness, which came on suddenly, in the midst of good health, to a small fibrous tumour developed in the body of the womb, although Sir Charles Locock considered it doubtful, as the patient was a confirmed opium-eater to a very large extent. Another patient for a whole year vomited almost all the food taken. In a case of internal metritis, sickness occurred only at the menstrual periods for a few hours, or for one, two, or even three days, during which time the patient continued vomiting, with from only five to ten minutes interval of repose or sleep.

Sickness accompanying uterine inflammation is a nervous

symptom, generally independent of biliousness or dyspepsia, to be explained by the mutual dependence of both the womb and the stomach on the same system of nerves. There is nothing unusual about the tongue in nine out of the fifteen patients. In two, it is cleaner than usual. The tongue is very much furred in the patient suffering from enteralgia. Five suffer occasionally from heartburn or acidity, two are decidedly bilious, having had jaundice several times, and one is subject to the outpouring of a large quantity of bile once a month, or even more frequently; but in all these patients sickness is often distressing when they are neither dyspeptic nor bilious, and those who suffer most from sickness in pregnancy are more likely to be affected by it when troubled by uterine affections.

Having thus sketched the pathology of sickness, caused by uterine affections and diseased menstruation, I now come to its treatment. The received adage, "sublatâ causâ tollitur effectus," applies with full force, and the essential point in the treatment of sickness dependent on uterine affections is to cure them, and the pelvi-peritonitis by which they may be complicated; but this is often a long and tedious process, and, in the meantime, the patient anxiously calls for, at least, speedy relief from sickness. It will sometimes occur that the means used for the one end may fulfil the other; thus I have repeatedly observed that leeches applied to the neck of the womb for the cure of its inflammation, produced a marked decrease of nausea or sickness; and the same remark has occurred to my friend Dr. Smith of Weymouth, who has devoted great attention to the study of uterine diseases. I have seen sickness also suddenly stopped by the application of potassa fusa cum calce to the neck of the womb. The replacement of an anteverted womb by a hypogastric bandage has been known to check vomiting. These are encouraging cases, which justify the trial of active measures. Another indication is to assuage uterine pain by the external and in-

ternal application of opiates to the womb. After giving such remedies a fair trial, if unsuccessful they should be discontinued; indeed, all surgical treatment of the womb should be postponed, and even injections and enemata should be avoided as much as possible. The continuance of a moderate amount of habitual nausea need not, however, interfere with the surgical treatment of uterine disease. It is generally good to preface all remedial measures by a dose of calomel and alterative doses of blue pill, even when there are no marked symptoms of biliousness, for this will often abate the distressing sickness, as in the following case :—

Miss W——, æt. 30, is of middling stature, stout, with a puffy face and a florid complexion. Ever since infancy she has been subject to some extensively spread cutaneous affection, and sometimes the mucous membrane of the nostrils pustulates, as at present. Menstruation began at eleven, went on freely and well till twenty-one, when she first suffered from disease of the womb. About four years ago, Mr. Price, of Marlborough, suggested that she should consult Dr. Bennet, who found extensive abrasion of the neck of the womb, with muco-purulent discharge, back pain, sickness, and a very scanty menstrual flow. This uterine affection was evidently part and portion of a cachectic condition of the whole system, for it has repeatedly relapsed, notwithstanding local and constitutional treatment instituted by Dr. Bennet or myself, and well followed out by Mr. Price. Omitting details that do not bear upon the subject, I will only mention that when I saw Miss W——, on the 15th of November, 1861, the sickness, which had been more or less troublesome ever since the beginning of the uterine disease, was unusually distressing, depressing her spirits, interrupting her rest, and causing her to talk in her sleep. Every morning between three and four o'clock Miss W—— is awoke by irritating sensations at the pit of the stomach, she turns about and is very sick, vomiting bile; she then feels nervous sensations in her joints, and

general weakness. If she takes tea, or any other food, it feels like putting something on a wound. She had nausea all day long, but only vomited once. There was no appetite, the tongue was furred, and there was acidity after food. Menstruation was scanty and just over. This habitual condition of the menstrual discharge, the frequency of relapses in an unmarried woman, notwithstanding judicious treatment, the continued sickness, and the fact that when there is no excoriated condition of the mucous membrane, walking, or driving in an easy carriage, will at all times bring on a slight red or brown discharge, leads me to believe that there is a certain amount of inflammation of the lining membrane of the body of the womb, which is placed too high for me to ascertain its size and how far pressure may give pain. On the 15th November, I ordered six leeches to be applied to the neck of the womb, by which means sickness in this case had been sometimes relieved. As the patient seemed decidedly dyspeptic, I ordered three grains of calomel with extract of colocynth, and a Seidlitz powder the following morning, and twenty drops of liquor potassæ to be taken in a little cold water after meals. On the 17th, the patient was free from nausea, except in the morning; so I gave her every night a pill containing two grains of blue pill and extract of hyoscyamus with one grain of Dover's powder, with another pill composed of three grains of disulphate of quina and one grain of extract of hyoscyamus. I ordered her to take, every two hours, a teaspoonful of a four-ounce mixture, of which four drachms of tincture of ginger with a quarter of a grain of strychnia were the active ingredients. On the 21st, Miss W—— had only been sick once in the previous four days, but the irritable feeling about the pit of the stomach remaining, I ordered a belladonna plaster over the part, six instead of three grains of disulphate of quina a day, and a dessert-spoonful of the strychnia mixture every two hours. This treatment was continued until the 27th, when

I learned that there had been no vomiting, but there was still the irritable "sore-wound" sensation at the pit of the stomach; otherwise the patient was better in every respect, and I sent her home, suggesting to Mr. Price to give her a full dose of calomel every three weeks, to continue the disulphate of quina pills every day, to paint the pit of the stomach with caustic solution of iodine every week, and to keep uterine inflammation in check by vaginal injections.

I always advise a patient suffering from nausea to take a cup of tea or a little milk to which a teaspoonful of brandy or rum has been added, as soon as possible after awaking, and before getting out of bed. It restores the tone of the stomach, and may, perhaps, strengthen the important ganglionic centres which lie in close connexion with it. Minor remedies are often sufficient to afford relief, such as effervescing drinks, seltzer, or soda water, and saline draughts, all the more effective for being iced; ice pills and very hot drinks, brandy and other cordials, sal volatile, camphor julep, bitters and astringents, such as calumba, rhatany, tannin. I have given strychnia with advantage, a quarter of a grain with six drachms of tincture of ginger and four ounces of distilled water, a teaspoonful to be taken every one or two hours. I do not know whether salicine deserves its reputation, but I have seen no benefit from giving oxalate of cerium, so much praised by Professor Simpson; neither has it been found useful by Dr. Tanner or Dr. Tyler Smith.

I place great reliance on opium; and its best modes of exhibition are illustrated in the following cases.

The wife of one of the Royal Commissioners for the Great Exhibition was forty-seven years of age when she first consulted me. She married at thirty, and immediately after and ever since, the menstrual periods have been accompanied by vomiting. Headache first appeared, and then sickness, which was frequent, during twelve to thirteen hours, whether the menstrual flow was scanty or profuse. There was no uterine

disease, and as many of the remedies just enumerated had been fruitlessly tried, I gave one grain of acetate of morphia in a six-ounce mixture, directing two tablespoonfuls to be taken in an effervescing draught, made with citric acid and carbonate of potash, when sickness set in, and to repeat the dose every hour. The patient found two or three doses of this medicine sufficient to stop the sickness at menstrual periods until the change of life took place two years afterwards. Large doses of the same remedy were effectual in the following case, which was under my observation for six years, until the patient quitted London for Malvern.

Mary H——, a dispensary patient, and an ironer by occupation, aged nineteen, with dark hair, swarthy complexion, and a mouth often looking as if it had been painted with yellow. She was eminently bilious, for, to use her own expression, "If anything were to upset me, I should go on and be sick for two days." She complained of vomiting during menstruation, the sickness lasting from one to three days, with slight intervals of respite, and with just as much bile in the last as in the first vomiting. The sickness was accompanied by violent pain in the sacrum. Vomiting was not equally severe at every menstrual period, though it was always worse, if, during the previous week, the patient "felt the bile rising in the mouth." This sickness was often the initial symptom of menstruation; thus, she has been repeatedly awoke at night, by a violent fit of sickness, and then the menstrual flow would make its appearance. This incessant vomiting produced so much debility, that during the four or five days following menstruation she was quite unfit for work. She either could not sleep during this period, or else she felt inclined to sleep night and day. The menstrual flow was often retarded and scanty. I gave the patient diluted nitro-muriatic acid in an infusion of cascarilla before meals, ten grains of carbonate of soda after meals, advising three grains of calomel and a black draught to be taken a few days before menstrua-

ting. I moreover prescribed two grains of acetate of morphia with two drachms of chloric ether in a six-ounce mixture, telling her to take a tablespoonful in an effervescing draught after being sick, and to repeat the dose after every fit of vomiting until she had finished the medicine. I also ordered small enemata, with sedatives. This treatment was, to a certain extent, effectual, when, after a few months, severe abdominal pain, back pain, a brown discharge, nausea, vomiting, and vulvitis occurred, and on making an examination I found the neck of the womb sound, but the body very painful, and slight pressure caused retching and hysterics. Thus it appeared that, instead of the sickness being merely associated with menstruation, this process caused the sickness, by waking up every month the slumbering embers of chronic inflammation of the body of the womb. I then made the patient rub in mercurial and belladonna ointment to the anterior portion of the abdominal walls, and advised her using acetate-of-lead injections. At times the patient took aloes-and-myrrh pills, and citrate of iron in effervescing draughts. Great improvement followed this plan of treatment. The morphia was not, however, uniformly effectual. Thus, on rare occasions, the whole mixture would not prevent sickness, though it usually made it cease at the end of twenty-four hours. The whole mixture was sometimes taken in five hours without producing sleep; at others, she would take the mixture, then sleep, wake to vomit, take the mixture again, sleep, and so on in succession, until the stock was exhausted or the sickness conquered. If the opiate procured two hours of *continued* sleep, there would be free perspiration, more abundant menstrual flow, and sickness would be lulled for a few hours. Even when the sickness was not speedily stopped, the remedy abated the tormenting pain in the sacrum. The opiate had another good effect—it enabled the patient to get to her work the day after the sickness subsided, instead of her remaining helpless for a few days after every menstrual period. After

the first year of this treatment, a few doses of the morphia were sufficient to check the sickness.

In another case, the patient is frequently able to control sickness by taking, occasionally, a dessert-spoonful of a four-ounce mixture containing one grain of acetate of morphia with twenty minims of diluted hydrocyanic acid in some of Sir James Murray's fluid magnesia. In the case previously described, success was partly due to the opiates given by the rectum, and whenever pain is referred to the womb, it is well to try and subdue it by opiates, applied by various ways in its vicinity, as by liniments and poultices, and to exhibit the same remedies in suppositories, to be introduced either in the vagina or the rectum. I have checked sickness by the application of a grain of acetate of morphia to the neck of the womb, but in one case, three such doses, thus applied every third day, turned nausea into vomiting. The extract of belladonna externally applied, or made into vaginal suppositories, and internally exhibited, until the first symptoms of poisoning show themselves, will sometimes be found useful. Like other practitioners, I have seen a blister applied to the pit of the stomach suddenly stop vomiting or nausea, and permit patients to take breakfast, who had not done so for the previous fortnight. In another case, the vomiting only stopped for two days, although the blister was kept open for eight. The surface of the blister may be dressed every day with a grain of acetate of morphia, until the wound begins to heal. Another means of checking sickness is to cauterize the pit of stomach with the *marteau de Mayor*. This generally causes a thin eschar to fall off in about a fortnight, and irritation is kept up for a month or six weeks; but all these may fail.

It is wonderful how long some women bear sickness without seeming much the worse for it. The daughter of a physician, who is now under my care, vomited very frequently every day for sixteen months, during part of which time she was under treatment for ulceration of the womb. Very little

food was retained, and only a wineglassful of urine was said to have been passed in the course of the day, nevertheless she grew very stout. On leaving Bath for Weston-super-Mare, vomiting abated, but nausea and retching are still habitual. In other instances I have noticed the good results of change of residence on obstinate vomiting. When other remedies fail, as in the following case, I have greatly relieved vomiting by establishing an issue at the pit of the stomach.

Mrs. S——, æt. 43, tall, thin, married many years, but never conceived. She enjoyed tolerable health until about three years ago, when my friend Dr. H. Bennet treated her for an inflammatory affection of the neck of the womb. This was cured, but the patient did not gain strength, and it became apparent that the body of the womb was also inflamed. In the midst of a relapse of uterine disease, vomiting supervened, and continued for five months, during which the patient was attended by Dr. H. Bennet prior to his temporary withdrawal from practice. Even when much younger and in excellent health, not only riding with her back to the horses, but boating on the smoothest water, and any fatigue or worry, would invariably bring on vomiting. Change of air had no effect on the sickness, and when I took charge of the case, in October, 1859, I successively tried all the means of averting it which I have enumerated, as well as creasote, pepsine, and also chloroform, externally applied to the pit of the stomach or taken internally. In this case there was almost complete want of sleep, and, considering that there was fair ground for hoping that the procuring of sleep might at least abate the vomiting, I tried all preparations of opium, but none would agree; small doses had no effect, nor even two grains of acetate of morphia left in contact with the neck of the womb. Indian hemp sometimes soothed, but procured no sleep. Every meal was vomited; doubtless a portion was digested, though the patient thought all the food was rejected. At all events, from want of sleep and food, symptoms of inanition came on;

and during the winter the patient was always cold. I kept her alive with brandy, Hollands, or Maraschino; more than two pints of some spirit being taken in the course of the week, a teaspoonful at a time, without affecting the head, although, when in health, the patient habitually took nothing but water. In July, 1861, the uterine affection was no longer painful, but the sickness was as bad as usual, although I had appealed to the large experience of Dr. Copland, who met me in consultation upon the case; for it was caused by some morbid state of the ganglionic nerves, which was also shown by the very intense abdominal pulsation to which this patient was frequently subject. One day, when the patient was at the worst, I told her that there was another remedy—an issue to the pit of the stomach; she then drew my attention to a little pimple at the lower end of the sternum, which had annoyed her for the last few days. This pimple, which was the result of a blister that had not risen, was poulticed, but in a few days it became a boil, or rather an abscess, more than two inches in diameter, and as it formed between the sternum and the skin of a much emaciated frame, the pain was most acute. As the abscess increased, more and more food was retained: subsequently, after two violent fits of retching, without bringing up anything, the vomiting stopped altogether, after having lasted a whole year, and the patient was able to digest roast beef and other articles of ordinary diet. When vomiting ceased, sleep returned at night, and the patient had refreshing naps of from two to three hours during the day. Moreover, an unusually dry skin broke out into abundant perspiration. For a fortnight, while the abscess discharged freely, there was no sickness, but as the discharge diminished, food was occasionally rejected; nevertheless, the patient rapidly gained flesh and strength, so that in a month after the cessation of the vomiting she went out in a Bath chair. It was evident that the sickness would return when the wound healed, and I urged converting it

into an issue, ineffectually, however, and what I anticipated occurred. In August a fixed abdominal pain rendered it necessary to apply a blister, and during the three days it remained open, all the food was retained. This made the patient consent to have an issue at the pit of the stomach. I applied caustic potash, and the sickness abated when the eschar became loose, and a discharge was induced. In September the patient was sufficiently well to go to Liverpool, and afterwards to Italy, whence she returned in 1862, her nervous system being so much strengthened that hysterical attacks had very seldom occurred and were slighter.

It is now two years since the issue has continued to discharge, and ever since, the patient often passes several days without bringing up any food, and only brings up one out of three meals on other days. This is a very satisfactory result, considering that increased abdominal pain and a continued brown or red discharge shows that there is a relapse of internal metritis, and that the appearance of a small fibrous tumour outside the neck of the womb where it joins the body, renders probable the existence of other fibrous tumours.

In my work on "Diseases of Women at the Change of Life," I have related how, all other remedies failing, Moscati applied the actual cautery to the pit of the stomach. For several hours there was no vomiting, and the patient was cured by the subsequent suppuration. Dr. Rogers mentioned having applied a moxa to the epigastrium with equally good effects, and I have read of similar successful cases from an issue applied to the pit of the stomach. In another case of obstinate sickness during menstruation, attended by myself, there was no vomiting so long as an axillar abscess was in full suppuration. I established the issue by means of caustic potash, instead of by the simpler process of an incision, because there is often a therapeutical efficacy in pain itself. It was the long, agonizing pain of the abscess which in the last case worked so wonderful a change in the system, causing a dry

skin to pour out perspiration, the food to be retained after a year's impossibility of doing so, and an unappeasable nervous system to be once more soothed by long-continued sleep. In another case of chronic inflammation of the body of the womb, which it would take too long to relate, the oft-repeated vomiting, however powerful it may be, seems to alleviate the still more distressing abdominal pains, leading me to admit that vomiting attendant on uterine disease is a symptom sometimes to be respected, and I have not sought to apply an issue in this case.

A few words on the diet of such patients. The first point is to let them have anything they fancy, and at whatever hour they like. Every half-hour it is well to give a teaspoonful of some nutritious food, such as milk, with rum or brandy, cream, clotted cream, an occasional bit of biscuit, plain, sweet, or flavoured with ginger. Five drops or more of Battley's solution of opium may be taken in a teaspoonful of brandy just before meals. Many of those who suffer from long-continued nausea would never eat if left to themselves. Their friends should be told to take to them, at unexpected times, a few mouthfuls of something savoury, and the patient must make a duty of taking it. Such patients should be treated like pregnant women, and made to eat; and, as I have before said, they should take food on awaking.

Enteritis and Intestinal Irritability.—From the frequency of diarrhœa during menstruation, it might have been inferred that severe or prolonged uterine inflammation would cause intestinal irritation. It seldom, however, assumes an aggravated form, at least in a temperate climate. Sometimes the patient complains of intestinal uneasiness, a tendency to constipation, intestinal flatulence, or of the bowels being "all of a work." If the patient be stout, this may obscure the diagnosis, as in the wife of a naval officer, in whom these symptoms were caused by a small amount of ulceration of the neck of the womb. On first seeing her, I was afraid there

might be some abdominal tumour in the background, but I applied the solid nitrate of silver freely, advised acetate of lead injections, a warm purgative every week, tonics, and the rubbing of the abdomen with camphorated oil; and when, after a month, she returned to town, the abdomen had much decreased, and the other symptoms had abated. In a discussion on a paper read by me at the Westminster Society, on "Menstrual Diarrhœa," Dr. H. Bennet stated that my researches explained the coincidence and persistence of diarrhœa with severe inflammation of the neck of the womb, leading him often to infer the latter from the persistence of the former.

I find that chronic inflammation of the body of the womb generally causes irritation of the lower bowel, which is evidenced by a considerable increase of mucus accompanying the motions, sometimes by small quantities of blood, at others by frequent tenesmic diarrhœa; or by constipation, which depends on a want of power to expel the feculent matter, as if by a kind of paralysis of the rectum, and sometimes upon the constriction of that portion of the intestine—a mechanical effect of its pressure by an enlarged retroverted womb.

This complication depends more on the patient's peculiarity of constitution than on the intensity of the uterine inflammation. Thus a young lady who had suffered several years from chronic inflammation of the womb, had diarrhœa during a relapse of the complaint. It lasted for several months, resisted treatment, but yielded by degrees to opiates given by the rectum. For the last ten years another patient always passes large quantities of mucus with or without feculent matter; the bowels generally feel irritable: constipation is the rule, but diarrhœa occasionally occurs. Since I drew attention to the subject, my statements have been confirmed by Scanzoni and Aran: Monat has even considered it as a special form of enteritis. The application of the acid nitrate

of mercury to the lining membrane of the cervix caused dysentery in a patient of mine, and this will occasionally occur spontaneously, for I have known blood passed by the bowels daily for years in conjunction with uterine disease. In India and other warm climates, dysentery is a very frequent complication of uterine disease, and the puerperal state and the persistence of dysentery render incumbent a return to Europe. This complication will be treated on general principles: opium is the best remedy, but all may be ineffectual unless the ruling complaint be cured.

Diseases of the Rectum.—They greatly aggravate the patient's sufferings, much more so than disease of the bladder, and often render connexion perfectly intolerable. These sufferings either depend on functional disturbance or hyperæmia and inflammation, or the partial dislocation of the rectum, as in rectocele.

Functional Diseases of the Rectum.—I am occasionally consulted by women who only complain of a frequent, dull, aching pain in the rectum and anus, which is increased by standing and sitting; some have been variously treated for disease of the rectum. On inquiry, I find that there is also back pain and uterine discharge, and on examination the neck of the womb is situated as it should be, but inflamed; surgical treatment soon causes all these symptoms of uterine disease to disappear. Of course, however well uterine inflammation may be treated, the above symptoms may occasionally reappear. In that case, I advise belladonna and henbane suppositories to be introduced into the rectum at night. The pressure of a displaced womb on the bowel will increase these symptoms, but is not indispensable for their production. Sir C. M. Clarke observes, that a discharge of mucus from the vagina is a concomitant symptom of piles, for the internal iliac artery supplies both the hæmorrhoidal vessels and those which supply the vagina with blood, and it will be found difficult to restrain this discharge whilst the hæmorrhoidal

tumours continue. The reverse is equally true; for I have frequently seen hyperæmia of the rectum and hæmorrhoids caused by chronic inflammation of the neck of the womb and kept up by it, particularly if the retroverted or flexed womb pressed on the rectum; by curing the uterine disease, the tendency to hæmorrhoids disappeared; and this accords with the experience of Mr. Baker Brown, who, like myself, has seen uterine inflammation originate and keep up an habitual congestion of the rectum, leading to prolapsus ani; but such cases are very rare. With regard to the treatment of hæmorrhoidal affections, it cannot be successful without careful treatment of the ruling uterine disease, for they aggravate each other; and should blood be lost both from the womb and hæmorrhoids, as sometimes occurs at the menstrual periods, the strength of the patient is greatly impaired. The cooling injections required for uterine inflammation also keep down hyperæmic tendencies of the rectum, and the same object will be promoted by the injection of half a pint of nearly cold water into the rectum twice a day, which will also be generally sufficient to relieve the bowels; but should this not be sufficient, the mildest purgatives should be tried, such as milk of sulphur, which I prefer, though tamarind electuary, Gregory's powder, castor-oil, and saline purgatives are likewise suitable. It is as well to avoid aloes; although, out of the many hundred cases in which I have given it, I have only once traced hæmorrhoids to its action, and neither Schönbein nor Aran has mentioned them as a result of treating amenorrhœa by strong aloetic enemata.

Inflammation of the Rectum.—Occasionally those labouring under uterine inflammation really suffer likewise from inflammation of the rectum. The lower portion feels swollen, is painful, and sometimes exquisitely so, when pressed by the finger. Defæcation is very painful, is followed by tenesmus, and it will take hours for this to subside; an examination

with the finger makes the patient scream. Connexion is intolerable. A small quantity of mucus or a little pus oozes out of the rectum in the course of the day; the motions always contain mucus, and sometimes blood. This state improves by proper treatment, but in some patients never entirely disappears, and is aggravated by menstruation. In the wife of a clergyman, now under treatment for chronic inflammation of both body and neck of a retroverted womb, this has also caused a hard swelling, about the size of a walnut, in the areolar tissue between the anus and vulva; after giving great pain for a few days, the little abscess broke, and about a teaspoonful of matter came away by the anus. This has occurred five times, and always during menstruation. The finger can feel the urethra, like a hard cord, twice the size of a goosequill. This is painful, but the pain is very much increased by walking, which also causes the sensation of a swelling and a difficulty of passing scalding urine. There is, too, the remnant of an irritable tumour of the meatus, and also follicular inflammation of the mucous membrane of the mouth, the follicular eruption coming up, one crop after another, producing small ulcerations, with great pain and the inability of taking solid food—a singular instance of the proclivity of mucous membranes to disease. The patients should be cautious in the use of enemata, and not inject more than half a pint of the blandest fluid. I have known patients made worse by injecting two pints at a time; salt water or soap-and-water are far too irritating. When inflammation is acute, I advise injections three times a-day, to be made into the rectum, of half linseed-tea and half a strong decoction of poppy-heads; and a little later, with equal quantities of saturnine lotion and decoction of poppy-heads. Various other injections have been tried, to relieve the distressing symptoms; but nothing succeeded so well as one of tepid water, to cleanse the bowels, and then injecting half an

ounce of the following solution, with two ounces of warm thin starch :—Acetate-of-lead lotion and tincture of henbane, of each half an ounce.

Paralysis of the Rectum.—This is not always the result of previous inflammation, and, although not painful, is a very annoying complication of long-standing uterine inflammation, occurring particularly when patients have been obliged to keep in bed, and to take large doses of opium. The bowels in these cases seldom if ever act of themselves: purgatives bring the fæces to the rectum, but it has not contractile power enough to expel them, and there they would remain if their exit were not obtained by an injection. This is sometimes unsuccessful, and the patient is obliged with her finger to withdraw the scybalæ, and for this reason a lady I am now attending lives in dread of the day when it is necessary to take medicine.

In these cases various injections should be tried, such as those containing salad-oil, salt, or soap. If suppositories are required, they should be made of belladonna and henbane, which relax the bowels, rather than of opium, which confines them. Small doses of ergot of rye, or nux vomica, or both combined, are indicated by theory, and have done me good service: they likewise help to restore tone to the muscular coat of the bladder, should it have lost its power, as in the case just alluded to.

Rectocele.—This is a kind of aneurism of the rectum, and if full of fæces is felt as a tumour projecting from the posterior wall of the vagina; the diagnosis is clear when the finger, after passing the sphincter, can easily make its way into the vaginal pouch. This vaginal malformation is the result of the over-distension of the vagina by repeated child-bearing, and may be quite independent of uterine inflammation; but as the completely prolapsed uterus may dislocate the bladder, it may likewise, though less frequently, partially dislocate the

rectum. The distending mass drags down the posterior wall of the vagina, forming a depression, which is increased by fæcal accumulations, for in such cases the bowels are very imperfectly relieved; straining to release the bowels increases the prolapsus, and the patient is often condemned at last to have recourse to the fingers, as in partial paralysis of the rectum. The treatment of this severe affection is evidently that of procidentia.

CHAPTER XI.

TREATMENT OF STERILITY.

LIFE is the chief wonder of creation; and the life of man with its unknown future and imperishable destinies is of measureless value for the philosopher. No wonder, then, if the power of transmitting life should be held in such high estimation; or if the loss of this power should be deemed a private misfortune and a public calamity. When marriage is fruitless, the woman bears the chief blame; but it is difficult to say how far this is fair, in the midst of the mystery that will ever enfold many of the processes of generation. My belief is, that nature has sown the seeds of life as prodigally in woman as throughout the rest of creation; that conception is much more frequent than is admitted, and that the frail bark, instinct with human life, that love starts upon an endless journey is frequently wrecked on its passage to the world, being rarely developed to the fulness of infantile perfection. When menstruation is spoken of as being delayed for a few days in married women, and then of its being unusually profuse and prolonged, I think of early miscarriages, which also occur frequently with prostitutes. The fecundated germ passes away undetected, and would seldom be recognised, from partial decomposition, although Serres states he has frequently found it. Uterine inflammation is the most common cause of these miscarriages, which may be brought on by immoderate connexion before menstrual epochs, or by overfatigue, when the menstrual flow is due; so that young married women should avoid exertion, excitement, and strong purga-

tives, before the menstrual epoch, whether it comes or not. Syphilis is an efficient cause of early miscarriage.

My present object is to sketch the obstacles that may prevent the vivification of the germ, and the numerous perils by which it is beset, with a view to their removal. For the diagnosis and treatment of sterility one is guided,—first, by the careful examination of the reproductive organs; secondly, by the history of the menstrual function; thirdly, by the intensity of the orgasm that accompanies connexion; fourthly, by the state of the patient's constitution.

When women consult on account of sterility, they are generally convinced that it must depend on some internal physical impediment; and as common sense convinces them that it cannot be discovered without careful investigation, they come prepared to be examined, and would have a very poor opinion of any practitioner who did not do so before giving an opinion.

Absence of Clitoris.—On examining the patient, the clitoris may be found wanting, and if this be a congenital malformation it causes or coincides with frigidity, and is an efficient cause of sterility, however well formed a woman may be in other respects. Rouband found that sterility coincided with this condition in four instances, and I have done so in three where I consider sterility to be irremediable.

Unruptured Hymen.—A membranous hymen is generally susceptible of being dilated. I have been consulted by women who have been married for years to husbands in the prime of life, and have found the hymen thick, flesh-like in colour and appearance, and with an aperture sufficiently large to let pass the menses, but not sufficiently so to afford a facile ingress for the semen; the funnel-like appearance of the parts implying habitual connexion. In such cases dilatation of the hymen would be tedious and painful; so it is better to divide it in two places with strong curved scissors, and after the bleeding has abated, to touch the lips of the

wounds with the solid nitrate of silver. Passing the finger into the vagina every second day, and occasionally touching the sores with the solution of nitrate of silver, will promote the object in view; and penetration will probably ensure pregnancy.

Partial Adhesion of the Labia.—This is of rare occurrence, the result of neglected inflammatory conditions of the labia in childhood; but this infirmity may effectually prevent penetration, and requires the gradual separation of the labia by the knife, and careful dressing of the wounds to prevent their reunion by first intention.

Obliteration of the Vagina.—When this is caused by the presence of fibrous tissue in place of the vagina, it allows of menstrual accumulation, and may be considered sufficient to render sterility incurable, notwithstanding the case of Dr. Debrou, of Orleans, in which, by careful tunnelling, he not only gave a passage to the menses, but rendered possible the bringing of pregnancy to a fortunate conclusion.

Rigidity and Contraction of the Vagina.—This occasionally prevents penetration, particularly if the wife be nervous and the husband advanced in years: this may render advisable the use of mechanical means to dilate the vagina and to weaken its hypersensitiveness. Bougies similar to those used to dilate the rectum may be kept in the vagina, and their size can be gradually increased; sponge-tents can also be used, and belladonna suppositories should be given, either by the vagina or the rectum.

Absence of the Uterus.—When the womb cannot be felt by the finger examining the vagina and the rectum, and when the finger in the rectum feels the tip of the sound passed into the bladder without the interposition of any solid globular body, it is clear that the womb is absent and sterility absolute, which is also the case when the womb is undersized.

Stricture of the Cervical Canal.—This is often the sole cause of sterility, and it is obvious that the semen must pass

with difficulty through a canal that does not readily admit a small bougie, and that congestion or slight inflammation of the cervical lining membrane, full of thick glutinous secretion, will effectually prohibit its entrance. In such cases there is little chance of a family, unless the cervical canal be gradually dilated by sponge-tents so as freely to admit the uterine sound several months after the treatment has been discontinued. For this it is necessary that the bougies last used should have been three or four times the size of the uterine sound. Mackintosh's idea of dilating the cervix uteri has been adopted for the treatment of many other complaints besides dysmenorrhœa. It is right to dilate the cervical canal when its narrowness leads to the retention of the menstrual fluid and to the formation of clots, which cannot be expelled without great and protracted pain. The same operation is required whenever the cervical canal does not afford free egress to the mucus and matter secreted by the lining membrane of the body of the womb, in cases of internal metritis, or to the membranes which it exfoliates. I have shown, by clinical illustrations, in the third edition of my work on "Uterine and Ovarian Inflammation," that this is a fundamental principle of the treatment of internal metritis, and that chronic inflammation in the womb can never amend if its internal membrane be continually distended by retained fluids. Indeed, dilatation of the cervix is the indispensable preliminary of all surgical interference with the diseases of the body of the womb, for without having done so, it is imprudent to inject any fluid into it, or to scrape or cauterize its internal surface. Dilatation has enabled the accomplished surgeon to remove polypi that could not otherwise be attained, in which case the size of the sponge-tents is to be daily increased until the polypi can be reached.

Process of Dilatation.—The operation must not be had recourse to until inflammation of the cervix has been subdued, and until inflammation of the body of the womb has become

chronic; otherwise the complaint would become aggravated. It is best to begin by passing a small wax or gum-elastic bougie, leaving them in their place for five minutes every other day. Afterwards the wax bougie may be cut short, and left to fall out of itself. When the passage is sufficiently dilated, it is time to begin the use of the compressed sponge-tents, which Professor Simpson judiciously substituted for the metallic bougies used by Dr. Mackintosh. With regard to the mode of using them, I can add little to Dr. H. Bennet's advice, who says:—"I use very small cones, from an inch to an inch and a half in length, tapering down to a small blunt point, and covered with a thin coating of wax. One of these cones—a small one—is introduced into the cervical canal, by means of the stilet, as far as it will go—quite within the canal, if at all possible—and there left for four-and-twenty hours. The wax as it melts forms a coating to the sponge, and protects the tissues which it imperceptibly dilates. The slow dilatation of the sponge, under the influence of capillary expansion, thus overcomes the resistance of the cervix, and effectually opens the region in which it is introduced without irritating the mucous membrane. This, however, is only the case when the sponge is well covered with wax; if left bare, it irritates the mucous surface and makes it bleed. The sponge should be allowed to remain for twenty-four hours, when the patient herself can easily withdraw it, by means of a small piece of silk or thread, which should be fixed to it, and should be sufficiently long to protrude externally. The expansion of the sponge is usually unattended with pain. Sometimes, however, the patient suffers slight pain or says that she feels as if something were being forcibly opened about the womb. If the sponge is allowed to remain more than twenty-four hours, it is generally expelled spontaneously into the vagina, apparently by the pressure of the mucus naturally secreted above the point where it lies. If, however, it is introduced very far into the cervical canal, so as to admit

of the os closing over it, it may be retained and require extracting, especially if the string breaks, as sometimes happens. If imperfectly introduced, it may fall out long before, and be found lying in the vagina. It is generally easy to tell which part of the tent has expanded in the cervical canal, as it is much less swollen than that which has not entered, and which has freely expanded in the vagina. A decided contraction indicates the line of demarcation. If the entire tent is uniformly and fully developed, as if it had been soaked in water, the probability is that it either never was really introduced into the cervical cavity, or that it was expelled into the vagina before it had time to dilate.

"When the os uteri is much closed, and very small tents are introduced, the use of a speculum cannot well be avoided, as the warmth of the vagina softens the tent or its point, before it can be passed into the os. When the os is more open, and a larger tent can be employed, the speculum is not required, as it can then be easily introduced with the assistance of the director or of a stilet, the patient lying on her left side. The first tent will probably only pass a quarter or half an inch; but each time a new tent is inserted it penetrates further, until the entire cervical canal can be dilated. As I only introduce the tent every second, third, or fourth day, in order to prevent irritation, the interval between two menstrual periods is generally required in order thoroughly to dilate the canal. The day the tent is withdrawn, as there is generally a certain amount of mucous discharge, I recommend a quantity of tepid water, or an astringent solution, to be gently injected into the vagina, to allay any slight irritation which the interference may have occasioned. The os and cervical canal being mechanically opened by the tent, after its removal injections should be used at first with great care. I have known uterine spasms to occur apparently from the injected fluid penetrating into the open os.

"By thus progressing carefully, ascertaining occasionally

the state of the parts by instrumental examination, and suspending the dilatation if any irritation of the mucous surface is produced, in the course of two or three weeks the cervical canal may be efficiently dilated without any local injury whatever."

This reads simple enough, but the beginner will find how difficult it sometimes is to introduce a fine bougie; how pertinaciously it curls up instead of advancing; how obstinately it refuses to make a passage, notwithstanding the use of considerable force; and how it is only by retreating and advancing that progress can be made. It is well to bear in mind that a sponge-tent left half-way out is useless; that it is better to bury a small one out of view than to only half introduce one much larger. With regard to the bulb-headed dilators of Professor Simpson, I adopt Dr. H. Bennet's statement, that "the small bulb-ended metal bougies of Dr. Simpson are free from the objections which apply to the metallic dilators, and, if carefully used, are safe and effectual. No force need be employed, as we depend for dilatation on their gradually tiring out, as it were, the contraction of the part of the cervical canal into which they are introduced. A size is chosen which just passes, and which is sufficiently small to be grasped by the cavity of the cervix. Its sojourn in the cervical canal, *if there is no inflammation present*, is unattended with irritation or inconvenience, and in the course of a period varying from a few hours to four-and-twenty, the cervix relaxes around it, and becomes sufficiently open to admit of a larger-sized bougie. The great difficulty with these bougies is their introduction, on account of the large bulb. If the vulva is relaxed and open, nothing is easier: but if, on the contrary, as is very often the case, the vulva is small and contracted, it becomes extremely difficult to introduce the bulb, and subsequently to guide the other extremity to the os uteri, even with the assistance of the finger and of the director which fixes in the bulb. I endeavoured at first to

obviate this difficulty by having metal bougies made with a very small bulb, keeping them in situ by a small piece of sponge, introduced into the vagina as a pessary. This plan, however, does not answer, as the bougie, not having the support of the bulb, is easily expelled: moreover, the presence of the sponge is often attended with vaginal irritation. I have, however, succeeded in rendering them much easier of introduction by diminishing the size of the bulb, making it of one thin sheet of metal with a slight rounded rim, instead of hollow, as is the case with Dr. Simpson's. Another improvement which I consider I have effected, is to give the stem a slight anterior curve, to make it suit the anterior curve which exists in the uterine cavity. I first introduce a small wax bougie into the uterus, leave it a couple of minutes, and on its withdrawal bend the stem of the bulb so as to imitate the anterior curve which the wax bougie all but invariably presents. The metallic bougie must give much less discomfort and sit easier when it thus adapts itself to the natural curve of the uterine passages."

Other substances have been used: the dry root of gentian admits of being cut into the most appropriate form, and it does well. Ivory, softened by chemical agency, is used in France, and in twenty-four hours it swells to double its size. Instead of dilating the cervical canal, Professor Simpson advises it to be slit up with a metrotome; but I think it an unjustifiable operation, because it subjects the patient to unnecessary pain and confinement, and has sometimes caused flooding to an alarming, if not to a fatal extent. In other cases this operation seems to cause, or at least to have given increased activity to, uterine inflammation. A patient of mine was so alarmingly ill with pelvic inflammation immediately after the operation, that the operator sat up with her for several nights, giving a grain of opium every hour; and although under his care for several months, she improved but slowly, had three similarly severe attacks of pelvic in-

flammation during the subsequent three years; and when, at the end of that time, she came under Dr. Bennet's care, there was inflammation of the womb, with stricture so great that it was difficult to introduce the smallest bougie. This lady never suffered from uterine symptoms until the womb was slit up eight years before, but she has ever since been seldom free from them, and has never borne a child. I may say the same of the daughter of a Scotch baronet, who, having been several years without a family, had the womb slit up, but unavailingly, and she has ever since been confined to the sofa for disease of the womb. I fully admit that, in some women, the operation may be performed without dangerous hæmorrhage or severe uterine inflammation, and may lead to pregnancy; but why run the risk if the same results may be obtained by the slower, but safer process of dilatation?

Polypoid growths in the cervical canal, by obstructing its area, have been shown to be the cause of sterility, by fecundation following quickly on their removal.

Inflammation of the Womb.—This is a most frequent source of sterility: the germ cannot take root on the inflamed and disorganized surface of the lining membranes of the body of the womb in internal metritis; whereas inflammation of the lining membrane of the neck of the womb often so increases the glutinous secretion of its follicles, that it presents an effectual barrier to the semen. Its admission is equally obstructed, if stricture of the womb has been the result of hypertrophy or chronic inflammation. Hence the frequent cure of sterility by antiphlogistics and by caustics, and the obvious precept to remove all traces of uterine inflammation, whether it constitute the sole disease, or cause sterility by complicating other conditions.

Uterine Flexions.—Anteflexion or retroflexion of the womb may cause sterility by determining stricture of the womb at the point of flexion; nevertheless, I have known pregnancy to occur under these conditions; and Scanzoni mentions having

seen it in three similar cases, and that the uterine malformation was cured in two. If anteflexion and retroflexion cause sterility, I think it is because they are often attended by inflammation, and that directing treatment against that condition affords the best chance of a family. After removing all inflammatory appearances, I freely dilate the cervix, and occasionally pass with great care a small elastic catheter beyond the point of flexion; the uterine sound should not be used, and a stem pessary would be still more objectionable.

Uterine Displacements.—The chances of pregnancy are proportionable to the amount of semen entering the womb; and as with well-adapted organs the orifice of the urethra corresponds with the os uteri, the semen may be actually injected into the cervical canal, and when this does not occur, the deadly collapse that follows connexion may solve uterine spasm, and so dilate the os uteri as to facilitate the entrance of a portion of the semen in which it is bathed; at all events, while anteversion and retroversion diminish the chances of pregnancy, a moderate amount of uterine prolapse rather favours conception. As displacements of the womb are generally the result of chronic congestion, or of inflammation, it follows again that the chances of pregnancy will be great or small in proportion as this inflammatory element can or cannot be kept under.

Cancer of the Womb.—Uterine fibrous tumours or ovarian tumours may be reckoned as causing sterility, although they do not, like cancer, absolutely prevent pregnancy and parturition.

Inflammation of the Oviducts.—These organs are very prone to inflammation, as is clear from the occasional obliteration of the uterine ends of these tubes and from the frequent obliteration of their distal ends. It must, however, be owned, that if the inflammation of these tubes be moderate, it passes unperceived; and if it be severe enough to determine a collection of pus, it is mistaken for a more common complaint—ovaritis. The oviducts are sometimes obstructed by thick mucus; and

it was suggested some years ago to deobstruct them by means of a small whalebone bougie introduced into the womb through a small silver catheter, but the proposal was unfavourably received. I do not believe it possible to sound the Fallopian tubes : if the operation could be performed, it would be useless, and the profession would be unanimous against any attempts to inject the oviducts with medicated fluids, as the practice is dangerous when even applied to the cavity of the womb.

Absence of Ovaries.—This would imply absolute sterility ; but the ovaries, like the oviducts, are beyond the reach of the finger, unless they be increased in size, and their absence can only be inferred from that of menstruation, and from a less womanly appearance.

Organic Diseases of the Ovaries.—The previous remarks apply to the ovaries when their structure is transformed into fibrous, tuberculous, or bony tissue ; but while one ovary is transformed into a vast multilocular cyst, the other may let fall ova susceptible of arriving at maturity.

Ovaritis.—Inflammation of the ovaries leads to sterility, but I believe both can be cured by antiphlogistic remedies, provided their peritoneal covering has not been so severely compromised as to cover it with thick false membranes. When inflamed, the ovaries enlarge and fall lower, so as frequently to admit of their being felt by the finger introduced into the rectum, particularly if the pelvis be shallow ; fixed ovarian pain, in the absence of uterine inflammation, and habitually painful menstruation will confirm this diagnosis, and justify the directing of antiphlogistic measures, more particularly to the ovaries.

Pelvi-peritonitis.—This is a well-recognised cause of sterility, at least in the dissecting-room, where it is common to find the distal end of the oviducts obliterated by false membranes, or the tubes strapped down by adventitious bands, so as prevent the instinctive application of their funnel to that

portion of the ovary from which the ripe ovule is about to drop. The ovaries themselves may be so embedded in false membranes, that the ovules are completely locked up. These conditions evidently point to absolute sterility, but they are beyond the limit of detection, and must be inferred from an unusually painful dysmenorrhœa, and from the knowledge that a sharp attack of pelvic inflammation followed miscarriage on pregnancy.

Habitual Morbid Menstruation.—Patients consult me on sterility in whom I can find none of the conditions previously enumerated, and in whom, nevertheless, the menstrual function has been from the first scanty or profuse, irregular or over-painful. If this, as it were, congenital morbid menstruation is not improved by marriage, it is generally fruitless; and it is easy to understand that the same state of the reproductive organs which causes morbid menstruation should likewise cause sterility. There is little hope of a family in such cases, though it is obviously right to advise tonics and very careful menstrual regimen.

Aberrations of Sexual Excitement.—The physical appearance of organs may be perfectly satisfactory, but the hidden power that works the machinery may be above or below that certain given standard which is the best guarantee of healthy action. That connexion should be pleasureable is a sign of the reproductive organs being healthy; but it has been long remarked that Messalinas are sterile; whether it depends on the inability of the germ to take root, or on its being speedily cast off in subsequent paroxysms of venereal excitement, is still undecided. There are women in whom nothing can be detected to explain sterility but too intense passion; and I remember a case in which it subsided after the prolonged use of cold hip-baths, cooling injections, and the internal use of camphor; the patient afterwards becoming pregnant. Whether or not such cases are more carefully concealed, I observe them less frequently than those of the opposite ex-

treme—frigidity. I occasionally attend three ladies, who are handsome, well-formed, happily married, and without any tangible imperfection of the sexual organs, yet who are completely indifferent to connexion, which neither gives pain nor pleasure, and they have never conceived. In two other cases where I can find nothing amiss, connexion gives little or no pleasure, acts as a poison to the nervous system, and causes a state of unconsciousness for hours, followed by headache and utter prostration, which does not wear off for several days. One of these ladies has been married ten years and has one child, the other fifteen, and has no family. In these cases the toxic influence is less when connexion is preceded by a more perfect orgasm; hence the reader will deduce the advice to be given in similar cases.

Constitutional Cachexia.—Medical inquiries are constituted by links so connected as to form a perfect circle: discussion must break the circle somewhere, and if I first expatiated on the more apparent causes of sterility, it was not that I meant to deny that it may be caused by a bad constitution. Constitutional debility may cause some of those diseased conditions of the reproductive organs to which sterility has been attributed, and may accompany them all, rendering their effects more certain. If the constitution rallies spontaneously, or by the use of medicines, conception may take place in spite of the persistence of uterine inflammation. In some women, the reproductive organs are to all appearance perfect in form and function; and as there is nothing to explain their sterility but confirmed debility, they become pregnant if they can recover their strength: hence it follows that all the appliances of tonic treatment should be brought into action. I am not aware how far a scrofulous constitution is a cause of sterility, and should it be so, it would only suggest tonic treatment. Syphilis is an obvious cause; for as it pervades the system, the ovule may become blighted in the ovary itself, which generally prevents concep-

tion, or induces miscarriages and the premature parturition of diseased offspring. The wife is often solely blamed for this, whereas she may be the victim of her husband's indiscretion, both requiring antisyphilitic treatment, which may ensure the life of healthy children. The profession has only just learnt that gonorrhœa may extend to the lining membrane of the womb and to the oviducts, thus causing pelviperitonitis and ensuring sterility by a combination of morbid processes. The chances of pregnancy are small in such cases, owing to the difficulty of bringing about a cure.

Empirical Treatment.—In a few cases, though every condition seems most favourable, still there is no family; so in the absence of all positive clue to treatment, we must be guided by problematical indications.

Without being caused by ovulation, menstruation frequently coincides with it, which explains the success that followed Ambroise Paré's advice to his Sovereign, to have connexion during the menstrual epoch. Negrier asserts that this plan has been successful whenever he has recommended it, and this reminds me of Coste's experiments on rabbits, leading him to believe that in women connexion promotes the bursting of follicles which would have been otherwise delayed. The very strong sympathies that bind the breasts to the womb confirm the idea, that by inflaming the breasts we may powerfully stimulate the other organ. While Hippocrates checked menorrhagia by stimulating the breasts, others have cured amenorrhœa by the same means; and my friend, the late Dr. Charles Loudon,* mentions that in four out of seven instances this plan was sufficient to enable them to become mothers. Similar ideas occurred to Marshall Hall, who suggested that a strong infant should be applied to the breast, and Dr. Bayes, of Brighton, advises fomentations of warm milk to the breasts, and to the corresponding portion of the spinal column, and that the breast-pump should be applied two or three times a

* "On Population." *Galignani.* Paris. 1842.

day just before the menstrual period. Neither of these practitioners support their views by cases, but the plan is well worth trying. This reminds me of a case I have related in my work "On Ovarian and Uterine Inflammation," in which a hard and painful swelling of a portion of the breast became apparent in the wife of an eminent surgeon. It was pronounced to be cancerous by several surgeons, but Sir C. Locock and Sir B. Brodie thought it benignant; and this mammary tumour was the first indication that the menstrual function was going to be re-established after fifteen years' absence. The painful swelling then subsided, the lady became pregnant, and has had three children, although Professor Simpson had previously given as his opinion that she would never have a child, and would die in childbed should pregnancy occur.

The Arabs race their mares till they are fatigued before they put them to the stallion. This may be done to arouse the activity of circulation in the reproductive organs, and to diminish spasmodic action on the part of the womb. Horse-exercise carried to fatigue would have a similar effect on women, and seems to have conduced to pregnancy in several cases. One might explain in the same way the reputed successful effects of flagellation, which was submitted to by women as a cure for sterility, in some of the Pagan temples of Greece and Rome; a remedy that I have not yet prescribed.

When I am consulted by too stout a person, I try to fine her down by less food, more exercise, toil, and trouble; for there are well-authenticated cases of women who are stout and barren when in opulence, becoming thin and prolific on being plunged into poverty. If this be true, it is a repetition in the highest region of vitality of a well-known law in vegetable physiology—that the seeds of a double plant become fruitful when placed in an impoverished soil. If the person be thin, I try to fatten her, in the faint hope that it may effect

the necessary improvement. Castor, ambergris, cantharides, &c., are given for sterility in Eastern countries; but I am not aware of any facts to prove their utility. A temporary separation of man and wife is often advisable to give to matrimonial intercourse the stimulus of novelty.

It is very singular that a woman may become fruitful after a lapse of years. I have cited one case in proof, and volumes might be filled with similar instances: and it does not follow that if she has been sterile with one husband she must be so with a second; for there is a species of sterility which I have omitted to mention—sterility from *physiological imcompatibility:* a man and his wife living together for years, having no family, being divorced, marrying again, and having large families, without any apparent change of health before or after the divorce. After the forty-fifth year the chance of fecundity suddenly diminishes, becoming less and less every year; but it is possible so long as the menstrual flow appears, however irregularly. I know of two instances in which conception occurred during the change of life. One was a single lady, forty-seven years of age, in whom the menstrual flow had been very irregular for the previous two years, with that general failure of health which so often indicates cessation. The belief that impregnation was impossible at this period led her to permit liberties which were followed by pregnancy and the birth of a child. This case is the more remarkable as connexion only occurred once, seventeen days after a flooding which lasted for ten days, an instance of ovulation without menstruation. Fecundity is possible after cessation, because ovulation is not tantamount to menstruation. The ovaries may induce most of the symptoms of menstruation, and they may shed ovules without the womb discharging blood. Women sometimes conceive during lactation without the return of the menstrual flow; and as, in some very rare cases, conception has taken place before first menstruation, so I believe it possible in very rare

cases after cessation. Mr. Pearson, of Staleybridge, has published the case of a woman who, at the age of forty-seven, was delivered of her tenth child, eighteen months after the cessation of the menstrual flow. He kindly informed me that between her two last confinements three years and four months had elapsed, and that after suckling the child she had been regular several months previous to the cessation of the menstrual flow, for which no cause could be detected. This woman suckled her last child, and has not menstruated since: forty-six is not a very unusual date of protracted procreative power, but the fact of conception taking place nine months after cessation is very singular. As an instance of the eccentricities which characterize the generative function, I may mention that I know a lady who was married at eighteen; both herself and her husband enjoyed habitual good health, but conception never took place until the lady was forty-eight, when she bore a child: and another case is reported by Schmidt, where a well-formed female, who married at nineteen, did not bear a child until she had reached her fiftieth year.

CHAPTER XII.

PREVENTION OF UTERINE INFLAMMATION.

THE more I practise, the more I am persuaded that a beneficent Providence never intended women to suffer so much as they do, and that two-thirds of the diseases of the reproductive organs are preventible complaints. If women are injudiciously brought up; if the menstrual function is recklessly interfered with; if they are imprudently given in marriage; miscarriages made light of, and insufficient time allowed for the womb to recover itself after the tremendous labour of parturition, women must expect to suffer from the various forms of uterine inflammation.

It is my object briefly to show that uterine inflammation can be prevented:

1. By a judicious system of education.
2. By careful management of the menstrual function.
3. By marriage, and a right understanding of the duties of married life.
4. By the careful management of pregnancy, miscarriage, parturition, and lactation.

1. *A Judicious System of Education.*—I need not dilate on this topic, for no one will deny that a judicious system of education is the best means of maintaining an originally good constitution, and the only way to improve a bad one: moreover, I have fully treated the subject in a work to which the reader is referred.*

* "Elements of Health and Principles of Female Hygiene." Bohn, York-street, Covent-garden.

2. *Careful Management of the Menstrual Function.*—The knowledge that menstruation is a natural function does a world of mischief; for those who do not suffer at that time will not submit to any restraint being placed upon their usual liberty of action; and those who suffer very much during menstruation will not seek advice, supposing that they must bear the pain of a natural function. It cannot be too strongly impressed upon the mind of young women, from the first period of menstruation, that however well they may feel, *they should do less than usual* at that time. This advice applies to all classes of society: the higher should avoid physical fatigue and over-excitement, and, therefore, long walks, shopping, riding, dancing, parties, and theatres. They should be careful of getting wet, of remaining in draughts, of taking iced and cold drinks, and of putting on damp linen; for they often suppress the menstrual flow and light up inflammation. A gentle purgative may be useful just before menstruation; but the too frequent use of purgatives may increase or check the flow, and all medicines should be discontinued, unless the contrary be specially ordered by the medical adviser.

If the menstrual flow becomes accidentally too abundant, it is well to remain on the sofa; if it stops too soon, a brisk walk, a tumbler of hot negus or brandy-and-water, or placing the feet in hot water, may bring it back. I deem this plan advisable, however correctly the menstrual function may be performed; but if it be habitually morbid, irregular in date, too scanty, too abundant, or too painful, then the case must be treated according to the principles laid down in the chapters on Emmenagogues, Hæmostatics, and Sedatives; for it must be carefully borne in mind, that all married women who are sterile from uterine disease have previously long suffered from morbid menstruation; and to ensure its right performance is to prevent uterine inflammation.

The same precautions should be adopted by married women,

particularly during the first period of married life, if they value their chances of maternity. Sterility is comparatively rare, but early abortion very frequent. I mean that conception takes place, there is no menstrual flow, and no care taken to avoid over-excitement, over-fatigue, purgatives, or connexion ; and then, after a few days, there is an abundant, prolonged discharge, which is supposed to be menstruation, but is really a miscarriage. This cannot be often repeated without leading to inflammation. Both married and single should be made aware, if they have once had a severe attack of uterine inflammation, that nothing is more likely to rekindle it than menstrual congestion, which is sufficient to aggravate every form of uterine disease ; and still more so, if the menstrual flow be interfered with by any of the baneful influences that so often check it. The relapses of chronic internal metritis generally occur at menstrual periods, and are frequently to be attributed to the patient's imprudence. While penning these remarks, I learn that a patient, who had suffered more or less from this complaint for four years, and who had so far recovered as to be able to withstand the loss of two children, and bear the imprudent climbing of the Malvern and Welsh hills, was at last so injudicious as to walk about the International Exhibition from ten till four, at a menstrual period, although abdominal pains were violent, which brought on a severe relapse, and obliged her to keep her bed for three weeks. Another lady similarly affected owes a bad relapse to riding on horseback on the first day of menstruation. One can have no conception of the amount of imprudence committed by women at menstrual periods, and then they wonder at being ill and at having relapses. The treatment of these relapses must be derived from a correct appreciation of the ovarian nisus, and consists in warm external applications, emollient injections, warm or hip-baths, narcotics during the flow, and leeches if the flow has not been sufficiently abundant to abate the increased inflammation.

3. *A Judicious Marriage.*—The tonic influence of marriage has been mentioned, and it sometimes renders menstruation normal which had previously been habitually morbid. When debility is not caused by organic disease, it soon yields to marriage. In the chronic stages of uterine and ovarian inflammation, it has done more good than harm, sexual intercourse being often borne when a digital examination was painful. It is easier to prove the benefits of marriage than to measure accurately the evils of celibacy, which I believe to be a fruitful source of uterine disease in women of strong passions. The sexual instinct is a healthy impulse, claiming satisfaction as a natural right. Our present state of civilization is full of conditions and circumstances that intensify this instinct; and if it does not receive its legitimate satisfaction, women of strong passions are placed in a permanent state of conflict, which is accompanied by increased irritability and congestion of the womb. Then arises a fearful struggle between conscience and instinct: some seek relief in imitating what is denied to them; others achieve a victory over passion, but the victory is dearly bought. Despondency at having to renew the fight, irritability of temper that her lot should not have been more fortunate, may cause deadly exhaustion and prostration, and often hysterical symptoms and convulsions. This is what I have observed; and sometimes a virtuous woman, in a state of sub-delirium, will blaspheme against friends, relations, social arrangements, and even religion, without having any knowledge of having done so, when, after a few hours, she was herself again.

Thus marriage is a preventive of uterine disease: it may nevertheless produce it, in various ways, if not judiciously ordered. Marriage should not be contracted either too early or too late in life. By too early, I mean before twenty-one, until which time the system has not taken its full development, nor the bones their perfect solidity. I have traced the influence of early marriage in many cases of uterine and

inflammatory affections; and it stands to reason that there will be a greater chance of miscarriages when the processes of reproduction are confided to immature organs. Indeed, it is not uncommon to observe that women married at seventeen have several miscarriages, and afterwards bear children.

Late marriages are less frequent and less fatal; but I can corroborate B. de Boismont's assertion, "that whenever sexual impulse is first felt at the change of life, some morbid ovario-uterine condition will be found to explain it in nineteen out of twenty cases." Thus I deem it imprudent to marry at this epoch, unless sanctioned by a medical adviser.

Matrimonial intercourse is often at first painful, and a source of more or less disturbance; so it would seem reasonable if, for a few months after marriage, women kept quiet, and lived in a comparative state of seclusion, instead of striving to sow as many seeds as possible of future mischief. The succession of visiting and gaieties in honour of the bride, the joltings on bad roads, and other fatigues of continental travelling, are well calculated to bring on early miscarriage and the suppression of menstruation, which lead to inflammation. Too frequent connexion is said to cause uterine inflammation; and this may be correct when the pelvis is shallow and the vagina short, which may cause more or less contusion of the os uteri. It is a very important question whether, when there is inflammation of the body or neck of the womb, connexion will increase it or not. It is generally admitted that married people should then sleep apart; and I have certainly seen the cure of ulceration of the womb protracted by the continuance of matrimonial habits, particularly when the womb descended low, and when connexion was painful. Young married women have consulted me, who had been previously told to persevere, notwithstanding the painfulness of connexion, as abstaining for a time would only render

it more painful when resumed; and this was said without a careful examination, which would have led to the discovery of inflammation, and sometimes even of ulceration of the os uteri. One might as well tell a man with a broken leg that rest was useless. When the body of the womb is inflamed connexion is very painful, and often brings on a relapse; but when connexion is not painful, I am much less particular on this point than when I began practise, thinking that it is rather beneficial than otherwise, in chronic affections of the neck of the womb, to patients of strong temperament and to those subject to hysteria. It is said that by connexion an additional excitement is given to an organ already too excited; but in some women the allowing of connexion is the most powerful means of appeasing the reproductive organs. One must always remember that it is a question of a natural appetite; and that, insomuch as a diseased stomach is made worse by the want or insufficiency of food, so diseases of the reproductive organs may be made worse by the absence of their accustomed stimulus. Thus I have seen women so suffering from chronic uterine inflammation that I should have been very sorry to have sanctioned their marriage, yet who certainly improved by it. I have under my care a patient who suffers severely from ovaritis and internal metritis, and the neck of the womb is soft, swollen, and exquisitely sensitive to the finger, nevertheless she has no pain on connexion; it does not make her worse, and, in fact, relieves many of her distressing nervous symptoms. This is a woman of strong passions, which warrant connexion, notwithstanding uterine disease. Another lady suffered much from hysteralgia on the loss of her husband: everything was tried without success, and after many years of suffering she married again, when a marked improvement immediately followed, and the patient was cured in three months.

4. *Pregnancy.*—Pregnancy has a real curative influence. It often cures those little understood conditions of the ovaries

to which I have drawn attention as ovarian irritability and subacute ovaritis. It cures them by reducing these organs to a state of inactivity for nine months, and for the further period allotted to lactation. In exactly the same way that pregnancy gradually softens the firm tissues of the healthy cervix, it often softens the neck of the womb when enlarged and hardened by hypertrophy and by chronic inflammation. This has been denied by Duparque and Lisfranc; but experience teaches me that there is a fair hope that the fully organized plasma and fibro-cellular tissue may be softened by the processes of gestation, and then gradually swept away by those rapid currents of absorption which so speedily reduce the enormous volume of the womb. This is less surprising than the statement of Scanzoni, that he found a fibrous tumour of the womb as large as a man's head, which he had been uselessly treating for eleven years, entirely to have vanished, without bodily expulsion, six weeks after the lady's confinement. This will appear incredible to those who have not felt the singular amount of softening and infiltration to which such tumours are sometimes liable during pregnancy. Any imprudence of the patient during the puerperal period will check this fortunate result; and I believe that there is a great chance of correcting uterine displacements if parturition has been favourable, and the patient be kept on her back for six weeks or two months, cooling or astringent injections being made during that time. I have seen the plan successful in three cases of marked anteversion, in two of retroversion, and in one of anteflexion. Scanzoni mentions three cases of anteflexion cured by pregnancy; and Dr. Goupil states that he distinctly made out retroflexion of the womb in two women, but that, on examining them carefully two or three months after their confinement, there was no trace of retroflexion. It has been shown that uterine displacement diminishes the chances of pregnancy; but should it occur, it may be thus made highly conducive to the rectification of the displacement, the more

so as this rectification may be consolidated by the physiological repose in which the womb is placed for many months during which lactation checks menstruation.

While thus ascribing to pregnancy a greater beneficent influence than is generally allowed, there is nothing more evident than the frequent production of inflammation of the womb by abortion or by parturition; and I am certainly not overstating the fact in affirming that two-thirds of the serious cases of uterine inflammation can be traced to a bad miscarriage or to a confinement. It therefore follows that the prevention of uterine disease in married women is tantamount to the judicious management of pregnancy, abortion, and parturition.

Women make no difference in their habits of life, whether they be pregnant or not; and if some do so with impunity, many miscarry from over-exertion and over-excitement. The way to prevent miscarriages is to lead a quiet life, particularly so during those days of each successive month when, under other circumstances, they would menstruate; and to abstain during those few days, not only from long walks and parties, but also from sexual intercourse. Miscarriage gives rise to more aggravated forms of uterine inflammation than parturition, because, in the first, there is a greater amount of bruising and laceration of the unsoftened neck of the womb, whereas when parturition occurs at the full time it is not lacerated, unless by the unnaturally large head of the child, by too precipitate labour, or by the use of instruments. Parturition generally ensures to the womb a long period of repose and absence of congestion, during which the bruised or lacerated cervix soon heals in healthy women. When, on the other hand, women miscarry, the healing processes of nature are interrupted by the congestion of menstruation and by speedy conception; for our social habits do not, unfortunately, enforce the sleeping apart of man and wife for a month after miscarriage, as after confinement. It is unfortunate for women

that the public make so light of miscarriages; but the profession is aware that the organic changes set on foot by conception, and which are called post-partum involution, still proceed for some time after the expulsion of the fœtus. If this process is interfered with by premature conception, the uterine tissues suffer from efforts made in conflicting directions; and this may perhaps account for the uterine deviations which sometimes follow abortion, and certainly explain subsequent miscarriages. After miscarriage, I make a point of advising the same emollient or cooling injections to be made twice a day, as if women were suffering severe uterine inflammation. I do the same after parturition, so soon as the lochial discharge ceases to be bloody; and if this plan were generally adopted, it would prevent a large portion of the uterine disease that we are now called upon to treat, and this plan could do no harm even when unnecessary.

Those who suffer most from prolapsus and other displacements are the poor, who are obliged to get up on the ninth day, and, with an over-weighted womb, to stand about for many hours; and the inference is obvious. The foregoing observations relate to women miscarrying and bringing forth children, the womb being healthy; but if it has previously suffered from inflammation, or gives evidence of some perverse adjustment of tissues leading to constant morbid menstruation, then the chance of miscarriage and parturition causing inflammation is much greater, and they may do so rather by an exaggeration of pathological conditions, than by such traumatic agencies. Still greater care will be required in cases, and it would be well to examine the patient after a month, so as to treat ulceration, should it exist, by surgical remedies.

That women should suckle their own children is to them often a pleasure, and always a duty, the neglect of which is often severely punished. I have already alluded to the good effects of lactation in subacute ovaritis and in uterine

displacements. Lactation can be continued in most cases of uterine inflammation, but sometimes a chronic state of sub-acute inflammation of the womb and diarrhœa seem to be kept up by lactation; and I have had to advise weaning the child, because lactation prevented the healing of an ulcerated womb.

CHAPTER XIII.

ON THE INFLUENCE OF INDIA ON THE TREATMENT OF UTERINE INFLAMMATION.

I AM not aware whether our hard-working fellow-labourers of Copenhagen and Stockholm have ascertained the frequency of uterine diseases in the northern latitudes; but, with regard to tropical countries, it appears that organic uterine affections are as frequent and as various as in the temperate regions of the globe. It would be very erroneous to suppose that uterine diseases were the result of an over-refined state of civilization: they have been found to be of frequent occurrence amongst the unirritable women of uncivilized races, by those who have been placed in favourable circumstances for observation. This statement is confirmed by my friend Dr. Stewart, late Professor of Midwifery in the Medical College of Calcutta, and Physician to the Hospital for Native Women, who was forcibly struck by the frequency of uterine diseases amongst the natives of India of both high and low caste; and by the native practitioners, who, not being looked upon with jealousy by their countrymen, have had the best opportunities of observation, and particularly by Madoosudun Goopta, whose record of lesions discovered in the dissecting-room of the native female hospital of Calcutta will be found in Dr. H. Bennet's Fourth Edition. Mr. Robert Clarke, who for twenty years was Colonial Surgeon at Sierra Leone, informs me that amenorrhœa, dysmenorrhœa, leucorrhœa, and profuse men-

struation are as frequently met with in Negro women as in English, but that hysteria is very rare. Dr. Kirkman Finlay, Superintendent of the Hospital in Trinidad, likewise assures me that, in that island, the native women are never without suffering from some form or other of uterine disease, and the French creoles aptly indicate their chief cause of suffering by calling it *mal de mère.*

Although I shall again refer to the probable causes of uterine inflammation amongst the natives of tropical climates; the object of this chapter is to investigate the influence of India in the production of uterine inflammation amongst our countrywomen; and my remarks will be limited to the several varieties of inflammation of the body and neck of the womb, and to such uterine enlargements and displacements as are often the result of inflammatory action.

In estimating the comparative frequency of uterine inflammation in the European residents of tropical climates, it must be borne in mind that, whether in India or in our other tropical possessions, European women are all young; they leave Great Britain at about twenty, and very seldom remain in India after forty, thus passing in a hot climate the period of life in which uterine inflammation is most common even in temperate regions. This remark is made as a safeguard against exaggeration; but I am fully prepared to admit, with those who have practised in tropical countries, that during their residence there, Europeans are unusually prone to uterine disease. Dr. Stewart does not hesitate to say that, in India, eight out of ten of the European female residents are habitually subject to deranged menstruation, leucorrhœa, or to cervical excoriations.

Without having practised in tropical climates, I think it useful to enter upon this investigation, because I have frequently had under my care, during the last ten years, patients invalided by uterine inflammation in the East or West Indies, the Brazils, China, or Australia; for these different climates

may be considered to favour the development of uterine disease in the same way, however different may be their pathology in many other respects. In addition to this favourable opportunity for studying the influence of tropical residence on the rise and progress of uterine disease, my intimacy with Dr. Henry Bennet has made available to me his large experience, so that these observations may be considered to a great extent as representing his views as well as my own.

The inquiry has not received consideration in any work with which I am acquainted; so it seems useful to submit our views to the medical profession, and to bring them under the attention of those who are practising in India and in our numerous tropical possessions, in order that they may fill up the deficiencies of an imperfect sketch. The following questions will be briefly considered:—

1stly. Why do tropical climates increase the frequency of uterine inflammation amongst those born in temperate regions?

2ndly. What is the influence of tropical climates on the march and progress of uterine inflammation both before and after the patient's return to a temperate region?

3rdly. Does the treatment of uterine inflammation require to be modified, by the peculiar morbid conditions of those who return from a tropical to a temperate climate?

Firstly,—Why do tropical climates increase the frequency of uterine inflammation in those born in temperate climates? To give a satisfactory answer to this question, it will be well to state the probable causes of uterine disease amongst the native races of tropical countries. One cause is the calling into action the sexual system long before its full development. In India this is the result of a positive religious injunction, and in other tropical countries an equally early indulgence in venery often occurs, on the first impulse of passion, amongst races little restrained by social position or the dictates of morality; and indeed, no matter the lati-

tude, wherever woman is but a plaything in the hand of degraded savages.*

The great liability to abortion, accidentally and often intentionally brought on; the barbarous handling of unskilful midwives; the too early rising from the puerperal couch; the want of cleanliness in some races, and in all the sudden action of cold, owing to the alternation of burning days and cold nights,—these are the principal causes of uterine disease amongst the native races, and the action of some of these influences in developing it amongst the European residents will be briefly traced.

When we intend a plant to thrive in a soil different from that in which it had grown, it is not only removed carefully, but left for a time in undisturbed repose to take root in its new habitation. There is, however, no such healthful period of repose for our young countrywomen who are transplanted from England to India. Even when the menstrual function has been habitually regular, it is disturbed by the sea voyage, and is not allowed to become regular before these emigrants of the upper ten thousand are launched, often for the first time, into the gaieties and fatigues of society. In the midst of the excitement caused by this sudden introduction to a strange country and a new position, they frequently marry, eometimes at too early an age, often before the catamenial

* "Esquimaux women marry and live with their husbands long before they become menstruated."—*Dr. Richard King's Replies to the Author's Questions.*

"Amongst the aborigines of South Australia, girls are betrothed and live with their husbands from eight to twelve years of age. They practise sexual intercourse from the eighth year upwards. Childbearing commences at about sixteen years of age, when girls cease to be public property, and live quietly with their husbands."—*The Colonial Surgeon's (Mr. James Hersbash) Replies to the Author's Questions.*

The celebrated Abyssinian traveller, Antoine d'Abaddie, informed me that the legal age of marriage in Nubia is twelve; that he has known girls married at ten, and others to have been bought and used for sexual purposes long before they were menstruated.

function has become regular. Unaccustomed to bear almost intolerable heat, they naturally enough often expose themselves in slender garments, saturated with perspiration, to the sea-breeze or cold north-wester. They cannot live in India, or in any other tropical climate, without being subject to those abdominal disorders which tend to induce uterine disease. The "country fever" will assail them from time to time, lighting up inflammation in the weakest organ; and, before long, the colourless lips and sallow cheeks denote that the blood has been deteriorated, and that the patient suffers from the anæmia which, even in a temperate zone, often stands related to inflammation of the womb, either as cause or effect. The muscular inactivity to which they are condemned, the unusually abundant losses of blood occurring during menstruation and after abortion and parturition, increase the anæmia, and explain that deep-rooted debility * which can only be removed by the bracing influences of a prolonged sojourn in a temperate climate. These are the conditions which explain the valetudinarian existence of European women in tropical climates, and the frequency of uterine disease; and after thus sketching the causes of this frequency, I shall now explain more fully the action of some of these causes.

Starting from daily experience, the greatest predisposing cause of uterine inflammatory affections seems to be some defective organization of the ovario-uterine organs, causing menstruation to be habitually morbid; so much so, that when the menstrual flow is habitually too abundant, too scanty, or painful and irregular in its periodical returns, a tendency to uterine inflammatory affections may be safely inferred. In

* My friend Dr. Dundas, who was for twenty-three years medical superintendent of the British Hospital at Bahia, believes that European women feel the depressing effects of warm climates more than men; and he attributes the difference to the greater indolence of the habits adopted by the female residents.

like manner, whenever inflammation of the womb occurs in the virgin, one may generally predicate that menstruation has been habitually morbid; whereas, in the married, this predisposing cause increases the liability to the acute or chronic forms of uterine inflammation under the influence of well-known causes.

The writings of those who have practised in tropical climates, inform us that when women are transplanted there from temperate regions, habitual perturbations of the menstrual function may be expected, even in those in whom that function had been previously regular. And I know, from careful inquiry into the constitutional antecedents of my patients, that menstruation, when morbid in England, becomes more so in India, or in any other tropical climate, and instead of the usual moderate flow, it is entirely absent or very profuse. So great is the tendency to uterine hæmorrhage amongst our countrywomen in India, that it has become a frequent practice for them to return to Europe for their confinements, so as to avoid the profuse flooding by which it is so often accompanied in India.*

The broad fact is thus brought out, that tropical climates produce uterine inflammation, because habitually intense heat disturbs menstruation in those who were not born under tropical influences; so that, for instance, our countrywomen, when transplanted into India, become more liable to inflammation of the womb, as a result of pregnancy, abortion,† and parturition, than if they had remained in England.

That a tropical climate should be productive of uterine inflammation, in those brought up in temperate regions, is also

* "Dysmenorrhœa and suppression of the menstrual flow are common in Demerara, as a result of tertian intermittents."—*Returns to the Author's Questions from Dr. Alleyne, late Colonial Surgeon, Demerara.*

† Miscarriages are more frequent among the European residents in India during the hot season, and recovery is more protracted.—*Johnson and Sir R. Martin on Tropical Climates.*

dependent on the fact, that Indian pathology is essentially *abdominal*. Tropical heat increases the activity of the portal system, rendering all abdominal inflammatory affections more frequent and dangerous. I have shown that the womb and bowels are so intimately connected, by nerves and blood-vessels, that menstruation seldom takes place without disturbing the functions of the bowels, confining them sometimes, but relaxing them in general. I pointed out that diarrhœa is sometimes a symptom of pregnancy, and that severe uterine inflammation generally gives rise either to obstinate constipation or to diarrhœa, and other functional disorders of the large intestine and of the rectum; so one is prepared to understand how it is that in India, for instance, diarrhœa is a more frequent symptom of pregnancy than it is in temperate countries, and that dysentery often complicates pregnancy, inducing abortion, either directly or by the treatment necessary for the cure of the intestinal affection, and is thus one of the most frequent causes of death during pregnancy and shortly after delivery. Diarrhœa and chronic dysentery are frequently met with as causes, concomitant or sequential, of uterine disease in those who have taken up their abodes in Eastern localities, and Dr. Stewart, at the native hospital in Calcutta, has repeatedly demonstrated to his pupils, by means of the speculum, that cases admitted as dysentery were due to extensive ulceration of the neck of the womb reacting on the rectum.

Another cause of the unusual frequency of uterine inflammation of the womb, in tropical regions, is certainly to be found in that deteriorated state of the blood to be seen in variable shades of anæmia, and explaining that deep-rooted debility brought on by a more or less prolonged residence in a hot climate, even when the transplantation has been well borne by the European. This debility is not only caused by the physical effects of habitually intense heat, but sometimes by malaria, and always by the comparative inactivity of the

muscular system, by the want of the usually sound sleep, and by that complete change of habits which often imparts a certain amount of oriental indolence to the once hardy Englishwoman. It is well known that this settled debility renders the more important viscera very liable to subacute inflammation; and there is no reason why the womb should escape this influence, and why it should not be then more forcibly acted on by its usual exciting causes of inflammation. This debility accompanies patients on their leaving India, so that they return to Europe thoroughly cachectic.

Strange as it may sound, a large portion of disease in tropical countries is referrible to cold, for the thermometer in the shade at Calcutta at noon, and at midnight, during the rainy season, marks a difference of temperature which is often greater than in temperate countries.

Whether the ill effects of the sudden application of cold to the external surface depends on its checking the cutaneous secretions, or on its disturbing the sympathetic relations which exist between the cutaneous nerves and internal organs, or by altering that electrical state of the system with which one is as yet so little acquainted, it is difficult to say; but it is certain that the sudden application of cold, particularly raw, damp cold, is the most frequent cause of menstrual perturbations and of uterine disease, in every country, whether it be cold,* temperate, or tropical. Indeed, to its action on frames debilitated by tropical heat, Dr. J. Johnson and Sir R. Martin attribute most of the diseases of Europeans in India. Living in a temperature which, even in the shade, equals, and often surpasses, that of the blood, it is easy to understand that women will seek relief by exposing them-

* "Suppression of menstruation is, perhaps, nowhere so common as in the Feroe Islands. It appears that the nature of the soil is such as to permit women to move about without shoes, and with only a skin wound round the feet, so that the feet are always damp and cold."—*Returns to the Author's Questions from Dr. Ravn, of Copenhagen.*

selves imprudently to the sea-breeze, to the cold land-wind, or to the icy chill of a raw, dewy night, which is felt to pierce and constringe the frame, inadequately protected by scanty clothing, saturated by perspiration; while the loose and ample folds of the trousers worn by the women of many Eastern nations are much more calculated to prevent the injurious action of cold on the pelvic viscera than the ordinary European costume.

Even the greatest preservative of health in a warm climate, the cold bath, may be abused; and my friend Dr. Stewart has sometimes traced uterine disease to its having been imprudently continued during the catamenial periods. Thus cold, under its many modes of application, tells most on the weakest organ, originating uterine disease in India, as it does in England.

I do not include amongst the causes of uterine disease that increased desire for sexual intercourse attributed to those who live under a burning sun; for I believe the assertion to be one of those bold assumptions, made to fit a theory, by those who forget that, according to the accounts of Arctic travellers, nothing can equal the salaciousness of the savage tribes, whose burning passions contrast as strongly with their ever-frozen habitations, as fiery Hecla with its foot of snow.

Secondly,—What influence have tropical climates on the march of inflammatory affections of the womb, both before and after a patient's return to a temperate abode?

From what I have been able to observe, both acute and chronic inflammation of the womb tell more forcibly on European women when residing in a hot climate, than if suffering from the same complaint in their native country. The muco-purulent discharge and the loss of blood are more considerable both in India and after returning to Europe; the nervous symptoms are more severe and eccentric; debility and prostration of nerve-force are more intense, and felt at an earlier

stage of the complaint. Such are the results of observation, and they harmonize with what might have been anticipated; for, supposing uterine inflammation to have become established in the European resident in tropical climates, from the action of the causes which I have enumerated, it stands to reason that the progress of the complaint will be accelerated by the frequently recurring action of the same causes. The march of uterine inflammation will be made more rapid by the gastro-intestinal affections which are so common. The various forms of remittent and intermittent fevers, which constitute the "common fever" of each tropical zone, are seldom avoided, and as these affections single out the weakest organ, they will, for a time, give an additional impulse to the uterine inflammation, while the ever-persistent action of intense heat increases that radical debility which fosters local congestion and subacute inflammation. Supposing the disease be met by the most judicious combination of constitutional and local measures, they will only be partially successful so long as the patient remains subject to these climatorial conditions; indeed, practitioners assert that, in India, steel and tonics produce so much nervous irritability in women, that their exhibition cannot be continued, however well indicated by theory. Dr. John Jackson, formerly physician to the Medical College in Calcutta, and Dr. Stewart inform me that, in India, steel has a tendency to increase uterine congestion, unless it be associated with aperients, which increase the uterine disease by irritating the bowels; and this is confirmed by Dr. Kirkman Finlay's experience in Trinidad.

They admit, however, that in those anæmic or toxæmic conditions induced by agues, menorrhagia, and other causes, when the lips are colourless and the blood is cold, steel, in some form or other, is absolutely necessary; the best and least exciting form being the syrup of iodide of iron. If, as frequently occurs, uterine disease remain undetected or without adequate treatment, it is thus more likely to become worse in

a given time, than if the same patient had remained without treatment in a temperate climate.

Under these circumstances the patients are invalided, and they return home with constitutions much recruited, particularly if, instead of taking the more expeditious but fatiguing overland route, they patiently submit themselves to the steady action of the sea during the long voyage round the Cape.

This improvement in the general health does not always tell very favourably on the uterine disease, which seems to be sometimes aggravated by the return to a colder climate. This remark coincides with what has been already noticed by Dr. J. Johnson and Sir Ranald Martin with regard to the aggravating effects of a return home on other diseases; for however plastic may be the powers of the system, it cannot immediately accommodate itself to a sudden change of climate. The constitution is so debilitated by tropical influences, that a return to a cold climate may cause a renewal of morbid activity on the part of a previously inflamed organ, be it womb or liver.

Before mentioning the conditions which are often found in patients on their return home, I may remark, that inflammatory diseases seem to present the same appearances, whatever be the patient's clime and race. Thus Dr. Stewart, at Calcutta, Dr. Scott, the chief medical officer of the Madras Hospital for Diseases of Native Women, and some of the regularly educated Hindoo practitioners, assert that, whether it be studied at the bedside or in the dissecting-room, uterine inflammation presents the same appearances in the Hindoo as in the European; and I have noted nothing peculiar in the pathological aspect of the inflamed uterine tissues in those who return to England from tropical climates. The local appearances are the same, but more marked, considering the length of time the disease has lasted. In like manner, the symptoms are often worse than one would have anticipated from the duration of the complaint, which is more intractable.

Having pointed out that the progress of uterine inflammation in tropical climates is accelerated by the frequent recurrence of complicating diseases, it remains to be shown that, in attending the uterine affections of those who have returned home from tropical climates, one is liable to find treatment interfered with by the remains of partially subdued tropical complaints, such as ague, remittent fever, liver derangement, and chronic dysentery.

The pertinacity of hepatic disorders after a return from the tropics is proverbial: chronic dysentery is scarcely less persistent, the colon and rectum being thickened and hyperæmiated, even when not ulcerated. The pertinacity of that unknown condition of the nervous system which responds by a fit of ague to any morbid stimulus, is another notorious fact, and the long-forgotten jungle-fever may be brought back by getting the feet wet in London mud. I need not remind the reader of the pertinacity of anæmia in those invalided in India, if it has resisted the bracing influence of the long sea-voyage.

This question of the complications by which the progress of uterine disease may be affected is not at all peculiar to the pathology of tropical climates; it arises daily in consultation practice. In the worst cases, disease has not only to be detected, but the best treatment determined on will be rendered more or less ineffectual by the intercurrence of complicating agencies.

Uterine inflammation, under some one of its various forms, may be clearly defined; but this may be only one element of the case, associated with other pathological conditions, which increase the difficulty of curing the uterine disease. This leads to the treatment of uterine disease in those who return from a tropical climate.

3rdly. What modifications are required in the treatment of uterine inflammation in tropical climates and in tropical invalids?

Considered in this point of view, the treatment of uterine inflammation divides itself into the treatment to be adopted during a residence in tropical climates, and that required after returning to a temperate region.

1. *Treatment of Uterine Disease in Tropical Climates.*—It is obvious, from what has been previously stated, that, on arriving in India or any other tropical region, young women should keep quiet, and learn to so adapt themselves to the climate as to obviate its inconveniences and to ward off its dangers before their constitution be subjected to any fresh trial of strength. It would be wise to seek to re-establish the regularity of the menstrual flow, and not to allow marriage to take place until this be accomplished. European habits of activity should be kept up so far as experience teaches them to be consistent with health; riding and driving at dawn and sunset are evidently indicated; and it is for those who practise in hot climates to decide how far exercise under solar influence is or is not prejudicial to European women. It is evident that, so far as the male sex is concerned, this is not followed by the evil results which might have been anticipated. It has been remarked by the well-known writer on military medicine, Dr. Robert Jackson, that in the East and West Indies, European troops were never so healthy as when actively engaged under solar influence, and never so sickly as when reposing in barracks. The healthiness of the European troops engaged in the late siege of Delhi, under tremendous heat, was a matter of wonder. For myself, I never felt stronger than during the ten days spent in crossing the Desert from Gaza to Cairo, at the end of May, being in saddle all day, and the thermometer ranging from 100° to 120° Fahr.

The strengthening influence of the cold bath and cold shower-bath is well known; but even when European women are not suffering from uterine inflammation, it would be well if, during a residence in tropical regions, they were to impart to the womb a portion of that bracing influence so largely

given to the skin, by the daily use of cold water injections, administered by means of a vulcanized india-rubber syphon syringe.

I have been told by medical men who have practised in the East and West Indies, that, even when not inflamed, the womb is in an irritable condition, and that the uterine and the vaginal secretions are unusually abundant; and Dr. D. Stewart even suggests a morbid condition in these secretions, which so react on the womb as to bring on inflammation. Under these circumstances, it is evident that the habitual use of cold water vaginal injections is the best preservative against uterine inflammation, and the best means of enabling European women to prolong their residence in a hot climate. A change to the hills or a sea-voyage are good modes of preventing uterine inflammation when it is brought on by failure of constitutional strength.

With regard to the treatment of uterine inflammation as it occurs in India, Dr. D. Stewart, Dr. Scott, and many other practitioners, fully adopt the principles of treatment laid down in Dr. H. Bennet's writings and in my own. They do not believe that the womb escapes from the general rules of pathology, and maintain that its diseases require local or surgical measures as well as constitutional. Indeed, they consider constitutional remedies like quinine and steel as less useful in India than in England, and rather build their hopes of recovery upon the application of the nitrate of silver or stronger caustics to the inflamed or ulcerated surface of the womb, alike in the native women and in the female European residents. In the latter, however, it frequently happens that the constitution is so undermined by the enervating influences of climate, that, notwithstanding the best treatment, the ulcerated womb will not heal, or reopens soon after healing, so as to render imperative a return to a more bracing climate.

2. *Treatment of Uterine Inflammation in those who return*

from a Tropical Country.—When patients of either sex return from India for some serious operation, they are very judiciously advised by the old Indian practitioners, who reflect so much honour on British medicine, not to have the operation performed until the blood has been renovated, and the constitution braced up by a year's residence at home; but it would be very injudicious to extend this injunction to the healing of uterine ulceration by surgical treatment. The constitution is much more liable to suffer from the continuance of an irritable sore than by the application of nitrate of silver, or a more energetic caustic; but I warn those who have to attend such cases, that they must expect to find the treatment of uterine disease in tropical patients baffled by complications, so as to protract the cases much beyond the usual period of their duration.

This inability to recover health, notwithstanding the best treatment, constitutional as well as surgical, is, in the anæmic, to be referred to the deteriorated condition of the blood and to a thorough exhaustion of nerve-force, and recovery will reward perseverance with a well-adapted succession of tonics: one of the best is that prescribed by Sir R. Martin to those who consult him for leucorrhœa on returning from India; I mean the sand-rock spring of Alum Bay, Isle of Wight, in which sulphate of iron and alumina are associated, an astringent mentioned at page 138. Often the pertinacity of the complaint depends on the notion entertained by patients, that once returned to Europe, they may suddenly change a life of forced inaction for the fatigue of visiting, shopping, and sight-seeing, which leads of course to inevitable relapses.

Travelling, a residence at the seaside, sea-bathing, and hydropathic appliances will often render great service in such cases. In others, the favourable progress which had at first followed a well-directed plan of treatment will be suddenly checked, without any assignable reason, until successive biliary accumulations and outpourings indicate chronic dis-

ease of the liver, which requires to be treated by mercurials, alkalines, tonics, and judicious regimen, or the uterine disease will not progress favourably. In a patient now under treatment, a large quantity of bile is vomited or passes from the bowels once or twice a month, often without known cause, sometimes from worry and fretfulness, and this has been the case for several years.*

Sometimes the check to the favourable progress of uterine inflammation will be explained by the patient getting wet through, or suffering some severe mental shock, which brings back a return of ague or of remittent fever; and the uterine disease will not yield until these complications are cut short by quina. In such cases, when the local complaint is grafted on thoroughly broken-down constitutions, it would be injudicious to follow up the surgical treatment of the uterine inflammation until the complete removal of all uterine lesions. Whilst these are kept in abeyance by medicated injections, one should seek to improve the system by change of climate, mineral waters, and hydropathic appliances, with the view of inducing those constitutional changes which may cure the various elements of the case, should such changes not arise spontaneously in the course of time—the chief remover of of chronic disease. At repeated intervals, varying from three to six months, it would be well to test the progress made towards the restoration of the constitutional powers by the effects of local treatment on the persistent uterine disease, continuing the treatment during three weeks.

During the last ten years I have known young women sent

* Dr. Copland ascribes the prevalence of liver diseases amongst the European residents in tropical countries to the liver being larger and its secretions more copious in the European than in the Negro and in the Mongol races; but my friend Mr. Robert Clarke, who has been colonial surgeon, at Sierra Leone and at the Gold Coast, for twenty-two years, and who had abundant opportunities of testing the value of this assertion in hospital practice, assures me that he has not observed any difference in the size of the liver in the Negro and in the European.

out to India in whom menstruation was so irregular as to afford little chance of the maintenance of health; I have attended patients who have been almost crippled for life by remaining in India long after the development of uterine inflammation; others have come back to England on account of uterine inflammation, returning to India before the disease was quite cured, and speedily obliged again to abandon their Eastern homes by a relapse of the old complaint; and I have, therefore, been led to insist on the following practical rules:—

1. When menstruation has been habitually morbid in a temperate zone, women should not form permanent settlements in India or the tropics.

2. Those who have frequently suffered from uterine inflammation in a temperate region should not take up their abode in India.

3. When the European residents of tropical countries suffer severely from uterine disease, they should remove to a temperate climate.

4. Those who come back to Great Britain from tropical regions invalided by uterine disease should not return to their Eastern homes until some months after the cure of the disease, and they should time their voyage so that their arrival in India may not occur in the hot season, when abortion is most frequent, and every variety of ulceration is more difficult to heal.

I feel convinced that a close adherence to these rules would prevent a large amount of disease, save a useless expenditure of money, and check the social misery which often follows the loosening of family ties by long continued absences.

SELECT FORMULARY.

It has been my endeavour to substitute definite quantities of valuable remedies for the uncertain preparations sometimes used, and to suggest inoffensive preparations in the place of some that are needlessly filthy. For instance; the extract of belladonna is a very valuable remedy, but in prescribing it we little know how much we give of its active ingredient; whereas sulphate of atrophia may be prescribed with precision. The smell of ointments or liniments made with extract of belladonna, when largely applied to the abdomen and the breasts, often prevents sleep: these ointments are, moreover, so filthy, that women cannot be persuaded to continue their use; whereas those containing sulphate of atropia may be as cleanly and inodorous as cold cream. It will be therefore obvious that to render remedies less offensive, is an effectual way of shortening disease, and the valuable properties of glycerine have enabled me to fulfil this object to a certain extent; for whether as a demulcent, or as a clean and convenient excipient of active remedies, the substance known as Price's glycerine enters largely into many of the following prescriptions, and for this part of the work I have availed myself of the pharmaceutical experience of Mr. Bullock, of Hanover-street, and of Mr. Schacht, of Clifton.

LOTIONS.

In chronic uterine complaints, it is very useful to keep the watery solutions of active remedies in prolonged contact with the abdominal surface. The thick spongio-piline imbibes a considerable quantity of fluid, and, like a poultice, is more suitable for the treatment of acute affections. Piline is much thinner, resembling cloth, with an impermeable side, and it may be damped with a medicated solution, and kept in place by an appropriate bandage.

Impermeable lambskin is sold by Mr. Ewen, of Jermyn-street: when damped with a watery fluid, it retains its moisture for several hours, and is so soft and pliable that it easily moulds itself to the abdominal surface, adhering so closely that it is easily kept in place.

Some patients complain that the oil-silk commonly used, when it is applied over damp lint, sticks disagreeably to the skin; and a new kind of impermeable silk has been lately patented, called Parhydor, which is free from smell and is not rendered adhesive by heat. It does not sustain injury by being boiled in water, and is said to bear tropical climates. It is not only preferable but stronger and cheaper than the common oil-silk.

When the object is to place the abdomen in a kind of medicated vapour-bath, it is better to place over the abdomen flannel or lint, made damp by some appropriate solution, and enveloped in oil-calico, such as is used at King's College Hospital.

Any of these contrivances may serve to place in contact with the skin diluted laudanum, tincture of aconite, turpentine, camphorated spirit, as well as the following lotions:—

Morphia Lotion.

1. Hydrochlorate of morphia . . . gr. x.
   Spirit of wine . . . . . ℥iv.
   Distilled water . . . . . to ℨiv.

Atropia Lotion.

2. Sulphate of atropia . . . . . gr. iv.
   Spirit of wine . . . . . ℥iv.
   Distilled water . . . . . to ℨiv.

Raspail's Sedative Lotion.

3. Solution of ammonia . . . . . ℨij.
   Camphorated spirit of wine . . ℥iiss.
   Common salt . . . . . ℨij.
   Water . . . . . ℨxxxij.

The salt is dissolved in the water, the solution filtered, and mixed with the other ingredients, and the lotion should be kept in a well-closed bottle. It may be applied with a small sponge, or a pad of soft linen may be soaked in it, and applied to the painful part, renewing it as often as may be required. If the lotion irritates the skin too much, water may be added. This is a valuable application in cerebral affections.

LINIMENTS.

As oil becomes rancid, it is often better to combine glycerine with other remedies. A warm hip-bath, or heating the skin with a flat iron previous to their application, will much increase their absorption.

Sedative.

4. Sulphate of atropia . . . . . gr. viij.
   Sulphate of morphia . . . . . gr. xvj.
   Aconitina . . . . . gr. ij.
   Diluted sulphuric acid . . . . . ♏v.
   Spirit of wine . . . . . ℥ss.
   Glycerine . . . . . ℥i.
   Water . . . . . to ℥iv.

Sedative and Stimulant.

5. Chloroform . . . . . ℥ss.
   Spirit of turpentine, or fir-wool oil. ℥i.
   Camphor . . . . . ʒij.
   Oil of lavender . . . . . ♏xx.
   Glycerine . . . . . ℥i.
   Water . . . . . to ℥vj.

To be well shaken before it is applied, and the first four ingredients should be mixed before adding the others.

OINTMENTS.

Common lard becomes rancid, so it is well to prescribe benzoated lard or lard boiled with benzoine; but I prefer a new preparation called glycerine ointment, which looks like

arrowroot jelly, and is made by boiling different kinds of starch in glycerine in the proportions of one of starch to four of glycerine. It has been used in France under the name of glycerine plasma, and although proposed some years since by Mr. Startin and Dr. W. Budd, it did not gain ground, and is used in England as a remedy for chilblains and as a cosmetic for the hands; and it is an excellent excipient of active soluble remedies. It does not become rancid, has no disagreeable smell, and can be brought down to any desired fluidity by adding a few drops of water; it is perfectly miscible in water, and does not cause permanent discoloration of the body-linen, as is the case with lard and oil, but the ointment should be kept carefully covered, as it absorbs moisture.

Veratria.

6. Veratria	gr. ij.
Otto of roses	gutt. i.
Glycerine	ʒss.
Glycerine ointment	℥i.

A piece about the size of a filbert, rubbed into the skin above the pubis, every day, is useful, when dysmenorrhœa does not depend upon inflammatory conditions.

Atropia.

7. Sulphate of atropia	gr. ij.
Glycerine	ʒss.
Oil of neroli	gutt. iv.
Glycerine ointment	℥i.

This or the following ointment may also be used as above, for the pelvic and spinal pains of uterine diseases.

Morphia.

8. Acetate of morphia	gr. x.
Glycerine	ʒss.
Otto of roses	gutt. i.
Glycerine ointment	℥i.

Iodide of Potassium.

9. Iodide of potassium . . . . . ʒi.
Otto of roses . , ... gutt. i.
Water. . . . . ʒi.
Glycerine ointment . . . . . ℥i.

To be rubbed into the skin of the lower part of the abdomen twice a day.

Mercurial.

10. Sulphate of atropia . . . . . gr. ij.
Sulphate of morphia . . . . . gr. iv.
Olive oil . . . . . ʒi.
Oil of lavender . . . . . gutt. x.
Strong mercurial ointment . . . ℥i.

A mercurial ointment has been made with glycerine plasma, but I frequently prescribe the above, which is not made additionally repulsive by the smell of laudanum and of the extract of belladonna. About the size of a small walnut is to be rubbed in morning and evening. A stronger effect will be produced by leaving the residue on the skin, and placing over it a warm linseed-meal poultice will promote absorption.

Compound Mercurial.

11. Strong mercurial ointment . . . ℥i.
Iodide of potassium . . . . . ʒi.
Acetate of morphia . . . . . gr. x.
Otto of roses . . . . . gutt. ij.
Distilled water . . . . . ʒi.

Dissolve the iodide of potassium in three parts of the hot water, and the acetate of morphia in the rest of the water, mix the solutions, and then incorporate the magma with the ointment.

PLASTERS.

These should be sufficiently soft to be spread with the thumb, as their active constituents are likely to be decomposed by the hot iron. A plaster made with fresh extract of bella-

donna is a very efficacious remedy, but its smell is offensive to many patients, whereas one made by incorporating sulphate of atropia with lead plaster or with a glycerine ointment made with arrowroot, which will, I think, replace the former substance, is a clean and inoffensive topic. It is well calculated for making ready-made plasters, as the patient can easily spread with a paper-knife a thick coat of one of the ointments 6, 7, 8, provided the glycerine be omitted, upon the rough side of a bit of kid or gutta-percha cloth, or on leather made impermeable to water. These applications adhere firmly to the skin, are easily removed, and will therefore not interfere with the customary ablutions, after which they can be replaced. The gutta-percha cloth, or the impermeable lambskin, if plunged in cold water, comes out perfectly clean, and can be used repeatedly—indeed, I believe this mode of applying remedies will be found invaluable to relieve many forms of neuralgia and of skin disease.

Atropia Plaster.

12. Glycerine ointment . . . . . ʒi.
Sulphate of atropia . . . . . gr. iv.

Veratria may be used in similar proportions, but I have ordered double the quantity of acetate of morphia. The alkaloid is to be rubbed down with a few drops of glycerine, carefully incorporated with the ointment, and spread thickly on leather, like an ordinary plaster. Glycerine ointment made with arrowroot, in the proportion one to three of glycerine, should be used, for it makes a stiffer compound.

Compound Sedative Plaster.

13. Sulphate of atropia . . . . . gr. iij.
Veratria . . . . . gr. iij.
Sulphate of morphia . . . . . gr. viij.
Glycerine ointment . . . . . ʒi.

To be made as above.

VAGINAL INJECTIONS.

Emollient injections should be used tepid, and I advise a teaspoonful of laudanum to be added to each pint of fluid that is injected.

Milk or milk-and-water is an excellent injection, so is tepid water, adding to it a teaspoonful of laudanum and a tablespoonful of glycerine.

Poppy-head Injection.

14. Bruised poppy-heads . . . . ℥iv.
Water . . . . . four pints.

To be boiled for fifteen minutes and carefully strained. This decoction is useful by reason of the mucilage it contains, as well as from the small quantity of opium.

Linseed-Tea Injection.

15. Slightly bruised linseed . . ℥iss.
Water . . . . . three pints.

Gently boil it for ten minutes, and carefully strain it, for the fragments of the seeds are apt to obstruct the pipe of the syringe, and render it indispensable to send it to the instrument-maker.

SEDATIVE INJECTIONS.

It is easy to increase the sedative action of these injections by increasing the quantity of laudanum to two or three drachms to the pint, and by combining the laudanum with tincture of henbane.

COOLING INJECTIONS.

To a pint of water at 70° F. should be added either a drachm of biborate of soda, chlorate of potash, acetate of lead, or the liquid diacetate of lead. To these solutions I always add a teaspoonful of laudanum, and also a tablespoonful of glycerine when the skin is irritable or the discharge acrid. I have sometimes combined chlorate of potash, borax, laudanum, and glycerine in the same injection.

Mr. Weeden Cooke ascribes great healing properties in the treatment of cancer to the following lotion :—

16. Chlorate of potash . . . . . ℥ss.
Diluted hydrochloric acid . . . . ♏xl.
Battley's solution of opium . . . ℥ij.
Water . . . . . to ℥xx.

ASTRINGENT INJECTIONS.

Their temperature should not be higher than 60° F., and lower if possible.

Oak Bark.

17. Oak bark . . . . . ℥j.
Water . . . . . two pints.
To be boiled down to one pint and strained.

An infusion of green tea also makes a good injection; and another may be instantaneously prepared by dissolving a drachm of tannin in a pint of cold water.

One drachm of the mineral astringents, such as alum, iron-alum, or perchloride of iron, in a pint of cold water, forms excellent astringent injections; and another can be made by adding to the same quantity of water one drachm of alum and ten or twenty grains of sulphate of zinc.

HÆMOSTATIC INJECTIONS.

The preceding injections might be classed under this heading. Tar-water is useful; and Raspail praises the following combination :—

18. Tar-water . . . . . 500 parts.
Camphorated spirit of wine . . . . 3 „
Vinegar . . . . . 3 „

ANTISEPTIC INJECTIONS.

19. Solution of chlorinated soda . . . . ℥i.
Water, at 60° F. . . . . one pint.
20. Permanganate of potash . . . . . ℥i.
Water at 60° F. . . . . one pint.

To these injections a drachm of laudanum and a tablespoon-

ful of glycerine should be added, to render the injection less irritating to the ulcerated surface of the womb, and the discharge less offensive to the skin. Tar-water would act as an antiseptic, and so would creosote.

Creosote.

21. Creosote . . . . . ℥xx.
Yolk of egg . . . . . 1.
Water . . . . . to ʒviij.
Half of this to be added to a pint of water.

ANTISYPHILITIC INJECTION.

22. Iodide of potassium. . . . . ʒii.
Laudanum. . , ... ʒi.
Water . . . . . to a pint.

To be used in tertiary symptoms of syphilis. The iodide should be dissolved in the water, and the laudanum afterwards added.

EMMENAGOGUE INJECTION.

23. Liquid ammonia . . . . . ℥xx.
Tepid milk . . . . . ʒvi.

When the injection is made, the pelvis should be well raised, and the labia pressed, so as to retain some of the injection for five minutes.

ENEMATA.

Emmenagogue.

24. Barbadoes aloes . . . . . gr. x.
Tepid milk . . . . . ʒiij.

To be injected twice a day when the menstrual flow is due, until it comes, or until tenesmus becomes unbearable.

Sedative.

25. Battley's solution of opium . . . ʒi.
Tincture of henbane. . . . . ʒi.
Water . . . . . ʒiij.

One tablespoonful of this, or double the quantity, to be added to a little warm milk, and to be given by means of a two-ounce india-rubber bottle.

VAGINAL SUPPOSITORIES.

Mr. Taylor, of Baker-street, has made excellent suppositories, by incorporating morphia and other vegetable alkalies with starch, almond-meal, and glycerine, coating the little ball with a mixture of suet and lard or cocoa butter. These suppositories remain a long time soft if enough glycerine be used, and do not give rise to any discharge. Acetate of morphia may be prescribed in doses of from one to two grains for each suppository; but with sulphate of atropia, it is prudent to begin with one-thirtieth of a grain, and I have not given more than a tenth of a grain in each suppository.

Emmenagogue.

Ten grains of extract of aloes, with a sufficient quantity of liquorice-powder, made into a ball, and coated with butter of cocoa, to be applied at night, and an injection of warm water to be made on rising in the morning.

Mercurial.

The most convenient way of placing mercury in contact with the womb is for the patient to introduce high up into the vagina one of the mercurial capsules which are sold by Mr. Twinberrow, of Edwards-street, an injection being used the following morning.

Hæmostatic.

26. Gallic acid . . . . . gr. v.
Tannin . . . . . gr. x.

To be made into a suppository with cocoa butter, and to be introduced two or three times a day.

RECTAL SUPPOSITORIES.

27. Extract of henbane . . . . . gr. iij.
Extract of belladonna . . . . . gr. $\frac{1}{4}$

To be made round, coated with cocoa butter, and to be introduced at night. This is the suppository I most frequently prescribe, for it relieves pain without constipating.

28. Extract of opium . . . . . gr. i.
Extract of henbane . . . . . gr. ij.

To be made in the same way and used in the same manner as the last.

COOLING POWDER.

29. Powdered starch . . . . . ʒv.
Powdered camphor . . . . . ʒi.
Powdered acetate of lead . . . . ʒss.
Essential oil of bitter almonds . . ɱxx.

It is useful to dust the pudendum with this powder two or three times a day, when the skin is very irritable.

MIXTURES AND SYRUPY PREPARATIONS.

Sedative.

30. Tincture of castor . . . . . ʒiij.
Compound tincture of lavender . . ʒvi.
Camphor mixture . . . . . to ℥vi.

A tablespoonful two or three times a day when cerebral symptoms and hysterical phenomena are marked.

31. Hydrochlorate of morphia . . . . gr. i.
Diluted hydrocyanic acid . . . . ɱxxiv.
Spirit of wine . . . . . ʒij.
Distilled water . . . . . to ℥vj.

One or two tablespoonfuls alone, or in a small effervescing draught when there is sickness.

Anaphrodisiacal.

32. Tincture of lupuline . . . . . ʒvj.
Tincture of digitalis . . . . . ʒss.
Cherry-laurel water . . . . . ℥ss.
Distilled water . . . . . to ℥vj.

A tablespoonful every third or fourth hour.

Tonic.

33. Hypophosphite of soda . . . ℈i. to ʒss.
Compound infusion of gentian . ʒvj.

Two tablespoonfuls to be taken twice a day, just before meals.

Syrups.

The following are very convenient preparations, from a half to a whole teaspoonful being given in a little water twice a day after meals.

Syrup of hypophosphite of quina and soda.
„ „ „ quina and iron.
„ „ citrate of iron.
„ „ citrate of iron and quina.
„ „ iodide of iron and potassium.

The ammoniated solution of quina may be given in the same doses, and can be sometimes taken by those who cannot bear other preparations of quina.

Emmenagogue.

34. Oil of savine . . . . . ʒi.
Nitric ether . . . . . ʒiij.
Mucilage . . . . . ʒi.
Water . . . . . to ʒvj.

A teaspoonful being given, after shaking the bottle, every two hours, when the patient is half comatose from suppressed menstruation.

I can also commend one of Dr. G. Bedford's prescriptions :—

35. Tincture of ergot . . . . . ʒss.
Syrup of saffron . . . . . ʒss.
Compound decoction of aloes . . . ʒiss.

A teaspoonful being given three times a day.

Another preparation, due to Paracelsus, is worth trial, the dose being from two to three drachms, twice a day, with a little water :—

36. Tincture of myrrh. . . . . 4 parts.
Tincture of saffron. . . . . 3 „
Tincture of aloes . . . . . 3 „

Hæmostatic.

37. Gallic acid . . . . . gr. xxiv.
Battley's solution of opium . . . . ℥xx.
Tincture of matico . . . . . ʒiij.
Infusion of orange-peel . . . . to ℥vi.

A tablespoonful every two hours.

I can also speak well of the following prescription, which chiefly differs from one recommended by Mr. Bradley, of Martly, by the addition of the tincture of ergot.

38. Turpentine, or fir-wool oil . . . . ℥iss.
Tincture of capsicum . . . . . ʒiss.
Tincture of ergot . . . . . ʒi.
Comp. tinct. of lavender . . . . ℥ij.

From half a drachm to a drachm of this mixture to be given in milk, after shaking the bottle, in hæmorrhage; but in cases of severe flooding after parturition, Mr. Bradley has given as much as half an ounce to an ounce, in plenty of milk, and with good results.

Antisyphilitic.

39. Iodide of potassium . . . . . ϑi.
Compound decoction of sarsaparilla . ℥iv.

To be taken in the course of the day for tertiary symptoms of syphilis.

PILLS.

Sedative.

40. Extract of henbane . . . . . gr. iij.
Liquorice powder, as much as sufficient.

This pill, or one of the following, to be taken at night, or oftener.

41. Extract of henbane . . . . . gr. ij.
Dover's powder . . . . . gr. i.

42. Extract of henbane . . . . . gr. ij.
Extract of Indian hemp . . . . gr. ¼

Dumas, of Montpellier, frequently prescribed the following pills for nervous affections of the abdominal organs :—

43. Castor . . . . . grs. xxx.
Camphor . . . . . ,, xv.
Opium . . . . . ,, viij.
Conserve of roses, as much as is sufficient.
To be divided into fifteen doses.

Anaphrodisiac.

44. Camphor . . . . . gr. ii.
Extract of henbane . . . . . gr. i.

I give one, two, or three of these pills three times a day, when there seems to be sexual excitement and hysterical symptoms.

Tonic and Sedative.

45. Extract of henbane,
Disulphate of quina, of each . . gr. i.

To be taken every night. This is a preparation that I have often found to be well borne by women who could not bear large doses of any tonic; some have continued to take it for months, not leaving it off during the menstrual period; and it will not interfere with the action of any purgative that may be required.

Tonic.

46. Disulphate of quina,
Sulphate of iron,
Extract of henbane, of each . . gr. i.

This is very suitable in many cases, the number of pills varying according to the case. I have given two three times a day in one instance, for many weeks.

Tonic and Laxative.

47. Disulphate of quina . . . . . gr. ss.
Compound rhubarb pill . . . . gr. ii.
Extract of henbane . . . . . gr. i.

Two of these pills to be taken at night, or one may be taken as a dinner-pill. Although this pill has only a slight purgative action, it often brings away stools that scald the passage as if mercury had been taken.

Hæmostatic.

48. Gallic acid . . . . . gr. ii.
Extract of matico . . . . . gr. i.
Watery extract of opium . . . . gr. ss.
To be taken every three or four hours.

Antisyphilitic.

49. Proto-iodide of mercury . . . . gr. i.
Extract of henbane . . . . . gr. ii.

The pill to be taken morning and night.

MISCELLANEOUS.

Caustic Tincture of Iodine.

50. Iodine . . . . . ʒi.
Iodide of potassium . . . . . ʒss.
Rectified spirit of wine . . . to ℥i.

The painful parts of the back and abdomen may be painted with one coat of this tincture once a week or oftener.

LIQUID TO REMOVE STAINS.

51. Cyanide of potassium . . . . . ʒiv.
Distilled water . . . . . ℥iv.

This will remove nitrate-of-silver stains from the hands, linen, and the speculum.

INDEX.

ABDOMINAL BELTS, 195
Abdominal varnish, 18
Abscess, perinæal, 245
Abuse of alcoholic drinks, 17
Acid nitrate of mercury, 88
Acids, mineral, 137
Aconite, 70
Actual cautery, 119
Air, change of, 130
,, sea, 131
Alkalies, 49
Aix-les-Bains, 133
Aloes, 153, 300, 303
Amaurosis, hysterical, 200
Ambergris, 73
Amputation of cervix uteri, 215
Antiphlogistic treatment, 28, 149
Anxiety, 134
Astringents, 137
Atropia, sulphate of, 297

BANDAGES, 193
Bath, cold, 125
,, cold hip, 124
,, electrical, 153
,, hot air, 127
,, sitz, 124
,, sea-water, 131
,, sponge, 124
,, Turkish, 127
,, vapour, 151
Baths, 24
Belladonna, 69
,, in tenesmus, 69
Bladder, inflammation of, 224
Bleeding, 28, 136
,, local, 32
Blennorrhagic internal metritis, 164
Blisters to neck of womb, 52

CAMPHOR, 71
Cancer, treatment of, 164
Cantharides, 164
Castor, 73, 302, 305
Caustic applications, theory of, 82
Caustics, 74
Cautery, actual, 119
Cervix uteri, amputation of, 215
,, ,, dilatation of 251
Change of air, 130
Chelsea pensioner, 46
Chlorate of potash, 298
Chloroform, 70
Cinnamon, 141
Climate, 275
Clitoris, 249
Cold bath, 125
Counter-irritants, 50
Cystocele, 226
Creosote, 308

DIET, 16, 123
,, in cases of vomiting, 241
Dilatation of cervix uteri, 251
Digitalis, 139
Diphtheritic ulceration of womb, 160
Diarrhœa, 241
Displacements of womb, 170
Donovan's solution, 165
Dysentery, 243, 281
Dyspepsia, 226

ELECTRICAL bath, 153
Emetics, 139
Emmenagogues, 145
Enemata, 23, 300
,, sedative, 63
Ergot of rye, 140, 303
Eruptions on womb, 160
Examination of patient, 10
Exercise and rest, 13, 149
External applications, 18, 292

FIRST interview with patient, 8
Flooding, 135
Fomentations, 57
Formulary, 292, 306
Foxglove, 139

GLYCERINE, 292
,, ointment, 295

HÆMORRHOIDS, 244
Hæmostatics, 135
Hansom cabs, 16
Henbane, 69, 304
Headache, varieties of, 66

Heat, 127, 150
Hip-bath, cold, 124
Hip-baths, 26
Hot-air bath, 127
Hydrocyanic acid, 70
Hydropathy, 124
Hymen, 249
Hypodermic method, 59
Hysterical amaurosis, case of, 200

Ice, 20, 136, 166
India, influence of, 275
Indian hemp, 71, 304
Inflammation of bladder 224
,, of vulva, 218
,, of vulva-vaginal glands, 219
Inflexions of womb, 174
Injections, 20, 298
Insanity, 65
Intra-uterine pessary, 169, 204
,, ,, injections, 77
Iodide of potassium, 163, 295, 300
Iodine, tincture of, 76, 306
Iron, 123, 303, 305
Irrigations, 23
Issues, 51
,, at the epigastrium, 42, 238

Key to diseases of women, 3

Lactation, 273
Lady practitioners, 2
Leeches, 33
,, counter indications of, 44
Liniments, 58, 294
Local bloodletting, 32
Lotions, 292
Lupulin, 73, 302

Madder, 156
Marriage, 134, 268
Masturbation, 68, 82
Menorrhagia, 135
Mercurial ointment, 47
,, capsules, 47
Mercury, 46, 163, 296
Mesmerism, 73
Mineral acids, 137
,, waters, 132
Miscarriage caused by leeches, 43
,, a cause of uterine inflammation, 272
Mixtures, 302
Moxa, 121
Morphine, 60, 69, 234, 294
Mugwort, 156

Nausea, 227
Neuralgia, cases of uterine, 41, 60, 199, 200
Nitrate of mercury, acid, 88
Nitrate of silver, 77
,, ,, when dangerous, 85

Ointments, 58, 295
Opium, 69, 139
Ovaritis, 258

Packing, 127
Paralysis of rectum, 247
Peculiarities of patients, 5
Pelvic succussion, 149
,, pains, 67
Pelvi-peritonitis, 258
Permanganate of potash, 299
Pessaries, 196
,, air, 197
,, rectal, 208
Pessary, intra-uterine, 169, 204
Pills, 304
Plasters, 58, 296
Plugging neck of womb, 143
,, vagina, 142
Potassa caustica, 90
,, ,, its dangers, 106
,, ,, its influence on parturition, 116
Potassa cum calce, 90
,, ,, mode of application, 97
Potassa cum calce, dangers of its use, 101
Potassa cum calce, its influence on parturition, 110
Poultices, 19
Pregnancy, leeches in, 42
,, curative influence of, 270
Prevention of uterine inflammation, 265
Procidentia uteri, 174
Prolapsus uteri, 174, 209
Pruritus of the vagina, 220
Purgatives, 152

Quina, 123, 303, 305

Railway travelling, 15
Rectal pessaries, 208
,, suppositories, 302
Rectocele, 246
Rectum, diseases of, 243
Refrigerants, 136
Resolutives, 46
Rest and exercise, 13
Revulsives, 141

Saffron, 155, 203
Savine, 156, 203
Scarifications, 44
Scrofulous ulcers, treatment of, 167
Sea-air, 131

Sea side, 131
,, water, 131
Sedatives, 54
,, choice of, 69
Setons, 51
Simplicity in prescribing, 11
Sitz-bath, 124
Slitting of womb, 255
Sound, uterine, 243
Sponge-bath, 124
Spongio-piline, 19
Spontaneous orgasm, 68
Sterility, 248
Stimulants, 17
,, uterine, 151
Styptic, Ruspini's, 167
Substitution, theory of, 82
Success, a tonic, 134
Succussion, pelvic, 149
Sulphur, 45
Sulphuret of carbon, 156
Suppositories, 24, 301
Suture of vagina, 212
Syphilitic treatment, 161, 304, 306
Syrups, tonic, 202

TAR-WATER, 299
Tenesmus, belladonna in, 69
Tincture of iodine, 76, 306
Tolerance of opiates, 65
Tonics, 122, 148, 302
Travelling, 131
Tropical climates, influence of, 275
Turkish-bath, 127
Turpentine, 140, 294, 303

UTERINE dietetics, 13
,, complications, 217
,, inflammation, prevention of, 265
Uterine neuralgia, cases of, 41, 60, 199, 200
,, orthopædics, 169
,, sound, 243
,, stimulants, 151

VAGINA, suture of, 212
Vaginal injections, 20, 59
,, suppositories, 59, 301
Vaginitis, 218
Vanilla, 156
Vapour-bath, 151
Varnish, abdominal, 18
Venesection, 28
Veratria, 70, 297
Vienna paste, 90
Vichy, waters of, 132
Vomiting, 228
,, cases illustrating, 232
,, treatment of, 231
Vulva, inflammation of, 218

WATER, sea, 70, 297
Waters, mineral, 132
Wine, 117, 239
Womb, displacements of, 170
,, inflexions of, 174
Wormwood, 156

ZWANKE, his pessary, 209.

THE END.

WELLCOME LIBRARY INSTITUTE

OPINIONS OF THE PRESS.

UTERINE AND OVARIAN INFLAMMATION,

AND ON THE

Physiology and Diseases of Menstruation.*

Third Edition, with Illustrations, 8vo, cloth, 12*s*.

"THERE are few works that are more steadily earning the approval of the profession than Dr. Tilt's "Treatise upon Metritis and Ovaritis." The author fully deserves that it should be so. He may be said to have made the subject his own, so far as English literature is concerned, and to have delicately, scientifically, and satisfactorily discussed a difficult subject and obscure topic. The third edition is now before us. It is indeed a goodly book; but it could scarcely be less voluminous, seeing how wide a field the author traverses. Very much is actually included in the apparently limited subject discussed by the author, who endeavours to keep the reader *au courant* with the teachings prevailing upon the Continent as well as at home.

"When Dr. Tilt started in practice, twenty-five years since, a firm belief in the infallibility of the speculum and of the nitrate of silver was nearly all that was essential for a specialist in the diseases of the sex who prided himself upon being of the advanced school. Matters have changed since then; for in spite of all said and written upon specula and caustics, women would still persist in being ill, and in vaguely referring their troubles to the pelvis. The truth is, as the author remarks, that above the internal sphincter, beyond which neither caustics nor specula can reach, there remains the body of the womb, with its lining membrane and the ovaries, which for thirty years are thrown into a state of hæmorrhagic and other orgasm every month for several days. Obstetricians have of late years recognised this, and not refused to touch where they could not see, and to use remedies, though they could not apply caustics. For much of the advance that has been made within the last ten years in this department, we are indebted to the exertions of Dr. Tilt. The improvement which

---

* London: John Churchill and Sons, New Burlington-street.

the present edition has undergone will tend to propagate the author's doctrines. That they will be in the main fully established we have no doubt. This their truthfulness will do for them; but, independently of this, the clear and simple style of writing in which they have been conveyed must materially contribute to their wide dissemination. What is easy and agreeable to read will be read accordingly. If a man write crabbedly, his readers become crabbed too, and are apt to let him rest quietly on their shelves. Dr. Tilt is a model author, too, in this: that he supplies us with a capital table of contents, a good general index, and an index of bibliography. These may appear trifles to some authors, who utterly neglect them. But to all readers they are of great importance, as also to the writer of the book, who is apt to be consulted in a ratio with the facility for reference. To notice again in detail a work which we have twice before submitted to critical review is quite unnecessary. The treatise before us now takes its position by the side of our standard text-books, and is too well appreciated to need any further recommendation from ourselves."—*Lancet.*

"To those who may be called upon to treat diseases of the female generative organs, we know of no work which they may study with greater advantage than this of Dr. Tilt; the author has shown himself to be an original, painstaking, and accurate observer, and no one, however much they may be inclined to differ with him on certain points herein discussed, can say that this work is not a credit to his skill and sagacity in unravelling many very intricate and difficult questions in ovarian and uterine pathology. In corroboration of our opinion we need only point to the fact that this is the third edition which has appeared in comparatively a few years.

"We regret very much that our space does not allow of a more lengthy examination of this most interesting portion of the work, and especially the last chapter relating to the pathology and treatment of hæmatocele, a disease to which the author was the first in this country to direct the attention of the profession, and which has lately, from the researches of Bernutz and Goupil, attracted considerable notice. We have said enough, however, to interest our readers in this work, and we can promise them a vast accession of knowledge of a most useful kind if they will attentively study it."—*London Medical Review.*

"We have on former occasions felt it our duty to remark upon the labours of Dr. Tilt with satisfaction, and as this is the third edition published, we have but little more to say than that he fully maintains the credit before accorded him for industry, and has added to the knowledge we possessed on several important branches of inquiry."—*Medico-Chirurgical Review.*

"Evidently the work of a man of industry, who, as student and practitioner, has devoted immense pains to the investigation of the whole subject of the laws of woman's life in health and disease."—*Medical Times and Gazette.*

"We look upon Dr. Tilt's as one of the really genuine works of the present day."—*Dublin Medical Press.*

"Well deserves perusal."—*Edinburgh Medical Journal.*

THE CHANGE OF LIFE IN HEALTH AND DISEASE.*

SECOND EDITION.

"Le livre du Dr. Tilt a son originalité, et devoit être signalé à ceux qui ne considerent pas la pathologie des ages comme un hors-d'œuvre à l'usage des médecins littérateurs. Le traité de *l'age critique* est rempli de données intéressantes; l'auteur qui s'est spécialement occupé des maladies des femmes, et qui a publié sur ce sujet des travaux estimés, y apportait une solide expérience; il avait le mérite de parler d'après sa pratique et de ne pas seulement rajeunir par une phraseologie nouvelle des citations d'un autre temps. En somme, on aurait peine à trouver sur le même sujet une monographie qui valut celle sur laquelle nous venons d'appeler l'attention. Une preuve entre autres que le livre est d'un vrai mérite, c'est qu'il éveille dans le lecteur le désir de le reprendre en souseuvre; de vérifier ce qui parait juste, de controler par une nouvelle étude ce qui semble moins admissible, et surtout de tenir meilleur compte des phénomènes de *l'age critique* dans l'observation de tous les jours."—*Archives Générales de Médecine*, October, 1858.

"On y trouvera une étude très bien faite et toute nouvelle des réactions nerveuses et reflexes que les désordres ovariques et utérins exercent sur toute la machine sensible de la femme. On compendra avec lui une foule de manifestations pathologiques qui sont le désespoir du médecin clinique. Cette partie de l'œuvre du médecin anglais suffirait à elle seule pour grandir encore, si cela était possible, la réputation que le docteur Tilt s'est acquise comme praticien des plus distingués, comme savant physiologists, et pour le placer parmi les écrivains dont les travaux ont fait faire un pas réel aux maladies de la compagne de l'homme. Ajoutons que le livre que nous voudrions faire connaître plus au long, se distingue encore par une profonde érudition, de la richesse dans le style, et une saveur scientifique qu'on ne trouve pas toujours dans les œuvres de ce genre."—*Union Médicale*, August, 1857.

---

* London: John Churchill and Sons, New Burlington-street.

ELEMENTS OF HEALTH, AND PRINCIPLES OF FEMALE HYGIENE.*

"There are two kinds of popular medical writers—those who introduce the public into the sanctuary of medical science, and tempt them to poison themselves by injudiciously taking medicines; and those who seek to improve the sanitary state of mankind by diffusing a knowledge of the general laws which govern nature, in relation to living creatures, and by imparting those precepts of physiology which, if duly observed, would prevent disease. The first class of writers we heartily condemn. To illustrate the second we point to the names of Drs. James Johnson, Mayo, and, particularly, Dr. A. Combe, deeming them benefactors of the human race. Following in the footsteps of those just mentioned, is Dr. Tilt. In his *Elements of Health* he has successfully done for women what the others have done for men, and his work is a model for those who propose writing on similar subjects, for in a vast plan every subject receives comment in proportion to its importance, and is lucidly explained so as to bring conviction to every woman of ordinary capacity. The work is characterized by extreme delicacy of expression, a healthy tone of feeling, free from all mawkish leaning to the prejudices of the sex, and it is written in a style which rivets the attention and carries on the reader from page to page. Our space is claimed by professional subjects, so that we cannot review this book so completely as we could wish. We can merely trace its general plan and prevailing idea. Each successive period of seven years forms a chapter, in which the mental and moral progress of decay are sketched, while the physical is treated at full length. Food, sleep, exercise, clothing, occupations, are separately considered; and the chapter concludes with a brief account of the diseases which are common to each epoch, and of the indications heralding their approach, which render medical advice imperative. Dr. Tilt's prevailing idea seems to be, that further improvement in the sanitary condition of society is to be principally effected by giving women an insight into the laws to which they are subjected, as living beings and as women; their own health, the improvement of the human race, and the welfare of society being attainable by that means. The work seems also to commend itself to the profession by the careful manner in which is therein laid down the means of preventing that exaggeration of the nervous temperament, which is so fruitful a source of the diseases of women. In conclusion, we shall only add, that as Dr. Tilt's is the only work of the kind—at least, in English literature—we trust it will be considered an indispensable guide by persons to whom may be intrusted the sacred task of educating the present generation of children, who are necessarily to become our future generations of men and women."—*Lancet.*

* London: Henry G. Bohn, York-street, Covent-garden.

"In the *British and Foreign Medico-Chirurgical Quarterly Review* it was lately remarked that a treatise on female hygiene was much wanted; and all those engaged in general practice who have to contend daily with the ignorance and prejudices of women respecting themselves and their children will re-echo the assertion of our respected contemporary. Dr. Tilt has sought to fill up this desideratum; and we are anxious to be among the first to notice a book which originated in our columns. Two years ago, Dr. Tilt inserted in this journal some highly interesting papers on the right management of women at the critical periods of life. These papers have suggested to the author the present work, of which we intend briefly to sketch the outline. The work is divided into periods of seven years, and each period forms a chapter. Each chapter briefly notices the mental and moral development or decay, and the physical condition is treated with care. The food, clothing, exercise, and sleep, as regards each epoch, are passed in review; and the diseases to which women at each period are most liable are pointed out, as well as the most appropriate means of prevention. Every chapter is preceded and followed by tables showing the mortality of both sexes for each year successively, the mean duration of life, and its value for insurance purposes—calculations which derive importance from the fact of their having been made under the eye of Mr. Farr, of the Registrar-General's office. Such is the outline of a work which combines a vast amount of information in a small compass, and of which we regret that our space will not allow us to give extracts; it is much required, and will doubtless, ere long, become as popular as those of the late lamented Dr. Combe. Perhaps no man is better calculated than Dr. Tilt to fill up this hiatus in medical literature: for few unite to the same extent great opportunities of observation with sterling common sense, a thorough love of his subject, and a lucid, correct, and lively style. We think the work will be found as useful to the practitioner as it is indispensable to those who are in any way connected with the education or responsibilities of women; for while, on the one hand, it is the best treatise on physical education with which we are acquainted, it also affords practitioners excellent advice respecting the prevention of nervous complaints, and, in fact, of all the diseases to which women are amenable from the peculiarities of their formation and habits."—*Provincial Medical and Surgical Journal.*

"Dr. Tilt has chosen a subject which required great tact and delicacy for its treatment; and though such a work was much wanted, it has been this feeling probably which has deterred writers from entering on the field before. We think Dr. Tilt has succeeded. He has taken up most carefully all those departments of statistical inquiry which throw light on the differences that exist in the constitution and temperament of the sexes, and in all parts of his work has treated the subject in both a learned and a practical manner."—*Athenæum.*

EDMONDS & REMNANTS,
PRINTERS