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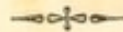
OF

PRACTICAL MEDICINE.

PUBLISHED BY ORDER OF THE
MASSACHUSETTS MEDICAL SOCIETY,
FOR THE USE OF ITS FELLOWS.

CONTAINING
ASHWELL ON DISEASES PECULIAR TO WOMEN.

VOL. XIII.



BOSTON:
PRESS OF T. R. MARVIN, 24 CONGRESS STREET.
1843.

A
PRACTICAL TREATISE
ON THE
DISEASES PECULIAR TO WOMEN,

ILLUSTRATED BY CASES,

DERIVED FROM HOSPITAL AND PRIVATE PRACTICE.

BY
SAMUEL ASHWELL, M. D.,
Obstetric Physician and Lecturer to Guy's Hospital, London.

BOSTON:
PRESS OF T. R. MARVIN, 24 CONGRESS STREET.
1843.

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P R E F A C E.

IT is now nearly twenty years since the important branch of Medical Science which constitutes the subject of the following pages, first occupied my earnest and almost constant attention. During a great part of this period, Guy's Hospital, with its extensive Lying-in Charity, and my own private and consultation practice in female diseases, have afforded me opportunities falling to the lot of but few practitioners. I do not, however, on this account urge any exclusive claim to the publication of a work of this kind, nor do I ask for its opinions and practice any exclusive and undue deference. But still I trust that the truth of the principles, and the treatment recommended in the book, will obtain for it the sanction and confidence of my professional brethren.

I may also add, that the disposition to publish has been strengthened by an opinion I have long entertained, that practitioners who hold important public appointments, are bound, so far as their sources of authentic information can be made subservient, to improve and increase the common stock of professional knowledge. It may, too, be urged in favor of my attempt, that some production of its kind is really wanted; for, while we possess many valuable single essays on female diseases, there is scarcely one complete and really practical work.

I commenced this treatise many years ago, and but for its difficulty and extent, it would long ere now have been completed. It must be remembered, that it is strictly devoted to pathology and treatment, not to anatomical detail and physiological research. The latter sciences will therefore be introduced for the sole purpose of illustrating disease and the influence of remedies ; further they would be irrelevant.

Numerous cases are narrated, in order that their symptoms may show whether the histories of the various diseases are accurately given, and that from their successful or unfavorable issue, the danger of the malady and the worth of the treatment may be demonstrated. These motives will, with practical men, and for them I have written, sufficiently apologize for the increased size of the volume. Perhaps it may be also urged, that cases add greatly to the interest of an elementary work, tending to relieve the dulness from which a constant repetition of principles, without such portraits, is nearly inseparable.

The book will contain little which is not the product of my own practice and observation ; and if I have not quoted largely from the works of others, it has not arisen from any want of a due appreciation of their excellence, nor from any unwillingness to acknowledge obligation, but because every practical book ought mainly to rest on what its author knows and has proved for himself to be true and valuable. Where such is the case, a writer naturally uses a phraseology of his own ; the dress in which he appears before the public is seen to belong, not to another, but to himself ; and there is, in consequence, a consistency of arrangement and character throughout the whole. Nevertheless, it will be seen on perusal, that I have not forgotten to mention the names of those from whom I have derived valuable assistance.

Many formulæ of remedies are appended to the various chapters, and this has been done, because it harmonized with the practical plan that I had prescribed to myself ; and be-

cause there are young practitioners without sufficient therapeutical knowledge, and older men with too many demands on their time, nicely to test the value, and accurately to determine the doses and other important conditions on which the efficient use of remedies so much depends.

My aim has been, to produce a treatise on female diseases, so true, simple, and practical, that it may form a safe and efficient guide to the elucidation and curative treatment of many at least of these intricate, rapidly-progressing, and dangerous maladies. If success attend the effort, that alone will be a sufficient reward for the labor of the work. I have endeavored to write in a plain and perspicuous style; with scrupulous accuracy as to facts; and in reference to opinions and treatment, nothing is recommended, of the probability or worth of which I am not myself convinced.

The first part of my undertaking is now before the profession, and in reference to it I may say, in the words of the great and lamented Dr. Gooch, "When an author attempts to execute his own view of a subject, he is the last person in the world to judge whether he has succeeded or failed. When he has finished his book, it is impossible for him to see it in the same point of view, and in the same light, as the public will; and as he himself would, if he could, forget its thoughts and phrases, and read it with a fresh and impartial mind: he may show it to a judicious and well-informed friend, but this is a poor thermometer of public opinion: the only one is publication, and to this I must trust the fate of my volume."

In conclusion, I acknowledge with pleasure valuable assistance afforded to me by Mr. Tweedie, Mr. Lever, and Mr. Oldham, the Obstetric Assistants of Guy's Hospital.

*London, Grafton Street, Bond Street.
September, 1840.*

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A PRACTICAL TREATISE
ON THE
DISEASES PECULIAR TO WOMEN.

PATHOLOGY OF FUNCTIONAL DISEASES OF
THE UTERINE SYSTEM.

I PROPOSE to arrange the diseases peculiar to women in three great divisions. In the first, I shall place the functional ; in the second, the organic diseases ; and in the third and last part of the work, will be comprised the affections of the pregnant and puerperal states.

A few preliminary observations on the pathology of each of these classes may explain and illustrate what is subsequently to be advanced. The functional are more complicated and less easy of accurate diagnosis than the structural diseases. It is often difficult to assign a precise locality to the former, as few of them are exclusively confined to the uterus, but exert, through the medium of the ganglionic system of nerves, an extensive constitutional

influence. The difficulty is not so great in determining the seat and degree of an organic lesion. A functional disease is one *which is dependent on deviation from the natural or healthy action of any part of the organization, indicated by symptoms during life, which after death are found to be unconnected with discernible changes of structure.* Contrast such a disease with cancer or scrofula, essentially organic maladies, and the difference is striking. In the latter, any part which is attacked will suffer conspicuous changes of its texture, and conformation. Functional uterine affections are mainly dependent on the derangement of menstruation; such for instance as chlorosis, amenorrhœa and dysmenorrhœa, profuse menstruation, menorrhagia, and in some measure leucorrhœa. In all, there is a deviation from the standard of uterine health. In chlorosis, amenorrhœa and dysmenorrhœa, there is scantiness of the catamenial secretion and pain; while in menorrhagia and its varieties there is profusion and excess; results indicative, probably, of marked difference in the nature of the primary affection, both of the organic nervous system and of the circulation. In health, the catamenial secretion is generally of the color of the venous blood, perhaps slightly more florid, but less viscid and without the power of coagulation, never separating, as blood does, into its component parts, however long it may be kept. Ordinarily, it occurs once in every lunar month, and without pain, the process continuing for three, four, or five days, and the excretion amount-

ing, in quantity, to three, four, or five ounces ; the fluid having a faint and sickly, and occasionally an offensive odor, quite different from blood, and but little disposed to putrefaction.

There is considerable variety in these particulars. In some women, menstruation is performed more, in others, less frequently. In one individual, the amount of the secretion exceeds, while in another, it falls short of the usual quantity, differing also in its quality or character. So far, however, as my observation extends, at least within certain limits, regularity in the periods of menstruation appears of greater importance, than either the absolute quantity or quality of the fluid. Nor must it be forgotten, in estimating the influence of menstruation on the health, that the catamenial secretion is peculiar to the female of the human race. There is no analogous secretion in other animals. Their uteri are neither so thick, so capable of development during pregnancy, nor so vascular ; nor in any of them, not even in those species of apes which walk nearly in the erect position, have we any proof that the mucus discharged during the œstrum, is furnished by the uterus ; it is thought to be almost entirely a vaginal fluid.

Menstruation may with truth be said to be a function of the highest importance to women ; so intimately connected with the whole of their economy, that its partial or entire suppression, may and does often induce serious and sometimes fatal disease.

It might have been supposed that there would be structural or physical changes in the uterus, concomitant with these affections. But it is not so ; for, if the undeveloped organization of the uterus and ovaria, in chlorosis, be excepted, there is little discovered by post-mortem examination, to account for these derangements.

Even in protracted and incurable menorrhagia, which occasionally destroys life, by giving rise to dropsies and other secondary diseases, if there have been no morbid growths co-existing, the uterus will not yield evidence of much structural disease. An increased softness and paleness of its parenchyma and lining membrane, will generally comprise the whole of the visible organic change. The same may be said of amenorrhœa and dysmenorrhœa. Beyond hypertrophy and congestion in the latter affection the organization generally continues unaltered.

The local symptoms accompanying these affections, excepting dysmenorrhœa, are usually slight and obscure. The constitutional derangements, on the contrary, although functional and sympathetic, are severe and extensive. Thus, it is common in chlorosis, amenorrhœa and dysmenorrhœa, as well as in menorrhagia, but particularly in the former, to have marked disturbance of the nervous, vascular, respiratory, and digestive systems ; pointing to the fact, that the womb and its appendages derive their nervous energy from the organic nervous system, while the external genitals derive their supply, al-

most entirely from the spinal marrow. Thus are the internal and external organs of reproduction, in great measure, functionally independent of each other. Even paralysis of the lower extremities and external organs may exist, without a similar want of power in the conceptive faculty of the ovaries and uterus.

The proximate cause of these functional maladies has excited a good deal of controversy. Chlorosis ought to be attributed to an impoverished circulation and undeveloped ovaries. Dr. Hamilton, seeing that costiveness frequently precedes and accompanies chlorosis, erroneously, I think, regards this state as its cause. He also denies the influence of the genitals on the general health, and says "that castrated and spayed animals suffer certain changes of constitution, but they retain the enjoyment of perfect health. Reasoning from this analogy," he says, "I do not understand how the influence of the female genitals can be so great, as that its partial suspension should occasion retention of the menses, or should induce chlorosis." I think Dr. Hamilton is in error here. In the case of castrated and spayed animals, puberty was either already present, or would have occurred, but for the castration. In early chlorosis, on the contrary, puberty is absent when it ought to exist, and the subsequent evils are not so much the result of the absence or abstraction of the genital organs (for in Mr. Pott's celebrated case the woman lived and did well after the removal of the ovaries,) as of the early defi-

ciency of vital energy or power, of which the costiveness, equally with the chlorosis, is one of the results. This author overlooks, in the conservative effects of life, when important organs have been taken away, the injurious and sometimes fatal consequences of such a congenital deficiency of vital power, as shall permit the reproductive apparatus to remain partially or entirely undeveloped, and who can measure the amount of the injurious effect? The examples, therefore, are by no means analogous. Amenorrhœa is connected with a torpid and inactive state of the generative organs, excepting in those cases where, from a variety of causes, marked derangement of the uterine circulation exists. Dysmenorrhœa, as a functional disease, appears to be most frequently induced by irritation more or less acute, by a low inflammatory state of the uterine mucous membrane, or by an active, or even slow congestion of the uterus. Menorrhagia and profuse menstruation may arise from different conditions of the capillaries; which are sometimes over-distended from repletion; and at others, having lost their tone, permit the passive exudation of their contents.

FUNCTIONAL DISEASES OF THE UTERINE SYSTEM.

CHAPTER I.

OF CHLOROSIS.

DEFINITION.—*A peculiar affection of the general health; in which debility, languor, and deranged stomachic functions are prominent symptoms; most frequently occurring when puberty is or ought to be established, although it may exist at any subsequent period, always characterised by anæmia of the system, and a yellowish, dirty green pallor of the surface; when a disease of early youth, almost invariably connected, either with entire absence of menstruation, or with a scanty, painful, and irregular performance of the function, and if a disease of later life, in addition to these causes, it may have been preceded and produced by menorrhagia, or leucorrhœa.*

History and Symptoms.—In furnishing these, precision is important, as chlorosis presents itself in three forms: as a *mild and incipient*, an *inveterate and confirmed*, and a *complicated* disease.

The incipient and mild form commences almost unobserved: the patient has been, perhaps from infancy, or at least for some years previously, delicate and feeble, so that anxiety has existed about her; but now, at the age of twelve, thirteen, or fourteen years—without any obvious exciting or morbid cause, other than a negative one, the non-establishment of puberty—a series of distressing and perplexing symptoms are ushered in, and observation is more especially directed to her, because an important epoch in her life has arrived. Hitherto she has been delicate, but there has been probably no disease. Now she excites apprehension from the gradual but evident decline of her health, in connection either with the entire or partial absence of menstruation. She does not pass on to womanhood.

Such a patient is languid, soon fatigued, and therefore inactive; she is not cheerful, but dull, and listless; sometimes perverse and sullen, and prone to solitude. Her appetite is capricious, it either fails altogether, or she craves unwholesome food. Her complexion is altered; although always pale, it is now much more so. The bowels are constipated; the tongue is of a dirty, pasty white; the breath is offensive; she suffers from flatulence; the slightest exertion fatigues and induces short breathing; frequent, severe, and peculiar head-aches, palpitation of the heart and pain in the side, are common occurrences; the pulse is quick, weak, and compressible, and sometimes fluttering. The cata-

menia, if not absolutely retarded, have scarcely appeared, the discharge having been pale in color, and scanty in quantity.

The symptoms already described, in an aggravated degree, and some new ones, attend *inveterate* and *confirmed* chlorosis. The debility, languor, and listlessness, are more marked. The depression is more complete, the appetite is more morbid, with a desire very often for slate-pencil, chalk, acids, pickles, and other things equally pernicious. The complexion becomes still more characteristic; it is a yellowish, dirty green, and the lips, gums, conjunctivæ, and lining membrane of the mouth, are bloodless; the tongue, too, is of a still paler white, and being soft and flabby, it is easily indented by the teeth; the breath is more offensive; there is nausea; sometimes vomiting and frequent heart-burn; the bowels, although generally constipated, are occasionally in a state of irritable and painful diarrhœa. There is acute and anomalous headache, attended by every variety of distressing sensation, such as heavy weight in the front or at the back of the head, vertigo, fixed and intense pain in one particular spot, paralytic feeling and neuralgia. There is a dark line underneath the eyes, about the alæ of the nostrils and at the angles of the mouth; the eyelids are dark and œdematous in the morning; the ankles and legs are frequently so at night; the cellular or soft tissues are flaccid, and the surface generally, especially of the upper and lower extremities, is cold. If menstruation has continued

up to this time, its intervals become more distant, the discharge itself is very scanty, continuing to flow only for a few hours, and in quality it is often serous and pale, and of offensive odor. There is sometimes a general dryness of surface; the skin is no longer resilient; there is a splitting and brittleness of the finger-nails; the hair loses its glossy brightness, falls off in large quantities, and alters in color. It is not uncommon in advanced chlorosis, for the abdomen to be full and painful; and without decided phthisical complication, there may be slight, short cough, pain under the left mamma, and hysteria in a variety of forms. At this period, one or several symptoms being confirmed, so far mislead as to induce the belief, that the lung, the brain, the liver, or the heart may be organically diseased. Such is the malady when fully developed.

Complicated chlorosis consists in the presence, in greater or less degree, of the general symptoms of the disease, with a more prominent morbid affection of some distinct organ or part of the system.

Predisposing causes.—A delicate, feeble, and undeveloped constitution, where the circulation and nervous power are inadequately exerted to perfect the organization of the body; in consequence of which the evolution of the ovaries is delayed, and their peculiar influence on the system, and particularly on the uterus, is withheld; thus, puberty is only imperfectly or perhaps not at all established, and menstruation, which must be preceded by puberty, is absent. At a later period of life, when

even married women and widows are the subjects of chlorosis, its predisposing cause is most frequently derangement of menstruation; there is either retention, irregularity, or pain and difficulty, in the performance of the function. Nor must it be forgotten, that profuse menstruation, menorrhagia, and chronic leucorrhœa, may induce chlorosis.

A damp, cold, and marshy locality, insufficient and innutritious food, the late hours and excitement of fashionable life, the sedentary employments of the poor in crowded and ill-ventilated factories, where the temperature is high and the smells are offensive, in fact, whatever relaxes and enfeebles the system, at any period of life, and especially at an early age, predisposes to this disease.

Chlorosis is occasionally met with in our own sex, and I certainly have seen one or two well marked instances of it.

Exciting causes.—Circumstances which depress the mind, and keep the feelings in a state of painful suspense or delay, unrequited affection, an attachment which is opposed on account of its imprudence, separation from family and friends, the sadness occasionally induced by being at school; habitual constipation of the bowels, according to Dr. Hamilton. Amenorrhœa, leucorrhœa, and menorrhagia, excessive venereal indulgence, and masturbation, weaken the powers generally, and especially the tone of the sexual system, and thus conduce to chlorotic disease. In all these causes, the impaired influence of the organic system of nerves

may be traced, not only on the ovaries and uterus, but also on the organs concerned in digestion, circulation, and respiration.

Pathology of chlorosis.—It may probably be fairly assumed, certainly it is the most prevalent opinion, that chlorosis primarily depends on a morbid condition of the blood, which secondarily affects the ovaries and uterus, by retarding their growth. This opinion is supported by the fact, that in the blood of chlorotic patients there is an increased proportion of the serum, with a marked diminution of the crassamentum. This has always been my view of the disease; nor would it be difficult to trace to this morbid condition of the blood, many—nearly all the different theories which have been propounded.

Gooch and Andral pointedly allude to the deteriorated quality of the blood; the former in his published lectures,* says, “If in girls who have attained the age at which this change is customary, the sexual organs are not developed, a deranged state of the constitution occurs, characterized by peculiar symptoms,” &c.—“In addition to the other circumstances just enumerated, the quality of the circulating fluid is, in chlorosis, altered; blood has been taken by way of experiment, and it has been found to be of a pale red color and watery, like the juice of a cherry.” After thus acknowledging that the sexual organs are not developed, and that the blood is morbidly altered, Dr. Gooch, inconsistently,

* Vide Gooch's Lectures by Skinner, page 7.

I think, condemns, as entirely groundless, the opinion that chlorosis depends on the absence of the physiological influence of the ovaries; and yet a little further on, in explaining his own views, he says, "that chlorosis depends on a want of that constitutional vigor, by which the sexual organs may be brought into action; that to this deficiency may be imputed the failure both of their development and functions. At the period of puberty, the constitution has not only itself to nourish, but it must have energy to rouse and excite to action a new set of organs; it must supply the materials for an increase of their growth, and all other purposes incident to their functions." Dr. Gooch could not more accurately have explained the course by which the blood, when impaired in quality and diminished in quantity, delays puberty and menstruation, and in their stead allows the establishment of chlorotic disease.

Andral's observations on the anæmia of chlorosis are so confirmatory of the views now expressed, that I cannot resist their entire quotation.

"The expression,* general anæmia, if taken in its rigorous signification, is incorrect; for the system can never suffer the total and complete absence of blood, without the heart ceasing to act, and the other phenomena of life becoming extinct. The term hypæmia would therefore be more correct. The quantity of blood in circulation may, however, be so diminished, as no longer to penetrate the mi-

* Vide Pathological Anatomy, translated by Townsend and West. Vol. i., pages 97 and 106.

nute vessels of the cutaneous surface, in which its place is supplied by a thin serous fluid; and after death, a deficiency or even total absence of blood is observed, not only in the large arteries, veins, and right side of the heart, but likewise in the capillary system, which is remarkably pale and colorless. In these cases the membranous and parenchymatous tissues, such as the brain, lungs, liver, kidneys, alimentary canal, and the parenchyma of the heart and muscles, are also remarkably pale and exsanguineous."

Andral again says, "In chlorosis several of the morbid phenomena first recorded are constantly observed; and if this disease, as is now generally admitted, frequently results from a defective formation of the blood, the cause of which may reside exclusively in the nervous system, can we with any show of reason refer either to irritation or sanguineous congestion, the proteus-like variety of functional derangements which chlorotic patients so constantly present, such as epileptic paroxysms, convulsions, chorea, dyspnœa, palpitations, vomiting, &c.? Or, shall we not approach nearer the truth, in assigning these different morbid phenomena to the same cause which produces them in persons who are reduced to a state of anæmia by the deprivation of food, light, and wholesome atmosphere? We may appeal to the test of experience, to the *lædentia* and *juvantia*, for the further confirmation of this doctrine. Venesections employed in such cases to combat an irritation, which in reality does not exist, invariably pro-

duce a marked aggravation of all the symptoms ; on the contrary, it frequently happens that by stimulating the nervous system of these chlorotic patients by the physical and moral emotions of matrimony, we produce a more natural complexion and color of the whole cutaneous surface, thus indicating a correspondent improvement in the process of sanguification ; and in proportion as the anæmia disappears under the influence of this new modification of the nervous system, the whole train of diseased action, the difficult respiration, constant sensation of uneasiness and listlessness, impaired digestion, gastralagia, vomiting, tympanitis and limpid urine, together with all the strange nervous symptoms, which seemed dependent on some organic alteration of the solids, gradually subside and eventually vanish, as a fresh supply of blood is generated in the system."

Diagnosis.—It will be allowed, after what has been advanced, that chlorosis is not an inflammatory disease. It is indeed most intimately connected with anæmia, and closely resembles (except in the pale greenness or dinginess of the skin,) that state of system which is the result of hemorrhage or any undue secretion. Those symptoms, therefore, such as severe headache, pain in the side affecting the breathing, distressing action of the heart, and several others, must not and cannot, where proper caution is observed, be mistaken for and treated as acute inflammatory affections. From the want of this caution, I have witnessed the very injurious

consequences of such mistakes, the practitioner having forgotten, what in female disease it is peculiarly important to remember, that the severity of the pain, and the rapidity of the pulse, are generally indications of irritability and excitement, not of inflammation; demanding narcotics, carminatives, and at the most, counter irritation, not bleeding, active purgatives, or spare diet. If my definition be correct, amenorrhœa, which may, and often does exist, quite independently of chlorosis, cannot be regarded as a synonymous disease. It is impossible, that there should be chlorosis without more or less of amenorrhœa, yet it is often seen, that there is amenorrhœa without any degree of chlorosis. It is quite true, that when amenorrhœa has not been cured or relieved—when it has produced, by its long continuance, extensive constitutional derangement—that then chlorotic symptoms will appear, and that, ultimately, the series of morbid phenomena constituting chlorosis will be clearly seen. Nor must it be forgotten, that chlorosis is itself a frequent cause of amenorrhœa, by its prevention or protraction of puberty, on which menstruation depends; and subsequently, even when the catamenial function has been established, leading to its partial suspension, and occasionally to its entire suppression. There will be no difficulty in distinguishing chlorosis from chronic affections of the abdominal viscera, especially from hepatic, splenic, and renal disease, or indeed from any morbid state, of which anæmia and pallor are prominent symptoms. The period of

life, the peculiar aspect of a chlorotic patient, and the derangement of menstruation, will ensure a correct diagnosis.

In the *complication of chlorosis with amenorrhœa*, the ovaries and uterus are principally affected. Here the chlorosis may have existed for some time, preventing the complete establishment of puberty and menstruation, but allowing both in a partial degree. After some months, when the function entirely ceases, there is a marked deterioration of the general health, and the malady becomes a double or complicated one. It is chlorosis with amenorrhœa. Or this combination may gradually occur, as the result of amenorrhœa produced slowly and insidiously, after months or years of healthy and natural menstruation. I need not say that the latter disease is rare, the other is common, and, if protracted, dangerous. It is this complication with amenorrhœa which has led to the confusion of names; the symptoms of menstrual suspension being so intimately blended with the affection of the general health, as to have induced, in many minds, the opinion, that chlorosis and amenorrhœa are convertible terms, and that they really denominate one and the same disease. It is almost unnecessary to add, that these are the cases which so frequently terminate in health, if early, well, and sedulously treated. Under tonic treatment especially, the blood is improved, both in quality and quantity; the pallor of the surface disappears; there is a vigor of system never before possessed; and, prompted and sustained by

this increased energy of the constitution, the various functions of the system are better performed ; puberty is more fully developed ; and thus, with or without the assistance of emmenagogue medicines, the catamenial secretion is regularly and pretty abundantly established. A few months demonstrate, that the transition from disease to health is at length safely, though tardily and with difficulty completed. Of course, in some instances, the duration of these chlorotic and amenorrhœal complications will be painfully protracted, and there will be an aggravated severity of symptoms, productive of great alarm. In such circumstances, it will be necessary to redouble, not the activity of the treatment, but the care and watchfulness bestowed upon the patient, so that we may discern immediately any indications of further complication ; always remembering, how probable it is, in this climate at least, that phthisical disease may occur.

If the malady continues, although the treatment may have been ably and perseveringly pursued, parental alarm and professional anxiety will soon be heightened. There are instances, however, where the critical point in the disease may have arrived, before any treatment has been employed. Such maladies are prevalent, and present nothing unusual ; delicacy of constitution, and imperfect menstruation, are events of every day ; and to the neglect and delay consequent on the commonness of the disease, many fatal results may be attributed. I have often, during the last few years, been requested to treat

such patients, of whom, had I judged from what I heard, I should not have predicted any danger ; and yet, on careful inquiry—and, in some instances, at first sight—I have been convinced that the case was all but hopeless. Chlorosis, combined with amenorrhœa, like other diseases, does not at once assume an aggravated form ; the symptoms already described exist frequently for a long period in a moderate degree ; and it would be wrong to deny, that there are cases in which, independently of treatment, the mischief gradually passes away. Change of air, a residence in the country, and more natural and out-of-door avocations, seem, by their combined influence, to lead to the development of puberty, and subsequently of menstruation and good health.

This however, is not the usual course of events : more frequently after unsuccessful treatment, and peculiarly if there be entire amenorrhœa, some organ, the cerebrum, for instance, or the digestive apparatus, or the lung, becomes especially deranged ; and the functions, dependent for their natural performance on the healthy condition of this structure, are disturbed, and, to a degree, marking the fact, that this is the organ or part peculiarly affected.

Complication of chlorosis with a discharge of blood from the stomach by vomiting.—This is not an unusual concomitant of protracted chlorosis and amenorrhœa. In such cases, the treatment may have been partially successful. The nutritious diet, and the tonic remedies, especially if iron has been

used, may have improved both the quality and quantity of the circulating fluid. In this condition, the suspension of the catamenia continuing, congestion, or, according to the French, "engorgement," occurs in some of the organs of digestion and nutrition; irregularity of gastric and intestinal action is the result: constipation, pain, spasm, and nausea harass the patient; and, in an effort to cough or to vomit, a quantity of dark, venous-colored blood is thrown up. It often happens, that these discharges observe a catamenial period, recurring every three or four weeks; * there being in the intervals more or less of leucorrhœal secretion. I have seen patients alarmingly anæmiated by these hemorrhages, especially where the amenorrhœa has been of long standing, and where it has been greatly neglected. It is sometimes perplexing to determine whether the blood comes from the stomach, the lungs, or the mucous surface of the fauces and trachea; its quantity and color will generally determine this point; although there are cases, where pulmonary bleeding is extensive, and where, from some quantity of the blood having been swallowed, and again rejected, by vomiting, it has acquired a dark hue and a clotted form, involving the point in still more difficulty. Doubt will not, however, be of long continuance; if the bleeding be pulmonary, there will be a prevalent cough, and a series of symptoms plainly denoting disease of the lungs. It is scarcely necessary to observe, that local emmenagogues are here peculiarly

* Vide Chapter on Vicarious Menstruation.

useful : the quantity of the blood is increased sufficiently to allow of the advantageous elimination of the menstrual secretion ; and every effort must be employed to establish the function. Nor is it irrelevant to remark, that persevering and active treatment is generally successful, where the bleeding is not pulmonary ; and I have seen two cases, where the hemorrhage has been large, and from the lungs, both of which yielded to persevering management.

Complication of chlorosis, with chronic derangement of digestion and nutrition.—In the milder form, there is always some disorder of these functions : but in its aggravated degree it demands much professional attention.

In these cases, we do not wonder at the emaciation which may have occurred : our only surprise is, that the functions of life should not have been even more interfered with. Patients in this condition eat scarcely any thing ; and the little they do swallow, is generally of the worst and least nutritious kind. I am aware that families and medical men are occasionally deceived on this point ; but I am also persuaded, that in many instances, where I have been consulted, there has been no fraud, the patients not having obtained food surreptitiously : and I may be allowed to remark, that although medical scrutiny and acuteness are never more useful than in these cases, yet that it is unwise and unkind to express a suspicion of this sort, without some tolerable proof. It is interesting to trace and to watch this complication. An impression every now and then exists,

that such a patient cannot recover; she takes so little, her strength is so impaired, the whole system is so emaciated, that she seems only to wait for some favoring circumstances to induce phthisis; and if she be hereditarily or constitutionally predisposed to this fatal malady, the probability is that she will not escape it. And yet I know of no combination of chlorosis which affords such ample scope and reward to judicious, persevering, and observant treatment. It is rare for a structural change to occur in the stomach, liver, or intestinal organs, in the most protracted form of the disease, although it is common to see the largest amount of functional derangement. Nor are the attendant evils only physical. The mind, the disposition, the temper, are all disturbed. Gloom and despondency, ennui, irritability, and dissatisfied feeling, oft times exert an irresistible control over such patients; and when their present state is compared with what they were twelve or fifteen months previously, the contrast is lamentable indeed. Seclusion and solitary habits are frequently indulged, and require the watchfulness and penetration of the physician and the family. Nor are instances wanting, in which mental peculiarity has for a time assumed not only the appearance but the reality of insane aberration. Such individuals are seldom the subjects of high excitement; they are rarely violently insane. More frequently, they are in error on a few points only; or, giving up all for lost, as to their recovery, they indulge in depression and despair. It is unnecessary, minutely to describe

the various indications of digestive disorder. They are so common, that they must be well understood. Nor can it be too strongly urged, that disorder of the general health, on which, perhaps, delayed puberty depends, and to which menstrual irregularity and suspension may be so often traced, is most intimately connected with the condition of the alimentary canal, and of the organs subsidiary to digestion; and if the peculiarities of the constitution, already pointed out, together with puberty and menstruation, especially modify the female economy, it may be allowed that the state of the digestive organs exercises a more extensive and peculiar power in them, than in our own sex.

Complication of chlorosis with functional affection of the cerebrum.—There is scarcely any complication more difficult to relieve than this. The varieties, as to situation, and the differing degrees of intensity of the pain, are worthy of observation. In some individuals, the uneasiness of the head is general, but not severe; while in others, the site of the pain is limited, and so agonizingly intense, as scarcely to be endured. In not a few instances, the pain is periodical, and of neuralgic severity, while in others, it is so nearly constant, as to preclude mental or physical exertion, and almost to induce the belief that it must be connected with organic affection. Nor is it very uncommon to meet with fits of hysteria, chorea, and epilepsy, attributed by the patients themselves, and perhaps correctly, to the long-continued and painful affections of the

head. These diversified degrees of suffering will, of course, be associated with a variety of morbid cerebral sensations: in some, there will be vertigo; in others, an overwhelming sense of weight. At one time, there will be paralytic sensation about the head and upper extremities; at another, a painful quickness of sensibility; and with many of these feelings, there will be morbid sympathy, of the stomach especially, as well as of the digestive organs and alimentary canal. Let it only be remembered, how these morbid actions will become blended, how irregularly and extensively they will affect the entire system, and it will not be difficult to conceive of the tedium and misery which these patients endure. It is consolatory to know, that, in by far the majority of individuals thus suffering, the affection of the cerebrum is functional, there is rarely structural disease; and if pressed for proof of this opinion, we may point to the numerous instances of recovery, even when the symptoms seemed clearly to indicate organic affection.

It is nearly impossible, within reasonable space, to describe the distressing and intricate morbid results attendant on this complication. There are, however, as already stated, not only shades of difference in the amount of suffering, but marked extremes; and I know nothing worse than the aggravated cephalalgia peculiar to this disease: to call it a nervous or a sick headach, even of the worst kind, gives only a faint idea of the intensity of the evil; for I have heard many patients deliberately declare,

that life would be undesirable, were it to be continued in association with this sad infliction. Temporary loss of memory and acuteness of perception, physical irritability, torpor, and derangement of the organs of digestion are amongst its most common consequences. Yet it is important to know, that there are, in most cases, limits, within which the morbid influence is confined. There are functions, with which, even this amount of suffering, does not greatly interfere. Such patients sleep tolerably well; their appetite is capricious, but not wholly destroyed; and, although nutrition is imperfect, there is not much or rapid emaciation—a circumstance in decided contrast with what is seen in chlorosis complicated with organic pulmonary change. It is not meant to be stated, that structural alteration never occurs, nor that ultimate recovery from the headache is invariable and certain. But, after having treated many of these diseases, and afterwards having watched them for a considerable time, I am disposed to believe that the cerebral structures, for the most part, remain unchanged; and that the cephalalgia of many months, and, in some rare cases, of years' continuance, is eventually completely lost, provided puberty and menstruation are fully established. The cerebral affections attendant on epilepsy must be excepted from this statement, and, perhaps, that highly nervous and paralytic tremor or shaking, which is sometimes the consequence of a very protracted chlorosis. Again, it must be remembered, that even epilepsy may occur without

structural lesion, and that paralysis may sometimes be cured. There are two cases (Nos. 10 and 11) illustrative of these opinions, and confirmatory of the extraordinary curative effects attendant on the development or restoration of the sexual function.

The vascular system, especially the capillaries and the heart, is frequently implicated in protracted chlorosis; and, by patients and their immediate friends, such complications are viewed with much apprehension. Constipated bowels and severe headache, are common circumstances; but the entire loss of the natural color of the surface, œdema of the face and extremities, palpitation of the heart and syncope, are less frequent, and wear so formidable an aspect, as to excite great alarm.

Ascites, I have rarely seen connected with the œdema of chlorosis; certainly not in early life. At a more advanced period, derangement and structural change of the liver or kidneys may, combined with chlorosis, induce effusion into the peritoneal sac. Such events are, however, rare. No doubt ascites in diminished quantity does occur, in the general tendency to serous effusion, which is so marked, when chlorosis is protracted; but it is not a formidable symptom in itself, and yields to the remedies which would improve the quality of the blood. When, however, the effusion is in greater amount, distending the abdomen, structural disease of the liver or kidney, as already observed, will be found to exist; when only palliative remedies can be employed. It is right also to caution the attendant and the family,

against supposing that every hue of the surface, slightly more icterode than usual, is to be regarded as an indication that the liver is seriously deranged, and requires for its restoration mercurial remedies.

Complication of Chlorosis with structural change of the Lung.—The malady rarely terminates fatally, except in combination with phthisis; and the question is not unimportant, whether the phthisis be induced by it and amenorrhœa, or whether these latter affections do not owe their origin, at least in part, to the original phthisical tendency of the system. This predisposition may be dormant till the epoch of puberty; and then its injurious influence may pervade the entire system. One of the immediate results will be a want of energy, an imperfect development of the sexual character; and this failure of puberty will lead to chlorosis and amenorrhœa. These latter affections will be the prominent, but not the real disease. Yet it is not astonishing that the chlorosis should principally arrest medical attention: it is the malady peculiar to the age: there are only few and slightly-marked indications of phthisis; and these, and even much worse symptoms, would be viewed as within the scope of the curative influence of menstruation.

Occasionally, phthisis may be induced by chlorosis and amenorrhœa; but, in by far the greater number of instances, the chlorosis only excites into activity, the previously latent tendency to this fatal disease; an opinion which receives confirmation from the fact of the other complications rarely pass-

ing into this. There may have been extensive vicarious hemorrhage, excessive and long-continued leucorrhœal secretion, intense pain of the head, hysterical and even epileptic seizures, a highly morbid condition of the digestive organs, and a moderate degree of emaciation; and yet there shall be no phthisis. The individual shall recover from these morbid states, without even an apprehension of consumption. Nay more, there may be fearful protraction of these maladies, and yet there shall not be cough, pain in the side, or expectoration; so distinct is the line of demarcation between this and the other complications. From what I have seen, I am convinced that structural disease of the lung, is most frequently connected, either with chlorosis alone, or with chlorosis in connexion with amenorrhœa. For instance: a girl of consumptive family, arriving at the age of puberty, becomes slightly chlorotic; and soon, instead of the negatively morbid state which may have existed up to this period, there creeps on slowly, but certainly, a confirmation of the disease. There is no menstruation; or, if the function be developed, it is only once or twice, and very imperfectly. Then, there is great cause for apprehension, not that the series of symptoms belonging to the other complications will occur, but rather that the anæmia and want of constitutional power, will favor the predisposition to structural pulmonary change. Such patients are not altogether without appetite; the derangements of the stomach and the alimentary canal are not prominent symp-

toms, the cerebrum does not painfully sympathise, and frequently there is an entire absence of hysteria. But there is quickness of pulse; irregular action of the heart; rapidity and difficulty of respiration; more or less thoracic pain, frequently confined to the left side; a short, hacking cough, and emaciation. Inquire particularly, and it will sometimes be found, that there is in slight degree, both expectoration and perspiration. When patients have arrived so far, and sometimes, happily, before they have reached this point, apprehension is roused, and medical treatment is eagerly sought.

Many such cases are occurring; and I wish the attention of practitioners, to be particularly directed to this complication. The vicissitudes of an English climate predispose to phthisical disease; and with the physiological circumstances peculiar to the sex, explain how it is, that girls so frequently die, at this epoch, of phthisis, in connection with chlorosis and amenorrhœa. If asked, what such a series of symptoms as I have just enumerated indicate, the reply must be, chlorosis complicated with a tendency to phthisis. And if it be inquired, what is the chance of entire recovery, a very guarded answer must be given.

To say that patients advanced thus far never recover, would be untrue: although it is perfectly right, to give a doubtful opinion. If the constitutional power can be augmented, if the blood can be improved in quality, and increased in quantity, then the symptoms may be arrested, and renovation of

health may be slowly effected. A symptom of improvement, of great value, is, diminution in the rapidity of the pulse : for so long as the pulse beats 130, 120, or even 110 in the minute, it must not be supposed that any real amelioration has taken place. It will be necessary, also, to be guarded in the opinion we ourselves form : the same self-delusion exists here, as in phthisis at other periods. The patient is convinced that there is no occasion for alarm ; and the disease often creeps on so insidiously, as to lead the family to believe, that there is no immediate danger. Let it, however, be remembered, that so long as there is a rapid pulse, short hacking cough, and a want of nutrition, there is real hazard. If, on the contrary, the pulse becomes slower, fuller, and softer ; if the cough be less frequent ; if the pyrexia disappear ; and especially, if the patient gather flesh, in ever so trivial a degree ; hope may be entertained.

Carefully treat such an individual : avoid mercury, drastic purgatives, and emmenagogues. Place her in the country, where she shall breathe pure air : let her diet be simple and nutritious (milk and animal food), and her medicine some of the various tonics ; and the expectation may be cherished, that the time is not far distant, when the sexual character will be fully developed, and the danger safely passed. From what has been stated, it must not be inferred, that this is the only fatal complication of chlorosis ; but, comparatively, it is rare for the others to terminate unfavorably. Still, after con-

tinued derangement of the viscera of nutrition and digestion, the debility, pyrexia, and emaciation may become intimately blended with alteration of the pulmonary structure; and the cough, expectoration and morning perspirations, may become prominently influential, in bringing about final sinking.

I have thus attempted to distinguish the morbid circumstances appertaining to the different forms of this prevalent malady. And although the leading and distinctive features will generally enable us to determine the complication, still, when any form of the disease has become aggravated, severe and of long duration, the blending of symptoms may perplex the diagnosis. It ought to be remarked, that leucorrhœa in various degrees is an almost constant attendant on chlorosis and amenorrhœa; and, when excessive, so seriously impairs the restorative powers, as to render the cure long and difficult.

I wish to particularise, as correctly as I can, the ages, at which, these various complications most frequently occur. Chlorosis alone, independently of amenorrhœa, is a disease of early life. In conjunction with menstrual suspension, it may be met with at any period, between the ages of puberty and the final cessation of the catamenia. Chlorosis conjoined with phthisis, may be seen between puberty and thirty years of age; sometimes later; but such instances are very rare, in comparison with the numerous complications of this kind, before the attainment of the twentieth year. Again, chlorosis

with amenorrhœa or phthisis, at an early age, are forms of the malady, generally associated with debility and delicacy of system ; while the other complications may exist at any period, and are not unfrequently combined with plethora or congestion.

Treatment of Chlorosis.—The treatment of chlorosis, to be extensively successful, must be early and most sedulously prosecuted.

It cannot have escaped observation, that the disease is one of almost universal influence : it is not confined to a particular organ, but affects the entire system : and yet, it is often productive of so much functional derangement, of so many isolated and painful affections, as to demand local treatment ; which, while it shall be in complete accordance with the main principles of the cure, shall still be especially directed to ameliorate topical pain.

The reader, then, will be prepared for a classification of the means of cure ;—an arrangement necessary, not only to prevent confusion and disappointment, but equally so for the attainment of that correct view of the malady itself, and of the particular stage which it may have reached, on which will depend the peculiar fitness of the whole treatment.

Thus, *first*, in mild chlorosis, either alone or complicated with amenorrhœa, the remedies will be principally of a constitutional kind, directed to the improvement of the general health, and to the establishment of puberty. If, when these points are gained, the uterine functions are not developed, the

delay may perhaps be attributed to torpor of the organs of reproduction, and emmenagogues may be employed.

Secondly, When the disease is variously complicated, it often happens, that the organ, or part of the system principally implicated, becomes so prominently morbid, as almost to throw into the shade the original chlorosis and its accompanying amenorrhœa; but it must never be forgotten, that these have been the source of the complications, the soil in which they have sprung up. Here the treatment will require modification: it will, of necessity, be less constitutional, and must assume more of a topical and symptomatic character.

And, *lastly*, where structural alteration of the lung is threatened or suspected, the management must have especial and almost exclusive reference to this alarming complication; every measure being adopted to avert this greatest of all dangers. Still, even here, it must not be forgotten, that if puberty could be sufficiently developed to allow of even the partial establishment of menstruation, a very formidable feature of the complication would disappear.

It is evident, that a combination of means is required; medicine, alone, cannot accomplish all; and other measures, without medicine, will generally fail. Again, if it be remembered, that the disease is proteiform and of ever-varying degree, it will be seen, that constant and unwearied efforts are required, not only to vary the old, but to suggest new resources.

The treatment of the most common form of chlorosis, namely, that accompanying puberty, may be regarded as the type of the treatment of all the others ; embodying the principles, which, with greater or less modification, are universally applicable. It is here, at the very threshold of the disease, when its character is not understood, or when it is treated empirically, that the greatest error is committed. It is viewed as a local, not as a constitutional affection ; and many are the individuals who have been sacrificed to the vain and ignorant attempt of prematurely establishing menstruation ; mercury, drastic purgatives and emmenagogues, having irretrievably destroyed the constitutional power and paved the way for phthisical disease.

It is not my intention elaborately to comment upon certain great mistakes in the *physical education* of female youth. And yet, I must be excused, if I direct attention to the diet, air, exercise, and clothing of the sex. It will readily be granted, that if, in these particulars, there is extensive deviation from the dictates of nature and common sense, there must be a proportionate risk of debility and disease. In our own changeable climate, it behoves the guardian of female youth to be especially prudent ; and I am one of those who think, that it is scarcely possible to study these matters too closely. If the national practices in these particulars could be changed—and the remark applies with great force to the middle and higher classes of society living in cities and towns—chlorosis, imperfect pu-

berty and amenorrhœa, would be uncommon, instead of being, as they now are, extremely prevalent diseases.

Chlorosis is a rare affection in rural districts, where female youth are much in the open air, where it is not unfashionable to walk and run, and where it is not considered a gross violation of good breeding to sport and play with activity and vigor. Such girls acquire energy of system, each organ is developed, the blood is abundant and of excellent quality; nutrition is healthy, and puberty is attained without difficulty.

These remarks may serve as an illustration of the principles on which the treatment of simple and amenorrhœal chlorosis must be conducted: and while it is scarcely possible to present a succinct and specific history of the pathology of this and the other complications, it is not difficult to describe, with simplicity and tolerable accuracy, the order of morbid events and the medicinal means, by which, they are to be relieved if not cured.

I have already observed, that a morbid state of the blood, of which anæmia is the prominent feature, lies at the basis of the disease. This may be viewed as the clue, by which the intricacy of the symptoms may be unravelled: and it will equally explain the nature of the malady, whether the specific morbid impression be in the system generally, in an isolated organ, a particular texture, or in any of the fluids of the animal economy.

But, to be more precise:—I would commence

the treatment, by special attention to the digestive organs and alimentary canal ; for I regard the disorder of these, as second only in pernicious effect, to the peculiarity of constitution, already mentioned. Nor will the advantage of their improved condition be limited to themselves : the deteriorated quality of the blood and its defective quantity, may both owe their origin to impaired digestion and nutrition. I have already alluded to the jaundiced hue of the complexion and of the surface generally, as leading to the suspicion of hepatic disease. The diagnosis will be made, by a careful examination of the region of the liver itself, of the urine and the fæces ; which will prevent the possibility of being misled by the color of the lips and conjunctivæ.

At first, then, a due evacuation of the bowels must be daily secured ; and much will depend on the kind of medicine by which this is effected. If mercury and drastic purgatives be frequently and largely employed, intestinal irritation will ensue, evidenced by unhealthy and undigested motions, mixed with mucus, and occasionally with blood. If the purging be excessive—if it be exclusively relied on for the cure—debility and exhaustion will result, and, in place of amelioration, the whole of the symptoms will become aggravated and severe. The best aperients are aloes, rhubarb, the sulphate of soda and manna, and, if an alterative be necessary, the hydrargyrum cum cretâ. Nor must we forget, that an injection of a pint of warm water, two or three times a-week, into the rectum, is, of all measures,

the most efficacious in aiding peristaltic action, and in removing the load of the large intestines. The compound decoction of aloes with the compound tincture of cardamoms; the compound aloëtic pill with the oil of cassia and hyosociamus, and the vinum aloes with the compound tincture of rhubarb, are the forms of these medicines I prescribe. The combination, with any purgatives or aperient remedies, of mild cordials, is exceedingly important. The following may be advantageously exhibited :

Pulv. Rhei ʒ ss. Magnes. Subcarb. ʒ ss. Conf. arom.
 ʒ i. Aquæ Cinnamoni ʒ ix. Tinct. Card. C. ʒ i. M.
 ft. Haust. bis terve in septimanâ sumendus.

Sodæ Sulphatis vel Magnes. Sulphatis. ʒ iss. Pulv. Rhei
 ʒ ii. Magnes. Subcarb. Sodæ Subcarb. āā. ʒ iii. Pulv.
 aromatici ʒ ss. M. ft. Pulv. aperiens.

Sumat Coch. i. vel ij. parva, bis terve in septimanâ, ex
 aquâ purâ.

It is superfluous, perhaps, to observe, that warm clothing, regular exercise, by walking, if it can be borne, if not, on horseback, are valuable auxiliaries; and, so soon as the repugnance to them can be conquered, nutritious animal diet and mild malt liquor will be productive of benefit. The improvement of the digestive organs, indicated by return of appetite and the natural and daily evacuation of the bowels, are generally accompanied by alteration of the complexion, and by the partial disappearance of the chlorotic hue; rarely by the immediate establishment or return of the catamenial secretion. At this crisis, some of the preparations of iron may be

exhibited; and the sulphate is probably the most efficacious, and possesses more specific properties than any of the rest. If the order of procedure, now pointed out, be reversed—if the iron be used before the bowels have been freely evacuated and their functional action improved, or while the tongue is loaded and foul—aggravation of symptoms will be produced; while, if there be only the peculiar debility and pallor, then the iron may be most beneficially tried. A single grain, or even two, may be given, twice or three times daily, combined with extract of hop, aromatic confection, and a single grain of extract of poppy or hyoscyamus. Occasionally, the effect of the iron is almost magical, especially where it does not confine the bowels nor induce febrile heat. The following form may be prescribed:—

Ferri Ammon. ʒ iss. Extr. Humuli, Extr. Papav. alb. āā
gr. xv.

Ol. Cassiæ ℥ xv. M. ft. pil. xxiv. Sumat. i. vel ij. bis terve
quotidie.

Where there is torpor of the system, flatulence, and hysterical depression, a tea-spoonful of the annexed mixture, in water, may be swallowed with each dose of the pills:

Tinct. Humuli, Calumbæ vel Gent. C. ʒ iss. Tinct. Lyttæ
ʒ i. Sp. Ammon. arom. ʒ iii. ft. Mist.

It is impossible minutely to describe every circumstance which may require medical management: in a lecture, much more may be accomplished.

Still, we must keep constantly in view the peculiarity and the anæmia of the chlorosis itself. It will not then, be difficult to vary and modify the treatment. In some instances, iron cannot be exhibited, or it may have been too early used: it may not have been employed in the right dose, or in the most desirable form. These, and numberless other minutiae, demand sedulous attention. Quinine and sarsaparilla, gentian and zinc, are remedies of acknowledged power: and in a variety of instances, where the sulphate and other preparations of iron were injurious, I have given, with decidedly good effect, the following powder, either once or twice a-day:

Ferr. Subcarb. gr. viii. Pulv. Ipecac. gr. i. Hydr. cum
Cretâ gr. ii. M. ft. Pulv.

I have already alluded to the necessity for continued care in the progress of the treatment; and the hope of cure must rest, not on the vigilance of a week, but on the perseverance and skill which shall keep in activity, for months, every part of the prescribed plan; not only the medicinal but likewise that which depends on air, regimen and active exercise. I do not dwell on the value of travelling; because it is universally admitted, that nothing contributes more to cheerfulness and health, than change of scene, of air, and of temperature. Chalybeate waters are sometimes extraordinarily efficacious; and a sea voyage has, within my own knowledge, been productive of entire cure, not only completing puberty but leading to perfect menstruation.

At what time shall emmenagogues be employed? When the health is so far improved, that there is less pallor, regularity of bowels, and more and better blood. Iron itself, is often an efficient emmenagogue. The use, every night, of the hip mustard bath, and the local salt shower bath across the loins, topically affects the uterus, and induces the catamenial secretion. The ammoniacal injection, composed of one drachm of the pure liquor ammoniæ to a pint of milk, daily injected into the vagina, has proved efficient in the hospital.

I am not aware that any variation in this plan will be required in chlorosis complicated with amenorrhœa. Caution will be most needed in the selection of the time for the use of emmenagogues: but after what has been said now, and what is to be said hereafter, the reader cannot remain long in doubt.

The *iodide of iron* has been extensively tried, both in hospital and private practice, and with undoubted success; especially when glandular enlargements and other indications of a strumous habit, have been associated with the chlorosis. I give it in the subjoined form:

Ferri Iodidi gr. xvi. Tinct. Calumbæ vel Gent. C. ℥ i.
Aquæ distillatæ ℥ vii. ft. Mist. Sumat coch. ii. magna,
bis terve quotidie.

Three or four leeches have been applied to the mammæ, on alternate days, with very doubtful effect as to the restoration of the menstrual function: nor can I speak more favorably of the employment, to

the same organs, of mustard cataplasms. *Marriage* frequently cures chlorosis and amenorrhœa: yet its good effects are not certain and invariable; nor is it uncommon to witness the aggravated forms of the malady in married life. A passing allusion is all that is necessary on its remedial influence; as in the chlorosis of early life, such a connection is unlikely and distant, and even at later periods, its existence is not a matter for medical discussion or control. Electricity deserves to be mentioned, as a local uterine stimulant; and I have seen many cases where its efficacy was decided.

The complications of chlorosis require extended and scrutinizing investigation; and perhaps enough has not been said of *hysteria* and *chorea*, as its combinations. The former, in differing degrees, is an almost invariable attendant on the malady; while chorea is rarely seen after twenty, and seldom after sixteen or seventeen years of age. The observations on the treatment of the various complications will be appended to the illustrative cases. By this method, the cases themselves will be rendered more interesting, and their peculiarities and plan of management more distinct and prominent.

In conclusion, let it be remembered, that the progress of these affections is often interrupted; domestic occurrences of a vexatious or painful kind produce frequent relapses; and the family as well as the patient, despond. Repeated attacks of cold, errors of diet, and a neglect of especial attention to the evacuation of the bowels, may be enumerated

as the causes of delay. These, the address and practical skill of the attendant must control: and it is no slight tribute to his worth in such protracted cases, that the confidence of the invalid and of her friends is continued to him unimpaired. He must repeatedly urge, that while there is only one consistent method by which recovery can be accomplished, there are almost innumerable ways by which a simple case may assume an inveterate or complicated form.

CASES OF SIMPLE CHLOROSIS.

MANY OF THESE AND THE SUBSEQUENT CASES WERE REPORTED BY THE GENTLEMEN OFFICIATING AS CLINICAL CLERKS AT GUY'S HOSPITAL.

CASE I.

MARY ——— aged 14, an out patient (under Dr. Ashwell's care), January 6, 1835, is stated by her mother to have been from birth a delicate sickly girl, and frequently the subject of cough with mucous expectoration and pain in the left side. Her symptoms are entirely chlorotic. There is pallor of countenance, coldness of surface and especially of the lower extremities, lividity of the hands and of the tips of the fingers, and emaciation. Puberty appears partially established, as there is some development of the mammæ; the pulse is 120 and feeble; respiration quick and short; cough distressing at night with slight mucous expectoration;

the bowels generally constipated, but occasionally purged; appetite capricious, dislikes all animal food, is fond of pastry, tea, and bread and butter. She is one of nine children, two of whom are girls and older than herself; and in both, the same symptoms have attended the establishment of puberty and menstruation. The tongue is loaded and tumid, and the mucous lining of the mouth is pallid and indented by the teeth. She resides in a confined narrow street, and sleeps in a small room, in which are three beds. There is at times a slight leucorrhœal discharge; the urine is scanty and high colored.

Pil. Rhei c. gr. v. omni nocte horâ somni.

Julep. Ammon. cum Magnes. ℥i. bis quotidie.

To live on beef-tea and arrow-root, and if possible, to be removed to a healthier residence.

Jan. 16. Her mother states that she caught cold when last out, but she thinks her bowels more regular. She is to continue the remedies.

26. The bowels are regularly and more healthily acted upon; the pallor is less; and the pulse does not exceed 98, fuller and softer; the tongue is nearly clean.

She is to continue the ammoniacal julep with magnesia two or three times weekly; and to take the following mixture:

Ferri Iod. gr. xviii. Tinct. Calumbæ ℥i. Aquæ distillatæ ℥vii. ft, Mistura. Sumat coch. i. magnum ter quotidie.

A pint of mild ale daily, and animal food.

Feb. 10. Is greatly improved; complains of headache and throbbing of the temple; pulse 80, and full; bowels rather confined. Is to omit the iron for a few days; and to take ten grains of the colocynth and calomel pill every other night.

17. The bowels are quite regular; the cerebral symp-

toms are alleviated; but she complains of languor and debility.

Rep. Mist. et Cerevisia ut antea.

Julep. Ammon. cum Magnesia \mathfrak{z} i. bis quotidie.

Is ordered to go in the country, and to be out much in the open air.

March 1. Is better in every respect; and is now requested, in addition to the remedies, to use the mustard hip-bath every night.

8. Has menstruated for three days, with little previous indisposition; and is so greatly improved, as not to require further treatment.

CASE 2.

REPORTED BY THE CLINICAL CLERK.

JANE ——— aged 19, a native of London, a girl of ordinary stature, light hair, fair complexion, and brown eyes. Admitted May 2. She began to menstruate at 16 years of age, and has regularly observed a period of three weeks, until within the last two months. The only peculiarity connected with the catamenia, has been the light color of the discharge. Her situation, as a house-maid, exposed her to very irregular hours; and her enumeration of the symptoms which attacked her, when in this capacity, seems to indicate the commencement of disorder of the general health. She suffered from headache, pains in the side, languor, and restlessness, which were succeeded, in two months, by a suppression of the catamenial discharge. Since this time, her disorder has increased, and she now presents the following symptoms:—The surface is uniformly of a very light-yellow color, and in parts, assumes an icterode hue. Around the eyes, there is a darkened areola, and the integuments appear

puffy. The prolabia, with the gums and the mucous membrane of the mouth and fauces, are exsanguinous. Tongue flabby, with indentations from the molar teeth on each side. The nails are brittle and the cuticle around them peels off. The legs are free from swelling. She experiences considerable dyspnœa on any slight exertion, and is very susceptible of fatigue. The appetite is capricious, but she has not manifested any particularly vitiated taste. Bowels naturally constive. The pulsations of the heart are loud, and the pulse full. No leucorrhœa. There is no fixed pain in any part of the abdomen.

Colocynth cum Cal. gr. x. statim.

May 6. Bowels well open. There is very little difference in the character of her symptoms, and the general surface remains pallid. There is a slight leucorrhœal discharge. A bellows sound accompanies the heart's pulsations.

Ferri Iodidi gr. xvi. Tinct. Calumb. ʒi. Aq. ʒvii. Cap. cochl. ij. magna bis die.

Habeat Cerevisiæ Oct. ss. quotidie.

She was kept on this tonic plan, with occasional aperients and daily exercise, until the end of the month. At this time she felt considerably improved. Appetite good; secretions natural; countenance still pale, although the yellow color and dark areola had disappeared. At her request, she was presented. A week after her departure from the hospital, under the same treatment, the catamenia returned, and her countenance assumed a more ruddy aspect.

CASE 3.

REPORTED BY MR. HENRY OLDHAM.

HARRIET S——, aged 18; a girl of strumous diathesis; short; thin made, and rather inclined to emaciation. Ad-

mitted May 11. She was born in London; where she has continued to reside, being in service as a house-maid. She has always been delicate, but has not been the subject of any particular illness. She began to menstruate at 16 years of age, but has never accurately observed the regular periods. About five months ago the catamenia became suppressed, and have failed to appear since that time. This seems to be the date of her present illness. She now complains of fluctuating pains about the chest, left side, and back; sometimes in the loins, and which occasionally proceed down the thighs. She suffers severe headache, giddiness, vertigo, *muscæ volitantes*, singing noise in the ears, with other symptoms of imperfect cerebral circulation. Her arms, too, are sometimes benumbed; and the fingers deadened, so that she cannot grasp anything firmly. Her manner is hurried; and at times there are movements about her like the first indications of chorea. Several of the teeth have lately become carious. Her legs swell; appetite fickle; pupils dilated. There is a general pallid appearance, although this has been somewhat improved by a steel mixture, and occasional aperients, which she has taken as an out-patient. Bowels well open.

Ferri Iodidi gr. xvi. Tinct. Calumb. ℥i. Aq. ℥vij. ft.
Mist. Cap. cochl. ij. magn. ter die.

May 16. Feels much better, looks more lively, and her appearance has improved. Complains of dyspnœa, on any unusual exertion. Bowels open; pulse small, quick, and vibrating. Has continued the iron mixture; was enjoined to keep the surface warm by sufficient clothing and was ordered to take exercise daily. Under this plan, her strength increased, she became stouter and of a more natural color. She suffered headaches occasionally, which an aperient usually relieved; and on June the 4th, the following report was entered.

“The catamenia appeared two days ago, the discharge

lasting only twenty-four hours. She has felt great relief from this circumstance ; her general health has greatly improved ; pulse 80 ; bowels well opened daily ; tongue clean."

July 4. Presented cured.

CASE 4.

REPORTED BY MR. FOOTE.

CHARLOTTE ———, aged 26, an unmarried woman, with dark hair and eyes and chlorotic aspect. The menstrual function for the last seven years has been irregularly performed, there having been suspension for five or six months, and always a scanty flow. Her present symptoms are, palpitation, dyspnœa, cough, pains in the chest and loins and between the shoulders. Her legs are œdematous : she has no appetite ; her pulse is 80, and soft ; tongue clean ; bowels confined.

Cap. Jul. Ammon. cum Magn. et Tinct. Card. Co. ℥i. ter die.
Beef-tea. Arrow-root.

June 20. Appetite slightly improved ; still there is pain in loins and back.

Ferri Iodidi gr. xvij. Tinct. Calumb. ℥i. Aq. ℥vij. ft. Mist.
Cap. coch. ij. mag. ter die.
Allowed one pint of porter daily ; and of wine, an ounce and a half.

July 5. She has been improving considerably under the treatment, and makes but little complaint. Her bowels are very confined.

Pil. Rhei. co. gr. x. o. n. s.
Tinct. Castor. Sp. Lavand. Co. āā ℥i. Ammon. Subcarb.
℥i. Aq. Cinnam. ℥ vii. ft. Mist. Cap. cochl. ij. magna ter
quotidie.

26. Face losing its chlorotic appearance ; better in all respects.

Inf. Gentian. Co. Inf. Sennæ āā ʒvi. bis die sumend.

Aug. 4. The menstrual discharge, which appeared on the 1st, has lasted three days ; complains now only of headache.

12. She was discharged, with her health and countenance very much improved.

Sept. 6. Returns to-day, to say that she is well. The catamenia have again appeared, in proper quantity, and for four or five days. Her cough, dyspnœa, and palpitation have not returned at all since the last period.

These few cases, selected from many similar ones, are sufficiently numerous to ensure a trial for the plan of treatment pointed out, and to demonstrate the importance of early and unremitted medical care. Neglect, in these instances, would probably have insured aggravation and severity ; and instead of a cure easily accomplished, there would have been protraction, difficulty, and danger. It is worthy of remark, that the iron will not suit every individual ; and although it has a more direct and salutary effect, where the uterine functions are torpid, than any other known remedy, yet the quinine must occasionally be substituted. I cannot forbear especially to urge the daily use of mild ale or porter ; as, independently of its agreeable properties as a beverage, it greatly assists in the restoration of flesh and strength. If these cannot be taken, port, sherry, or madeira wines, with hot water and a little spice, will advantageously excite the stomach, and promote digestion.

The temperature of the body is often supported with difficulty in chlorosis; and as cold induces congestion, warm clothing and exercise are important adjuvant measures. The circulation of delicate girls is feeble and lymphatic; their stomach and bowels are soon deranged; and by such causes the uterine functions are interrupted and impaired.

CASES OF INVETERATE AND CONFIRMED CHLOROSIS.

I shall insert only two such—because it is easy, after what has been already advanced, to imagine an aggravated form of the malady. Still, it would not be right altogether to omit its illustration by examples.

CASE 5.

Miss B——, æt. 27, March, 1833, began to menstruate at 15, and till within the last three years has enjoyed good health. Since this period she has lived in town, and the catamenia have been gradually diminishing in quantity and in color, till now the discharge scarcely lasts more than a few hours, and has lost all sanguineous tinge. The pulse is 108 to 120, irritable and easily compressed; the breathing is quick and short, on the slightest exertion; and the heart palpitates often and violently. Her depression is extreme, and she entirely desponds as to her recovery.

There is no acute neuralgic pain of the head, but she suffers much from vertigo and loss of memory. Her aspect is a dirty, almost green yellow, very much beyond the pallor of incipient chlorosis; the bowels are generally constipated, but occasionally much purged, the motions being highly

offensive and dark. There is a fetid odor about the breath; frequent nausea, and sometimes vomiting; the cellular and muscular tissues are flabby, and the alarm of her friends has been especially excited by her progressive emaciation, and her icterode hue; the tongue, lining membrane of the mouth and lips, are of unhealthy paleness; there is a dark mark under the eyes, and at the angles of the mouth; the nails are chipped and dark; and the skin is dry. In addition to these symptoms she has frequent hacking cough; and although it is thought to indicate approaching phthisis, it evidently depends very much on nervous excitement; emotion or hurry invariably produces it, and there is no expectoration, pain in the side, or morning perspiration; on the whole there can be no doubt that this is a severe and aggravated case of chlorosis, as yet a functional disease, and one which will probably yield to persevering and careful treatment.

She was ordered the following:—

R. Ferri Iodidi gr. xv. Tinct. Card. C. ʒj. Aquæ distillatæ ʒ vij. M. ft. Mist.

Sumat Coch. i. magnum ter quotidie.

R. Pil. Rhei C. Extr. Colocynth. C. āā ʒ ss. Hydr. Chloridi gr. v. Ol. Cassiæ gtt. xii. M. ft. Pilulæ xiv. Sumat ij. vel. iij. alternis noctibus.

Chocolate or coffee and broiled bacon for breakfast; roast or broiled meats for dinner, with mild malt liquor, especially ale; weak coffee or chocolate in the afternoon; and a sandwich, with a small quantity of ale for supper.

March 14. Is still feeble; although in several respects better; has less cough; breathing less quick; nor does the heart palpitate so violently. Has more appetite; the bowels are in a healthier state; and there is less leucorrhœa.

She is strictly to continue the same plan.

April 1. Is steadily improving; there has been a very slight menstruation.—Pergat.

April 14. Has had the catamenia for two days and a

half; the secretion of good color and large in amount; palpitation and pain of side much less; appetite improves very slowly; aspect clearer. Thinks the iron produces headache; pulse 100.

Omitte. Mist. cum Ferr. Iodid. Cont. Pilulæ.

R. Infus. Rosæ C. ℥vij. Tinct. Humuli, Tinct. Card. C. āā
℥iv. Quininæ Sulph. ℥i. Acid. Sulph. dil. ℥x.

M. ft. Mist. Take one tablespoonful three times a day.

May 26. The catamenia have returned twice since her last visit; and the secretion has been altogether healthy. Is still far from strong; but the cough and all the distressing symptoms are so greatly improved as to leave no doubt of ultimate recovery; she is about to visit Tunbridge Wells. I saw this patient once more in the latter part of the summer, and she was entirely restored.

The next case is one of aggravated chlorosis, complicated with menorrhagia and leucorrhœa.

CASE 6.

Mrs. B——, æt. 38, is the mother of six children, the youngest now, July 1837, four years old; she has been formerly weakened by over lactation, and by several bad miscarriages. Has been menorrhagic for the last three years, the discharge not only being profuse and clotted, but lasting for eight or nine days, with leucorrhœa in the intervals. A humid atmosphere has aggravated the disease; the aspect is highly chlorotic; the hue of the skin dirty white; and the dark marks about the eyes and angles of the mouth and alæ of the nose are especially apparent. It is scarcely necessary to say more than that every symptom of the disease exists in aggravated form, especially vertigo. She dare not, sometimes, for a day or two, walk across the room; her body

seems to have been almost drained of its blood; and what remains, judging from what is lost in epistaxis, is very watery and attenuated.

Her great fear is that she shall become entirely dropsical, as her lower limbs are anasaralous and the arms œdematous. She is hysterical and nervous, almost to insanity.

I need not detain the reader by the daily and weekly details; suffice it to say, that a year elapsed before the disease was cured. A variety of palliative and adjuvant remedies were employed; but the great benefit was derived from iron, ergot, and camphor.

The form of pill most frequently exhibited, I annex.

℞. Ferri Sulph. vel ammoniat. gr. ij. Camphoræ gr. iss.
Cons. Ros. q. s. ft. pilulæ. Take one pill twice or three times a day, or

℞. Ferri Sulph. ℥i. Secalis Cornut. (in pulvere) ℥ii. Syr.
Simp. q. s. ft. pilulæ xii. Take one, or two pills, twice or three times daily.

It must be borne in mind, that the ergot is a remedy of variable power, although, in the cases fit for its use, it more frequently fails from not being fresh, and from having been long in a powdered state and exposed to the light, in a white bottle, than from a want of beneficial activity in the genuine drug.

The menorrhagic and leucorrhœal form of the malady is rare in early life. It generally occurs in women who have borne children, who have worked

hard, and who have lived irregularly and on scanty and poor food. I have seen several cases of this form of the disease in the wards at Guy's; and it is worthy of observation, that iron succeeds almost invariably in their cure. Perhaps this may prove that they are chlorotic maladies. Were they merely cases of loss of blood and simple anæmia, nutritive diet and a restraint of the hemorrhage would cure them; but I am convinced they are more than this. The indications of chlorosis are really present, and the remedies for chlorosis, especially iron, will be required.

CHLOROSIS COMPLICATED WITH VICARIOUS DISCHARGES OF
BLOOD, AND DISORDER OF THE STOMACH AND BOWELS.

CASE 7.

REPORTED BY DR. JOSEPH RIDGE.

Aug. 9, 1836. ELIZA ———, aged 16, a delicate, chlorotic girl, with pale cheeks and exsanguine prolabia: has always lived in London, and has enjoyed tolerably good health.

She has been engaged for the last four years in a sedentary occupation (waistcoat-making); and has rarely quitted the house, sometimes not for weeks together. The catamenia appeared first a year ago, continuing for three days, but were of light color: they observed the natural period for five or six months; but on each successive recurrence were more scanty and serous, with lumbar and pelvic pains, and great

lassitude. For the last twelve weeks, the function has been entirely suspended; and she has suffered, for some time, from dyspepsia, constipation of the bowels, and intense headaches. Nine weeks ago, she had a severe attack of hæmatemesis, which was preceded and attended by considerable pain over the stomach, and sickness after eating. It continued for four days; and, according to her own account, she must have vomited altogether several pints of blood. There has been occasional epistaxis since; and once or twice, a slighter return of hemorrhage from the stomach. She at present complains of flatulency; pain in the left side; of dyspnœa; disturbed action of the heart upon exertion; and pain in the occiput. The tongue is pale, moist, and flabby; pulse quick, silky, and irritable.

Sumat Pil. Colocynth. cum Calomel. gr. x. bis in hebdomadâ, horâ somni.

Mist. cum Ferri Sulphat. ʒi. ter quotidie.

Liq. Ammon. pur. ʒiss. Lactis tepid. Oct. i. pro Injectione, quotidie utend.—Meat diet, and a pint of porter daily.

Aug. 20. Is relieved from many of the symptoms; slight epistaxis yesterday: bowels well open.—Pergat.

24. Complains of fullness and pain of the stomach and head; her aspect is less anæmiated.

27. Considers herself much improved; appetite good: pulse stronger: complains only of headache: she was ordered to take air and exercise, in the square.

30. Makes no complaint. Some color is returning to her cheeks; and though the catamenia have not yet again appeared, her general health is so rapidly improving, that she is allowed to become an out-patient.

Sept. 8. Has menstruated fully and without pain, and is rapidly recovering her health.

CASE 8.

REPORTED BY DR. JOSEPH RIDGE.

ELIZA ———, aged 19 ; a girl with light hair ; of pale, waxy, and chlorotic aspect ; and under the middle stature : admitted as a patient of Dr. Ashwell, Jan. 7, 1836.

She was born in London ; has been occupied as a domestic servant ; and till within the last twelve months has enjoyed good health. Menstruation commenced at the age of 16 ; and was perfectly natural till the commencement of her illness ; at which time, the function was suddenly suppressed, the suspension still continuing. Her general health has been gradually giving way, and there has been progressive emaciation.

Vicarious discharge first occurred during the last week ; and on three successive days she vomited about half a pint of dark-colored and clotted blood. Her present symptoms are, pain in the head, accompanied, on assuming the erect posture, by violent throbbing, giddiness, swimming of the sight and ringing in the ears. There is palpitation of the heart, increased on exertion ; inability to lie on the left side ; globus hystericus ; dyspnœa with slight cough, but without expectoration ; constant pain of the right side ; loss of appetite ; occasional tumefaction of the abdomen ; constipation of the bowels ; and, at intervals, abdominal pain and tenderness. The tongue is clean, but pale and relaxed : pulse 90, compressible, yet jerking.

Sumat Pil. Colocynth. cum Calomel. gr. x. ter in septimanâ.
Mist. cum Ferri Iodido more solito præparat, coch. ii. majora ter quotidie.

Utatur Injec. cum Liq. Ammon. pur. et Lacte quotidie.
Diet, Beef-tea, and Arrow-root.

Jan. 12. Complains of pains in the sternum, in the region of the heart, and of throbbing pains in the head : sleeplessness. Skin cool.

Pergat.

App. Cucurbitulæ sine ferro nuchæ.

18. Feels better, though the head is still painful and dizzy.

To be electrified.

23. Severe pain in the left side, probably hysterical : head is very painful, and throbs violently : bowels open : tongue clean.

Omitte Mist. cum Ferro. Sumat Decoct. Aloës C. \mathfrak{z} iss. quoque primo mane.

28. Suffers still from dyspnœa, and neuralgic pains in the side : headache : abdomen tumid : bowels open.—Pergat.

Feb. 4. There has been considerable improvement : she has been freer from pain, and is active about the ward ; bowels are well relieved.

6. Continues to improve : is much less subject to dyspnœa and palpitation : the pains in the head and side are relieved. There has been no appearance of the menstrual secretion.

9. Has a return of the former symptoms, though not in so aggravated a form. Bowels open.

Mist. Ferri c. \mathfrak{z} i. ter die.—Pergat.

15. The pain in the side is increased ; otherwise she continues the same.

Emplast. Opii part. dol.

22. She now complains of a load at the stomach, after

taking food ; and for the last day or two she has vomited about an hour after dinner. Tongue clean : pulse feeble.

27. Since the last report, she has been better until yesterday afternoon, when, after dinner, she retched violently, and brought up a small quantity of dark-colored blood, after which the dyspnœa and pain in the chest returned. Pulse, 80, soft, but somewhat sharper.

March 2. The oppression at the chest returned again last evening ; and this morning she was seized with another attack of hæmatemesis, and vomited half a pint of dark-colored blood. Bowels open : pulse 96, and feeble.

Cont. Medicament.

At her own request, she was made an out-patient ; and under a similar course of treatment, in country air, the vicarious hemorrhage was subdued ; she returned again to the iodide of iron, and after six weeks the catamenia appeared. I have seen this patient several times since ; and, by purgatives, iron, and exercise, the bowels, and the uterine functions, are preserved in a healthy active condition.

CASE 9.

REPORTED BY MR. HENRY OLDHAM.

ELIZA H——, aged 24, a woman of moderate stature, dark hair, fair complexion, and spare habit, was admitted July 4, 1835, under Dr. Ashwell. She has been married nine months, without pregnancy, and is employed in general household work. She began to menstruate at 15 years of age, since which time she has had occasional attacks of amenorrhœa. These never extended over many periods ; but the discharge was usually restored by taking aloes, with new-laid eggs. She has been in delicate health for four or five years ; principally complaining of a bad cough with expectoration,

occasionally accompanied by pains about the epigastric region. For this she has been frequently blistered and leeches. For the last half year, at every monthly period, she has vomited a quantity of dark-colored grumous blood, and the catamenia have proportionally diminished in their amount. These attacks of hæmatemesis once or twice supervened on coughing; but usually they were the result of vomiting. She has latterly abstained from intercourse, as it produced intense pain in the vagina and hypogastric regions.

She looks pale and wan: complains of considerable headache and lumbar uneasiness: she is weak, and unable to perform her usual duties. There has been profuse leucorrhœal discharge for seven or eight months, pain in micturition, and a tenesmic effort to evacuate the contents of the bladder. The skin is moist; but has lost its resiliency, so that, when pinched between the fingers, it is slow in regaining its natural position. Tongue flabby, indented at the edges, and rather foul. Bowels naturally costive. The mammæ are very tender, and there is occasional nausea. On examination, the uterus was found of its natural size, and the os and cervix of their normal form and dimensions: they were, however, tender to the touch. Abdomen tumid.

Col. cum Cal. gr. xv. statim; et repet. alt. noctibus.—Sumat Inf. Rosæ cum Mag. Sulph. ʒi. bis quotidie.

July 8. The general uneasiness was relieved by the free action of the purgatives. The headache has been intense, and increased when in the recumbent posture. She sleeps heavily; and being continually disturbed by frightful dreams, she rises unrefreshed. She complains of a fixed sharp pain, on pressure, beneath the margin of the lower ribs on the right side. Leucorrhœal discharge profuse: pulse 100. The pain in the left mamma is severe; the left nympha is elongated, and a superficial ulcer is seen on its inner surface. Heart pulsates forcibly.

Ferri Iodidi gr. xvi. Tinct. Calumb. ℥i. Aq. distillat. ℥vij.

Cochl. ij. magna ter die.

Pil. Rhei c. gr. x. p. r. n.

Liq. Ammon. ℥i. Lactis Oct. i. fiat Injectio, omni nocte utenda. Hirudines vi. mammæ sinist. applicand.

10. She feels better. The headache and pains in the mamma have decreased. Bowels open : pulse 90.

Rep. Medicamenta.

13. There is heavy dull pain in the head ; aggravated on lying down, and preventing its free movements. The pain in the loins occurs in paroxysms ; and is so severe as to occasion sudden and spasmodic starts, like those produced by an electric shock. Pulse 86, soft and regular. The leucorrhœal discharge is lessened : the os is still tender. The ulceration on the nympha is healed. Bowels open : countenance and general surface more healthy.

15. The white discharge has been examined, and is found to be mucus. This is the period for the return of the catamenia, and the usual time for the reappearance of the hæmatemesis. She has expectorated some gelatinous mucus, but no blood. Bowels open. Pulse quiet : lumbar pain diminished.

Repetantur Medicament.

20. The paroxysms of lumbar pain have entirely ceased, and she looks much more healthy. The catamenia have not appeared, and there has been no premonitory symptom of the hæmatemesis. Headache entirely relieved. Skin moist ; bowels open.

Omittant Injec. et Mist.—Capiat Ferri Carb. ℥i. ter die.

Electric sparks to be passed through the loins.

24. The electricity has been four times repeated ; and was to-day immediately succeeded by considerable pain,

both in the loins and thighs. The leucorrhœal discharge greatly diminished. She feels much improved. Secretions natural : appetite good.

25. From her sensations, she expected the re-establishment of the catamenia : in other respects the same as yesterday.

Rep. Medicamenta, et Scintillæ Electr.

26. The catamenia appeared early this morning, accompanied by great pain in the loins and thighs.

Balneum tepidum hâc nocte.—Pergat.

The discharge continued to flow until the evening of the 28th. With its cessation she experienced considerable relief, and quickly began to amend. The electricity was continued on alternate days, with the daily exhibition of the carbonate of iron. On the 11th of August she complained of severe pain at the scrob. cordis, sore throat, and headache, the effects of an imprudent exposure to cold. These were relieved by antiphlogistic measures, and soon disappeared. Under a continuation of the tonic plan of treatment, her strength was renovated. The surface lost its pallor, and the circulation was well and vigorously carried on.

Aug. 24. The catamenia have again appeared, accompanied by lumbar pain, and sympathetic irritation of the mammæ.

On *Sept.* 2, she left the hospital, free from serious malady ; and so greatly improved as to leave no doubt of her ultimate recovery.

OBSERVATIONS.

It will not be necessary to offer many remarks on the preceding group of cases. Hæmatemesis occurs more frequently than is supposed ; and in con-

nection with so much pain, fulness, and congestion in several organs, as might appear to justify active treatment. I have seen bleeding, purging, and lead, lavishly employed; but with decidedly bad effect. In all the four cases narrated, there was anæmia, quick irritable pulse, and excitement, precisely the symptoms of chlorosis, and such as may, without difficulty, be distinguished from similar symptoms dependent on acute inflammatory disease. The transient neuralgic character of the chlorotic pains, notwithstanding their severity, the amenorrhœa, countenance, and pulse, must lead to a correct diagnosis, and to modified and local treatment. The great indication is, either, to establish or to restore the catamenial function; and to attempt the attainment of this point, even by the empirical use of emmenagogues, bad as the practice may be, is less injurious than a full pursuance of the antiphlogistic plan. Blood-letting can seldom be required. On one occasion, I visited a chlorotic patient who had been bled from the arm for the relief of thoracic fulness and difficult respiration: she was partially and temporarily relieved. It was thought advisable to repeat the bleeding; and nothing could be more conspicuous than its bad effects. Her prostration of strength was extreme; the breathing was more laborious; and an anasarcaous state of the body was universally apparent. Nor is it less important to reiterate the caution against excessive purging, especially where mercurial or drastic medicines are employed. The first object, doubtless, is to pro-

cure, by proper aperients, healthy and regular evacuations; but the anæmia of the patient must be increased by their undue exhibition—a practice so common, that some individuals doubt whether more harm than benefit has not accrued from their use. Let this be as it may, it is quite true, that the evil results of such a plan are not confined to the stomach and bowels themselves; the irritation and flatulent distension of the intestines leading to aggravation of the chlorosis, and to nervousness and distressing sinking, very difficult to be borne: and yet, with such an increase of disorder, I have known mercury and aloes persevered in for weeks. So strong is the prejudice in favor of a “good, active purgation.”

Electricity, the mustard hip-bath, the ammoniacal injection, leeches to the vulva, moderate cupping to the loins, the various emmenagogues, and occasionally a very active purgative, are the remedies peculiarly appropriate to this complication.

CASE 10.

CHLOROSIS COMPLICATED WITH CEREBRAL AFFECTION.

MARY ———, aged 19, admitted as an out-patient under Dr. Ashwell, Nov. 10, 1833. She began to menstruate at 13 years of age; and from that period was never quite well, frequently complaining of lumbar pain, headache, indigestion, &c. These symptoms were disregarded for three or four years, and then they became too acute to remain unnoticed. She is now considerably emaciated, suffers intensely from pain in the head, is frequently unconscious, and her in-

telleet is greatly impaired. Her breathing is laborious, with frequent palpitations of the heart, and pain in the cardiac region. If she lie down suddenly in bed, and without two extra pillows, her breathing is so interfered with, that she is afraid of suffocation. Her digestion is bad, her appetite capricious and depraved, caraway-seeds and mint being favorite articles of diet. Aperients are constantly given, and never without the removal of scybalæ. Pulse 130, quick, irritable, and feeble; pain in the side very acute: has not menstruated at all for the last three months, and not properly for the last year. Her tongue is marked by the teeth, and the lining membrane of the mouth is unhealthy. Her aspect is blue and leaden, and the prolabia almost bloodless. Her finger-nails are cracked, and her extremities are of the chlorotic hue. Urine scanty, and high-colored.

Ordered, Cordial aperients; Leeches behind the ears; the Æther-wash to the head; and a Pill three times daily, composed of one grain each of Quinine, Camphor, and Hop; with nutritious Animal Diet and mild Ale.

Dec. 6. Somewhat better. The catamenia have not appeared.

Pergat.

24. Less headache; acute lumbar pain; spasms of the lower part of the abdomen.

Applicentur Hirud. x. labiis pudend.—Hot mustard baths.

Jan. 6, 1834. Has menstruated for nearly four days, plentifully, and without pain; is, in all respects, improved.

Pergat.

20. Headache nearly gone; acute pain in the side, and difficulty of respiration less; still emaciated, and appetite impaired; bowels much constipated.

Sumat Cal. cum Colocynth. gr. x. alternis noctibus.

31. Bowels well cleared, and more regular; improved in appearance.

Feb. 28. Calls to say she is quite well.

CASE 11.

Jun. 23, 1836. Miss ———, aged 34; of delicate and leuco-phlegmatic appearance; menstruating irregularly and scantily, but especially for the last year; devoted to reading, and occasionally oppressed by anxiety, but never called upon for any laborious exertion. Bowels confined: pulse quick and feeble: appetite never very good. On the whole, up to twenty-five or perhaps thirty years of age, she was tolerably healthy, and sometimes florid. The complaint for which she now seeks advice is headache, which has existed more or less severely for six or seven years. It was unnoticed at first, and was accompanied by a jaundiced appearance of skin, and by retching; but the vomiting never removed, and scarcely palliated the pain in the head. There was not much done medically for the first few years; but her health became gradually more impaired; and about twenty-four months since the pain assumed an intensity and constancy never previously belonging to it; every symptom since this period has been grievously aggravated; and the disease now absorbs her whole attention. In October, 1835, new symptoms arose—pain deeply seated in the orbit, tension of the tympanum with soreness and painful hearing; throbbing and beating of the head, and, in a few days, almost entire deafness, lasting till December; since which time the deafness has only recurred during menstruation, (which is almost amenorrhœal,) alternating with a peculiar sensation of syncope, tension, and noise in the ear. Remedies have been tried, of a mercurial, depletive, and antiphlogistic kind. Pulse 110, quick and irritable.

Good diet, principally animal food and ale, without wine or spirit, were enjoined.

Iodide of Iron, and Colocynth as an aperient, but without Mercury, were exhibited; and the head was shaved, and the Æther wash applied.

Feb. 20. Considerably improved in all respects. To use the mustard hip-bath before the catamenial period, and continue the same remedies.

March 20. Has menstruated for three days, and without pain. Her cerebral symptoms less; still very far from well.

April 30. Is certainly greatly better. Her intense headaches return at very distant intervals. She is gaining flesh; and is able partially to resume her occupation of teaching. Bowels regular; urine natural; pulse 90, but feeble, and easily compressed. Still continues the iron, and the mustard-bath, before the period. Is ordered to take much out-of-door exercise.

I have not since seen this patient; but during the present month, September, I have heard, from a relative who lives in the same town, that there has been no relapse. The catamenial function is well performed; and the headache and the cerebral affections have entirely disappeared.

CASE 12.

REPORTED BY MR. BLACKBURN.

EMILY ———, aged 17, a tall thin girl, of florid complexion, and of intelligent appearance, was admitted under Dr. Ashwell's care, Feb. 5, 1836. She has always been weakly; and for the last four or five years has been subject to chest affection, from which she has been free since the existence of her present malady. Two years ago she had phrenitis, and has since been in imperfect health, being often seized with aggravated fits of hysteria, so that she falls and remains insensible and motionless for hours together. She is now deaf, and has once had otorrhœa; but its presence

was attributable to an accidental injury of the meatus externus. She has intense headache, chiefly affecting the occiput. The cephalalgia was unusually severe in Dec. 1835; and soon afterwards her right foot and hand were frequently in agitation. A month subsequently she lost all control over them; and since this time there has been aggravation of the pain. Ten days ago she was delirious, and remained so for a few hours. Menstruation has been only once regular and natural. Her present symptoms are—dulness, almost imbecility of intellect; constant and rather acute occipital pain; frequent but not very violent agitation of the right side, with occasional spasms of the left; little or no affection of the face; no difficulty of articulation. Bowels open by purgative medicine; skin soft, and moist.

Pulv. Scam. cum Cal. gr. xv. statim. Ferri Subcarb. ʒi.
quartâ quâque horâ.

To take half-a-pint of porter daily, and use the flesh-brush.

This treatment was pursued for a fortnight with advantage; and the daily reports exhibit progressive amendment. The agitation is decreased, and the pain in the head diminished.

Zinci Sulph. gr. ij. ter die.—Balneum pluviale omni aurorâ.

Feb. 22. The agitation is much less; and she has recovered considerable power of the left hand, but not so much of the leg. Bowels open; tongue clean.

25. The agitation has somewhat increased, and she complains of pain in the affected arm and leg.

Augeatur dosis Zinci Sulph. ad gr. iv. ter die.

She continued to improve until March 11; when the nurse reported that she had had a fit in the night, in which she appeared to have lost the power over her limbs, and the legs were somewhat contracted: the hands were placed over the occiput, where she appeared to suffer pain. She is now

rather confused ; pupils dilated, though obedient to light. There is some involuntary movement principally confined to the left side. Bowels well opened yesterday ; pulse small, and soft.

Radatur Caput. Lotio frigida constanter applicand. Zinci Sulph. gr. iv. ter die.

March 16. Had another fit this morning, but much less severe than before. Pulse quick ; pain in the head not increased.

22. Has had no return of the fits, and appears much improved. The involuntary twitchings are comparatively slight. She is more collected, and can articulate clearly. Bowels open ; pulse quiet ; still deaf ; her strength is so increased, that this-morning she was able to walk twelve or fourteen yards.

Inf. Rosæ. cum Quin. Sulph. gr. ij. t. d.—Pil. Rhei C. gr. x. p. r. n.

She remained in the hospital till April 21, when she was presented quite well. During this time she gradually regained her strength, losing all symptoms of chorea. The general health was confirmed ; her appetite returned ; the catamenia appeared, though scantily ; and her countenance assumed its natural aspect.

Her intellect is still somewhat impaired ; but the head is free from the occipital pain, and there is no symptom of structural change.

The cases narrated, illustrative of this complication, require little comment. They attest the aggravated severity of the cerebral affection ; and present indications so similar to those resulting from structural change, as fully to demonstrate the difficulty of correct diagnosis. Although it is very rare

for organic affection of the cerebrum to accompany chlorosis, it must not be forgotten, if the malady continue, that a complication entirely functional at the commencement, may lead to change of structure ; and that whilst the greater number of accompanying symptoms are merely functional, there may exist, in some one organ or viscus, organic disease. Local cupping, not general blood-letting ; a blister to the nape of the neck ; moderate and cordial aperients ; change of air ; and cheerful occupation and amusement of the mind in society, or active out-of-door pursuits, are means the most likely to restore or to establish the catamenial function.

CASES OF CHLOROSIS COMPLICATED WITH FUNCTIONAL OR
STRUCTURAL DISEASE OF THE THORACIC VISCERA, ES-
PECIALLY OF THE LUNGS.

CASE 13.

REPORTED BY THE CLINICAL CLERK.

MARY ———, aged 21, an unmarried woman, spare made, and of pale and emaciated appearance, was admitted into Mary's Ward, under Dr. Ashwell's care, Dec. 3, 1835.

She has always been delicate, and liable to inflammatory attacks : she began to menstruate at sixteen years of age, but the function has always been irregularly performed. Sometimes a suspension of five months has occurred : at others, the discharge has been suddenly checked ; and rarely has she had a full and healthy flow.

On the 8th of November last the catamenia appeared, which terminated an amenorrhœa of five months duration: yesterday there was another attempt, which lasted for eight or nine hours, then ceased: and the discharge, although pale and serous, has this morning returned. She has for some time been subject to leucorrhœa.

About two years and a half ago she had a severe attack of thoracic inflammation, and was greatly weakened by its treatment: there is now much debility; the face is flushed, and the surface pale and waxy; dyspnœa and pain at the epigastrium. She has had cough and mucous expectoration for several years, from which she is still suffering. Sometimes she coughs up three or four ounces of a fluid slightly muco-purulent, and occasionally half a pint in the four and twenty hours. The heart beats violently, and is excited on the least exertion: her appetite is impaired; and the pain at the epigastrium, occurring after food, is relieved by vomiting a quantity of watery fluid, with a remarkably sour taste; urine limpid, and secreted in large quantity; pulse 72, rather full; bowels constipated.

Colocynth. cum Cal. gr. x. statim. Infus. Rosæ cum Magnes. Sulph. bis die.

December 8. Feels better. The cough is less troublesome: pain diminished: appetite improved: still headache and wakefulness.

Hydr. cum Cretâ gr. v. cum Pulv. Tragacanth. Comp. gr. v. omni nocte.

Mist. Oleosa cum Mannâ; et Vin. Ipecac. ℥ xv. bis die.

11. Is greatly improved in her feelings and general aspect. Pulse 86, regular. Yesterday she ate meat without the usual pain at the scrob. cordis. Leucorrhœa still continues.

Rep. Medicamenta.

17. There is an attack of pneumonia, cough, and dyspnoea ; severe crepitation at lower part of left lung, involving a very small portion ; expectoration not altered in character or quantity ; skin hot.

Cucurbitulæ Cruentæ ad ʒx. infra mammam sinistram :
postea Emp. Lyttæ.

Colocynth. cum Calomel. gr. xv. statim. R. Vin. Ant.
Tart. ʒ xv. Liq. Ammoniæ Acet. ʒiv. Tinct. Hyos-
cyam. ʒ xx. Mist. Camph. ʒvi. ft. Haust. ter die.
sumend.

27. The inflammatory attack readily yielded to the remedies, and she appears to have gained strength : complains of nausea.

Mist. Ferri Comp. ʒi. bis die.

The tonic treatment was occasionally varied, but persevered in ; and she daily improved. The pulse beat regularly, usually 80 in the minute. Bowels open. She can eat, and easily digest meat.

January 5. The catamenia appeared, accompanied with less pain ; and of a more natural color than formerly, lasting five days.

The cough and expectoration daily diminished. She was able to walk about, and left the hospital Jan. 19, with a slight bronchitis remaining, but the general health almost entirely restored.

CASE 14.

Feb. 28, 1835. Miss ———, aged 26, began to menstruate at 14 years of age ; and till within the last year and a half has enjoyed good health. Since this period she has lived near town, and the catamenia have been gradually diminishing in quantity. At first, the discharge continued for half

a day, or a day less than when in full health. Now, the flow does not last more than a day, but is unaccompanied by uneasiness: there is no acute pain of the head, but she is frequently giddy; her digestion has been interfered with, and her appetite greatly impaired: thirst is sometimes distressing: the thoracic symptoms are, however, the most pressing; as her breathing is short, hurried, and laborious, and she has frequent hacking cough.

Still, these thoracic symptoms precisely resemble those sometimes produced by chlorosis complicated with hysteria. The cough is excited by any mental emotion; and loss of voice and sudden difficulty of respiration are often induced by the same cause. Palpitation is of frequent occurrence. There is no expectoration of phlegm, but frequent water-brash: the bowels are constipated: the pulse is quick and irritable. The aspect icterode: the tongue and lining membrane of the mouth are unhealthy; and there is the dark mark under the eye: the conjunctiva preserves nearly its healthy and natural color: the nails are chipped and dark; and the fingers partake of the general jaundiced hue.

Ferri Iodidi gr. xvi. Tinct. Calumbæ ʒi. Aq. distill. ʒvii.
ft. Mist. Sumat. coch. magn. i. ter die.
Pil. Rhei. Co. ʒij. Ol Cassiæ gtt. xij. M. ft. Pil. xxiv. Su-
mat ii. vel iii. alt. noctibus.

April 4. Has had the catamenia for two days and a half, and is more relieved by the flow than formerly. Palpitation less; pain in side diminishing: more strength: appetite not much improved.

Bacon with chocolate for breakfast; roast beef and mutton, with mild ale, for dinner; weak chocolate for tea; and a sandwich, with a little mild ale, for supper: these were the directions given Feb. 28: the result was as described above. She was ordered to continue the same diet.

May 16. Bowels irregular and confined: less cough: pulse 100, fuller and softer; the pallor continues, and the debility is considerable. Catamenia appeared at the usual time, but continued only for a day.

Cont. Remedia.

To use for a week, previously to the period, the strong mustard hip-bath, every night.

Sumat Decoct. Aloes C. ζ ii. cum Pulv. Jalape gr. x. alternis matutinis.

June 20. Has menstruated fully, and without pain: the hysteria has nearly ceased. Circumstances of a painful nature, relative to an engagement which she had formed, were unexpectedly removed; and cheerfulness and vivacity have succeeded to gloom and anxiety.

Pergat.

It is unnecessary to say more about this patient, than that by a sedulous prosecution of the remedial measures, she entirely recovered, is now married, and the mother of two children.

CASE 15.

CHLOROSIS COMPLICATED WITH PHTHISIS.

Miss ———, aged 15, a young lady of dark complexion, intelligent countenance, and of great delicacy, was attacked, at the age of 13, with hooping-cough. The paroxysms were frequent and violent; and, notwithstanding treatment and change of air, the disease lasted some months, with little or no diminution of severity. At first it was unaccompanied by expectoration; but shortly a mucous phlegm was thrown up. Her strength decreased; her appetite was capricious; and it was feared that the lungs would become phthisically dis-

eased. She was sedulously watched ; and her exercise, diet, and clothing were carefully regulated. Before she attained her 14th year, the cough had lost its peculiar character, and appeared to pass into chronic bronchitis. The generally emaciated state of the body, with the pallor and concomitant symptoms, clearly indicated chlorosis ; yet it was hoped that the establishment of puberty and menstruation might lead to a restoration of health. For a few months, remedies to improve the constitutional power, and induce the desired change, were ineffectually employed. Her countenance became more chlorotic ; the lips and mucous lining of the mouth more pallid and unhealthy ; and the anterior wall of the thorax seemed daily to approximate more closely towards the spine ; there was not the slightest enlargement of the mam-mæ ; nor did it appear at all probable that puberty or menstruation would be developed. The expectoration changed its character, and, instead of mucus, large quantities of dark-colored pus were coughed up, so offensively fetid as to require immediate removal from the apartment. Every indication was decidedly phthisical : there was hectic flush and quick pulse in the evening, and exhausting perspiration in the morning : the appetite was, at times, morbidly great ; while at other times scarcely any thing was eaten. Her strength rapidly failed. Pectoriloquy, gurgling cough, and cavernous respiration, were severally detected by the stethoscope ; and before she reached her fifteenth year, she sank from phthisis complicated with chlorosis.

CASE 16.

April 1, 1838. Miss B., æt. 19, of light complexion, delicate from infancy, and frequently suffering from amenorrhœa, was exposed, in September 1837, to a cold, damp atmosphere. The result has been entire suppression of menstruation, with its accompanying inconveniences, and severe

cough. The aspect is entirely chlorotic, the skin being dirty-white, the conjunctivæ, gums, and lining membrane of the mouth bloodless; nor is there one indication of the malady absent.

The expectoration, which is occasionally purulent, the pain in the left side, the morning perspiration, and the emaciation, point very clearly to phthisis. There is also considerable leucorrhœa. The progress of this case has been instructive: at first the amenorrhœa did not attract attention, because it was unattended by important indisposition. But, in December 1837, some more serious symptoms showed themselves: the chlorosis was fully established, cough, and quick pulse, with the icterode hue and gradual emaciation, alarmed her medical attendants, who had carefully watched and treated her. Since this period, it is unnecessary to detail the course of the disease; but it is sufficient to add, that menstruation was never restored, that tubercular cavities formed in the substance of the lung, and destroyed the patient in October 1838.

Many similar examples I could furnish, scarcely a year passing without my seeing several such melancholy cases. I forbear offering many remarks on the treatment of this most fatal complication, having already insisted upon the absolute necessity of continued vigilance and care. I may, however, suggest the importance of early and entire change of air. A sea voyage, a milder climate, frequent travelling, and cheerful society, offer the best prospect of creating or renewing the vigor of the system, and establishing a healthy condition of the pulmonary organs.

I have purposely avoided the discussion of the stethoscopic signs of phthisis, not to dissuade the

practitioner from the careful examination of the chest, but because I am fearful of his attaching too much importance to the absence of physical evidence of this disease. His apprehensions should be excited by the peculiar condition of the patients already described—a condition favorable to the deposition of tubercular matter in the lungs. To obviate the probable consequences of this condition will require the utmost forethought. If, however, he wait till these consequences have ensued, or, in other words, till auscultation affords proof that organic change is actually commencing, all his care and all his skill will be unavailing.

CHAPTER II.

OF AMENORRHŒA.

DEFINITION.—*The Absence of Menstruation.*

There are two principal forms of the disease.

First, The Amenorrhœa of Retention, where, at the appropriate age, menstruation is absent, including *three* varieties.

a. Amenorrhœa, dependent on congenital deficiency, malformation or structural disease of the genital organs.

b. Amenorrhœa, where, independently of deficiency or malformation, there is either a slow and partial development, or an entire absence of puberty.

c. Amenorrhœa, after puberty is fully established.

Second, The Amenorrhœa of Suppression, where menstruation having existed perhaps for a length of time, has, independently of pregnancy or lactation, become suppressed, including *two* varieties.

a. Recent and acute suppression.

b. Chronic suppression.

a. *Amenorrhœa, dependent on Congenital Deficiency, Malformation or Structural Disease of the Organs of Generation.*

History, Pathology, and Diagnosis.—These are happily rare cases, and the cure, under the most favorable circumstances, is hazardous and difficult, and sometimes impossible. It is now almost universally acknowledged, that menstruation, as well as conception, is dependent on the existence and influence of the ovaries. If, therefore, the absence of the function is connected with the absence of these organs, the disease is irremediable. Nor will the chances of a cure be augmented, if both ovaries have become structurally diseased. So long as one of them, or even a portion of one of them, is sound, menstruation may be performed; but if there be entire disorganization, complete amenorrhœa will be the result. These opinions receive additional confirmation, from the development of the ovaries not occurring till the age of puberty, from the diminution of their size, when the catamenial and reproductive functions cease; and from the gradual lessening of the menstrual discharge, as disease of the ovaries progresses. In Mr. Pott's celebrated case of the removal of both ovaries, menstruation entirely disappeared, although, previously to the extirpation, puberty existed, and the function had been well performed. An instance of complete scirrhus of the ovaries, attended by a similar result, and occurring in my own practice, will be narrated hereafter.

The history of these cases is not encouraging: the health often suffers, and there is a proneness, either to irritability and excitement, or torpor and depression. I have now under my occasional care,

a lady of thirty-two years of age, who has never menstruated, I believe from congenital deficiency of the ovaries, and she is never quite well. Of late, her health has been more seriously deranged; she loses flesh, has frequent febrile attacks, a troublesome cough, pain in the side, and embarrassed respiration. The probable termination of this unhappy condition is phthisis. In this instance, sexual development and feeling are entirely absent; nor has there ever been leucorrhœal discharge.

I cannot, without more qualification than my friend has appended, entirely concur in the following statement of Dr. Churchill, in his very able and interesting work on the Diseases of Females. "These patients," Dr. Churchill says, "have the body generally well developed and healthy, the circulation active and regular, the organic functions (save one) fully performed. But the breasts are not prominent, the genital characteristics and sexual propensities are not developed, the voice is deeper than usual, a slight beard appears on the upper lip, and there is a mixture of masculine with feminine peculiarities." The latter part of this statement is fully borne out, but the author has probably underrated the general amount of ill-health in cases where the ovaries are wanting. Other organic deficiencies and malformations produce amenorrhœa.

There may be no uterus, or if it exist it may be anormal in form, its cervix may be wanting, or together with the os, impervious. The vagina may be entirely absent, or so imperfectly formed, that it

shall not be connected with the uterus; its sides may be adherent, solid growths may obstruct the continuity of its canal, or there may be an imperforate hymen.

I have seen several cases where the uterus could not be ascertained to exist; although the presence of the ovaries was tolerably certain. One or two such will be given. Here the health was not seriously, and in one case, not at all deranged. The uterus did not exist, and, of course, healthy menstruation was absent. No mischief, therefore, arose from the retention of the catamenial discharge. But it is far different where there is a uterus, where menstruation is performed, but where the escape of the secretion is entirely prevented by malformation.

Distension of the uterus, pressure on neighboring organs, impeding their functions, derangement of the general health, and periodical efforts at menstruation, occurring probably at monthly intervals, clearly distinguish these examples of retained menstruation from cases of absent ovaries or uterus; and show the absolute necessity for a most careful examination.

Prognosis.—This must be unfavorable where there is a congenital deficiency or extensive organic disease of the ovaries or uterus. In neither condition can menstruation be established. It is not, therefore, probable that the usual amount of health shall be enjoyed, although it is quite true, excepting in structural disease, if such individuals escape

phthisis, to which, in early life, and in our climate they are especially prone, they may, and often do, become vigorous and robust.

Where the other malformations are present, the prognosis must mainly rest on the nature and extent of the obstacles, on the practicability of a surgical or any other operation for their relief; on the degree of danger, not only in the operation itself, but to surrounding parts; and especially on the risk, certainly the most serious of all, of peritoneal inflammation. The more distant serous membranes also, the pleura and pericardium may become inflamed, as a secondary result of any operation on the genital organs.

If a safe passage cannot be made, then a fatal or very dangerous result may ensue from immense accumulation in the uterine cavity, inducing peritonitis. Nor, is it perhaps impossible that this organ shall be ruptured, and permit the escape of its contents. Such a case I have never seen; nor from the acknowledged distensibility of the uterus, can I think it probable. It is far more likely, the accumulation being gradual, that the parietes of the organ will be slowly and sufficiently developed, to prevent rupture. The derangement of health, and the mechanical inconveniences consequent on retention, will almost certainly induce amenorrhœa.

Treatment.—Where the ovaries or uterus are wanting, the case is irremediable. Where an imperforate hymen, an occluded os, or a thin septum across the vagina, prevents the exit of the men-

strual secretion, the knife, the bougie, or the finger, may accomplish a cure. If the cervix uteri exist, without a pervious canal, a trocar of small size, or a firm bougie, may form an artificial one; but in the other and more serious malformations, where there is extensive obliteration of the vagina, or merely a rudiment of this passage, or where there is only a space between the urethra and rectum (vide cases), and where, although the uterus be present, it cannot be reached, except by exploratory incisions, in such complicated examples, the safety of the patient will generally depend on the discreet non-interference of the surgeon, while her cure must be looked for, from his courage and enterprise. It is almost needless to remark that few men, qualified for such operations, are unwise enough to undertake them, without the sanction and assistance of able professional colleagues and friends.

A case of M. Amussat, appended to this chapter, will illustrate these remarks. Among the means at the disposal of the surgeon, may be mentioned the formation by the knife, trocar, and bougie or sponge tents, of artificial canals and passages, the removal by incision, by caustic and ligatures of tumors and attached growths; and where the uterus suffers from augmenting accumulation, so as to endanger its rupture, all other means failing, it may be punctured from the rectum. It is impossible, in a systematic work, to lay down precise rules for the treatment of such maladies. Each case must be considered alone; its peculiarities must be coolly re-

flected on ; and, while temerity is to be condemned, enterprise, short of recklessness, where the danger of non-interference is so great, is deserving of praise.

In the simpler obstructions, the operations, either by the trocar, knife, or bougie, are not difficult ; but it must not be forgotten, that such patients, with whatever facility the impediment may have been removed, and a mere incision is often sufficient, are really exposed to the danger of peritoneal inflammation. When the operation has been successful, which it almost invariably is, in the simpler and more frequent cases, a quantity of dark, uncoagulated secretion escapes, and continues to drain away for several days. At length the uterus is emptied, and under favorable circumstances menstruation will occur naturally at the next, or at a more deferred period.

Peritoneal or local inflammation, especially the former, must be carefully guarded against ; and where it is necessary to keep the canal open, by bougies, sponge tent or dossils of lint, the earliest approach of abdominal or local tenderness must be promptly treated. After such a warning, every expedient for preserving the aperture must be discontinued. If the inflammatory symptoms are slight, local depletion, by cupping on the loins or hypogastric region, leeches, numerously applied, purgatives and narcotic fomentations or poultices may suffice ; but if the pulse be full and hard, the skin hot, and the abdomen really tender, in a word, if there be

peritoneal inflammation, nothing short of large and repeated general bleedings will avail as preliminary to these milder measures.

b. Amenorrhœa where there is either a slow and partial development or an entire absence of puberty.

Causes.—As the age varies considerably, at which puberty is established, not only in different countries, but in individuals residing in the same country, the absence of menstruation, at the usual epoch, must not, at once, be regarded as a disease. Its delayed appearance may be caused by idiosyncrasy or delicacy of constitution, by a tardy development of the body generally, often dependent on impure air, confinement in factories, or close apartments, and many other similar causes. Or the health may be so feeble, owing to rapid growth and excessive leucorrhœa, that the development of the genital system is necessarily delayed. We ought not, therefore, hastily to conclude that puberty will not be established, and still less that its non-appearance depends on congenital deficiency or disease; every measure for the invigoration of the general health should be fairly and long employed before the case is regarded as hopeless. It is very remarkable that Lisfranc should have met with fourteen cases of the total absence of menstruation, where he was unable to attribute such absence to physical obstacle or chronic affection of the uterus.

Pathology.—The pathology of this form of amenorrhœa is the same as that of chlorosis; let the amenorrhœa persist, and the anæmia and pallor of

the latter disease, so indicative of attenuated and impoverished blood, will soon appear. I refer the reader, therefore, to the chapter on chlorosis, where he will find the subject fully explained.

Progress and termination.—The majority of these cases terminate favorably, especially if violent emmenagogue medicines, for they ought not to be called remedies, are abstained from; months and years, however, may elapse before the cure is completed, during which the confidence of the patient and her friends in medical skill will be severely tried.

Exceptional instances, where there never is puberty and menstruation, are rare; but they do occur. Nor are they always dependent on congenital deficiency and malformation—the powers of the constitution are sometimes entirely inadequate to the task of developing the genital system.

Treatment.—When the ovaries are wanting, or destroyed by disease, there is no remedy. Where only feebleness and delicacy of constitution delays puberty, judicious treatment will avail. I forbear to enter at large on the management, as I have done it so fully in the chapter on chlorosis.

c. Amenorrhœa, after puberty is fully established.

This form may occur, either in

a. The too plethoric, although otherwise healthy and robust, or in

b. The delicate, irritable, and hysterical.

a. Amenorrhœa in the former class is invariably characterized by symptoms of congestion or active plethora, and is not so common as the second form

of the malady. It is not often seen in crowded cities or large manufacturing towns, but in the country, where girls live more naturally, and are much in the air. It is generally curable, although often neglected.

Symptoms.—Headache, tension, and weight about the brain, with a sensation of fulness and throbbing in the centre of the cranium, or about the cerebellum, a florid countenance, torpor, lassitude, pain in the back and loins, a full, and generally a slow pulse, though occasionally in irritable females it is rapid; irregular circulation, evidenced by the feet and hands being, the one hot, and the other cold, or both at short intervals remarkably hot and remarkably cold. The skin sometimes harsh and dry, and at others clammy. It is not to be supposed, if the amenorrhœa continue, that these symptoms will pass away, after the attempt at menstruation is over. They may do so for the first few periods, but subsequently they will continue, during the catamenial intervals, recurring with aggravation as the menstrual epoch again approaches. If the malady has been long neglected, or inefficiently treated, a cure will not soon be accomplished. The constitution sympathizes so entirely, that months and perhaps years may elapse, before it resumes its healthy and natural actions. Some women, however, naturally menstruate only at distant intervals; and I had lately under my care a patient, who for two or three years menstruated only every four months; and another, who never had the discharge oftener than

every six months. Instances are also recorded, where healthy menstruation occurred only once every year, or once every two years. In my patients, symptoms of plethora were always present, and the menstruation was painful. Cupping, leeches, and purgatives, with narcotics, were the means employed.

Causes.—Exclusive of organic deficiency or malformation, the most simple cause is uterine congestion; so active as to prevent the secretion of the menstrual fluid, and this is most frequently induced by exposure to cold, which suddenly arrests the secretory process. Less intelligible causes have been adduced, such as torpor of the secreting uterine arteries and spasm of their extremities. In some of these examples, the patients are indolent and sedentary, indulging in a luxurious and stimulating diet, soft beds, warm apartments, and too much sleep.

Diagnosis.—There is little difficulty, where the disease is seen early, in forming a decided opinion of its precise character. At first, there is neither anæmia nor pallor, and when subsequently present, the history of the affection will prevent error.

From amenorrhœa, where the menstrual fluid is retained either in the uterus or vagina, it may be easily distinguished. In the former there will be an absence of plethoric symptoms, the particular feature of this species; while the increasing size of the uterus, and the mechanical pressure on neighboring organs, so characteristic of retained catamenia, will decide the diagnosis. I need scarcely add,

that, if there be the slightest suspicion of pregnancy, examination per vaginam becomes an imperative duty.

Course of the Disease and Prognosis.—It is rare for plethoric amenorrhœa to resist all attempts at cure. In such an event the plethora most commonly disappears, and the patient becomes chlorotic, or suffering no longer from repletion, months and years, or even the whole of the menstrual period of life may pass over, without the establishment of the function. Occasionally chorea, hysteria, epilepsy, hepatic and intestinal disease may occur, nor is it impossible that the patient may be destroyed by a general cachexy, tabes mesenterica, or phthisis. The prognosis must therefore depend on the character of the complication.

Treatment.—This must primarily have especial reference to the plethora, abstraction of blood and purging being essential remedies. It will rarely be necessary to bleed generally, except there be marked congestion of some of the more important organs. Such, for instance, as the brain, the lungs, the liver, &c. ; in which case twelve, fifteen, or twenty ounces of blood may be promptly abstracted. Local depletion, by cupping on the loins or over the sacrum, leeches to the labia, inner surface of the thigh, the groins and os uteri, are ordinarily sufficient, and give decided relief where there is severe pain of the head, back, or loins. Active purgatives, and local depletion, so rarely advantageous in chlorosis, are beneficial. It is requisite to improve and

increase the secretions of the whole canal, and to unload and stimulate the lower intestines. Jalap, rhubarb, colocynth and scammony with calomel at night, and a dose of salts and senna or infusion of rhubarb in the morning, answer the purpose exceedingly well. (Vide formulæ.) These must be repeated with a frequency and a modification of the dose, suited to the urgency of the case. Auxiliary remedies must not be forgotten, such as the mustard hip-bath, at 96° or 98°, every other or every night, the common practice being to enjoin its use for ten or twelve minutes, instead of half an hour, one or even two hours, taking care to preserve the high temperature during the whole time. The bath used in this way is a powerful remedy. Nor is it less valuable sometimes, when the feet only are immersed, every night and morning, especially where the circulation is torpid and irregular, and the patient suffers much from cold, flushing of the face, or headache. Exercise and a spare diet must also be enjoined. Such patients should not be allowed to ride in easy carriages, which favors congestion; nor is riding on horseback so good as a regular walk of several miles per diem, the length of the walk and the degree of exertion being, of course, proportioned to the strength. I have several times witnessed greater uterine fulness, and impaired circulation of the lower limbs, as the result of horse exercise. I invariably, therefore, strongly recommend walking in this form of amenorrhœa.

Animal food, malt liquor, or wine, must be spar-

ingly taken. If they are freely used, under the impression that they will excite menstruation, further repletion must ensue. I have several times advantageously practised small revulsive bleedings; four, five, or six ounces of blood may be drawn from the arm, at the period when menstrual effort exists; leeches to the mammæ have not, in my observation, done good. The treatment, therefore, so long as plethora continues, includes occasional venesection, revulsive and small bleedings, cupping and leeching, active purging, constant and careful regulation of the bowels, a spare and sometimes a vegetable diet, prolonged mustard baths, and walking exercise.

The condition of the system may have been altered and improved, the treatment may have removed the plethora, but there is yet no menstruation. It may be asked, whether it be necessary in such circumstances at once to employ emmenagogues? I think not. Some months may elapse before the uterus shall perform its proper function, but eventually, menstruation will most probably occur. If, however, the health fails, and instead of a ruddy and robust, there is a pale and wan countenance, and a gradually pervading debility, the amenorrhœa will merge into chlorosis: to prevent such a termination emmenagogues may be used. But I must also observe, that if, when the plethora is removed, menstruation does not quickly occur, the continuance of the malady must not always be attributed to debility. Such an opinion leads to

the premature and injurious exhibition of tonics and stimulants; for although weakness is a cause of amenorrhœa it is by no means its only condition, since often, where debility has been entirely removed menstruation has failed to be established. I shall at the end of the chapter discuss the various considerations, justifying and demanding the exhibition of emmenagogues.

b. Amenorrhœa, after puberty is fully established, in delicate, irritable and hysterical females.—What is there to distinguish this form from amenorrhœa in females who, having been plethoric, are so no longer? I have observed that the former are generally more healthy; and after the removal of the plethora they more quickly and easily menstruate; girls, on the contrary, naturally delicate, if menstruation does not quickly succeed puberty, very often suffer for months and years from non-performance of the secretion.

In both forms of amenorrhœa now under consideration, viz., where it exists after plethora is removed, and in delicate females, it is understood that puberty is established: but even with this advantage, presuming that the amenorrhœa persists, chlorotic symptoms will ensue, and if emmenagogues have not been successfully used or menstruation has not naturally occurred, the proper definition of the malady is amenorrhœa complicated with chlorosis; and to avoid perplexing repetitions, I refer the reader to the preceding chapter of the work.

Second, The Amenorrhœa of suppression, where

menstruation having existed, perhaps for a length of time, has, independently of pregnancy or lactation, become suppressed.

There are *two* varieties.

a. *Recent and acute suppression.*

b. *Chronic suppression.*

Causes and symptoms.—If it be somewhat difficult, in every instance, correctly to discriminate the complicated forms of amenorrhœa and chlorosis, it is easy, from the history and symptoms, accurately to distinguish a case of suppression. Menstruation is healthily suspended only during pregnancy and lactation; but it must not be forgotten that the natural termination of the function may, from idiosyncrasy of constitution, arrive some years before the usual age.

The *two* great causes of acute suppression are mental emotion and the application of cold. Sexual intercourse during menstruation, fever, either idiopathic or secondary, hemorrhage or venesection, severe trying or drastic and emetic medicines, iced water and confectioners' ices, are auxiliary and less frequent causes. The effect of cold in suddenly arresting menstruation is well known; whether it be applied by a stream of cold and damp air, by wet feet, by drinking cold water when hot, or by undried linen. Nor are we less familiar with the injurious effects on the sexual functions of joyous and painful emotions. Not only is the secretion of the catamenia prevented, when about to occur, but when menstruation is present it is often imme-

diately checked by sudden terror. The same observation is true also of the secretion of the milk. Happily the effect of several of these causes is diminished by the frequency of their occurrence. The bathing women go into the sea, during menstruation, with perfect impunity; and the habitual exposure to the casualties of life necessarily diminishes their injurious impression. Dr. Gooch relates that a patient of his consulted him, long after the entry of the Cossacks into Paris, for an amenorrhœa, which was solely produced by the alarm she then suffered. And Dr. Churchill states that almost all the women who are sent up to the Richmond Penitentiary, near Dublin, after having been tried at the Recorder's Court, labor under suppression, in consequence of the mental agitation and distress they have undergone.

If it be asked how these causes operate, I reply, very differently. The effects being modified not only by the intensity of the cause, but in great measure also by the constitution of the individual.

In a young or middle-aged woman, fleshy, of plethoric habit and ruddy complexion, the immediate suppression of the secretion will be followed by congestion, if not by inflammation. While in a woman delicate, thin, and spare, of sallow aspect, and highly nervous, the more probable consequences are irritation, attended by spasm and paroxysms of severe pain, with intervals of ease. In the former case there will be sensations of weight and pain in the head and loins, tension and acute and constant

pain in the region of the uterus aggravated on pressure, short breathing, a hot skin, and a full, hard, and rapid pulse ; occasionally there will be violent hysteria, and I have several times observed delirium. It is scarcely necessary to add that suppression, accompanied by such symptoms, is far more immediately dangerous than any of the other derangements of menstruation. Gooch, indeed, mentions an instance of suppression, where, after death, the uterus was found in a state of gangrene, the result of intense inflammation.

About this form of suppression, then, there can be no doubt ; neither the symptoms nor the treatment are at all masked or perplexing ; it is much more than irritation, it is decided inflammation of the uterus. Apoplexy is said, by Capuron, to result from sudden suppression : this I have never met with, although I have seen seizures of a mixed kind, where there was something beyond hysteria, an approach to epilepsy. Partial and transient paralysis of the lower extremities has occurred once or twice in my practice ; and Churchill mentions that the patient may also be attacked by local inflammation, either of the brain, lungs, or intestinal canal.

The *pathology* of acute suppression is clear. There is in the marked cases, inflammation of the substance and of the investing and lining membranes of the uterus. Of course, a similar remark is true of other viscera, when they are inflamed during menstrual suppression.

Diagnosis.—In plethoric and robust women the

diagnosis of the malady cannot be difficult. The history of the case removes every doubt as to the fact of suppression ; and the character of the symptoms is too decided to allow any other conviction than that the disease is inflammatory.

Treatment.—It is essential to the safety of the patient, where inflammation of the uterus, or its appendages, really exists, that general bleeding should be at once resorted to. If cordials be given and fomentations applied, with the view of restoring the suspended secretion, valuable time will be lost, and inflammation may, during the interval, advance rapidly to an incurable or gangrenous stage. Even were menstruation to be re-established, the inflammation would scarcely be diminished ; the disease, therefore, being so dangerous, must be treated as though it were quite independent of the suppression. Of course, the amount of blood to be abstracted must depend on the intensity of the inflammation, and the strength of the patient. It may be necessary to bleed largely, and, more than once : fifteen, twenty, or twenty-five ounces, may be abstracted, and colocynth, with calomel, must be immediately exhibited, to secure a full purgative effect ; a powerful enema should succeed the pills. If, in a few hours after the first venesection, the pain and the pulse are unimproved, more blood should be drawn ; if, however, there is less abdominal tenderness, and a diminution in the number and hardness of the pulse, twenty or thirty leeches applied to the uterine region, may suffice, without the

second bleeding. A saline mixture with digitalis, a pill containing antimonial powder, opium, and calomel, (vide formulæ) may be administered every two or three hours. After these measures, auxiliary ones may be employed. A general or partial warm bath, at 96°, is a powerful sudorific, particularly where the patient, being placed in an easy position, remains in the bath thirty or forty minutes; fomentations of equal parts of gin and strong decoction of poppies, and an injection into the rectum of half an ounce of barley-water and thirty minims of liquor opii sedativ. often produce great relief. Modifications of this treatment will be suggested by the differing degrees of severity, and consequently of danger, appertaining to each case. Nor must it be forgotten, that the suppression, although the cause of the malady, is unimportant, when compared with active inflammation in an organ highly vascular, and covered externally by a serous membrane.

But suppression of menstruation occurs also, and perhaps more frequently, in delicate and spare women, who are highly nervous and irritable. Inflammation may, even in them, be the product of suppression; but in the majority of such attacks, the pain and other symptoms are not inflammatory, although it is sometimes difficult to distinguish the aggravated neuralgia and spasm of the different abdominal organs, and of the uterus and its appendages, from real inflammation. Still it may be done, although it requires some of that unwritten experience, that incommunicable tact, which a man can

alone acquire by long and accurate personal observation. The pain is rarely fixed, attacking first one and then another viscus, changing its locality without the use of remedies; and, if treatment be employed, such as local bleeding, a mustard poultice, or a stimulant and narcotic embrocation, it is remarkable how quickly the pain is transferred from the uterus to the head, from the head to the chest or heart, and again from these parts to the intestinal canal. The patient is prone, during these attacks of irritation, to fits of hysteria, and syncope.

Treatment.—General bleeding is inadmissible, nor are leeches usually advantageous: metastasis of the pain, but rarely its permanent removal, may be produced by their application. Active purgatives are necessary, for the bowels are commonly loaded, and hard scybalous fæces long retained in the large bowels, excite and maintain painful irritation. A general warm bath at 96° ; a warm mustard hip-bath, or mustard pediluvia, may be advantageously employed. The following antispasmodic draught may be given every three or four hours, till the symptoms begin to subside.

R Liq. Ammon. Acet \mathfrak{z} ii vel. iii.

Tinct. Castorei vel. Assafœtidæ \mathfrak{z} ss. ad \mathfrak{z} j.

Pulv. Ipecac. C. gr. iv. vel. v.

Mist. Camp. \mathfrak{z} vii. M. ft. Haust.

In addition, if the pain be severe, a pill, containing two or three grains of camphor, and two grains of antimonial powder may be exhibited.

Injectons into the rectum sometimes produce an

almost magical effect. Laudanum, assafoetida, and poppy syrup are employed for this purpose, (vide formulæ,) and as it is necessary that they be retained for some time after their introduction, a piece of sponge or a napkin, should be kept firmly and closely applied to the extremity of the bowel. When narcotic enemata are injected, the quantity should not exceed two or three ounces, as more will unnecessarily dilute the anodyne ingredient, and by distending the gut, induce expulsive action. The pain and spasm, in this form of acute suppression, are thus relieved, and menstruation does often recur during the immediate period, in this, than in the inflammatory species; but in neither can it be invariably expected. If, however, the treatment has fortunately re-established the discharge, every precaution ought to be employed to prevent the exposure of so susceptible a patient to any of those causes which might induce a relapse. It need scarcely be remarked, that an attack, either of inflammation or irritable suppression, is often the prelude to more permanent menstrual obstruction; and if month after month elapses, without the performance of the secretion, chronic suppression, to be next treated of, will be the result.

After a primary attack of suppression, unless any symptoms of uterine congestion remain, treatment in the interval is rarely necessary, but immediately previous to the subsequent periods, every measure should be adopted calculated to ensure natural menstruation. The bowels should be kept free by mild

laxatives: cold should be guarded against; the feet and the surface of the body generally should be kept warm; mental emotion and undue physical effort should be avoided, and the mustard hip and foot-baths, should be used on alternate nights. If menstruation return at the expiration of the first or second month after the suppression, anxiety is at an end. If not, and leucorrhœa with other symptoms shall appear, then more active treatment must be adopted in the intervals, so as to prevent, if possible, chronic suppression.

b. *Chronic suppression.*

Causes, Symptoms, and Pathology.—Chronic suppression may result from an acute attack, or it may gradually supervene, as the effect of some permanent irregularity in the secreting power of the uterus; dependent on increasing constitutional delicacy, or decided ill health. It may be the issue of organic disease of the ovaries or uterus; or the natural consequence of a premature cessation of the menses. It is not to be expected that causes so various should operate uniformly, nor do they.

In some women the mischief having commenced in an attack of acute suppression, healthy menstruation cannot be restored, at least without difficulty and delay. A painful effort is made at monthly intervals; but the discharge does not appear, and the amenorrhœa becomes chronic and inveterate. In others the function is, for some time, scantily, irregularly and painfully performed; but the excreted fluid is pale and serous, and, after a few more

months, the periodical molimen having died away, chronic menstrual suppression is permanently established. There are, however, cases of healthy menstruation, where the quantity of the secretion is so extremely small, that, but for the regularity of its return, it might be believed that chronic suppression was approaching. Several examples of this kind are known to me. Nor does such a state greatly interfere either with the health or conception. In one patient, whom I have attended in numerous confinements, the menstrual periods have never lasted more than a day; yet she has been exempted from anything beyond the indisposition common to women. In another, married late in life, where the menstruation was equally scanty, I tried, at her suggestion, to increase the secretion; but the various remedies employed, such as iron, sarsaparilla, quinine, mercury, and iodine, failed. Her marriage, however, has been prolific, and she has become the mother of four healthy children in three years. Since her last confinement the same sparing menstruation again returned, proving that, in her case at least, the peculiarity was not morbid, as neither remedies, pregnancy, nor parturition, effected any change. Dewees says of these instances, if there be no ill-health, that infertility after marriage may often be attributed to an anticipation of final menstrual decline. He mentions three instances where the function ceased altogether before the twenty fifth, and two where it terminated finally before the thirtieth year. In all, the health was perfect. I

have now a patient, in her thirty-sixth year, who having suffered from dysmenorrhœa up to thirty-one, ceased then to menstruate. Her health has been gradually improving ever since.

It is not difficult to recognize the *symptoms* attendant on chronic suppression. Among the head symptoms there is occasional vertigo, diffused and obstinate headaches, *muscæ volitantes* and dilated pupil, with involuntary twitchings of the eyelids and muscles of the face. The surface is irregularly cold, hot, or dry, while there is a manifest susceptibility to the impression of cold, causing shuddering. The prevailing state of the bowels is constipation, from weakened muscular power; and the accumulations in the bowels greatly interfere with nutrition, as the flabbiness of the textures and the occasionally rapid emaciation sufficiently prove. The urine is abundant and limpid. The thoracic symptoms are dyspnœa, palpitation, pains in the chest, &c. If the suppression continue, these symptoms may persist, or if the constitution be equal to the task, it may, aided by remedies, re-establish natural menstruation. The health may, however, seriously fail; and phthisis, organic disease of the liver or other abdominal viscera, or secondary dropsy, may destroy life.

The *pathology* of chronic suppression, where it does not depend on organic disease, may be referred to torpor or congestion in the earlier stages, and to constitutional debility in its more advanced periods. In the protracted and inveterate forms of suppression, the ovaries and uterus, in common with other organs,

suffer from defective nutrition, the blood having become too impoverished to excite the organic nerves, and to supply the requisite secretion to the several tissues of the body.

Treatment.—It is important to determine, not only the exact treatment to be adopted, but the precise period when it shall be commenced. It is not right, for instance, to regard every menstrual suspension as justifying medical interference. Many of the slighter irregularities arising from cold, mental emotion, and other causes, quickly subside, without medicine or professional management. If, therefore, the health does not suffer from the absence of the discharge, the case may be safely left to nature, excepting where there is excessive leucorrhœa, which so rapidly impairs the strength, that it is proper at once to attempt the removal of the suppression.

Where the amenorrhœa originates from a congested state of the uterine vessels, the cure under the treatment recommended, will in general be found more rapidly effected than in the other variety. Among the irritable and delicate women, where the discharge has become gradually lessened, a series of functional disorders, the result of sympathetic derangements have to be removed, which generally requires a prolonged treatment.

It has been already remarked, that debility is not the sole cause of absent menstruation, and it is peculiarly necessary, in protracted suppression, before entering upon the use of stimulant remedies,

clearly to ascertain whether there is not congestion or latent inflammation of the uterus and its appendages: if there be, such medicines must do harm. An examination of the uterus, externally and by the vagina, will procure the requisite information. Dewees strongly insists, that emmenagogues frequently fail from this cause, and adduces cases to show how important it is, where debility has been only presumed to exist, but where there really is inflammation, that depletion should precede the use of this class of medicines. During the first two or three months of suppression, when the constitution sympathizes but little, active treatment is unnecessary. And the same remark is applicable, so long as the question of pregnancy is undecided.

After the full exposition already given of the treatment of the different forms of amenorrhœa, it is scarcely necessary to say more, than that in chronic suppression, the treatment will principally be determined by the predominance of plethora or debility. In the former, depletion; in the latter, tonics and stimulants will be required.

The following remarks on *complicated amenorrhœa*, I extract from my summary of obstetric cases treated at Guy's Hospital.

The six cases of complicated amenorrhœa were very interesting: In one, it was associated with chorea. This patient, after protracted treatment, was eventually cured by sulphate of zinc, and the injection of liq. ammoniæ into the vagina. In another, amenorrhœa was complicated with epilepsy.

The medicine prescribed was ferri sulph. gr. i. pulv. digitalis gr. i. pulv. myrrhæ gr. ij. mucil. Acaciæ q. s. fiat pilula ter die sumenda. It is worthy of remark, that these pills were persevered in for three weeks, without any injurious consequences from the use of the digitalis; a circumstance attributable, probably, to its combination with the iron. At this period, the catamenia appeared; and there has been no return of the fits. In a third case, hemiplegia was attendant on the amenorrhœa. This complication was tedious, and difficult to manage. At first, the mist. ferri c. was prescribed; afterwards, the sulphate of zinc; and an iodine liniment was well rubbed over the spine, night and morning. Menstruation was eventually established, and the patient regained the entire use of the side. In the fourth case there was tænia with the amenorrhœa. In addition to the other remedies, the ol. terebinth. was curatively employed. In the fifth patient there was vicarious discharge from the mamma, in conjunction with amenorrhœa: the mist. ferri c. was ordered, as well as the daily employment of the ammoniacal injection. The last patient had, in addition to the amenorrhœa, a peculiar nervous affection of one of her lower extremities, which completely subsided when the catamenial function was, by appropriate remedies, healthily established.

It is right also to mention, that amenorrhœa may occasionally be traced to hemorrhage during and after labor. In one well marked case, occurring in my own practice, the patient had three times suffer-

ed amenorrhœa from this cause, lactation not having been attempted. Twice pregnancy recurred, independently of the return of menstruation.

In the chapter on chlorosis, ascites is enumerated as one of the uncommon results of that malady; the same observation is true of amenorrhœa. In both, an improvement in the quality of the blood, and above all, the re-appearance of menstruation, are essential to the cure.

Dr. Churchill alludes to several cases of amenorrhœa, where a distinct bruit de soufflet existed without other evidence of heart disease, and which disappeared spontaneously upon the reappearance of the catamenia.

Emmenagogues are remedies supposed to exert a specific power over the uterus in exciting menstruation; or in other words, regarding the menstrual fluid as a secretion, emmenagogues are the medicines by which we endeavor to give to the secreting organ the state or condition on which the function depends. It is requisite, therefore, that these stimulating agents should be appropriate, and it would be indeed fortunate, if to aid the elimination of the catamenial secretion, we possessed a medicine, as uniformly and beneficially stimulant as mercury is in torpid states of the biliary function. Whether any medicines certainly possess this influence, is a question to which my experience does not afford an affirmative reply. Still, although there are no drugs positively emmenagogue in their action, the properties of some in stimulating the uterus, render them

important auxiliaries in the treatment of various states of diseased menstruation.

In chlorosis, and in amenorrhœa, where there is deficiency or malformation, the local emmenagogues often do harm, never any good. In cases too of absent menstruation, where there is either a slow and partial development or an entire absence of puberty, emmenagogues, if used at all, are improperly employed : and in chronic amenorrhœa complicated with dropsy or phthisis, and in amenorrhœa with general and uterine plethora, still further congestion must result from their administration.

But where the uterus is inactive or entirely quiescent, puberty having been established, and neither plethora nor debility existing, emmenagogues may be advantageously tried. Nor are they less valuable, where amenorrhœa continues, in delicate, irritable, and hysterical women, after tonics and cordials have failed to produce the menstrual discharge. In chronic suppression, emmenagogues are clearly indicated. Plethora, loaded bowels and fever forbid their use ; spare diet, purging, local depletion, and occasionally a small bleeding from the arm, prepare the way for their beneficial exhibition.

Emmenagogues are of *two* kinds :

First, Local or immediate Emmenagogues directly applied to the uterus or the neighboring organs.

Second, Constitutional Emmenagogues, producing their effect through the medium of the system.

Of the first class, *Electricity* is the only agent justly entitled to the appellation ; the only power

by which the uterus can be directly stimulated. It is well known, that local pain is produced whenever a sufficiently strong electric shock is passed through a sensitive part. Thus, if electricity, by shock, be directly applied to the uterus, a highly stimulant effect will ensue. Nor is the organ less beneficially affected, in some instances, by the electric sparks, or by a continued current being passed through it; still it is an uncertain emmenagogue. In the ward at Guy's, and amongst the out-patients, it has of late been used with more than the usual good effects, Dr. Golding Bird having superintended its application. In some of the cases, where, after the condition of the alimentary canal had become healthy, the amenorrhœa continued, with slight pallor and weakness, electric shocks passed through the loins quickly induced menstruation. In others, its continued repetition three or four times a week led to a similar result; and instances were not wanting where a shock suddenly produced the flow. Electricity must, however, be cautiously employed. Where the patient really dreads its exhibition, it may depress the nervous system, and still further protract the malady. Nor must it be forgotten, that if syncope, sickness, or diarrhœa follow its use, it ought to be discontinued. Electricity moderately applied, frequently, rouses into activity the energy of torpid organs and parts, but when used in excess it may altogether destroy their excitability. I rarely trust to it alone, nor do I employ it in cases of general plethora or local congestion. If pregnancy be

suspected to exist, however strenuously denied by the patient, electricity ought not to be used ; once I ordered it, quite ignorantly, where the amenorrhœa depended on concealed pregnancy ; and abortion occurred within an hour.

Of Galvanism as an emmenagogue I have no experience, but it is mentioned favorably, although cursorily, by several authors.

The application of leeches to the os and cervix uteri, where congestion exists, will frequently produce menstruation ; but it is somewhat difficult so to employ them, and in young unmarried women it is almost impossible. Dr. Stroud strongly recommends the practice, and speaks favorably of its effects. A proper leech-glass must be used by a well-instructed nurse, a few days prior to the period, and repeated several times.

Stimulant Injections.—These were formerly much employed, and a variety of irritating ingredients entered into their composition : at present, as a vaginal enema, the Liq. Ammonizæ fort. in milk, is generally administered. I have often used it with success during the last twelve years, both in hospital and private practice (vide formulæ.) It rarely does good, if it is not attended and followed by a pungent sensation of heat, tingling, and some pain in the vagina. Its use should be commenced three days prior to the expected period ; and the patient, after each injection, should apply a napkin to the vulva, so firmly as to cause the injected fluid to be retained for ten or fifteen minutes. It is not

a safe remedy where there is uterine congestion. In two such cases dangerous inflammation of the cervix and upper part of the vagina followed its use. Where, however, uterine torpor is unaccompanied by congestion and acute irritation, the ammoniacal injection is often efficacious. Occasionally, like electricity, it produces menstruation at once, while, in some women, in common with the most approved remedies, it is without effect. The strong mustard hip-bath, used twice during the day, the patient remaining in it for nearly an hour each time, at a temperature of 96° or 98° , is an effectual auxiliary remedy.

Stimulating fluids have been, as emmenagogues, injected into the uterine cavity; and they may, perhaps, by some who have not used them, be yet recommended. Death, from peritoneal inflammation, has several times followed the practice; and in two instances, occurring under my own eye, fatal results had nearly ensued from most alarming attacks of this formidable malady. It has been supposed, but certainly without due consideration, that as cold water alone or with sulphate of zinc may with impunity be injected into the uterus after labor, so with equal impunity a similar injection may be thrown into the interior of the uterus in amenorrhœa; but there is little or no analogy to support the reasoning. In the former instance it may be fairly presumed that the mucous membrane is healthy, and, uterine contraction being secured, restraint of the bleeding will be the consequence of the rem-

edy ; but, in menstrual suppression, there may be, and often is, congestion and irritation, and perhaps a diseased state of the tissue lining the uterine cavity—here, on the contrary, inflammation will probably ensue. Excepting as a means of arresting hemorrhage, I never now inject the uterine cavity.

Of the emmenagogue properties of *medicated bougies* I have no experience ; when used, stimulation of the lining membrane of the cervix is intended to be produced, with the hope that a similar action will extend through the continuous membrane of the uterus. These, with the exception of the *mustard* and the *variously medicated hip-baths*, are all the local emmenagogues directly applied to the uterus. The mustard hip-bath, if well employed, seems at times to exercise an almost specific influence over the uterus. Nor is the exhibition of mustard by the stomach without a similar effect. I have often given eight, ten, and twelve grains of mustard, in camphor julep, three, four and five times daily, prior to the menstrual period, with good effect, the regularity and the quantity of the secretion being beneficially affected by it. Dr. Rigby relates that some school girls, for sport, swallowed mustard spread thickly on their bread, and in all the elder girls it produced menstruation in a few hours, although the regular period for its appearance had not arrived.

It is right to allude to *sexual intercourse* as an emmenagogue, as marriage often, though by no means invariably, cures amenorrhœa.

Stimulating Injections into the Rectum are much relied on by some practitioners, as emmenagogues, and certainly I have used with advantage an enema—recommended by Dr. Schonlein—composed of ten grains of aloes, and one ounce of mucilage, twice or three times a day.

Leeches to the Vulva, above the pubis, and at the upper and inner part of the thighs, are occasionally beneficial. Nor are *stimulating embrocations*, *warm frictions*, and *the flesh-brush to the hypogastic and lumbar regions*, to be entirely neglected. They must, however, only be relied on as adjuvant remedies.

Of the utility of *Pressure on the Iliac and Femoral arteries*, as a remedy for amenorrhœa, I have no knowledge. Not once have I seen it tried. Dr. Hunter, of Beverley, first successfully employed it about seventy years ago. It was subsequently practised in Edinburgh, and Dr. Home reports that in his hands, it succeeded once in six times. It is not a satisfactory or rational thing to induce congestion of the uterus, if it can be accomplished, as a remedy for amenorrhœa, since it is admitted that the disease in question is often attributable to this very condition. The plan has been long discontinued.

The *Second* class of emmenagogues is *The Constitutional, producing their effect through the medium of the system.*

Mercury is our most powerful deobstruent, and deserves to be mentioned first amongst the remedies

of this kind. It is not to be used in slight cases, nor where there is extreme exhaustion, a predominant irritability, or a tendency to phthisical or strumous disease. But, in obstinate amenorrhœa, where other treatment has failed, where there is chronic inflammation or permanent congestion, and any evidence of incipient structural change, there is no remedy comparable to this. In medicine, however, as in matters of less moment, there is a fashion: and in obedience to its dictates, we too often pass from one extreme to its opposite. The extravagant employment of mercury at one time, and its undeserved neglect at another, the indiscriminate praise bestowed upon it by some, and its unjust abuse by others, abundantly verify this observation. As an alterative I have not used it successfully; but if salivation be produced and maintained, mercury often ensures decided and permanent benefit. The inconveniences of a mercurial course, protracted through three or four months, however modified and lessened, are quite enough to induce not only great caution in the selection of an appropriate case, but great watchfulness of its effects. If the pulse becomes more rapid and less strong; if constitutional irritation and weakness daily increase; if there be cough or diarrhœa, these not having previously existed, the mercury should be at once discontinued. No prudent practitioner will administer it after such warnings. More frequently, in cases warranting its use, improved symptoms will follow moderate salivation. The tongue becomes clean, moist, and

of healthy color ; digestion improves, and there is some return of healthy appetite ; the complexion loses its dingy, icterode hue, and becomes more clear ; and the entire state is greatly improved. I am not aware that the form of mercury to be administered is a matter of much consequence. The Plummer's or the common blue pill, calomel, the grey powder, or the inunction of the mercurial ointment, may any of them be selected. The mercurial effect should be carried so far, as to produce soreness of the gums and moderate salivation ; and these should be kept up for twelve or sixteen weeks.

The frequent daily use of the chlorate of soda as a gargle, will diminish the inconveniences of the salivation, by removing the fœtor of the breath and cleansing the mouth, so as to prevent the unpleasant taste. Sarsaparilla is a valuable adjunct ; it allays irritability and prevents emaciation.

Iron, in its various forms and in modified doses and combinations, is a most valuable emmenagogue. Its worth, in all diseases where the blood is impoverished and where there is general weakness, is well known. Its protracted administration, instead of injuring, improves the health ; and the blood, instead of remaining a watery and attenuated fluid, acquires from iron more healthy and nutrient properties. In this way its emmenagogue power is realized. Nor must it be overlooked, that iron possesses this additional value ; that, as the cure of the amenorrhœa, is mainly dependent on the improve-

ment which has been effected in the general health, so it is more likely to be permanent, menstruation not having been reproduced by powerful and transient stimuli. These remarks are pertinent to its exhibition, whether in a form purely medicinal or chalybeate water. The various *chalybeate springs* contain different quantities of the carbonates and sulphates; and their waters are certainly most efficient when drunk on the spot. The regulations for exercise in the intervals of swallowing the water ought to be sedulously followed. Nor must it be forgotten, that plethora and constipation should be removed prior to any form of iron being exhibited; and if, during its use, giddiness, headache, sickness, and a quick or full pulse should occur, the iron must be immediately discontinued.

Of the *Ergot of Rye*, or *Secale Cornutum*, as an emmenagogue, I cannot speak favorably; nor is it on principle easy to understand how it should produce such an effect. As a powerful stimulant of the muscular substance in the pregnant and puerperal conditions of the uterus, it is, if judiciously employed, invaluable; but the removal of uterine torpor, and the arrest of uterine hemorrhage by the excitement of muscular action, are entirely different effects from the restoration of a secretion, often owing its suspension to plethora and extreme debility. Nevertheless, Dr. Locock, the brevity of whose papers, on the diseases of menstruation, is their only fault, speaks favorably of the deobstruent properties of the rye. I cannot say that I have

never succeeded, when I have used it; but it is necessary to be cautious, not only in selecting the case, but likewise the precise time when it shall be administered. It is most to be relied on in a somewhat relaxed and debilitated patient, and ought to be given, not in the intervals of menstruation, but when determinate efforts are being made to establish the secretion. Occasionally, at these periods and in conjunction with strong mustard hip-baths, it has produced the menstrual discharge. I rarely now give it, but never when these efforts having been unsuccessful, subside. Irritation and abdominal spasm are almost sure to follow its continued use. In one or two instances I have witnessed alarming seizures of this kind, where it has been long employed. The powder (see formulæ,) in doses of ten grains, two or three times daily, is probably more efficacious than the tincture, although the latter induces less severe uterine and intestinal spasm and pain.

Iodine is occasionally a good emmenagogue; but there is no remedy of this class which in my hands has so frequently failed. In patients predisposed to struma, or actually suffering from scrofulous enlargement of the glands, the iodine exerts an almost specific influence on nutrition, and by improving the blood, favors secretion. Dr. Coindet was perhaps scarcely correct in attributing to this drug such powerful and certain emmenagogue properties. I have made numerous inquiries about its effects, and have not discovered that others have used it more suc-

cessfully than myself. It may be given in doses of five, eight, twelve, or fifteen drops, or even more, of the tincture, twice or three times daily, in sugared water. Or the iodine, in substance, may be administered, combined with the hydriodate of potass. (Vide formulæ.) Caution must be observed after plethoric amenorrhœa, lest a return of this state, accompanied by vertigo, cerebral fulness, or slight hæmoptysis, may succeed its use.

Strychnine was introduced by my friend Dr. James Bardsley, of Manchester, in cases of suppressed menstruation. In four instances of amenorrhœa, occurring in delicate females, I have unsuccessfully used it. In two out of the four, one fifth of a grain was taken four times a day; but vertigo, and spasmodic twitching of the muscles, with severe headache, compelled me to lay it aside. The late Dr. Cholmeley, of Guy's Hospital, employed the strychnine in several cases of amenorrhœa, in the wards, but without any success. He began with the sixth of a grain three times a day.

Of Madder, the root of the *rubia tinctorum*, as an emmenagogue, I have little personal experience. In the commencement of my professional studies, I witnessed its successful use; but I believe it is now very rarely employed. Madder tinges the bones and the urine of a red color; it is supposed, therefore, that finding its way into the circulation, it directly influences the secretory function of the uterus. It is given in doses of ʒss. to ʒj. of the powdered root, two, three, or four times a day. Dr.

Home says that out of nineteen cases of amenorrhœa he cured fourteen by madder. It does not quicken the pulse, or derange the stomachic functions, but appears to operate almost insensibly in producing the return of menstruation.

Rue, so much praised in former times for its emmenagogue properties, is now scarcely ever used; nor does the evidence in its favor prove more than that it may be a cordial antispasmodic of uncertain efficacy.

Savine, the *juniperus sabina*, is powerfully stimulant and emmenagogue; but its use is at present much restricted. Its deobstruent power is attributed to a volatile oil, which is similar in its properties to turpentine. Popular opinion is decidedly in its favor, and it is the medicine most commonly employed to procure criminal abortion. Dr. Davis, in his elaborate work, mentions on the testimony of one of his pupils, who served his apprenticeship at Tonbridge, that in the neighborhood of that town there was a remarkably fine savine tree, the decoction of the leaves of which was successfully used, not only to remove menstrual suspension, but also to induce abortion. Where there is a feeble and languid circulation, savine is a suitable stimulant: but its use is injurious where there is plethora and irritation. The powdered leaves, and the oil of savine, are the preparations employed; of the former from four to twelve grains, and of the oil from two to twenty drops may be taken two or three times daily.

Seneca Root, and *Black Hellebore*, are deobstru-

ents, but they do not merit more than a passing allusion.

Nitre, by stimulating the kidneys, is a decided emmenagogue. It seems to reach these latter organs, judging from its effects, without decomposition. I lately gave to a patient, whose mother placed great confidence in this salt, one scruple three or four times daily, in a wine glass full of water. It purged and produced bloody motions; but on the third day there was a copious flow of the catamenia after a suppression of seven months.

The Infusion and the Tincture of Digitalis, produce their uterine effect through the kidneys.

Aloes is doubtless the most efficient of the emmenagogue cathartics, acting on the uterus through the rectum. Even after menstruation has ceased, the disposition to the function often remains, but the discharge can rarely be produced by the natural efforts alone—here, if a drastic dose of aloes be given, the catamenia are frequently, in slight degree, restored. It may easily, therefore, be allowed, that a similar effect may occur from the continued exhibition of the medicine, during the epoch of menstrual life. Aloes cannot, however, be always administered. If there be an irritable uterus or a highly irritable stomach and alimentary canal, the drug cannot be borne—sickness, intestinal tormina, and extreme irritation of the rectum and anus, forbid its use. Several formulæ will be given.

Gamboge, serpentaria, wormwood, musk, myrrh, castor, valerian, and lavender, with several others,

are regarded as emmenagogues, but the majority of these remedies can scarcely be viewed as more than stimulant antispasmodics, and as aiding the more direct and powerful medicines of this class.

CASES OF AMENORRHŒA DEPENDENT ON CONGENITAL DEFICIENCY, MALFORMATION OR DISEASE OF THE GENITAL ORGANS.

CASE 17.

AMENORRHŒA GRADUALLY SUPERVENING ON DISEASED OVARIES.

October 10th, 1838, Miss G——, æt. 17, a patient of Mr. Bailey, of Limehouse, is fair and strumous in aspect, rather thin, always delicate, but not sickly. Puberty was established at fifteen, and menstruation quickly supervened. In February, 1838, nearly nine months before the present time, a tumor about the size of a goose's egg, hard, uneven on the surface, and only slightly tender to the touch, was discovered low down laterally in the right hypogastric region. Up to this period the catamenia were regular in their return, although the quantity was lessened, and the color light. A few weeks afterwards, in March, a similar though smaller growth appeared on the left side, and several of the inguinal glands were enlarged and indurated. Now, there are two distinct tumors, that on the right extends from the iliac fossa to the umbilicus, while the left iliac fossa is entirely occupied by the other and smaller growth. They are of stony hard-

ness, at times painful, independently of pressure; mechanically, they derange the action of the bowels and bladder, while fever and defective nutrition are rapidly destroying her strength. Appetite is impaired, and there is a frequent dull pain in the stomach, accompanied by acute pain and cramp in the backs of the thighs and legs. The sleep is much disturbed; pulse from 100 to 110, small and weak, and there are nightly paroxysms of fever; there is neither cough, expectoration, nor morning perspiration.

Since June, menstruation has progressively decreased, and it has been attended with severe pain. Six weeks ago, the second growth (both are believed to be ovarian) having attained a large size, and having probably completely destroyed the healthy structure of the organ, a painful effort alone, without any discharge, marked the menstrual period.

Eight weeks subsequently to my first visit in October, the amenorrhœa continued. Only palliative treatment was recommended, the extent of the disease forbidding active interference.

In February, 1839, she died, worn out by mechanical and febrile irritation, and by want of nutrition. For six months before death there was entire amenorrhœa and excessive leucorrhœal discharge.

A *post mortem* examination confirmed the opinion that the uterus was perfectly healthy, and that the ovaries were entirely scirrhus, so much so as to have obliterated every trace of their natural organization.

This case requires no comment. It confirms the doctrine that the ovaries are the efficient cause of menstruation.

CASE 18.

AMENORRHŒA WITH CONGENITAL MALFORMATION OF VAGINA
AND UTERUS.

HANNAH ——— æt. 22, was admitted June 13th, 1832, into Dorcas Ward, Guy's Hospital. The following particulars are taken from the case-book and my own notes.

This patient has never menstruated, but there is no abdominal enlargement. Has suffered severely for many months from headache, pains and tightness in the chest and loins. She has been plethoric, but is not so now; pulse 90; moderately full; tongue white, skin hot, especially at night.

For these symptoms, subsequently attended by dyspepsia, she was bled and purged, and put on low diet; and on July 7th, she left the hospital cured of her indisposition, but without having menstruated. As it was thought that malformation existed, this patient was, at her own request, carefully examined, and the following is the report:—

Hannah ——— is well developed as to her general womanly structure, and has therefore probably perfect ovaries. But the external aperture of the vagina is closed by a firm membrane, which being pushed up two or three inches towards the sacrum, forms a shut-sac, without the slightest opening. Neither the finger nor a probe can detect an os or cervix uteri beyond this closed extremity; nor does the finger in the rectum when pressing forwards, nor pressure downwards from above the pubes, cause any firm body, like the uterus, to impinge upon the finger remaining in the vagina. It is quite certain that there is no large accumulation of menstrual fluid either in the womb or upper part of the vagina. These parts, if they exist at all, must be of small dimensions.

No exploratory operation was recommended, as any attempt to lay open this shut-sac might expose the cavity of the peritoneum. If catamenial accumulation shall hereafter render an opening expedient, the containing parts will be so dilated as to be felt by the finger; then the knife may probably be used with a prospect of success. I have, however, already said that these operations are scarcely ever devoid of danger.

Here menstruation was not performed, because the secretory organ, the uterus, was wanting. I saw this patient two years afterwards, when she had quite recovered her health, and wished to be married; but hesitated because she had not menstruated. I declined to give any advice.

CASE 19.

AMENORRHŒA DEPENDENT ON ABSENT UTERUS AND
VAGINA.

Dec. 20, 1836. I visited Mrs. ——— æt. 27, (a patient of Mr. New, of Mile-end). This lady has been married two years, and is well developed about the pelvis and mammæ. Her general health is tolerably good, if a proneness to fever, susceptibility to cold, and hysteria be excepted. She has never menstruated, but in other respects she is sexually healthy. The genitals are singularly anormal. The mons is large, the labia are well formed, and the fourchette and perineum do not deviate from healthy conformation. There is however, no vagina, and I think, no uterus. On passing the finger in the direction of the os externum, it may be carried about an inch onward between the urethra and rectum. The former canal is very capacious and distensible, for after

overcoming the contraction at its entrance, the finger may traverse it till it enters the bladder, the rugæ of which viscus are easily felt in its empty state. Examination by the rectum, the finger being retained in the urethra, detects no body like the uterus, the two fingers approaching very closely to each other; a fold of membrane only being interposed between them. Intercourse is imperfectly accomplished, and yet not without gratification; the urethra being the recipient canal. That there are ovaries is certain; but I feel confident there is neither uterus nor vagina.

CASE 20.

AMENORRHŒA WITH CLOSURE OF THE VAGINA, CONSEQUENT ON PROTRACTED AND INSTRUMENTAL LABOR.

IN *August*, 1837, Mr. Maccay, and a neighboring surgeon, requested me to visit Mrs. B., residing in Whitechapel; she was twenty-one years of age, had been married ten months, and had been in labor nearly sixty hours, under the care of a midwife. As there were not more than three inches and a quarter of space between the sacrum and pubis, as the internal parts were hot, tumid and tender, and the abdomen tympanitic and extremely painful on the slightest pressure, I proposed perforation. I brought the head of the child through the pelvis with great difficulty, even after I had reduced it to the smallest dimensions. There resulted, as I feared, from the long continued pressure of the head on the soft parts, vaginal abscess and ulceration; and the subsequent cicatrization was accompanied by contraction. In July, 1839, not having seen Mrs. B., since the delivery, she called at my house and told me that she had never menstruated since the labor, but she was much weakened by constant leucorrhœa. On examination, I had no difficulty in passing the finger into the

vagina, for about two inches and a half, where it terminated in a pointed extremity. The closure is quite firm, and I cannot discover, either by the speculum or probe, the slightest aperture. In front, beyond this shut-sac, I cannot feel the uterus, but through the rectum, it is easily discovered, nor is it at all enlarged.

This patient is failing in health, is dyspeptic, emaciated, and, since the labor, has become entirely devoid of sexual feeling. But I cannot persuade her even to think of surgical aid. It is an interesting case as showing the increase of constitutional morbid effect beyond what exists in the examples of congenital deficiency, where menstruation was never performed; and such an instance may be regarded as the connecting link between the congenital cases, and those where the menstrual fluid is secreted, but retained. The examples of congenital deficiency are the least dangerous; cases like the one now described are more hazardous; and instances of secreted, but retained catamenia are full of risk, if the fluid cannot be evacuated, and even then there is abundant cause for anxiety.

CASE 21.

AMENORRHŒA DEPENDENT ON MALFORMATION OF THE
VAGINA.

REPORTED BY MR. HENRY OLDHAM.

ELIZABETH R——, aged 22, a well-developed girl, of short stature, florid complexion, and fair skin, was admitted into Guy's Hospital in February, 1836, under Dr. Ashwell.

At the age of 15, she had some affection of the eyes : but with this exception, she enjoyed good health until ten months ago, when she first became troubled with headache, vertigo, and lassitude, a sense of fulness in the hypogastric region, with lumbar pain, capricious appetite, pain in the side, and irregularity of the bowels, for which she was received into the Hospital, under Dr. Cholmeley. At this time the catamenia had not appeared : and an examination was instituted, to ascertain if any mechanical obstacle existed. The parietes of the vagina, about two inches from the vulva, were found closely adherent ; and fluid could be detected immediately above. Mr. Key divided the septum ; and a large quantity of dark-colored, viscid fluid, was evacuated. The opening was dilated by bougies ; and she shortly left the Hospital, feeling well. There was but one scanty appearance of the catamenia after this period ; but her health was not materially deranged until six weeks of the present time, a white mucous discharge having alone occurred. A recurrence of the above-mentioned symptoms induced her to apply to me for advice ; and, on examination, it was found that the two divided surfaces of the vagina had again firmly united, but that the catamenial fluid was accumulated in small quantity only, which was proved by the absence of a fluctuating tumor above the cicatrix. Finding her general health somewhat impaired, and the morbid sympathies with the uterus, such as sickness, headache, &c., continually present, I prescribed laxative medicines, mild tonics, nutritious diet, and palliative remedies, to remove urgent symptoms. The symptoms became more severe, as the quantity of menstrual fluid increased ; and she was readmitted into the Hospital under Dr. Ashwell. At this time, she complained of giddiness, headache, and tinnitus aurium, lumbar pains, with a sensation of fulness and bearing-down, occasional dyspnœa, uncertain appetite, depression of spirits, and great irregularity of the bowels, sometimes being troubled with diarrhœa, followed by constipation. The uterus was not to be felt above the pubes ;

but a feeling of fulness, not of distinct fluctuation, was communicated to the finger, on examination. The same class of remedies was used, under which her general health improved; and in two months' time, the tumor above the united parietes was so distinctly bulging, as to warrant the evacuation of the retained catamenial fluid, which was less in quantity than on the previous occasion. In twelve hours after the operation, symptoms of peritonitis were present, which were met by active measures, such as bleeding, both general and local, purgatives, calomel, &c. They, however, continued unsubdued, and she died.

The body was conveyed to the mother's house, where an inspection was obtained.

On opening the thorax, marked traces of recent pleuritis were universally diffused. The lungs, in some portions, were found adherent to the opposed pleura costalis, by delicate bands of imperfectly-organized fibrin, which were readily broken down. In other parts, layers of plastic lymph were found loosely attached to the pulmonary pleura, and within the pleural sac: on both sides there were three or four ounces of serous fluid, with some flakes of lymph floating in it. The depending parts of both lungs were gorged with blood and serum, which ran out from the two surfaces of a divided portion. The upper lobes were crepitant, but their edges were too rounded. The heart and large arteries were healthy.

On opening the abdomen, layers of lymph were found on the surface of the liver, particularly around the acute margin, and between the convolutions of the intestines. This lymph varied in degrees of firmness, appearing, at the under part of the liver, to be converted into a tolerably well-organized band of false membrane, attaching it to the opposed surface of peritoneum: in other parts it was plastic, and in the pelvis, some little flakes were seen, swimming in serous fluid. The mesenteric glands were greatly enlarged, and also those along the psoas muscle and brim of the pelvis. Some of these

were of a scirrhus hardness, others of a chalky consistence. Those on the brim of the pelvis were particularly enlarged, so as greatly to encroach on the dimensions of the superior strait. The uterus and its appendages had not contracted adhesions, both anterior and posterior pouches being entire.

The situation of the stricture was a little more than an inch below the os; and above this part, the vagina appeared thin and distended, forming a continuous line with the dilated os, the circumference of which was above four inches. The cervix rapidly became thicker, and, for upwards of three inches towards the fundus, the parietes were fully double their normal size. The upper half of the body of the uterus was somewhat more bulky than natural, and its cavity slightly increased. The broad ligaments were unaffected, but their appendages were much less delicate than natural. There was a cavity within the cervix, which formed the chief dilatation, so expanded as to be able to enclose a goose's egg. The rugæ and cells of the cervix were greatly diminished, and their surfaces presented a slight appearance of fibrinous effusion. Some few longitudinal striæ were visible, more particularly at the posterior part, apparently the result of a recently-contracted cavity.

The preceding case confirms the opinion, that operations about the vagina and perineum are occasionally followed by inflammation of the peritoneum; and it ought to induce caution in the prognosis. The first division of the septum was not succeeded by mischief of any kind: yet, although there was no difference in the mode of operating, a second incision through the parts led to a fatal attack of peritonitis. The distention of the cervix, while the fundus and body of the uterus retained their normal form and size, is singular, and corroborates the

statements, lately made, as to prolapsus of the neck of the uterus by stretching, and perhaps by growth, while the parts of the viscus, above the cervix, remain in their original state. If, as this case proves, effused fluid may distend and stretch the cervix, independently of other parts of the organ, it is not difficult to conceive that the same result may occur from other causes.

CASE 22.

AMENORRHŒA DEPENDENT ON CONGENITAL ABSENCE
OF THE VAGINA.

Abridged from the case, as reported by M. Amussat in the *Gazette Médicale* for December 12, 1835.

A young lady, æt. 15, was in bad health, owing to amenorrhœa. The menstrual effort occurred every month, but without any discharge, and the abdomen was distended by the gradually enlarging uterus. There was no vagina, but the urethra terminated naturally. A finger introduced into the rectum, and a sound passed into the bladder, detected the uterus, large and fluctuating; and it was also ascertained, that there was so little space between the posterior part of the bladder and rectum, as to render it impossible, or very hazardous, to form an artificial vagina by the knife, lest these important viscera should be wounded. M. Amussat, the other medical attendants having given up the case as hopeless, proposed to separate the contiguous organs by traction. He began by depressing the mucous membrane of the puden-

dum, just below the orifice of the urethra. Guided by a sound in the latter canal, he carried his finger onwards in the space between the rectum and urethra, and secured the ground he gained each day, by a properly adjusted sponge tent. At length he reached the distended uterus, and, after a small opening by a trocar, he enlarged the os uteri, by a bistoury, keeping it open for some time by a canula. Menstrual fluid was evacuated, not only through the aperture thus formed, but also by a spontaneous opening through the rectum. The sequel of the case is encouraging; the patient entirely recovered, and, when the account was published, was not only menstruating regularly, but about to be married.

Other cases of this kind may be found in the different medical authors.

I forbear to enlarge the size of the book by the addition of illustrative examples of the other forms of amenorrhœa. They are so common and so well understood, and in some respects so closely resemble chlorosis, that the description of them in the text will suffice for their ready detection.

CASE 23.

PROTRACTED AMENORRHŒA CURED BY MERCURY.

Mrs. H.——, æt. 23, a native of the north of England, of dark and sallow aspect, and evidently unhealthy, was placed under my care in August, 1823. Has been married between three and four years, but without pregnancy. Men-

struation commenced at fifteen; but it has scarcely ever observed the regular periods, and it has occasionally been absent for several months together.

Her present symptoms are amenorrhœa of seven or eight months' duration: profuse leucorrhœa, sometimes of bad odor; pruritus of the genitals, always severe, but occasionally so intolerable as to compel her to keep her own room. Constipated bowels, the evacuations dark, scybalous, and highly offensive; healthy appetite destroyed, frequent craving for improper articles of food, and progressive emaciation. Skin of dark, icterode hue, lips and lining membrane of the mouth colorless. Pulse 95 to 100, feeble and easily compressed; frequent dyspnœa, especially on the slightest exertion, but there is neither thoracic pain nor cough.

On inquiry, I found that Mrs. H. had been under the care of many practitioners, both in London and the country, and that nearly every plan of treatment had been tried, only excepting the mercurial. After explaining to herself and family, that as medicine had hitherto been unavailing, it was important at once to employ the most efficient means; I proposed that mercury should be exhibited to such an extent as to affect the system, and that soreness of the mouth, and gentle salivation should be kept up for three or four months. I was the more induced to do this, because I found the uterus generally slightly enlarged, and the os and cervix hard, uneven, and tender to the touch.

The patient was removed a few miles into the country, and on August 20th, 1823, commenced the following treatment:

Sumat Pil. Hydr. gr. iij. Pulv. Opii gr. $\frac{1}{8}$ in formâ pilulæ nocte, maneque.

Infricand. Ung. Hydr. Diss. inter femora quaque nocte.

She was allowed wine and meat diet, and particularly enjoined to keep in the house and avoid cold.

Sept. 10. Gums very tender for the last two or three days, and there is decided salivation. There has been no menstrual effort. Complains of the inconvenience of the spitting, but the bowels are more regular, and the evacuations more healthy.

Sept. 20. The gums are not so tender, but they are slightly swollen and spongy. Has only taken three grains of Pil. Hydr. occasionally, just to keep up the effect. There has been no catamenial effort, but the pruritus is nearly gone, and her aspect is certainly improved. Appetite better.

Oct. 20. On the 17th of October, after some suffering, menstruation returned, and the flow continued for three days. In all respects better, and the family are struck with her improved complexion.

Nov. 28. Was ordered to discontinue the mercury, as it was thought the effect would be maintained some weeks without its further exhibition. The catamenia re-appeared at the expiration of the month without pain; the discharge was abundant, and of sanguineous color. No return of pruritus. On examination, I found the uterus less heavy, and the os and cervix softer and less tender. Gargles for the mouth, sarsaparilla and bark, porter and wine, were freely given during the continuance of the treatment.

In January, 1824, Mrs. H. was quite free from all mercurial influence, and in better health than she had been for many years. In November, 1824, she gave birth to a boy, now (1839) living.

For several years this lady remained healthy; but she was subsequently so much exhausted by excessive hemorrhage after childbirth, that dropsy supervened, and she died before she reached her thirtieth year. I could add similar cases, demonstrating

the value of mercury in protracted amenorrhœa, and where there is congestion of the uterus. Dr. Davis relates several such in the first volume of his Principles of Obstetric Medicine, one of the most valuable works of reference we possess.

CHAPTER III.

OF VICARIOUS MENSTRUATION.

DEFINITION.—*A discharge, generally of blood, from other parts than the uterus; superseding menstruation, and in its return, occasionally observing a menstrual period.*

History and Symptoms.—This vicarious discharge can scarcely be regarded as a disease, when the hemorrhage does not really derange and exhaust the system. Dr. Locock calls it a curious freak of nature. I think he is right in doing so; for the process, in most instances, equally wants the regularity of a healthy function, and the injurious influence of a disease. It is an event entirely out of course; for although it is scarcely ever met with except in connection with amenorrhœa, still by far the greater number of instances of this latter malady are unaccompanied by vicarious discharge. Generally, it occurs in the unmarried, at least my observation warrants this conclusion, but quite as often in the weak and delicate as in the robust. When married

women are its subjects, conception rarely takes place during its continuance, although an interesting case, in which pregnancy more than once suspended the vicarious discharge, is recorded by Dr. Davis. The sterility, depending principally on torpor of the organic system of nerves, may likewise be farther insured by the amenorrhœal state of the uterine lining membrane, incapacitating it for the formation of the decidua. The vicarious discharge is usually blood, but it may consist in an excess of the natural mucus of the genital organs, constituting leucorrhœa. Some portion of the pulmonary and intestinal mucous tissues are thought to be the more common seats of the vicarious loss ; but certain it is, that the nipples, the ears, the gums, the umbilicus, the bladder, the axillæ, any part of the skin or the mucous membranes, or the surface of an open ulcer, may occasionally by gush, more usually by slow transudation for several days, furnish the vicarious blood. In the regularity of its periodical return, it seldom resembles the healthy function, although cases are recorded where the menstrual epoch has been exactly observed.

It has been assumed, but without proof, that before furnishing the vicarious discharge, the part must be in a disordered, irritable, or weak condition ; but it has been frequently seen, that so far from structural change taking place in the vicarious organ, even its functional disturbance is generally slight, and the amount of subsequent constitutional disorder, is only proportionate to the blood lost. Where

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the nipples or mammæ are the seat of the hemorrhage, there is often the formation of a crust over the affected spot, which being thrown off, the bleeding occurs.

The time during which vicarious menstruation may continue to be repeated, is very uncertain. I have admitted patients into Guy's, expecting its reappearance, and after keeping them in the ward for many weeks, have been completely disappointed, the amenorrhœa persisting, and the vicarious flow not returning. Local pain, constitutional irritability, and hysteria, are often premonitory of its periodical approach; and in a patient, who was subsequently a nurse in the Hospital, the surface and edges of a large menstrual ulcer on the thigh, were invariably more painful, hot, and swollen, prior to its furnishing the vicarious evacuation. There are cases on record, by Churchill and Siebold, where excessive salivation has supplied the place of the catamenia. Such an instance I have never seen.

Causes.—The suppression of an accustomed secretion, and the sudden, or even the gradual superposition of plethora or congestion, may account for these local and vicarious losses. But why this form of menstruation should occur so rarely, if it be preventive or curative of these morbid conditions, is a question which I cannot answer.

Diagnosis.—The distinction can scarcely be difficult, between vicarious and common hemorrhage. The existence of amenorrhœa, the occurrence of marked catamenial effort and the vicarious evacua-

tion, together with the absence of the local and constitutional symptoms of primary hemorrhage, will remove all doubt.

Prognosis.—I am not aware that any case has ever terminated fatally. So far as my observation has extended, the uterus has ultimately resumed its peculiar function, nor has the vicarious organ ever suffered any permanent injury. The duration of this curious process will much depend on the obstinacy of the amenorrhœa, the effect of the vicarious loss, and the treatment.

Treatment.—The extent to which remedies shall be employed, must be determined by the amount of the hemorrhage, the effects of the loss, and the warning of its approach. If the process has been frequently repeated, and there are premonitory symptoms, emmenagogues may be used, if there be no plethora or congestion. If, however, there is engorgement of the uterus, cupping on the sacrum or loins, leeches to the os uteri, vulva or anus, must precede the use of any stimulants. A smart drastic purgative may not only prevent the vicarious attack, but also induce menstruation; and I have several times, after preliminary depletion, witnessed the good effects of electricity and the strong mustard hip-bath, at a high temperature.

If the hemorrhage, having come on suddenly and without any previous indication, is moderate, interference is unnecessary, the advantages of healthy menstruation being partially secured by it. But if, on the contrary, a large quantity of blood is lost,

and from an organ important to life, then similar measures must be adopted as in hemorrhage, not vicarious. The infusion of roses with nitrate of potass, dilute acid and digitalis, cubebs and bismuth, the acetate of lead, ergot, turpentine, and opium (vide formulæ), may be exhibited.

In the intervals, the treatment must be directed to the removal of the amenorrhœa: tonics, and especially iron, ought to be given. A residence at Tunbridge Wells, Malvern, Buxton or Matlock, or by the sea-side, is often decidedly advantageous.

Vicarious Leucorrhœa.—There is in health a secretion, exceedingly small in quantity, of colorless transparent mucus, poured out by the uterine lining membrane, for the purposes of lubricating the opposite surfaces of the organ, and preventing friction and adhesive inflammation. When excessive, constituting leucorrhœa, it is occasionally, and more frequently than blood, vicarious of menstruation. Strictly speaking, there is amenorrhœa, because a mucous, instead of a sanguineous secretion, is furnished by the minute extremities of the uterine arteries. But there is activity instead of torpor; and it will be found, on inquiry, that all the symptoms denoting menstruation regularly appear, especially when this condition is vicarious of the catamenia at an early age.

The disease is most common in delicate and susceptible girls, at the epoch of commencing menstruation. I have seen it also in weak and exhausted women, and I have now under my care a patient

nearly thirty-five years old, who, in consequence of frequent abortion and protracted suckling, being exceedingly impoverished and feeble, has for the last twelve months, suffered from vicarious leucorrhœa. The regular menstrual period has been exactly observed, and although the discharge has been fully as abundant as the natural catamenia, and has lasted three or four days, it has never till the last month been colored. Conception in these cases is not an improbable event, as in several females who have come under my notice, where the menstruation was colorless, pregnancy has occurred.

In early life this vicarious leucorrhœa, if from its amount and periodical return, it is believed to be uterine and not merely vaginal, removes all impression of congenital defect or malformation. Nor, if the interval be free from excessive mucous discharge, is the health much deranged : a circumstance marking the difference between this form of vicarious menstruation, and chlorosis and amenorrhœa. It rarely happens that the uterine function is fully developed independently of medicine or change of air, although it is quite possible that, under favorable circumstances, perfect menstruation may almost spontaneously occur.

Pathology.—There can be no doubt that vicarious leucorrhœa depends not alone on disordered action of the secretory apparatus of the uterus, but also on the impoverished and attenuated condition of the blood ; and, in those instances where the discharge is always present, we may probably infer

the existence of sub-acute inflammation of the uterine lining membrane. It is difficult to explain by what diseased action it is, that vessels accustomed to eliminate a sanguineous fluid should so far lose their full secretory power as to furnish only an increased amount of mucus. Some years ago I pointed out a similarly perverted action, occurring after labor, where aqueous discharge, occasionally in immense quantity, is poured forth instead of the lochia. And in hemorrhage from the intestines, an analogous phenomenon is sometimes presented, when a large quantity of mucus, exhaled from the villous coat, supersedes the sanguineous flow. Dewees regards vicarious leucorrhœa as a slow development of the menstrual function. Friend and Astruc were both cognizant of its occasional existence. The former denominated it "the lymph-like menses," and Astruc recognises it as leucorrhœa taking the place of the catamenia. Nauche, in his comprehensive, valuable work, "*Maladies propres aux Femmes*," looks upon vicarious leucorrhœa as salutary, thus confirming the views I have guardedly expressed. He says that in 1824 he had under his care a patient, twenty-four years old, plethoric and robust, but healthy sanguineous menstruation was absent. Instead of it, there was secreted every month, and with satisfactory results as regarded the health, a quantity of white mucus.

Diagnosis.—The occurrence of the leucorrhœa at the monthly intervals, the other attendant circumstances, and the absence of healthy menstrea-

tion will fully elucidate the character and origin of the malady.

Treatment.—This is nearly, if not entirely, the same as where hemorrhage is vicarious of menstruation. A nutritious and easily digested diet, exercise, pure air, and tonics, especially iron, will so far improve the blood and impart constitutional vigor, as sooner or later to induce healthy menstruation.

CASES OF VICARIOUS MENSTRUATION.

CASE 23.

REPORTED BY MR. EBENEZER VORLEY.

SARAH ———, aged 17, of short stature, fair complexion, and unmarried, became an out-patient of Dr. Ashwell, August 19th, 1836. Excepting an attack of intermittent fever, which occurred about four years ago, her health, though delicate, has been generally good. The catamenia first occurred two years since, while engaged many hours in the day at a sewing business; twelve months elapsing before their second appearance. Since this period, the function has been irregularly and scantily performed. Half a year subsequently to this return of menstruation, she had a vicarious secretion from the breast, preceded by an effusion of blood under the skin of the mammæ. The cyst soon burst, and discharged its contents: a cicatrix partially formed, slightly pitted, and discolored round its edges. The same process has been performed at every menstrual period since; excepting on one occasion, when the catamenia appeared more naturally. The secretion is almost invariably from the left

breast; the right only once having been similarly affected. The mammæ are much enlarged, exceedingly painful, and very tender a few days prior to the expected period, at which time there are severe pains in the lower part of the abdomen, loins, and back. There is also abdominal swelling. It has several times happened, that there has been a very slight catamenial show, but it has not proceeded to a full menstruation; and the breast, under these circumstances, has invariably performed its vicarious function. There is moderate leucorrhœa during the intervals, becoming excessive at the periods. She has little appetite; and, after food, suffers greatly from pain in the epigastrium, flatulence and heartburn. The bowels are very confined, requiring large doses of aperient medicine for their full evacuation.

Pulse 108, feeble, and easily compressed. The tongue is coated with white fur; and her sleep is disturbed by pain in the inferior extremities and lower part of the abdomen.

Let her use the Ammoniacal Injection daily: take the Colocynth and Calomel Pill three times a-week; and the Mist. Ferri C. twice a-day.

The treatment was continued for some months, her health gradually improved, the leucorrhœa disappeared, and in February, 1837, the catamenia were natural and regular.

CASE 24.

August 20th, 1838. Miss ———, aged 17, a native of London, began to menstruate at 15, and after continuing to do so for a year, the discharge entirely ceased. Soon afterwards she had cough, and slight hemoptysis. The latter symptom disappeared, and for the last six months she had vicarious hemorrhage from the ears. At the time I visited her, the blood filled the external meatus, and I was told by

her mother, that the loss from both ears had never been less than three ounces at each period, and that it came away slowly. By a piece of sponge I cleared the meatus, and afterwards I saw the blood slowly exhaling from the inner surface. As there were decided symptoms of chlorosis, and a feeble pulse, I ordered small doses of iron, an improved diet, and a visit to Tunbridge Wells.

I did not see this patient again till several months after her return, but I had previously heard that the vicarious discharge entirely ceased in two months, her health in the interval having been materially improved by the return of natural menstruation.

CASE 25.

VICARIOUS LEUCORRHŒA.

Mrs. L——, aged 40, residing in Kent, consulted me the 2d of August, 1838, for vicarious leucorrhœa. She is thin, pallid, and extremely weak, although formerly robust and *embonpoint*. Menstruation commenced at seventeen, and after her marriage, which occurred when she was thirty years of age, she frequently suffered from its scanty and painful return. She has had two children at the full term, and five miscarriages, alarming hemorrhage having attended every abortion. For the last year the menstrual period has been regularly observed, but the discharge has been less and less sanguineous; and for nine months the secretion has been entirely bloodless. There is also considerable leucorrhœa in the catamenial intervals. Complains of extreme giddiness, and cannot occasionally stand upright. Pulse from 90 to 110, weak and small, appetite nearly destroyed, and the bowels never act without medicine. Hysterical fits often occur, and she is nervous almost to insanity.

She was ordered to the seaside, a nutritious diet was enjoined, with a small quantity of wine and malt liquor; the salt shower tepid bath, and constant exercise in the open air.

℞ Tinct. ferri. Muriat. Tinct. Humuli. Spir. Ammon. Aromatic ãã ʒiv. M. ft. Mist.

Take thirty drops in a tablespoonful of port wine three times a day.

A mild aperient when required; and a vaginal injection twice daily of sea-water.

I heard from this patient after a month's residence at Brighton: she was improved in many respects, but the vicarious leucorrhœa continued. She followed the plan laid down, and when she called at my house in December, having only a few days previously returned from the sea-side, she said that her health was perfectly re-established, but that the menstrual discharge was only slightly sanguineous. I enjoined a continuance of the iron.

CHAPTER IV.

OF DYSMENORRHŒA.

DEFINITION.—*Menstruation, preceded and accompanied by acute, and often lancinating pain in the uterus and adjacent parts, and occasionally in the mammæ, with derangement of the secretive function; the catamenia being usually, though not invariably, scanty in quantity, and in the severer and more chronic cases, clotted, shreddy or membranous.*

History and Symptoms.—Dysmenorrhœa is an important disease. It is very common, and produces extreme suffering—it often prevents conception; and if pregnancy has occurred during its continuance, the patient is exposed to the risk of abortion. Although, in itself, it is not a fatal malady, yet it admits of proof, that malignant diseases have followed its protracted existence; and lastly, it is exceedingly difficult to cure. It is not confined to one class of females; the married and the single, particularly the latter, are obnoxious to it. It prevails among women of irritable temperament, and of delicate, strumous, and phthisical constitutions. The habits of the rich, therefore, by

fostering these tendencies, have a direct influence in promoting it. There are examples too, although rare, among women of sanguine temperament. Every case of merely painful menstruation must not be regarded as dysmenorrhœa. If, for example, the pain and tightness of the head, the pain in the lumbar and hypogastric regions, which have preceded the menstrual period, diminish and pass away as the secretion increases; such a case is not dysmenorrhœa. Scanty menstruation, is not always painful; nor is the opposite state, where the function is copiously performed, always free from suffering. Dysmenorrhœa is often co-existent with menstruation; often after a prolonged and healthy continuance of the function, a change in the general system, or some of the exciting causes, to be mentioned hereafter, induce its approach.

The earliest symptoms of *irritable* or *neuralgic* dysmenorrhœa, where there is neither inflammation nor congestion are referrible to general disorder of the health, such as impaired appetite, great languor, gradual loss of flesh, and uncertain action of the bowels. The catamenia become irregular, sometimes appearing in excess, with a prolonged interval; while at other times suppression is an early morbid indication. The discharge is emitted with almost indescribable pain, being shreddy, clotted, and generally scanty in quantity. These symptoms vary much in different cases. In some individuals, they are but temporary, continuing only for the first day or two of the period; when after the expulsion

of a small clot not always firmly coagulated, the discharge assumes its natural consistence, and is unaccompanied by more than the usual local uneasiness. In others, the whole time is one of intense suffering, commencing with sharp, darting, lancinating pain in the uterus and vagina, and extending apparently to the uterine appendages. There is acute sympathetic pain in one or both breasts; the lumbar pain, running down the sacrum to the thighs and groins, becomes excessive: and during the emission of the discharge, the expulsatory pains, resembling the throes of labor, add much to the suffering. The intensity and duration of the pain depend much on the nature of the discharge, the rigidity of the structures, and the nervous susceptibility of the patient. In some instances, the catamenial period is preceded for two, three, or four days, or a week, by severe pain in the mammæ. When the menstrual period has ceased, the suffering is for the time at an end, and the strength is less reduced than might have been expected. During the whole period, little febrile excitement exists, and the amount of constitutional injury, from one or even several of these attacks, is inconsiderable. By and by, however, if proper treatment be neglected, or if the disease is so inveterate, as not to yield to it, the general health becomes much impaired, and the reciprocal morbid action of the one upon the other greatly aggravates the case. Without any sympathies of the uterus, with the exception of the mammary being called into prominent

exercise, the bowels become uncertain in their action, being sometimes constipated and then unduly relaxed, even from a mild purgative: the hepatic secretions are variable in quantity; and occasionally there is pain and excoriation about the anus, from their acrimonious nature. The appetite is capricious and small, food is almost loathed, the blood becomes impaired, and imperfect nutrition is evident from paleness of the general surface, emaciation and loss of physical power. In this stage of the disease leucorrhœa becomes profuse, if it has not habitually existed; and sometimes amenorrhœa supervenes, thus entirely suspending the uterine suffering. In connection with the continuance of this menstrual suppression, the mammæ become flaccid and almost disappear; and the torpidity of the uterus excludes that viscus from a healthy discharge of its functions.

In *plethoric dysmenorrhœa* there is not much deviation from the symptoms now described; but the menstrual period will be preceded by headache, flushing of the face, full and quick pulse, a sense of weight in the pelvis, rigors, and sometimes by delirium. These precursory symptoms are followed by the catamenia, which are sometimes profuse with more or less of coagula. More frequently, however, the discharge is scanty, and consists of clots with portions of membrane, and the difficulty of emission is extreme. The pains resemble those of labor; the patient bears down with considerable effort, and after many abortive attempts, a paroxysm of uterine suffering is relieved, by the expulsion of

a small concrete clot, or a detached portion of membrane. It must not be supposed that only the plethoric women expel these false membranes ; women of an opposite temperament may do so, and for a lengthened period ; an ill-advised use of emmenagogues aiding such a result.

Congestive Dysmenorrhœa.—When the affection of the mucous membrane is attended with a partial inability to secrete the full quantity of menstrual discharge, the large and repeated doses of aloes and steel, so often given with the intention of compelling menstruation, augment the quantity of blood in the uterus, which remaining stationary, every successive period is accompanied with an increase of congestion, till at length this form of the disease is fully established. The premonitory symptoms in this variety are comparatively slight. A sense of weight in the pelvis, with the bearing down pains of prolapsus, lumbar pain, frequent micturition and constipated bowels, denote an enlarged uterus. But it is not till the function is about to commence, that the very severe symptoms arise. There is then intense uterine pain, with a sensation as though some foreign body were shut up in the uterine cavity ; and in the attempts at its expulsion, the uterus is aided by the voluntary, as well as involuntary efforts. The paroxysms occur as in labor, but in dysmenorrhœa there is no interval of ease. Incessant restlessness comes on ; the patient looks anxious and pale, and frequently attempts to micturate, and as the contraction of the bladder is evacu-

ating the urine, she uses all her power in the vain endeavor to expel a clot or portions of membrane. Sometimes there is spontaneous relief afforded by the passage of a small concrete mass; but this is temporary, and it is only with the cessation of the period, that she can be said to be relieved from her sufferings. One marked peculiarity of this form is the absence of inflammatory symptoms. The pulse is rather weak, sometimes quick and irritable, the skin is perspirable, and there is exhaustion, not inflammation. During the intervals of congestive dysmenorrhœa, where false membranes are constantly expelled, there is generally abundant leucorrhœal discharge, the health becomes increasingly disordered, the mammæ shrivel, and the legs are œdematous. It is in this variety that spurious abortion most frequently occurs. A mass is ejected from the uterus, which is made up of a condensed or laminated coagulum with portions of membrane, or a membrane moulded to the cavity of the uterus, inclosing a large coagulum. Illustrations of these are beautifully delineated in Dr. Granville's work, and hereafter I shall give Dr. Montgomery's distinctions between this form of membrane and the true decidua.

The late Dr. Mackintosh, of Edinburgh, pointed attention to *dysmenorrhœa dependent on mechanical obstruction*, caused by contraction or stricture of the canal of the cervix, or by partial imperforation of the os uteri. Capuron also alludes to it, and other authors think that in some very rare cases, the

malady may be attributed to such a cause. There is no doubt that dysmenorrhœa has occasionally co-existed with such malformation; but it is by no means certain that it owed either its origin or its continuance to such a state of parts as its cause. Dr. Churchill, in one instance, distinctly ascertained the presence of a stricture half way up the canal of the cervix; but its dilatation left the dysmenorrhœa as bad as before. A few years ago I examined the cervix after an extremely severe and protracted attack of the disease, and I satisfied myself and a professional friend, that there was really narrowing of the canal. This was entirely cured by bougies; but the catamenial suffering was not at all alleviated. In another case I was more successful, and Dr. Ryan entirely cured one of the very bad forms of dysmenorrhœa by metallic bougies. In Dr. Mackintosh's examples there is nothing proved as to retention of the menses, which might have been looked for if the mechanical impediment had been so complete as "scarcely to admit a bristle." He tried the treatment by bougies in twenty-seven instances, and cured twenty-four. In eleven of the latter number, pregnancy subsequently occurred. As the introduction of bougies must act as a direct and powerful uterine stimulus; the advantage, even where contraction really exists is not necessarily entirely attributable to dilatation. In doubtful cases an internal examination ought to be made; as dysmenorrhœa may depend not only "on a small os, but on inflammation of the lining membrane, and of

the neck of the womb, and on tumors diminishing the calibre of the passage through the cervix." Still I believe that the views of Dr. Mackintosh are more correct than is generally supposed, and they should not be disregarded in protracted and obstinate dysmenorrhœa.

Causes.—It is not at all times easy to specify the exciting cause. The history usually brings to light some symptoms of uterine irritation, more or less acute ; some catamenial irregularity, some proof of a temperament disposed to strong emotions. Among married women, miscarriages, premature confinements, and particularly the various effects of cold, may be enumerated as preceding the complaint. Nor must uterine determination or congestion be forgotten, by some pathologists regarded as the most frequent cause of all.

Diagnosis.—But little need be said on the diagnosis of dysmenorrhœa ; as in the great majority of cases, the functional disorder is clearly ascertained, and the symptoms well defined. It is only in the cases of spurious abortion, where the characters of individuals may be ignorantly aspersed, that much discrimination is required. The duration of the complaint, the nature of the menstrual secretion in former periods, the enlarged state of the uterus from congestion, as ascertained from examination by the vagina and rectum, independently of the physical characters of the product, are quite sufficient to satisfy any observer. Dr. Montgomery, in his elaborate and accurate work, on "The Signs and Symptoms

of Pregnancy," thus expresses himself, in reference to the peculiarities which distinguish the dysmenorrhœal membrane.

"The substance expelled in this disease will be found deficient in several of the properties of the true decidua; for although produced by an action in the uterus analogous to that by which it prepares the decidual nidamentum for the reception and support of the ovum, it differs therefrom in two essential points; first, that it is a morbid product; and secondly, that not being intended, like the true decidua, to become an organ, or at least a medium of nutrition for the ovum, it is not furnished with a structure such as would only be required for the performance of such an office; hence, it is thin, flimsy, and very unsubstantial in its texture; of a dirty white or yellowish appearance when slightly agitated in water, devoid of the soft, rich, pulpy appearance, deep vascular color, and numerous foramina for the reception of the nutrient vessels from the uterus, which are always so distinctly observable in the true decidua, which however in one point it resembles, having its inner surface smooth, and the outer unequal, but of a ragged, shreddy appearance, unlike that of the healthy uterine decidua, and it is, moreover, entirely destitute of the little cotyledonous sacculi already described as an essential character in the latter structure. In texture, it more nearly resembles that of the reflexa than any other structure; but no trace of the transparent membranes of the ovum can be discovered within it, or attached

to it, and should it happen to come away entire, in the form of a hollow triangular bag, we never find within it a duplicate of itself forming an inner pouch or reflex layer, as in the case of the natural decidual envelopes of the ovum. Morgagni has given a very accurate account of this accidental product, as it occurred in the case of a noble matron of his country, who expelled it almost every month with pains like those of child-birth, having its external surface 'unequal and not without many filaments that seemed to have been broken off from the parts to which they had adhered; but internally hollow, on which surface it was smooth and moist, as if from an aqueous humor which it had before contained.'"

Pathology.—Some authors regard dysmenorrhœa as a neuralgic affection, a disease of enervation, identical with hysteralgia and irritable uterus. Others take a different view of the malady, and consider it as invariably dependent on a morbid condition of the mucous lining of the uterus. The former attribute the pain, and all the other symptoms, to acute irritation; the latter, to inflammatory action. These conflicting opinions are not irreconcilable. In a great number of cases, particularly in delicate single females, there is only acute nervous irritation, affecting the muscular tissue as well as the mucous lining, and producing pain. In other and aggravated examples of the malady, there exists a low form of inflammation, modified by the peculiar membrane which it affects, and inducing intense pain. There are facts strengthening the impression,

that dysmenorrhœa is often a disease of irritation. Hysterical and susceptible females are more prone to it than any other class. The pain is mostly unaccompanied by symptoms of inflammation; the pulse is quickened only during the paroxysm, this being over, it again subsides; and the flushed face and hot skin are often succeeded by a cold and clammy surface. Acute pain may exist without inflammation, and a layer of lymph may, as in dysentery, be thrown off from the intestinal mucous surface, without decided inflammatory action. Neither the pain of labor nor the after-pains, occasionally so protracted and agonizing, are inflammatory; and yet, if the degree of pain were to be the criterion, one might easily believe that inflammation really existed; for certainly no suffering from dysmenorrhœa can be greater than the pain attendant on labor and its subsequent contractions. In other cases, and which are thought, (by the supporters of the opinion that inflammation is invariably present,) alone to deserve the appellation of dysmenorrhœa, a modified and low form of inflammation certainly exists, which produces a false membrane, assuming, in some instances, the shape of the uterine cavity, and in others, being expelled in detached portions. I quote the following remarks from a clear and practical paper on this malady, read before the Medical Society of Guy's Hospital in 1839, by Mr. Henry Oldham, one of the obstetric assistants of the institution.

“There are so few instances in which minute in-

vestigations of the exact condition of the mucous membrane and body of the uterus in dysmenorrhœa are permitted, that we cannot offer any remarks on the visible changes in these structures. We are consequently left to the far less secure, but the only admissible mode of inferring the character of these alterations, from the symptoms which accompany the affection and the analogous productions from other mucous membranes. There can be no doubt that mucous membranes, though prone to suppurative inflammation, often throw off from their surface false membranes of organized lymph. The trachea in croup, the intestines in some forms of dysentery, the urethra under inflammation, are familiar examples of the kind; and there is but one common explanation of this occurrence, viz. that the products of inflammation are present, and that the lining membranes of these several organs are the seat of the diseased action. The uterus presents a precisely analogous instance in dysmenorrhœa, and we hence infer, that its mucous lining is in a similar state."

A paper presented to the Statistical Society in 1839, by Mr. Lever, another of the obstetric assistants of the Hospital, and displaying his usual research, confirms these views, by showing that one of the occasional ultimate results of dysmenorrhœa, is structural change of the uterus. A protracted dysmenorrhœa, where the false membrane has been habitually secreted, (and the fact will be noticed in the appended cases,) is liable to induce thickening and indura-

tion of the os and cervix. This is the result of chronic inflammation, and is only to be feared from the probability of its assuming a malignant character in women possessing a cancerous diathesis. By such a structural change, whenever it affects the channel of the cervix, mechanical dysmenorrhœa may be induced.

Prognosis.—This will be more or less favorable, according to the views entertained of its nature. If, like irritable uterus, dysmenorrhœa be regarded as invariably a neuralgic, not an inflammatory disease, it may be severe and protracted, but it will not be fatal. In fact, I know of no instance where a termination so serious has been its immediate result. But, if a scirrhus or carcinomatous change of the uterus follow, even very rarely in its train, then a prolonged dysmenorrhœa is a great evil. It must not, however, be forgotten, that in the majority of instances, the affection is cured, either by medical treatment, marriage and child-bearing, or by the natural permanent cessation of the catamenial function. From observation, I am disposed to think, that marriage and connubial intercourse are frequently remedial; the probability or impossibility of such events must therefore influence the prognosis. It is not meant to be affirmed, that they are invariably curative, or that aggravated examples of the affection are not to be found amongst married women. I am now attending an unmarried patient in her forty-fifth year, who, from fifteen to forty-two, (when the function entirely and suddenly ceased,)

invariably suffered from dysmenorrhœa. Her sister was similarly affected till her marriage, but that event, and frequent pregnancy, entirely displaced and cured the dysmenorrhœa. In the former case, I have examined the uterus very carefully, but I cannot discover any structural change either in the body, cervix, or os. The utmost caution should be used in the investigation of suspected structural change, supposed to be connected with dysmenorrhœa, as, in the opinion of the sex, very little suffering is sufficient to induce them to denominate any case painful menstruation. A few years ago, it was a matter of doubt whether the false membranes of dysmenorrhœa could be formed independently of impregnation. This point is now laid at rest, and no suspicion can for a moment be entertained of the purity of any individual so circumstanced. It has been thought, too, that conception was entirely incompatible with this disease. I have known pregnancy occur in several instances, almost immediately after the marriage of a dysmenorrhœal patient; but it cannot be doubted, that an aggravated form of the malady must be unfavorable to such an event, and that sterility may often be fairly attributed to such a cause.

Treatment.—This is necessarily different; for, while inflammatory and congestive dysmenorrhœa require depletion and antiphlogistic measures, the neuralgic or irritable form calls only for narcotic and slightly nauseating remedies. There are, however, in the treatment of every variety, two principal in-

dications; to alleviate the urgent pain of the menstrual period, and to employ, during the intervals of the discharge, such remedies as shall restore to the uterus its healthy secretory power. Both are occasionally accomplished with difficulty; the first, however, is generally the most easy of fulfilment.

In the more ordinary variety of the malady, the *neuralgic*, the mustard hip-bath and some narcotics are especially beneficial; if the attack be aggravated or of frequent recurrence, then ipecacuanha or antimony ought to be employed. But to be more precise: let the patient, on the first premonition of pain, commence the use of the hot bath at 96 or 98°, and ordinarily remain in it for a half or three quarters of an hour, repeating it three or four times in the twenty-four hours, and always guarding against the effects of cold, by keeping in a hot bed, so long at least as to allow the skin to resume its ordinary temperature. When the pain is very severe, the bath may be continued until faintness is induced; and if it be inadequate for this purpose, then half a grain of ipecacuanha, or fifteen or twenty drops of antimonial wine may be exhibited every hour. It will be found, that the general relaxation of the cutaneous surface, and the attendant and temporary depression of the system, greatly favor menstrual secretion. In the milder cases, a hot hip-bath and slight narcotics will suffice. Camphor, ipecacuanha, and hyoscyamus, the Dover's powder, the extract of hop, lettuce, conium and belladonna, variously combined (vide formulæ), relieve the pain and induce

perspiration and sleep. If perspiration is with difficulty obtained, three, or four, or five grains of antimonial powder may be given, by which a diaphoretic effect will be insured. Sometimes, when the pain is terribly severe, and the cerebral excitement goes on nearly to delirium, one quarter or half a grain of the acetate of morphia may be given at night; and smaller doses, either of it, the muriate or meconate of morphia, or Battley's *Liquor opii sedativus*, at intervals during the day. A suppository of opium, conium, hyoscyamus or belladonna, is often effectual in relieving the pain. In some cases, from the forcing, bearing down efforts, we can distinctly recognize the attempt on the part of the uterus to expel a clot. Here the ergot, either in decoction or tincture, may be repeatedly given, and an interval of marked ease, however brief, will occasionally follow its expulsion. It would be difficult to speak with precision of every modification of treatment; but enough has been said to enable the practitioner, while he maintains the principle, to vary the mode of management. In a French publication of the Society of Agriculture, Sciences, and Arts, Dr. Patin recommends the acetate of ammonia for dysmenorrhœa; enjoining, however this caution, that as it diminishes the discharge, it must be used with reserve. He says, that so far from being a stimulant, it is really a sedative remedy; and he regards it as applicable in any case, whether of dysmenorrhœa, profuse menstruation, or menorrhagia, if there be morbid excitement of the female genital

system. This physician gives from forty to seventy drops three or four times daily ; the only inconvenience being slight and transient giddiness. I have no experience of this remedy.

In the *inflammatory* and *congestive* forms of dysmenorrhœa, in addition to the remedies already enjoined, local depletion is peremptorily required ; and there are cases, where there is vascular fulness, in which a small general bleeding will be advantageous. Congestion almost invariably prevents secretion ; the unloading of the vessels, therefore, aids the flow of the discharge. In the majority of instances, cupping on the loins, to the extent of eight, ten, or twelve ounces, or leeches will suffice, and, if necessary, the bleeding may easily be repeated. Leeches to the os uteri have been already mentioned, and I think, that when well applied, they are decidedly more beneficial than any other local depletion. Several times I have witnessed their superior efficacy in relieving the severe pain ; in one instance, where the patient had been in the habit, for several years, of being occasionally cupped, the relief afforded by thus directly unloading the congested vessels themselves, exceeded, to use her own expression, any idea she could have formed. The speculum tube may be introduced into the vagina prior to their application ; and if the cervix be brought fully into view, neither the vagina nor any other part than this portion of the congested viscus will be fixed on by the leeches. Their use should, as much as possible, be confined to married women, and a clever

nurse should be taught to apply them. The hot-bath, as heretofore advised, sudorific, nauseating and anodyne medicines may all be used. Hot poppy fomentations to the abdomen generally, and particularly to the hypogastric region, injections, several times during the twenty-four hours, of poppy and conium into the vagina, so as constantly to bathe the lower part of the uterus, will encourage the discharge and sooth the pain.

The *second* part of the treatment comprises the management during the catamenial intervals. In the neuralgic and irritable form of the disease, the object is to improve the general health, principally by attention to the disordered state of the digestive organs, and by the avoidance of local excitements. I need not dwell on the importance of mild and cordial aperients, in preference to drastic and mercurial purgatives. An occasional alterative, such as the grey powder, or a moderate dose of blue pill, is required, but active and repeated purging must be injurious. Afterwards, the various preparations of iron, combinations of the mineral and vegetable tonics, omitting them when the bowels are disposed to be relaxed, a nutritious and unstimulating diet, pure air, a temporary residence at places celebrated for their chalybeate waters, and gentle but persevering exercise, are the most important indications. Dr. Dewees, one of our ablest obstetric writers, regards the neuralgic form of dysmenorrhœa as analogous in its nature to chronic rheumatism; and strongly recommends, in the intervals of the disease,

the volatile tincture of guaiacum ; adding, that he has relieved many dysmenorrhœal patients by the antiphlogistic plan, but cured none. He begins with drachm doses of the tincture three times daily, increasing the quantity to three drachms three times daily, in a glass of wine. His success has been great ; mine, although I have often tried the guaiacum, has been inconsiderable.

In the *inflammatory*, and especially in the more frequent *congestive* form of dysmenorrhœa, local depletion, saline aperients, and spare diet, are particularly necessary ; nor should they be discontinued till the volume of the uterus is satisfactorily lessened. The hot hip-bath three times a-week, and warm injections of the fœtus papaveris twice a-day, will topically aid the former and more important remedies. Afterwards, mild tonics will complete the restoration of the patient. Bearing in mind what has been already said, of structural uterine change following chronic dysmenorrhœa, mercury must not be forgotten in the inveterate cases. In the preceding chapter, when treating of its deobstruent effects, I pointed out certain conditions as unfavorable to its use ; but, where these indications are absent, there is no medicine so likely to prove efficacious. It may be employed in both the varieties, if their continuance is exceedingly prolonged, and the false membrane is habitually expelled ; but certainly mercury is most beneficial where there is a thickened and indurated cervix, the result of chronic inflammation.

The effect of the inunction of the iodine ointment on the neck of the uterus, where it is enlarged and hardened, is most satisfactory. This subject will, however, be more fully treated of in the chapter on hard tumors of the os and cervix.

CASE 26.

CHRONIC DYSMENORRHŒA—PREGNANCY SUPERVENING
AFTER FOURTEEN MONTHS.

OCCURRING IN THE PRACTICE OF MR. HENRY OLDHAM.

Oct. 20. Mrs. H——, a young lady of lively, active habits, was married in July, 1838. For three or four years previous to her marriage, she appeared constitutionally delicate, and during this time she suffered from occasional menorrhagia, followed by menstrual suppression, the continuance of which varied between six weeks and two months. This condition of the uterine function was attended with great languor under exertion, imperfect nutrition from loss of appetite, irregular action of the bowels, tympanitis, hysterical emotions, and leucorrhœa more or less profuse. During the latter part of this time she had several attacks of glandular swellings, and the right lobe of the thyroid remains permanently enlarged.

The first three months of marriage were attended with marked improvement in her general health. The appetite became healthy, the features firm, the animal spirits buoyant, and everything indicated confirmed health. About the fourth

month after marriage the first symptoms of dysmenorrhœa appeared. The menstrual period was preceded by intense pain in the mammæ, lasting for days, which was relieved only when the catamenia commenced to flow. The discharge itself was altered in quality, being clotted, and in its expulsion occasioned much local suffering. The pains, however, subsided with the discharge, and the first periods were passed, leaving only a temporary sense of exhaustion. She came under my care in March, 1839. At this time she was laboring under an attack of dysmenorrhœa, which had been preceded by great irritability of the mammæ, lasting eight days. The local sufferings were very great, and the discharges consisted of occasional fibrous masses, with detached portions of membrane and a brownish colored fluid. During the attack she complained much of exhaustion, her appetite left her, and the least exertion aggravated the pain. She was ordered the hot hip-bath, with hot poppy fomentations, and the following pills :—

R. Ext. Hyoscy. gr. iv.

Camphoræ Rasæ, gr. iij.

Pulv. Ipecac. gr. i. Ft. Pilul, ij. Ter in die sumend.

These had the desired effect of relieving the pain ; but the symptoms after the catamenial period did not kindly pass away. There was continual aching of the loins and groin, as though the uterine ligaments were strained ; a perpetual sense of weariness ; indifferent appetite ; and unrefreshing sleep. She also complained of pruritus of the external genitals, and leucorrhœa was present. The bowels were irregular, sometimes constipated, and at others relaxed. Circulation feeble.

It would be tedious to recount even a monthly report, although the symptoms were accurately noted. They par-

took generally of those already enumerated. At one time the tonic treatment pursued during the interval seemed almost to have re-established her health; but the intense agony of the succeeding period left the same exhaustion; and was followed by the same constitutional effects. The sedative treatment, with slight variations, was enjoined during the attacks, and chalybeates variously combined—occasional purgatives, with good, but unstimulating diet, were the main therapeutics in the intervals. She was ordered to the seaside, and marital intercourse was suspended. Temporary alleviations were often procured; but there still remained delicacy, and continued ailment with the same functional disorder. Her general health indeed seemed gradually to get worse; and some of her friends foreboded phthisis, without, however, any physical sign of thoracic disease being recognised. Iodine with the hydriodate of potash in small doses was given with some benefit; and the iodide of iron had a decidedly good effect.

In September, 1839, she menstruated naturally, without antecedent pain; and the discharge was of its proper consistence, color, and quantity, and the appetite greatly improved. In a fortnight after this period she complained of more intense suffering than she had ever before experienced in the hypogastric region, with lumbar and bearing down pains, inability to exert herself, etc. The *mammæ* also became intensely painful, so that the least pressure on them occasioned shivering and sudden pallor. On examining the uterus, the os and cervix were found hardened and painful, and the body of the uterus fuller than natural, its weight being sufficient to bear it low down in the vagina. A previous examination, about six weeks before this time, had detected the os and cervix larger than normal; but soft and rather painful when even gently touched. The local and sympathetic pains seemed to be premonitory of the menstrual flow; but this period passed away, and ten days afterwards Dr. Ashwell

saw her with me. On examination, the volume of the uterus was found considerably augmented, and it was suspected that this suspension of the catamenia had occasioned the congestion. Upon more careful examination, however, of the mammæ, a well formed areola was visible, and the existence of pregnancy became probable, and now, in November, the sympathetic affections have abundantly confirmed the opinion.

CASE 27.

PROTRACTED DYSMENORRHŒA CURED BY MERCURY.

IN January, 1837, I visited Mrs. ———, æt. 24, residing a few miles from town. She is delicate and of strumous aspect, and has been married nearly two years. She aborted soon afterwards, and has never since been pregnant. The present symptoms are intensely painful menstruation, accompanied by the expulsion of clots and portions of false membrane. Prior to marriage she suffered in a similar way, but not to the same extent. For a few months after this event, the dysmenorrhœa was materially alleviated; but since the abortion it has returned in aggravated degree. Now, pains in the hypogastrium, loins, and thighs, occur several days prior to menstruation, inducing fever and depriving her of appetite and sleep; the dysmenorrhœa lasts seven or eight days, and from exhaustion she is generally on the sofa a week afterwards; so that the disease and its consequences absorb nearly the whole month, and leave but little opportunity for curative treatment. Leucorrhœa is always present when she is not menstruating; the bowels are irritable and uncertain; sometimes constipated, and at other times, after a gentle

aperient, or even after trivial mental excitement, violently purged.

In May, Mrs. ——— was no better, although she had fully pursued the treatment laid down in the previous pages. She was emaciated, and as she complained of constant heat and pain at the neck of the bladder, and of pain also in coïtu, I was allowed to examine. The lower part of the body of the uterus was enlarged, hard, and slightly tender; the cervix was thickened, generally increased in size, indurated and uneven, but without the stony hardness of malignant disease; the os was patulous, and its edges not smooth. The whole viscus was increased in size, and on raising it up on the finger, she was immediately relieved from pressure on the neck of the bladder, of which at other times she complained.

I now urged the importance of mercurial treatment, the recumbent posture, and the entire avoidance of sexual intercourse.

June 20. Mrs. ——— was ordered three grains of blue pill every night; and four ounces of the compound decoction of sarsaparilla, with two grains of quinine twice a day. Meat diet and mild ale; and she was also especially enjoined to be careful not to expose herself to cold.

July 24. The mouth has been affected, and the flow of saliva increased for the last fortnight; but there has been neither premonitory pain nor menstruation, although more than a month has elapsed since the last period. In other respects there is not much alteration; the countenance is still wan and anxious.

August 10. Menstruation has occurred with much less pain, and without either narcotics or the warm bath. Gums are sore, and the salivation is still going on, although one three-grain pill only is taken every third night.

Sept. 25. Has entirely discontinued the mercury for several weeks, and the last two periods have been passed with scarcely any pain, and without clots or membrane.

I have twice examined the cervix uteri, and although it is still tender, the induration is gone, and the size of the uterus and of the cervix also are again natural. This patient afterwards spent a considerable time in the country and by the sea side, entirely recovering her health and strength.

CASE 28.

SEVERE DYSMENORRHŒA DEPENDENT ON INFLAMMATORY
CONGESTION OF THE CERVIX AND BODY OF THE UTERUS.

OCCURRING IN THE PRACTICE OF MR. FENNER OF PENTONVILLE.

Miss W——, aged 29, began to menstruate so favorably at seventeen years of age, that she was unconscious of the occurrence. But after some months, she invariably suffered, (and has continued to do so to the present year, 1839,) a few days before the periods from acute pains in the loins, and left hypochondrium, headache, flatulence, retching and violent palpitation of the heart. The pain in the left hypochondrium and the palpitation have since been almost constantly present in greater or less degree. The periodical discharge is always dark, scanty, clotted, and membranous, never lasting more than a day and a half, and sometimes not so long. During the year 1838, there were superadded a shooting pain on the inside of the left thigh, leucorrhœa, and intense pruritus, rendering the condition of the patient extremely distressing.

Sept. 20, 1839. A period has just passed with such aggravation of the above symptoms as led to my being consulted. On examining the uterus by the speculum, I found its cervix and body considerably congested, and very painful to

the touch. Moderate pressure with the finger instantly reproduced the palpitation of the heart, and the pain in the left hypochondrium, causing the patient to exclaim "Oh my heart! how it beats!" Then, "Oh my side! you are bringing on the pain in my side!" thus demonstrating that those sensations were merely sympathetic of the condition of the uterus.

Treatment.—She was bled to fifteen or sixteen ounces—a pill of Pulv. Antimon. gr. iii. Antimon. Pot. Tart. Hydr. Chloridi. āā gr. $\frac{1}{6}$, was given every six hours until the mouth became sore; afterwards it was continued once or twice daily, to maintain the derivative action, up to the time of the next period. A hip-bath, and an injection of warm water into the vagina, were used twice every day while the pains continued severe,—then every night. The patient was enjoined to keep much in her bed, and to use the Hydrocyanic lotion (vide formulæ) for the pruritus. External irritation was also kept up on the left hypochondrium by the Ung. Antimon. Pot. Tart.

Sept. 29. Much better; pulse 90, and less irritable; mouth sore; pain in the left hypochondrium, and palpitation less.

Oct. 1. On examination by the finger, the uterus is found to be much softer, and less sensitive; nor even the pain and palpitation produced, as before, by pressure.

Oct. 17. As the period was expected to return very shortly, the patient was again moderately bled, complaining only of slight premonitory pain in the hip and head. She has suffered less during the interval than for years; her appetite and sleep being greatly improved.

Oct. 23. After passing a good night, and getting up well, the catamenia appeared, as at first unconsciously, and without pain.

It would be easy to verify the statements of the text by a far greater number of cases; as examples of the disease in its different forms, and of every degree of severity, are continually presenting themselves in private and in hospital practice. But the instances cited may suffice to impress the importance of a correct view of the precise pathological condition of the uterus before commencing any active treatment. Nor can it be too strongly urged that as pain is the accompaniment of so many different morbid conditions, it is in dysmenorrhœa absolutely essential to know whether it be associated with an irritable and neuralgic, or an inflamed and congested uterus. Palliatives and narcotics may suffice in the former varieties, but in the latter, till inflammation and congestion be removed by depletion and antiphlogistic measures, neither narcotics, tonics, nor emmenagogues will avail.

I have already spoken of the advantages of leeches directly applied to the cervix uteri, when the dysmenorrhœa can be traced to congestion; and I have lately seen several cases, one in particular, with Mr. Fenner of Pentonville, who devotes much time to the investigation and treatment of female sexual disease, where by the aid of his speculum tubes, scarification of the neck of the uterus was freely practised. There was not during the operation, nor afterwards, any decided pain; and as three or four ounces of blood were quickly drawn, it will prove a far better, quicker, and less troublesome remedy

than the application of leeches: the relief attendant on this novel process, was superior to what had ever resulted from the leeches. I believe this method of depletion may be safely, and often most advantageously resorted to.

CHAPTER V.

FORMULÆ OF REMEDIES.

It may not be without advantage that I should select, from the various remedies used in hospital and private practice, in the diseases already described, all of which are distinguished by paucity of the catamenial discharge, those which, after repeated trials, I have found most efficient.

APERIENTS AND PURGATIVES.

FORM. 1.—*Pulv. Magnesiæ. Comp.*

℞. Magnesiæ Sulphatis ℥iiss. Magnes. Carb. Sodæ Sesqui-Carb. āā ℥iv. Sodæ Hydrochlorat. ℥ii. Pulv. Zinzib. vel pulv. Aromatici ℥j. M. ft. Pulvis.

Take one, two, or three teaspoonfuls at bed time, or occasionally in the day, when the bowels are confined. Usually the powder may be mixed in warm water; but if a more decidedly aperient effect is desired, then half a bottle of soda water may be poured over the salt, and it may be swallowed in a state of effervescence.

FORM. 2.—*Pulvis Purgans.*

℞. Pulv. Rhei gr. vj. Potassæ Sulphatis vel Sodæ Sulphatis gr. x. Pulv. Zinzib. gr. iii. Ol. Cassiæ gtt. ii. M. ft. Pulvis Purgans.

Take one powder in warm water night and morning.

FORM. 3.—*Pulvis Purgans.*

℞. Hydr. Chloridi [*Calomel*] gr. ii. Pulv. Jalapæ, gr. vj. Pulv. Cambogiæ gr. iij. Pulv. Zinzib. gr. iv. Olei Cassiæ gtt. ii. M. ft. Pulv.

Take one powder in gruel, or barley-water, once or twice a week, at bed time.

FORM. 4.—*Pulv. Scammonii cum Hydr. Chlorid.*

℞. Scammon. Gum. Resin. Pulv. gr. viij. Hydr. Chloridi [*Calomel*] gr. ii. vel iii. Potassæ Supertart. Sacch. Alb. āā gr. x. M. ft. Pulv.

Powders three and four will only occasionally be required; but where the secretions of the intestinal canal are vitiated, and the hepatic functions are imperfectly performed, they, or some of the more active aperients (with occasional alteratives), will be efficient remedies, if judiciously and sparingly exhibited.

FORM. 5.—*Pilulæ Colocynth. Comp.*

℞. Extr. Colocynth. C. Pil. Rhei Comp. Pil. Cambogiæ C. āā ʒi. Olei Cassiæ gtt. vj. M. ft. Pilulæ xii.

Take one or two pills at bed time every night, or every other night, or

℞. Pil. Colocynth. C. Pil. Galbani C. āā ʒss. M. ft.
Pilul. xij.

Take two pills twice a day.

FORM. 6.—*Pilulæ Aperientes.*

℞. Pil. Cambogiæ C. gr. xxx. Sodæ Carb. Quiniæ Disulph.
āā gr. xv. Ol. Menth. Pip. gtt. vj. Syr. q. s. M. ft.
Pilulæ xii.

Take two or three pills at bed time.

FORM. 7.—*Pilulæ Aperientes Alterativæ.*

℞. Pil. Hydr. ʒi. Hydr. Chlorid. [*Calomel*] gr. x. Pulv.
Antimonial. gr. x. Antimon. Tartarizat. gr. iii. Pil. Rhei
C. ʒi. Syr. q. s. M. ft. Pilulæ xii.

Take two pills every other night.

FORM. 8.—*Pilulæ Aperientes Alterativæ.*

℞. Pil. Hydr. Chlorid. Comp. ʒi. Pil. Aloes cum Myrrhâ
ʒii. Extr. Sarsæ. Extr. Taraxaci āā gr. x. Syr. q. s. M.
ft. Pilulæ xvj.

Take two or three twice a day.

FORM. 9.—*Mist. Purgans Communis.*

℞. Pulv. Rhei, Magnes. Carb. āā ʒii. Conf. Arom. ʒiss.
Infus. Rhei, Aquæ Cinnamomi āā ʒiij. M. ft. Mist.

Take a wine-glass full early in the morning, two or three
times a week.

FORM. 10.—*Mist. Rhei Comp.*

From Guy's Pharmacopœia.

℞. Rhei pulv. ʒj. Sodæ Carb. ʒii. Pulv. Calumbæ ʒii.
Aquæ Menth. Pip. Aquæ fontis aa ʒvj. M. ft. Mist.

Take two table spoonfuls three times a day.

STOMACHICS AND TONICS.

It has already been observed that the various preparations of iron, several of which I annex, are by far the most valuable in these affections, but they cannot always be administered. If the digestive organs are much deranged, or if there be a proneness to diarrhœa, they will probably still more irritate the intestinal mucous membrane. Preliminary and cautious directions about the diet and the alvine secretions will be required, and when the tone of these organs is restored, and not till then, iron in some of its forms may be efficiently employed. Occasionally, when the general health has been long disordered and tympanitis has ensued, other remedial combinations will be required.

FORM. 11.—*Pilulæ Ferri Ammon.*

℞. Ferri Ammon. ʒii.
Extr. Gent. C. Extr. Papav. Alb. aa gr. x.
Theriaci, q. s. Ft. Pilulæ xii.

Take two pills three times a day.

FORM. 12.—*Pilulæ Ferri cum Gentianâ.*

From Guy's Pharmacopœia.

℞. Ferri Sulphatis gr. i. Extracti Gentianæ Mollioris gr.
iii. M. ft. Pilula.

Take one pill three times daily.

FORM. 13.—*Pilulæ Ferri cum Quiniæ Disulphate.*

℞. Ferri Sesquioxidi Quiniæ Disulphatis āā ʒi. Extr.
Gentianæ Mollioris, Extr. Papav. Alb. āā gr. x. Ol. Cassiæ
gtt. vj. M. ft. Pilulæ xii.

Take two pills twice or three times a day.

FORM. 14.—*Pilulæ Ferri cum Galbano.*

℞. Ferri Sesquioxidi, Pilularum Galbani Compositarum, āā
gr. xxv. Extr. Humuli. gr. x. Ol. Cinnamon. gtt. viij.
Theriaci q. s. Ft. Pilulæ xii.

Take two pills twice or three times a day.

FORM. 15.—*Pilulæ Ferri cum Myrrha.*

℞. Ferri Sesquioxidi, gr. ii.
Pulv. Gummi Myrrhæ, gr. iii.
Theriaci q. s. ut fiat Pilula.

Take two pills three times a day.

TONICS WITH PURGATIVES.

FORM. 16.—*Pilulæ Aloes cum Ferro.*

℞. Ferri Sesquioxidi gr. i. Extracti Aloes Aquosi, Extracti Gentianæ Mollioris āā gr. ii. Ol. Menthæ Piperitæ gtt. i. ut fiat Pilula.

Take two pills twice or three times a day.

FORM. 17.—*Pilulæ Colocynthis cum Ferro.*

℞. Ferri Sesquioxidi gr. xviii. Pilularum Galbani Compositarum, Extracti Colocynthis Compositi āā ʒi. Theriaci q. s. ut fiant Pilulæ xii.

Take two pills once, twice, or more frequently during the day.

FORM. 18.—*Pilulæ Rhei cum Ferro.*

℞. Pilularum Rhei Compositarum ʒii.
Ferri Sesquioxidi ʒi.
Theriaci q. s. ut fiant Pilulæ xii.

Take two pills once, twice, or more frequently during the day.

FORM. 19.—*Pilulæ Zinci Compositæ.*

℞. Zinci Sulphatis gr. xii. Extracti Gentianæ ʒj. Ol. Anthemidis gtt. vj. ut fiant Pilulæ xii.

Take two pills once, twice, or more frequently during the day.

FORM. 20.—*Mistura Ferri Aperiens.* No. 1.

R. Ferri Sesquioxidi gr. x. Magnesiæ Sulphatis. Sodæ
Sulphatis āā ℥iv. Aquæ destillatæ ℥vj. M. ft. Mistura.

Take two tablespoonfuls twice or three times daily.

FORM. 21.—*Mist. Ferri Aperiens.* No. 2.

R. Ferri Sulphatis gr. x.
Magnes. Sulph. ℥iii.
Acid Sulph. dil. ℥j.
Infus. Gent. Comp. Infus. Rosæ Comp. āā ℥iv. M. ft. Mist.

Take two tablespoonfuls twice or three times daily.

FORM. 22.—*Mist. Ferri Muriatis.*

R. Infus. Gentianæ Compositi ℥vij.
Syr. Aurantii ℥i.
Tinct. Ferri Muriatis ʒxl. M. ft. Mistura.

Take two tablespoonfuls twice or three times daily.

FORM. 23.—*Mist. Quiniæ Disulphatis.*

R. Infus. Rosæ Compositi ℥v.
Tinct. Cardamomi Comp. ℥j.
Quiniæ Disulphatis ʒi.
Acid. Sulph. dil. ʒx. M. ft. Mistura.

Take one or two tablespoonfuls twice or three times daily.

FORM. 24.—*Mist. Ferri Iodidi.*

℞. Ferri Iodidi gr. xviii. Tinct. Calumbæ ℥j. Aquæ destil-
latæ ℥vij. M. ft. Mistura.

Take one or two tablespoonfuls, two or three times daily. A piece of iron wire should be kept in the phial, to prevent decomposition of the iodide of iron and precipitation of the sesquioxvd of iron.

CORDIALS, ANTISPASMODICS AND NARCOTICS.

FORM. 25.—*Mist. Ammoniæ Composita.*

℞. Ammoniæ Carbonatis Diss. Tinct. Castorei, Sp. Lavan-
dulæ Comp. āā ℥vj. Tinct. Hyoscyami ℥i. vel Syrupi
Papav. Alb. ℥iv. vel Morphix Acetatis gr. $\frac{1}{2}$ vel. j. Aquæ
Menthæ Piperitæ ℥vj. M. ft. Mist.

Take one tablespoonful three or four times daily. It may be unnecessary to add any of the narcotic ingredients.

FORM. 26.—*Mistura Castorei Composita.*

℞. Tinct. Castorei, ℥j. Sp. Lavandulæ Comp. ℥iv. Tinct.
Camph. C. ℥iv. M. ft. Mistura.

Take half a teaspoonful every three or four hours in a tablespoonful of water.

FORM. 27 —*Mistura Morphix Acetatis.*

℞. Morphix Acetatis gr. i. vel. ii.
Acid Acetici gtt. x.

Aquæ destillatæ ℥iii.

Tinct. Card. C.℥i. M. ft. Mistura.

Take five or ten drops occasionally ; frequently, if pain or spasm be urgent.

FORM. 28.—*Mistura Vini.*

From Guy's Pharmacopœia.

℞. Vini Albi, vel. Rubri, vel. Spiritus Gallici ℥vj. Ovorum Duorum Vitellos. Sacchari ℥fs. Olei Cinnamomi guttas iii. M. ft. Mistura.

Take two tablespoonfuls frequently during the day, if there be languor or faintness from debility.

FORM. 29.—*Mistura Cretæ Opiata.*

From Guy's Pharmacopœia.

℞. Pulveris Cretæ Comp. cum. Opio. ℥iij. Aquæ Menth. Pip. ℥ix. M. ft. Mistura.

Take two tablespoonfuls after every liquid motion.

FORM. 30.—*Julepum Potassæ Carbonatis.*

From Guy's Pharmacopœia.

℞. Liquoris Potassæ Carbonatis ℥j. Aquæ Menthæ Viridis ℥xi. M. ft. Mistura.

Take one or two tablespoonfuls in barley water or linseed tea, twice or three times daily.

FORM. 31.—*Infusum Serpentariæ Compositum.*

From Guy's Pharmacopœia.

℞. Serpentariæ Contusæ, Contrajervæ Contusæ āā ℥v.

Aquæ Ferventis ℥xvj. Post Macerationem in vase leviter clauso per duas horas, liquorem cola, et adde Tinct. Serpentariæ ℥ij. M. ft. Mistura.

Take three tablespoonfuls every four or six hours, occasionally adding to each dose if it be required.

Liquor. Ammon. Acet. ℥iv. vel.

Liq. Ammon. Sesquicarbonatis ℥xxx.

FORM. 32.—*Pilulæ Moschi Compositæ.*

℞. Moschi gr. xl. Pulv. Zinzib. Pulv. Valerianæ āā gr. vj. Camphoræ gr. xii. Conservæ Rosæ q. s. M. ft. pilulæ xii.

Take two pills every three or four hours.

FORM. 33.—*Pilula Sedativa.*

℞. Pulv. Opii. gr. ¼. Camphoræ gr. iv. Cons. Rosar. q. s. M. ft. pilula.

Take one pill every four or six hours.

NARCOTIC INJECTIONS AND SUPPOSITORIES.

FORM. 34.—*Enema Antispasmodicum.*

℞. Liq. Opii. sedativ. ℥xxx. Infus. Valerianæ ℥i. Mucil. Acaciæ ℥ss. M. ft. Enema.

The injection to be passed into the bowel by a syringe night and morning.

FORM. 35.—*Enema Contra Spasmas.*

From Dr. Copland.

℞. Camphoræ Rasæ gr. v.—x. Potassæ Nitratis ℥ii. Olei

Olivæ ℥j. Tere simul, et adde Infus. Valerianæ, Decocti
Malvæ. C. āā ℥v. M. ft. Enema.

FORM. 36.—*Enema Emolliens.*

From Dr. Copland.

℞. Flor. Anthemidis, Semin. Lini. Contus. āā ℥ss. Aquæ
fervid. ℥vj. Macera et cola; dein adde Opii. gr. ii. iii.
vel. vj.

Half this quantity to be used at a time.

FORM. 37.—*Enema Belladonnæ.*

From Dr. Copland.

℞. Fol. Belladonnæ Exsic. gr. xii. Aquæ Fervid. ℥vj. M.
ft. Enema.

In severe dysmenorrhœa, in retention of urine from spasm
of the sphincter vesicæ, or spasm of the rectum.

FORM. 38.—*Enema Olei Terebinthinæ.*

From Guy's Pharmacopœia.

℞. Olei Terebinth ℥ss. Ovi unius Vitellum. Tere simul,
et gradatim adde Decocti Hordei tepid. ℥x.

To be used once a day or more frequently.

FORM. 39.—*Enema Saponis Compositum.*

℞. Saponis Mollis. ℥j. Pulv. Opii. gr. iii. vel. vj. Aquæ
Ferventis ℥vj. M. ft. Enema.

Half or the whole quantity to be used once, twice, or three times daily.

FORM. 40.—*Enema Tabaci.*

From Guy's Pharmacopœia.

℞. Tabaci ʒj. Aquæ Ferventis ʒxvj. Macera per sextam horæ partem et cola.

One quarter or half the quantity may be used, and if necessary the injection may be repeated in an hour.

FORM. 41.—*Suppositorium Opii.*

℞. Pulv. Opii gr. $\frac{1}{2}$ vel. i. Sapon. Castiliensis gr. iii. M. ft. Suppositorium.

The suppository to be used once, twice, or thrice daily.

FORM. 42.—*Suppositorium Belladonnæ.*

℞. Extr. Belladonnæ gr. i. vel. ii. Saponis Castiliensis gr. iii. vel. iv. ft. Suppositorium.

To be used once or twice a day.

EMMENAGOGUES.

FORM. 43.

℞. Liq. Ammon. fort. ʒi. vel. ʒiss.
Lactis tepid. ʒxvj. M. ft. injectio vaginalis.

A third part to be passed into the vagina three times daily.

FORM. 44.

From Dr. Schonlein.

R. Aloes Socotorin. gr. x. Mucilaginis Acaciæ ℥j. M. ft.
Injectio intestinalis.

The injection to be thrown into the rectum two or three times a day.

FORM. 45.

R. Sinapis pulveris ℥ii.
Aquæ Ferventis ℥xvj. M. ft. Injectio.

A third part to be passed into the vagina three times daily.

CHAPTER VI.

OF MENORRHAGIA.

DEFINITION.—*Inordinate Menstruation, both as to the frequency of return, and the amount of the secretion ; in the majority of instances accompanied by direct loss from the uterine arteries.*

There are *two* forms of the disease.

First, Profuse Menstruation, either as to frequency of return, or the amount of the secretion, or both, without uterine bleeding.

Second, Profuse Menstruation accompanied by direct loss of blood from the uterine arteries, including *three* varieties.

a. Acute or active menorrhagia ; occurring in the plethoric and robust.

b. Passive or chronic menorrhagia ; the subjects of this variety being the delicate, hysterical, and exhausted females ; and,

c. Congestive menorrhagia ; generally met with at the middle or more advanced periods of life.

Profuse Menstruation, either as to frequency of return, or the amount of the secretion, or both, without uterine bleeding.

History and Symptoms.—I may at once observe, that the hemorrhages of abortion, pregnancy, and parturition, and of the various organic diseases of the uterus, do not come within the scope of this chapter; and to avoid a perplexing multiplication of names, I include profuse secretion of the catamenia, as a form of menorrhagia, as it is rarely a disease of long continuance, unaccompanied by bleeding directly from the uterine vessels. If we reflect on the large supply of blood constantly furnished to the uterus during the greater part of life, and which is every month, for a functional purpose, still further augmented, it is not at all surprising that the limits of secretion are occasionally exceeded, and that, instead of a fluid only partially sanguineous, its usual product, pure blood, should be discharged from its vessels. Thus, so long as the discharge, even if it be profuse, is not blood, menstruation only exists; but, if the secretory function is either altogether or only partially superseded from excessive determination to the uterine vessels, their orifices may give way, and, as then they will permit blood to pass unchanged, menorrhagia is established.

Profuse menstruation and menorrhagia are neither confined to one class of females nor to one age. The young are less liable than those more advanced in life. The plethoric and robust less frequently than females of susceptible and feeble constitutions.

Still, circumstances may induce these diseases in every class, the periods of reproduction and catamenial cessation being more obnoxious to them than all others—climate and peculiarity of system being criteria of importance. In northern and cold countries, the amount of menstrual secretion which is only natural here, would be regarded as excessive; and in hotter climates, what we consider profuse menstruation, would be strictly normal. In one individual, or in the female branches of a whole family, five, six, or seven ounces may be only a healthy amount of discharge, while in others such a quantity would be morbidly profuse. It follows then, that in the one case, health not weakness would accrue, while in the other, weakness not health would be the result.

The question, therefore, whether menstruation be healthy or inordinately profuse, will mainly depend on climate and idiosyncrasy, and especially on its constitutional effects. If it occur during pregnancy and lactation, it is unnatural and in excess; and on several occasions, in married women more especially, I have known it recur after long periods of suspension, so profusely, as to have been mistaken for abortion. The way in which profuse menstruation comes on is various. I have now a patient in whom, for some months, the discharge, without any admixture of coagula, has every second week set in suddenly and with a large gush; this discharge, with an interval of only a few hours, being repeated for four, five, or six days. This individual is thirty-

one years old, and unmarried; and so far as I can ascertain, is without the slightest evidence of structural disease; but she is anemiated and feeble. More frequently, however, the secretion is excessive from its continuance, lasting ten or twelve days, or is too early in its return. Young and single women are more prone to the latter; while married females, weakened by child-birth, undue lactation and leucorrhœa are obnoxious to the former variety. Leucorrhœa, indeed, has much to do with profuse menstruation, and is generally present, either in the catamenial intervals, or has existed prior to the excessive menstruation. Dewees states that in America he has scarcely ever known a case of genuine profuse menstruation. Such examples being almost invariably accompanied by the discharge of pure blood. I do not doubt the accuracy of this statement; but a similar statement of this country, and of my own experience, would not be correct, as instances, and not a few, have come under my own observation.

The symptoms are precisely those induced by a drain on the sanguineous system, varying in degree, according to the amount, the continuance, and the more or less frequent recurrence of the discharge. At first languor, inactivity, and sensations of weakness, rather than pain across the loins, are complained of; subsequently there is severe and almost constant aching in the back and lumbar region, coming round to the hips and front of the thighs, and to the lowest part of the abdomen. The face

is pale, sometimes bleached and cadaverous. The patient suffers from nervous headache, the pain being often confined to one spot, tinnitus aurium, throbbing of the temples, frequent vertigo, and where the loss has been excessive, a sensation as though a clock were ticking in the head. The heart acts feebly on small quantities of blood, and there is in consequence chilliness of the surface and coldness both of the hands and feet. If the malady continue, and particularly if there be much leucorrhœa, the whole series of symptoms now described becomes more distressing. The disordered state of the brain from a diminished supply of blood, sometimes closely resembles that arising from repletion. From ignorance or a disregard of this fact, giddiness, confusion, and a sensation of falling from sudden movements, in turning or lifting the head, have excited a fear of apoplexy, and the bleeding and antiphlogistic treatment which have been practised, have ensured a still further aggravation of the original disease. Nor will the more serious indications dependent on excessive catamenial discharge, be confined to the brain alone. The lumbar and central pains become more decided, the headaches more agonizing, the derangement of the stomach and bowels is permanently increased, and there is almost constant pain, felt in some part of the course of the colon, affecting either the sides or centre of the abdomen. There is palpitation, and all the symptoms so graphically described by Dr. Addison. Occasionally, in some of the worst examples, there

is confirmed diarrhœa. I have many times seen œdema, and in one case, where the patient had long resided in the East Indies, and was much exhausted by frequent abortions, there was general anasarca. Nervousness almost to insanity, melancholy, and, according to some authors, epilepsy have resulted from the disease. So far as my observation has gone, a vaginal examination has revealed nothing beyond a soft, flabby condition of the vagina and uterus, leucorrhœa, and an os slightly more patulous than natural, but without tenderness or induration. The consequences of profuse menstruation, if protracted, are almost sufficiently evident from the detail of the symptoms. Dr. Marshall Hall, in his "Essay on Blood Letting and its evils," has fully explained them. I may, however, remark that they are precisely of the same character as are produced by hemorrhage from any other part. Of course the probability of early cure will greatly depend on the severity and repetition of the attack. In the slighter cases little treatment is required, and the disease often subsides almost spontaneously; and even in the more aggravated examples, suitable and persevering treatment generally avails. A greater proneness to abortion, if the patient become pregnant, and a disposition to prolapse of the uterus and vagina, are results of the malady.

Causes.—Delicacy and debility of system and undue plethora conduce to the disease. The former frequently; the latter only in few instances. In all classes these causes may be brought into activity by

cold, inordinate physical effort, and mental excitement. In married women, repeated labors and abortions, and undue suckling, lay a foundation for the malady. In all, excessive use of the genital organs may lead to this or any other form of menorrhagia, and the disease has often had its origin in hemorrhage occurring after labor.

Diagnosis.—It is by no means difficult to distinguish this from the other forms of menorrhagia by the absence of coagula. If the discharge does not clot, it is still menstrual secretion; if on the contrary, like blood lost from other parts of the body, it separates into serum and crassamentum, it is no longer a case of simple catamenial excess. The freedom of the patient from organic uterine disease will be satisfactorily ascertained by a vaginal examination.

Treatment.—This will vary in females of different constitution, and in all there will be a marked distinction between the measures adopted during the discharge itself, and in the menstrual intervals. In *plethoric and robust* individuals, the larger amount of secretion is often salutary, and may be allowed to continue in many instances till it naturally subsides. Where treatment is necessary, moderate venesection may, a few days before the expected period, be practised; more frequently local depletion, by cupping on the loins, or leeches to the pudendum or perineum, and in some instances to the cervix uteri. When the loss is really excessive, the patient should be confined to the sofa or a mattress,

strictly maintaining the recumbent posture, and the diet should be unstimulating and cold. Saline purgatives, with dilute acid and nitre, may always be exhibited; more rarely digitalis and superacetate of lead (vide formulæ). The apartment should be cool, the patient being lightly covered by bed clothes, and excitement of every kind must be carefully avoided. In some severe cases it may be necessary to apply cold locally: iced water, and ice itself, wrapped in bladders, are used with this view. It has been thought right to inject cold stimulating fluids into the vagina, and, in a very few examples, even into the uterus, and to plug this canal as far as the os. I do not say that such extreme measures are never demanded, but happily, if judicious treatment be early adopted, they will rarely be required.

In the *interval of menstruation*, a spare, unstimulating, and only moderately nutritious diet, and frequent saline aperients, should be enjoined. Where there is decided plethora, shown by a red and flushed countenance, swimming in the head, and a full, hard and quick pulse, small and repeated bleedings, are beneficial. Daily exercise by walking or riding, although the former is to be preferred, and the avoidance of heated apartments and luxurious indulgences, will contribute to a healthier state of the system generally, and particularly of the uterus.

In *delicate, pallid, and feeble* patients, the disease must be treated differently. Here the excess of secretion, so far from being salutary, as it occasionally is in the plethoric and robust, is decidedly injurious;

every return, by weakening the uterine capillaries, aggravating the anemia. Instead of depletion and antiphlogistic means, ammonia and small doses of the acetate of morphia, and the *mistura vini* of Guy's Pharmacopœia, are to be employed; and where the loss is large, no remedy will generally be more efficient in checking it, and in shortening the period of the flow, than the ergot. It may be given either in powder or tincture; of the former, five grains, and of the tincture, thirty drops every six or eight hours. Cold applications, and astringent injections, (*vide formulæ*,) into the vagina have been already mentioned. Dewees recommends, for this purpose, sugar of lead and laudanum, and speaks highly of elixir of vitriol and laxatives. Mackintosh enjoins the use of an enema, containing a scruple of the sugar of lead. All the remedies are intended, either by lessening the activity of the general circulation, or by securing the contraction of the uterus, to diminish the quantity of blood sent to it, and thus to curtail the amount of secretion.

In the *interval* such measures must be employed as shall preclude the return of the malady. If it can be attributed to over lactation, excessive leucorrhœa, or frequent abortion, the child should be weaned, the leucorrhœa cured, and the risk of pregnancy for a time prevented by abstinence from intercourse. Chalybeate water, and mineral tonics, a residence by the sea, or at some of the various spas in this country or abroad, salt-water baths, of any kind, most agreeable to the patient, vaginal injec-

tions, sponging with cold salt-water all over the loins and hypogastric region, are well calculated to relieve local weakness and to aid the more direct and powerful measures.

Second, Profuse Menstruation, accompanied by discharges of blood directly from the uterine vessels, including three varieties.

a. Acute or active menorrhagia; occurring principally in the plethoric and robust.

History and Symptoms.—This form of the disease is much less common than the passive and congestive varieties. It occurs most frequently in plethoric married women who live generously, and in whom the circulation is active. In such individuals exposure to cold or wet during menstruation, or any circumstance deranging their health, may induce fever, inordinate action of the heart, congestion and subsequent rupture of the uterine capillaries, and menorrhagia. I have also occasionally seen inflammatory and spasmodic menorrhagia, in young, florid, and robust unmarried girls: although these varieties are really more rare than the others, I believe they often exist unnoticed. The undue plethora, on which they mainly depend, is relieved by this larger periodical loss, and if it do not occur too often, this morbid state may be altogether cured by it. In healthy women also, a profuse catamenial discharge, even when it is attended by pain, is often long disregarded, such an event being generally viewed in a favorable light. It is not, therefore, till the loss is really excessive and somewhat alarming, or till it

has induced marked debility and a pale, wan countenance, that medical aid is sought. In active menorrhagia there generally exist, immediately before the expected period, and occasionally for a few days prior to the flow, considerable tension and fulness within the pelvis, accompanied by a feeling of weight and throbbing in the uterus itself. The mammæ often sympathize, becoming tumid, hot and tender on pressure, and the external genitals are sometimes slightly swollen and painful. The pulse is quickened, there is oppression of the head, and often decided head-ache, with sympathetic fever. In this way the acute or active form of menorrhagia is ushered in and is throughout characterized by a predominance of inflammatory or spasmodic symptoms, or by a combination of both. Where inflammation is present, there will be fixed pain in the uterine region; a hot dry skin, and a frequent hard and full pulse. Where spasm prevails, the pain will not be constant; but having continued a longer or shorter time, and often most severely, it will subside, and, after an interval, again recur with throes resembling the pains of labor. The discharge, too, is equally variable, ceasing for short periods, during the pain, and returning when it subsides. The pulse, during the spasm, is contracted, irritable, and quick; afterwards it becomes softer and slower, giving proof by this rapid change, of a state of system, neither of inflammation nor debility, but of irritation. The progress, duration, and severity of these attacks are extremely variable. Sometimes the discharge comes

on and continues by gushes, and numerous coagula are expelled. The patient, in many instances, is thus relieved; the head-ache, tension, and pain in the uterine region are quickly diminished; the pulse is softer and less quick; the skin cooler and moist; and the remainder of the period is passed over with tolerable comfort. In the more protracted and aggravated cases, the discharge often continues for three, four, five, or six days, not without diminution, but still with such a proneness to excessive return, that the patient is compelled to avoid exertion, and to maintain, almost constantly, the recumbent position. On the subsidence of the flow, she is weak and exhausted, and several days elapse before she regains her usual freshness of countenance and strength of pulse. It is easy to mark the transition from this to the passive form of menorrhagia; for although, at first, the recurrence of the events just now described, may not seriously impair the health, yet after a time, the loss produces a marked impression on the system; the flow lasting longer, and the number of days between the catamenial periods being so diminished, that scarcely is one attack over, before another approaches. Thus the active and acute variety is merged in the passive form of the disease.

Causes.—From the history already given, it will be inferred that menorrhagia is generally dependent on morbid conditions of the constitution; although its causes may be accidental or local. Thus, while the active form is mainly associated with a plethoric

habit, and does, under such circumstances, afford relief, it may still be frequently traced to morbid uterine activity and excitement, arising from local injuries, such as blows or falls, sexual excesses, repeated abortions and leucorrhœa; irritation of the bladder and of the intestines generally, and especially of the rectum, from hardened fœces, hemorrhoids, worms, tenesmic purging, constant and even occasional constipation. Doubtless such causes will be rendered additionally injurious by too protracted and severe mental and physical efforts, rich living, heated apartments and soft beds, indolence and too much sleep.

Diagnosis.—The distinction between the active and inflammatory or spasmodic menorrhagia, and the passive form of the disease, is not always easily made. In the beginning there is little difficulty; but when, from frequent repetition, debility exists, we may err. Still the countenance, the pulse, and the “tout ensemble” of the patient are such that we shall not remain long in doubt. Nor must it be forgotten, that on a correct discrimination of these different conditions, the success of the treatment will greatly depend. It is true that active menorrhagia may co-exist with debility, the uterine vascularity and circulation being, from local causes, morbidly increased; but it would be a great mistake to treat this latter condition as we should that form of the malady where the discharge was dependent on general fulness and activity. If to aid the diagnosis the uterus be examined per vaginam, there will rare-

ly be discovered any marked change in its volume or position, although I have noticed some fulness and heat about the cervix and body of the organ.

Treatment.—This is scarcely different from what has been already enjoined in profuse menstruation, occurring in plethoric individuals, vide page 198. But I may remark, that the employment of smart drastic purges, (vide formulæ,) often does great good. The late Dr. Cholmeley, of Guy's, relied almost exclusively on their exhibition; and he has frequently, as he passed through the wards, pointed out cases entirely cured by these alone.

In *spasmodic menorrhagia*, to which I have already referred, the pulse is irritable and quick, not hard and full. The system is not plethoric, nor the pain constant, (vide cases;) but it subsides and again recurs. Here bleeding, nitre, and digitalis, fail to relieve; and recourse must be had to anti-spasmodics, anodynes, and occasionally to alteratives. It is not always easy at once to distinguish this form; but if antiphlogistic means have been tried unsuccessfully, the patient will often be cured by remedies of a different class. Dr. Gooch says, "that a lady laboring under spasmodic menorrhagia, went through the whole routine of antiphlogistic treatment without any benefit. I then gave her, he adds, one grain of ipecacuanha every hour; in eight hours she became nauseated and sick, and the discharge immediately ceased. This state of nausea was kept up for a day or two, and the discharge did not recur. When you have a case of menor-

rhagia, attended with a quick and irritable pulse, the pain subsiding and recurring, you may be certain that it arises from spasm or irritation, and that it will be relieved by antispasmodic remedies. The two best are ipecacuanha taken into the stomach, and assafœtida, with opium injected into the rectum. A grain of ipecacuanha is to be taken every hour till nausea is produced ; which state must be maintained for a day or two, by repeating the same dose as frequently as may suffice for this purpose ; and quiet local irritation in the uterus by injections of assafœtida and opium, by the enema antispasmodicum, form. 34, 35, 36, 37, or 39, to be found at pages 188 and 189. There is a very marked connection between the pain and the discharge ; for if you can relieve the one, the other will cease."

Nor must the treatment in the interval be disregarded ; in profuse menstruation, unattended by real uterine hemorrhage, allusion has been pointedly made to its extreme importance. If the bleeding and the antiphlogistic regimen, practised as a period approaches, be exchanged, after the disease subsides, for nutritious diet and wine, the malady will not only continue, but it will become aggravated, and the loss, during menstruation, may be so large as to excite considerable apprehension. Many patients protract the menorrhagia by such error, and, by repeated discharges, the passive form is induced. A nice distinction is necessary here : thus, several times when I have thought that the loss has depended on debility, and I have unsuccessfully ex-

hibited the ergot and tonics, I have gone back to the antiphlogistic plan, and have cured the patient. Nor let it be forgotten, that local depletion is sometimes most beneficial; especially in those cases where, in the absence of general plethora, there is local uterine fulness.

b. Passive or chronic menorrhagia; the subjects of this variety being delicate, hysterical, and exhausted females.

History and Symptoms.—This is the most common form of menorrhagia, and approaches in frequency to chlorosis and amenorrhœa. A partial explanation may be found in the want of attention to early menstrual profusion, and in the too indiscriminate use of wine and other stimulants. The various degrees in which it exists, deserves notice. In some the excess may be so slight, as hardly to produce any morbid effect; and from this stage onward, to examples of marked hemorrhagic prostration, every shade of the complaint may be witnessed. I have in my recollection several instances where a fatal result seemed highly probable. An additional reason is thus supplied for careful investigation, prior to and during the treatment, by tonics and wine; and where such measures are determined on, their use must be watched, modified, and occasionally suspended. An attack of fever, or uterine congestion, will demonstrate the propriety of this admonition, and prove that the management should rest on principle, and that it must not be pursued merely as a matter of routine.

I need scarcely mention the class of women most liable to passive menorrhagia—those originally delicate, or who have become so from any of the causes already enumerated at the commencement of this chapter, and not the robust and plethoric, are its subjects.

The symptoms are precisely those of morbidly profuse menstruation, fully pointed out at page 195.

Causes.—The same as in profuse menstruation.

Diagnosis.—The presence of clots in the discharge, or the stiffening of the linen by its flow, sufficiently explain the character of the disease. If the uterus be examined, it will rarely be found increased in size; but its cervix and os, as well as the vagina, are generally soft, the former having lost its close, welted feel, and the whole being bathed in leucorrhœal discharge. Such an inquiry will also reveal any structural lesion of these parts, should it exist.

Prognosis.—It may perhaps be unnecessary to say much on this point, as a fatal result is exceedingly rare; but, as the long continuance of the malady may induce dropsies of various cavities, and may call into play morbid tendencies about other organs, a too confident opinion should not be given. Our anticipations of cure should spring not only from the tractable character of the malady, but from a conviction that the patient will strictly and perseveringly carry out our measures of relief.

Treatment.—Reference must be made to page 198, where the means generally successful in arrest-

ing excessive menstrual flow are enumerated. Rest in the recumbent posture, during and previously to the attack, either in bed on a mattress, or on the sofa, is indispensable. Without it the best devised treatment will fail. At first, patients disregard the injunction; but the continuance of the discharge, increasing debility, and the attendant evils, compel obedience. Astringent injections should rarely be used during the few first days of the menstrual period, as they often produce uterine spasm; but when coagula are passed, either alone or mixed with the catamenial fluid, the secretory function is either partially or entirely suspended, and injections may then be highly beneficial, (*vide formulæ.*) Some patients derive little or no advantage from them—others use them so partially, as to preclude any probability of benefit—while not a few ascribe pain, an unusual symptom in passive menorrhagia, and increased discharge to their exhibition. It is essential that the patient lie, when the injection is thrown into the vagina, that the pelvis be raised by placing a sofa-cushion under the hips, so that the fluid may easily reach the upper extremity of this canal, and that whatever quantity be injected, it shall be retained for ten or fifteen minutes in direct apposition with the parts. To effect this, the nurse should make firm pressure on the vaginal orifice by a napkin accurately applied. Where these conditions are complied with, and where occasionally, in susceptible and irritable women, the injections are slightly warmed, so as to prevent the probability of the oc-

currence of uterine spasm and pain, I know practically that great good will generally result from their administration.

But life is occasionally well nigh destroyed by excessive menorrhagic loss—the patient being reduced to the same state as by uterine hemorrhage after labor. If the practitioner has reason, from its previous occurrence, to apprehend a renewed visitation of this kind, every preventive measure must be adopted. Not only must the treatment in the interval be carefully followed out, as directed at pages 200 and 201, but absolute rest must be enjoined for several days prior to the expected catamenial return; sexual excitement, physical exertion, stimuli likely to affect the vascular system and the uterus, and intestinal constipation, must all be carefully avoided. During the flow, if alarming loss of blood seem to be approaching, the ergot and opium, (vide formulæ) injections of cold water and astringent lotions into the rectum, and, above all, plugging the vagina, as far as the os, must be practised. Soft *dry* tow, slowly introduced in small quantities, till the passage is entirely filled, forms the best tampon or plug, and it may be allowed to remain unchanged for twenty-four or thirty hours. The patient will probably object to such a remedy, and suffer slightly from its use; but neither of these circumstances are sufficient to justify the practitioner in giving it up. A silk handkerchief, lint, or linen, may be used, but they must be dry. If wet or saturated with moisture, their introduction is

painful and difficult: dry soft tow, in small pieces, is certainly far better. I have seen two cases, where if the apparatus for transfusion had been within reach, I should have used it. Both patients, however, gradually recovered. It may be urged, that injections of cold or medicated water into the uterine cavity, would be important. I confess, without knowing that the mucous lining was healthy, the fear of subsequent inflammation would, with me, generally prevent their employment. I am, however, convinced that, in excessive menorrhagia, plugging is not sufficiently often resorted to. It need scarcely be enjoined, that if the patient is reduced to a very low ebb, or if there be prolonged and profound syncope, she must be moved with the greatest care. In the syncope following excessive puerperal bleedings, such precaution is all important, as asphyxia might result from its non-observance. It is scarcely less necessary in the exhaustion produced by excessive menorrhagia.

c. Congestive menorrhagia, generally met with at the middle or more advanced periods of life.

History and Symptoms.—On this form of the malady enough attention has not been bestowed. And yet, it differs so much from the others, that it is a matter of surprise that its peculiarities should have been only slightly noticed. It continues long, occasionally for several years, (vide cases,) and frequently in alarming excess. It is often preceded and followed by large watery and leucorrhœal discharges; and pain in the uterine and lumbar regions

is a common accompaniment. Its sympathetic effects on the brain, lungs, and heart, are occasionally severe ; and, where the disease has continued long, there is generally coldness of hands and feet, a feeble and quick pulse, and an anxious pallid and sunken countenance. The alterations in the size and feel of the uterus, which form a part of the disease, cannot, at this period of life, be recognized, without some alarm. The malady is not confined to one class of women. The plethoric are not, as far as I know, more prone to it than the debilitated and irritable. I have rarely, if ever seen it, before thirty-eight or forty years of age ; but I have several times met with modified attacks, independently of organic complications, after menstruation might have been supposed to have ceased.

In the milder instances, the symptoms already described, terminate after a more or less protracted continuance in the entire cessation of the function ; but in other and more protracted examples, the symptoms are so extreme, as to excite real apprehension. The recurrence of the bleedings is uncertain, although in general, a catamenial period will be partially observed. Occasionally the loss continues for many weeks or months, without any complete cessation : the only appreciable change consisting in a diminished flow, or the discharge becomes either aqueous or leucorrhœal, and perhaps slightly or offensively odorous. In many cases there will, at the expiration of a fortnight, or midway in the interval, be a peculiar bearing, acute pain in

the lower part of the uterus. Several of my patients have noted this pain very accurately, and have correctly regarded it as indicative of a repetition of the menorrhagia. This symptom has occurred too often, to allow me to doubt, that it is in some way connected with the affection. Dr. Churchill mentions that in most, if not all the cases he has seen, there was considerable dysuria, and that, in several, it was necessary for the patient to lie down before the bladder could be completely evacuated. Irritation about the neck of this viscus, extending along the urethra to its orifice, is common; but the dysuria, especially to the extent related above, I have rarely met with. Nor must it be forgotten that after these morbid occurrences have repeatedly taken place, and when every thought of pregnancy has been given up, conception has occurred. Such an event, for a time at least, and perhaps permanently, cures the affection. It is therefore important to bear in mind its possibility. I have known two examples of healthy pregnancy under these circumstances, after an interval of five or six years from the former accouchements. Headache, embarrassed respiration, bleeding from the nose, sometimes excessive, dyspepsia, impaired appetite, and emaciation, are frequent concomitants: after all, these various mischiefs may only be temporary. The function, on whose morbid condition they all depend, is itself waning, and a few more months may secure its permanent suspension. Thus, sometimes, even with only domestic care, and often

with proper medical treatment, the affection declines, and eventually the patient regains more health than she has for a long time enjoyed. But this is not always so. Unhappily there are cases where the hemorrhages, and their attendant evils, continue for many months, even for several years, inducing a strong belief that organic disease must really exist; nor must we forget that malignant changes do, although rarely, develope themselves. Even in their absence, life is, now and then, eventually destroyed by exhaustion, arising from the repeated bleedings, by phthisis, or by dropsies of some of the great serous cavities. Anxious inquiry is directed to the probable time of final cessation, and it is often asked, how long these bleedings may continue when they are not connected with structural disease? In many instances, the function ceases at forty-four or five; in more, at forty-seven, eight, or fifty; in a few, at a much more advanced period, and in fewer still, at thirty or between thirty and forty years of age. I confess my inability to answer the latter question; but I have met with more than several instances, where hemorrhages, alarming in degree, have continued for twelve, eighteen, twenty-four, and forty-eight months, and have ultimately declined, and the sufferer has regained good health.

It is right in every protracted hemorrhage from the uterus to *examine*. By this alone, and I allow that even then we frequently fail, can we expect to ascertain whether there be polypus, a submucous

tumor, or so much increased bulk as to render the existence of organic lesion highly probable. In the majority of the examples of congestive menorrhagia, I believe that increased uterine bulk, fulness of the cervix, and openness of the os, constitute the whole of the diseased change.

Pathology.—Congestion of the uterine vessels is the explanatory cause of these bleedings. In some instances, there is an unusual and excessive accumulation of blood, and then it is not at all improbable that some of the branches of the uterine arteries, ramifying on the mucous membrane, give way. In submucous tumor of the womb, these vessels are abnormally large, and are by their rupture the source of frequent hemorrhage.

On the whole, the symptoms are indicative of slow progress, and lead to the conclusion that the disease is of the passive kind. The affection is probably dependent on the peculiarity of age—the period having arrived when this most important function is about to cease. I have already noticed its supposed frequent complication with organic disease: nor is it possible not to feel anxiety on this point, when we remember that vessels and tissues in a state of nearly constant congestion, become hypertrophied, and liable to the invasion of structural and malignant change.

Diagnosis.—It must not be forgotten that losses of blood occur in connection with other states of the uterus than the various forms of menorrhagia. Approaching abortion is often supposed to be menor-

rhagia; nor is the mistake corrected, till the ovum is expelled, and the hemorrhage ceases. I lately saw a case, and it is unnecessary to mention the more common occurrences of this kind, where, from the emaciation, bleached countenance, and exhaustion, I had formed a most unfavorable opinion, the flooding having continued, although not excessively, for nearly six months. On examination, I found the uterus large, and the lips of the uterine aperture swollen, but not patulous. The idea of pregnancy, as the patient was forty-four, and had not borne children for several years, did not occur to me. I prescribed some medicine containing ergot, and I gave a doubtful opinion. After taking three doses, she expelled a blighted ovum, and in a few months entirely, although with difficulty, recovered her health.

"I was called," says Dr. Gooch, "in the earliest part of my practice, to a lady who had for a considerable time a dropping from the uterus, which had produced a bleached, cadaverous countenance, cold hands and feet, and great debility. On examination, I found at the upper part of the vagina a little long projecting tumor, which I thought might possibly be a peculiar formation of the cervix uteri. I was afterwards called in great haste to see her, and, on my entering the bed-room, she said there was something coming away; and, on examination, I found the leg of a foetus in the vagina. I speedily delivered her of a foetus of about four months growth; the placenta soon followed, and the hemorrhage ceased. This was a blunder of mine; for

that which I supposed to be the cervix uteri, was no other than the foot of the foetus, just beginning to protrude through the os tincae."

The diagnosis of menorrhagia from pregnancy is important : but not so important, nor so difficult, as its distinction from some of the more concealed organic diseases. Corroding ulcer, cauliflower excrescence of the os, ulcerated carcinoma of the cervix and polypus, descended into the vagina, are easily made out by a common examination ; but whether protracted, frequently recurring, and dangerous hemorrhages arise from uterine congestion, or from submucous tumor, a polypus yet retained in the uterine cavity, or from organic disease of the mucous lining itself, it is by no means easy to determine. Often in the course of these hemorrhages, there is so much pain, such apparent traces of malignant disease about the face, so much emaciation, and such very trivial and temporary benefit from every remedy used, that in despair one believes, that it must be a malignant affection, (vide case.) After a time, however, and perhaps unexpectedly, the bleedings partially cease, the pain diminishes, and the patient's health is improved. A vaginal examination reveals nothing beyond what has been already mentioned, and hope is again encouraged. Thus a favorable diagnosis will mainly depend on the healthiness of the uterus, so far as the finger can examine its structure—on the absence of progressive and marked emaciation—on diminishing, at least not increasing, hemorrhages ; on the general concurrence of

the bleedings with the menstrual periods; and on the lessened volume of the uterus during the menstrual intervals. Other circumstances, which cannot be accurately expressed, but which form a part of that unwritten and incommunicable tact, acquired by all observant men, will aid the judgment. A strumous constitution, glandular tumours in other parts, hard tumours of the fundus or body of the uterus, broad ligaments or ovaries, increasing hemorrhages and uterine pain, a gradual giving way of health, and the absence of any beneficial effect from remedies, point to an unfavorable termination, and lead to the conviction that there is beyond the reach of an examination, by the finger or speculum, some malignant structural change.

Prognosis.—Dr. Churchill says, “of all the cases I have seen, none have proved fatal, either directly or indirectly.” This is more than I can affirm. Happily the malady is generally cured, or perhaps it would be more correct to say, that as the catamenial function ceases the bleedings cease also. If there be no latent tendency to malignant or pulmonary disease, it is not likely that such will occur. And it must be allowed, that women do sustain excessive and long continued uterine hemorrhages, without a fatal result. But let it not be supposed that these formidable losses do not seriously injure the health. They deprive the body of that blood by which its solid structures are nourished, and thus lay the foundation of uterine softening. There is

also a probability of dropsy, and the patient may be destroyed by phthisis.

Treatment.—So much has been already said, that it is scarcely necessary to enlarge here. In the hemorrhagic intervals, if there be local or general plethora, a small bleeding, cupping on the loins, leeches to the anus or vulva; and if there be fulness, heat, and pain about the cervix uteri, scarification, as already recommended, may be practised. Sexual intercourse and stimulants, mental excitement and physical effort, must be avoided for ten or twelve days before the periodical returns. When there is increasing pallor, œdema, threatened dropsies, softening of the cervix, and aggravated debility,—sea air, a mild but nutritious diet, consisting of animal food and milk, or malt liquor, must be enjoined. Where there is universal coldness of surface, especially of the extremities, frictions, by stimulating embrocations, the flesh-brush, and horse-hair gloves, the wearing of flannel, and worsted stockings, are indicated. The salt hip-bath, the local salt shower-bath, applied night and morning, by a common garden watering pot, over the hypogastric and lumbar regions, are often advantageous. Nor is the injection of cold water, once or twice a day, into the rectum, to be forgotten. Astringent vaginal injections are deservedly relied on, especially if carefully administered, as already urged, (page 209,) during the intervals. Still there are cases, and occasionally I meet with a good many, where cold injections cannot be borne. Local fulness, excite-

ment and pain, follow their use, and sometimes I have attributed to their employment an earlier and larger return of the hemorrhage. They are most beneficial where there is copious leucorrhœa, and from the cure of this morbid secretion, good may be invariably anticipated. It is to be remembered, that the unmarried are liable to congestive menorrhagia, and I have often thought that their cure was more difficult and protracted, and their hemorrhages larger, than where many children had been borne ; but I am not prepared to give a positive opinion. During an attack, the patient should lie on a hard mattress, be kept perfectly quiet, covered lightly with bed clothes, and have warmth applied to the feet and legs ; hot bottles, or mustard poultices may be used for this purpose. Her drink must be unstimulating and cold, except where there is syncope, and then wine in small quantities may be given.

I have for several years tried the ergot in these cases, and I think highly of its efficacy ; but there are more than a few instances in which it has entirely failed, and several in which it has induced spasm, and increased bleeding. I have two patients who, for these reasons, always request that it may not be used. I prefer the tincture to the powder, and I give thirty drops for a dose. Frequently lead and opium, turpentine, muriated iron and opium, (vide formulæ,) have proved serviceable. Cold to the lower abdomen and genitals, and particularly

plugging the vagina with soft tow, where the loss is excessive, are effective remedies.

Few cases will be introduced; very few of everyday occurrence. But where the history and symptoms, the pathology or treatment of menorrhagia require illustration, I shall not scruple, as briefly as possible, to confirm the text by their insertion.

CASE 29.

SPASMODIC MENORRHAGIA.

July 24, 1836. I visited Mrs. —, æt. 37, a widow, residing at Walworth, and under my care as an out-patient of Guy's Hospital. She has never borne children, and is of spare habit, but neither weak nor emaciated. She has been menorrhagic for several years, and habitually suffers from dyspepsia, earning a livelihood by close application to her needle. Menstruation occurred two days since, and for the last twenty-four hours, the paroxysms of pain and spasm about the uterus have been very severe. Much blood has been lost by gushes, and many large clots have been expelled. The spasm still continues, and on my visit I found the pulse quick (130) and irritable, but neither full nor hard. She is chill and faint; the countenance pallid and anxious; has had no sleep since the commencement of the attack, although there have been rather long intervals free from pain. At the commencement of the disease, three years since, she was bled and purged, but without any other than an injurious effect. Urine scanty and high colored.

I ordered hot poppy fomentations to the abdomen, and the following mixture.

R. Pulv. Ipecac. rad. ℥i. Tinct. Camph. C. ʒii. Mist.
Camph. ʒxiv.

M. ft. Mistura. Take one teaspoonful every hour till
nausea is produced.

In the evening she was considerably relieved ; had taken six doses of the ipecacuanha mixture, and was completely nauseated. The pain occurred at more distant intervals, and the flooding had nearly ceased. In a few days the menorrhagia passed off, and she recovered her accustomed health. For several subsequent periods she pursued this plan ; and when I saw her six months afterwards, she informed me, that the menstruation was performed so naturally, that she had entirely laid aside the use of the medicine.

There are numerous examples of spasmodic menorrhagia, especially in crowded manufacturing towns. The treatment by bleeding and purging is too indiscriminately adopted ; nor is it, at least very often, till the patient's health is decidedly injured, that a different plan is practised. I have repeatedly cured this form by nauseating and anodyne remedies.

CASE 30.

CONGESTIVE MENORRHAGIA, NEARLY FATAL.

IN 1833, I was asked by Mr. Rendle of Southwark, formerly a clinical clerk of Guy's Hospital, to see the following case :—

Mrs. ——— æt. 42, of spare habit, the mother of several children, and compelled to work hard as a washerwoman, has long suffered from menorrhagia,—dating its commence-

ment from the birth of her last child, now three years old. At times the bleedings have been less in quantity, but they have never entirely ceased. Till lately, the menstrual period has been nearly observed; but recently, the losses have occurred at very short intervals, and she has been weakened and emaciated by their excess. Two days before my visit, menstruation commenced, with sensations of fulness and weight in the hypogastric region. For twenty-four hours there was no hemorrhage; but soon afterwards, large coagula passed, and an immense quantity of blood was lost. On our entrance, we feared she was dying. The pallor and coldness of the face and extremities, the scarcely perceptible pulse and breathing, and the clammy perspiration of the surface, betokened the greatest danger. We stood over the bed, doubtful whether she would live or die. We feared to move her, least fatal asphyxia should ensue; nor was it till we had waited several minutes, and she had opened her eyes and breathed more distinctly, that we dared to give some ergot and brandy. At this moment, I wished to transfuse, and had the apparatus been at hand, we should certainly have injected blood into her veins. As this could not be done, we repeated the ergot and brandy (*vide formulæ*) several times, and the vagina was plugged. No further bleeding occurred, but the recovery was very slow.

CASE 31.

PROTRACTED MENORRHAGIA, TERMINATING FATALLY, BY
PHTHISIS AND ASCITES.

Mrs. T., æt. 45, an out-patient of Guy's,—is the mother of eight children, and of dark complexion.

July 10, 1835. Has suffered from menorrhagia for three years, remedies having hitherto done little, if any good. The

bleedings generally occur in connection with menstruation, although floodings in the intervals have not been uncommon. Always and correctly prognosticates an attack, if she has, about the middle of the period, acute pain low down in the hypogastric region, with sensations of weight and fulness about the uterus. Pulse 110, and compressible; countenance pallid and sunken; bowels easily and frequently purged; urine scanty; perspiration frequent; marital intercourse, which rarely occurs, is often followed by bleeding.

℞. Secalis Cornuti ℥ii. Morphiæ Acetat. gr. iss. Ferri Sulph. gr. xii. Cons. Rosæ q. s.

M. ft. pilulæ xxiv. Take one pill three times daily.

To use the tepid or cold hip-bath every evening.

Two ounces of the compound alum injection three times daily, and to abstain from intercourse.

July 30. Has had one excessive flooding since the last report; stopped by cold, freely applied over the abdomen and loins, and cold alum wash injected into the vagina. There is much leucorrhœa, and frequent cough; countenance pale; more emaciated and increasingly weak. Cont. remedia.

August 10. No better; leucorrhœa still continues; pulse 120; feverish at night, with perspiration in the morning; complains of some, although slight pain, about the cervix uteri. To use an injection of sulphate of iron (vide formulæ.)

℞. Tinct. Ferri Muriat. Tinct. Secalis Cornuti. Tinct. Hyoscyami, āā ℥iv. M. ft. Mistura.

Take thirty drops three times daily, in a teaspoonful of port wine.

September 20. To-day she states that there is, and has

been for the last few weeks, a constant sanguineous discharge, not by gushes, but scarcely by more than a few drops at a time. Her legs pit on pressure, and they are œdematous and cold : urine scanty and high colored ; breathing short, and often difficult ; leucorrhœa scarcely diminished ; cough short, hacking, and frequent, with a continuance of the morning perspirations. Her countenance has the sallow leaden hue, pointed out by Sir James Clark, in his invaluable practical Work on Consumption, as so characteristic of tuberculous cachexia, acquired in mature life. Is to go into Wiltshire, her native county, and to follow out the plan before pursued, and so fully pointed out in the preceding page.

On examination I found the os uteri patulous and large, the neck of the uterus soft, almost spongy, and entirely devoid of its firm, glandular feeling. I carried my finger, without difficulty, into the uterine cavity ; but I could detect no hard nor soft tumor. The uterus is not greatly increased in size, nor did any bleeding follow this inquiry.

November 15. Her mother informed me that she had died about a month previously, from dropsy and consumption, the bleedings continuing to the last. She was exceedingly emaciated. No examination was made after death.

This case scarcely requires any comment. It is interesting, because, happily, it is rare ; and the fatal pulmonary mischief is clearly attributable to the repeated bleedings. It cannot be said that there was no organic uterine change ; but it may, I think, be fairly assumed, that the structural degeneration of the reproductive organs was not malignant. Such softening is, I believe, a frequent accompaniment of very protracted congestive menorrhagia,

and points to the propriety of improving the health, and of restraining the hemorrhage, the former condition being mainly dependent on the latter.

CASE 32.

CONGESTIVE MENORRHAGIA AND PREGNANCY.

I HAD frequent occasion to see Mrs. ———, æt. 42, during the years 1837, 1838, 1839, and several times in 1840. This lady was thirty-eight years old in 1836, had been married eighteen years, and was the mother of many children. Her health had been good during the whole of her married life, with the exception of slight illnesses connected with her various confinements. In 1837, she first suffered from menorrhagia, and in that, and the following year, the discharge was often so excessive as to alarm her. Once I happened to be present, and certainly nearly two pints of blood were lost by gush in a few minutes. These attacks induced syncope and prostration at the time, and in the menstrual intervals there was pallor, weakness, and some emaciation. Tow, for the purpose of plugging the vagina, has often been in readiness; but her unconquerable aversion to this valuable remedy, has hitherto most improperly been allowed to prevent its use. The acute bearing pain, low down in the uterus, to which I have already alluded, invariably occurred about the middle of the interval, and was the certain precursor of a coming hemorrhage. Nor as a premonitory condition, were there ever absent, feelings of weight, tension, and distressing fulness in the lower part of the pelvis. Several times I satisfied myself by examination both by the rectum and vagina,

that the uterus was really larger, and congested prior to menstruation.

During the attacks, astringent vaginal injections, cold sponging over the loins, and pudendum, were freely employed. The ergot, in its various forms, the acetate of lead and acids, opium and turpentine, were all given. The recumbent position was long and strictly observed.

In the intervals, tonics, stomachics, sea air and bathing, local salt-water shower baths, good diet, rest, and as much quiet as could be obtained, were insisted on.

I am often very anxious about this case. There is emaciation, a sallow, wan countenance, impaired appetite, and great debility. Leucorrhœa is always present during the menorrhagic intervals, and it is sometimes slightly sanguineous and offensive. I have repeatedly examined during the last two years. The os is constantly patulous, its lips swollen, and, together with the cervix, soft and flabby. Still, there has never been either hardness, fissure, or abrasion.

After the continuance of the menorrhagia for more than three years, and when all idea of pregnancy had been abandoned, conception occurred. Over fatigue, the patient being ignorant of her real state, produced abortion at the end of the third month (July 1840). The ovum was quite healthy.

This is one of the large class of cases. I need not say that they are perplexing and difficult. The protraction and the debility induced by the repeated hemorrhages, fully justify such a conclusion. But additional confirmation of the opinion is afforded by the possibility that structural malignant change or dropsies, or exhaustion, may destroy the patient. Congestive menorrhagia may, I think, more frequently than is supposed, be attributed to the avoidance of complete sexual intercourse, and to conse-

quent derangement and congestion of the ovaria and uterus. This abstinence is dangerously practised to avoid the risk of adding to the number of a family, already thought to be too numerous for the pecuniary means of its principal supporter. But this is obviously a subject on which one cannot, with propriety, enlarge.

CASE 33.

CONGESTIVE MENORRHAGIA—DIAGNOSIS DIFFICULT.

Mrs. ———, æt. 52, has not been married, is tall, and of large make. Has always resided in or near London. Up to the time of her present illness, has enjoyed unbroken health, and has been remarkable for muscular strength and activity. In November, 1836, when she was 48 years old, menstruation first became irregular, returning very profusely after longer intervals. Sometimes she was alarmed by the numerous and large coagula which passed, and by syncope; but she quickly rallied, and as she believed such occurrences, if not natural, were very common, she refused to adopt any medical plan, or to take any particular care. I frequently saw her during these hemorrhages; she was chill, prostrate and faint; but, after their subsidence, management was at an end.

In August, 1838, almost two years after the commencement of the malady, there was emaciation, frequent hot flushes, and distress from heat in any form; a blanched skin, a quick vibrating pulse, and slight uterine pain. The patient could not walk so far, nor attend so energetically to her domestic duties.

Prior to the occurrence of the menorrhagic attacks, Mrs. ——— always complained of weight, fulness and tension in the uterine region, of pressure on the bladder and dysuria, and occasionally of pain about the neck of the womb. In November, 1838, I was allowed to examine both by the vagina and rectum. The body of the uterus was heavier and larger than natural; the os somewhat patulous, and the cervix swollen. I did not use the speculum, as the hymen was firm, and prevented even the easy passage of the finger; but I am confident there was no abrasion. All the parts were unusually soft and flabby, but neither pain nor bleeding followed the inquiry.

From 1838 to August, 1840, the course of this disease has been perplexing and unsatisfactory.

In March and April, 1838, Sir James Clark was consulted—at that time her state was as follows: the general surface is pale and exsanguined; the least excitement quickens the pulse, and produces flushings of heat. The emaciation slowly increases—there is œdema in various parts of the body, but no anasarca. Only slight uterine pain is complained of; but she has the appearance of a patient suffering from malignant disease. A continuation of the treatment was enjoined.

The remedies have been the ergot in every form and dose; turpentine; the acetate of lead; acids and refrigerants; benzoin; opium; the various astringent, stimulant, and anodyne injections; country and sea air; spare and nutritious diet; leeches and small bleedings; easy exercise in a carriage, and the recumbent position. But only transient benefit has been derived. Often, in the last two years, I have given it up as a lost case, as there has never been a day during that time, without either sanguineous, sero-mucous or muco-purulent discharge; but after I have arrived at this conclusion, for a week, perhaps for several, the discharges decline, there is no uterine pain, there is a rally of the strength; she becomes cheerful, walks about the garden, sleeps better, enjoys her

food, and gathers flesh; thus leading one to doubt, whether this may not be a very rare example of protracted, congestive menorrhagia, without any more than the usual non-malignant changes of structure.

Several circumstances deserve attention in this case. The patient is often entirely free from sanguineous loss for three or four weeks; but its place is always supplied by copious discharges of sero-mucous, not aqueous, and occasionally of muco-purulent or purulent fluid; generally as many as eight, nine, and ten napkins are used daily, and when the sanguineous discharge is present, many more are required, so that it is impossible not to wonder how these large and constant drains are borne.

The hemorrhages are invariably preceded by sensations of uterine congestion, and several times a clot has been passed entire, presenting an accurate cast of the uterine cavity. From its comparatively small size, and unaltered form, an inference has been drawn that this viscus is still of nearly normal volume.

There is scarcely any pain; none of a severe or permanent kind: an anodyne has never been required for its alleviation. An examination made a few days since (August 1840), both by the rectum and vagina, reveals no traces of disorganization. The os is patulous, and its edges are large and swollen; the cervix too is more bulky, but beyond these changes I can discover nothing anormal.

I have dwelt at some length on this case, because I know it is but of rare occurrence. A positive opinion cannot be given. My own leans to its malignant character. The emaciation, the repeated bleedings, the constancy of the serous, the muco-serous, and purulent discharges, the gradual diminution of strength, and the trivial benefit derived

from remedies, all point to disease of this kind. Still no care, no remedy at all likely to exert beneficial control, should be withheld. The patient ought to be encouraged, and especially on the ground, that her long struggle may terminate in a stationary, inactive condition of the disease, and perhaps in recovery.

I could add several examples of protracted congestive menorrhagia, where the congestion was consequent on a *loaded condition of the bowels and luxurious living*. To these, as causes, allusion has been already made. In one instance, where the patient was middle-aged, and the landlady of an inn, nearly constant hepatic and intestinal derangement, as well as increased bulk of the liver, was thus induced. The menorrhagic attacks were most frightful, and on not a few occasions, there was great difficulty in rousing her from the consequent syncope. The late Dr. Cholmeley visited her, and stated that she might be cured by spare diet and purgatives. The importance of these measures was enforced, and in a few months the hemorrhages were prevented. I mention this case especially, to show the value of purgatives prior to the anticipated return of the menstrual period. I often ordered for this patient, after the disease had continued some time, a full dose of castor oil, twenty-four hours before the expected commencement of the discharge, and with the best results. Dr. Locock observes, "that in examples of this kind of menorrhagia, the next return of menstruation may be rendered comparatively trifling, by

the use of a full purgation about twenty-four hours before the period, when that can be ascertained, avoiding every medicine of a drastic, stimulating nature." He also adds, thus confirming what I have just advanced, "that chronic (congestive) menorrhagia is occasionally connected with organic or functional disease of the hepatic system; and when it is recollected how notoriously inattentive women are to the state of their bowels, and what enormous masses of fœcal matter are allowed to take place, it may easily be supposed to what degree the abdominal circulation must become obstructed, and how powerfully such obstruction must act in producing congestion of the pelvic viscera."

In conclusion, I think it right to observe, that I have twice witnessed, in most extreme cases, the beneficial effects of injecting into the uterine cavity a small quantity of the *spirit of turpentine*. It will not be supposed, after what I have heretofore said, that I advise this procedure on slight grounds. I believe such injections to be very certain but highly hazardous remedies, and they never ought to be employed except as *derniers ressorts*. The uterus has also been injected with a small quantity of lead and alum in solution; and the narrator of the treatment says, "the remedy is a dangerous one, for in two instances it was followed by vomiting, uterine inflammation, and death." At page 243, vol. II. of Guy's Hospital Reports, and at page 115 of the present work, additional cases and observations will be found.

I first employed the turpentine in a menorrhagia where every previous remedy had proved ineffectual. The case is as follows :—Mrs. G., forty-five years of age, and habitually intemperate, requested me to give her some medicine to prevent hemorrhage from the womb. She was large, and rather bloated, but still capable of great exertion. She was married, was the mother of several living children, and had miscarried a few months previously. I remonstrated with her on the excesses to which she acknowledged she was prone, and fully explained to her, that they were the source of the bleedings. The uterus was large and soft, and the cervix was full and flabby ; but although the os was sufficiently patulous to permit the entrance of the finger, I could not detect further structural change. An examination by the rectum was also made. She lived in my immediate neighborhood, and as I had frequent opportunities of seeing her, she adopted for a time the prescribed plan and diet. By purging during the intervals, and especially before the period, the losses were for a few months greatly diminished. At length she thought herself so well, as to be no longer under the necessity to adopt any plan which curtailed her usual indulgences. I lost sight of her for some months, and I know during the interval, that highly seasoned food, and large quantities of ale and wine were daily taken. One evening, I was requested in haste to visit her, and I found her almost dead from uterine bleeding. Her husband informed me, that since my last attendance, she had

very frequently lost large quantities of blood, and he had thought that on several occasions she must have died, but that hitherto she had always slowly rallied. Brandy and ammonia and ergot, restored animation, but she had not said many words before a fresh gush again induced alarming syncope. Cold water was dashed over the face, ammonia was applied to her nostrils by a camel-hair pencil, and after a very lengthened fainting, she again rallied. On inquiry, I found the attack had already lasted two days; and it was evident that her powers were exhausted. Her voice was scarcely to be heard, the pulse was quick and feeble, and her breathing was very short, the countenance was livid and anxious; in fact, it seemed as though another gush would destroy her. Her medical attendant, Mr. Burton, plugged with sponge, but ineffectually. On the instant, I proposed to inject a small quantity of spirit of turpentine; and having procured a gum-elastic male catheter, and cut off its end, so that there was an open mouth, I introduced it through the os, which was very patulous, into the uterine cavity, and by a syringe I injected about two or three drachms of the spirit. Soon afterwards I plugged the vagina with tow. There was no further bleeding, but the pain was indescribably great, as though there were burning coals in the uterus and bladder. The evidences of hysteritis seemed so clear, that I feared we must have taken away blood. Fomentations of poppy and conium applied very hot; camphor and laudanum, together with a purgative enema, allayed the

intense suffering. In twenty-four hours I removed the tow, and there was no further bleeding. Menstruation never returned, and from the continued and occasionally severe pain which followed the use of the turpentine, I suspect that adhesion of the sides of the uterine cavity resulted from the inflammation. Her former intemperate habits were soon resumed, and in less than a year she died. No inspection could be obtained.

I again witnessed the advantageous effect of this remedy in July, 1838. On that occasion I was requested to visit a lady under the care of Mr. Price, of Margate. On my arrival, the following particulars were communicated to me:—Mrs. M——, æt. 45, is the mother of several children, and has suffered from menorrhagia for two or three years: of late, the losses had been large, and she had repaired to the sea-side for a restoration of health. Two days before my visit, July 17th, the period returned, and in a few hours much blood was pumped out of the uterus by gushes. Mr. Price promptly, but without stopping the hemorrhage, gave large doses of ergot, acetate of lead, and sulphuric acid, at the same time applying cold externally, and injecting astringents into the vagina. It soon became evident that more must be done, and Mr. P. boldly determined to throw a small quantity of turpentine into the uterine cavity. On my arrival this had been effected some hours; the bleeding had ceased, and she appeared to have all the symptoms of hysteritis. The agonising pain, described in the pre-

ceding case, was present, requiring aid to keep her in bed. The pulse was 140, irritable and thrilling, but compressible, and without hardness or power. The abdomen was painful to the touch, but not in the same way as in puerperal fever. The pain had aggravations and intervals of less severity, and it was not necessary, as it often is in puerperal peritonitis, to prevent the pressure of the bed-clothes by placing a cradle over the patient. Still the sufferings were described as almost unendurable. Opium, a purgative enema, and afterwards a suppository, together with anodyne and mustard fomentations, palliated the pain; and, under the influence of a full opiate, she got some refreshing sleep. The vagina had been plugged prior to the injection of the turpentine, and before we left her for the night, I carefully filled it with tow, wetting it afterwards by a syringe with decoction of ergot (*vide formulæ*). In the morning there had been no return of hemorrhage, and I was subsequently informed, by Mr. Price, that she had recovered well but slowly.

In cases of alarming menorrhagia, it is a matter of moment that the practitioner remain with the patient and ascertain very frequently the extent of the hemorrhage. In puerperal bleedings, after the expulsion of the placenta, life is often dependent on this precaution. A crown princess of Austria, who had been attended by the celebrated Boer, of Vienna, (the case is related by Dr. Rigby,) and many other women, have been lost from the neglect of its observance, and in the instances now under inquiry

it is scarcely less necessary. After excessive menorrhagic bleeding by gushes, or in a stream, the powers of life are often reduced to a very low ebb; and protracted but slight drainings may therefore afterwards insidiously and unexpectedly sink the patient.

CHAPTER VII.

OF LEUCORRHŒA.

DEFINITION.—*An excessive and altered secretion of the mucus, furnished by the membranes lining the vagina and uterus, by the follicles of the interior of the cervix uteri, and by the lacunæ of the vestibulum, generally white or nearly colorless and transparent, usually without much odor, glutinous, muco-purulent, or purulent, sometimes yellow, green or slightly sanguineous, and of varying degrees of consistency. The amount of constitutional derangement depending on the severity of the affection and the susceptibility of the patient.*

There are *three* forms of the disease.

First, The common leucorrhœa, often mild, sometimes acute.

Second, The inveterate and chronic leucorrhœa.

Third, The symptomatic leucorrhœa.

Acute and mild leucorrhœa.

History and Symptoms.—I have adopted this division, because it is both correct and comprehensive.

It is proper to distinguish a recent, common, and inflammatory leucorrhœa, from one of the same order, only of chronic inveteracy. And it is certainly not less correct to distinguish both these from the symptomatic form, when the discharge owes its origin and continuance to structural or malignant changes of the uterus or its appendages. It is also comprehensive, not only including the examples where the pathological condition is inflammation or simple uterine catarrh, but also the symptomatic cases, where changes of a more serious or disorganizing kind are the source of the mischief. Of all the diseases peculiar to the sex, there is none so common. Few married women, particularly if they are mothers, escape its attacks. The young and the robust are less liable than those more advanced in life, especially if the latter possess susceptible and delicate constitutions. If evidence were required of its almost universal prevalence, it might be found in the number of its synonymous names, in the vast variety of real or supposed remedies, and in the many treatises published to elucidate its nature. In its milder forms, there is so little pain and constitutional disturbance, so little interference with the uterine functions and the comfort of the patient, that we cannot wonder at its neglect. And yet I believe, if care were taken at this early stage, if ablution only was frequently practised, the tone of all the parts, and more particularly of the secretory membrane, would be regained, and further mischief entirely prevented: so far as my observation has

gone, there is amongst female youth, and women generally, in this country, an unfounded dread of ablution of the external organs, either cold or tepid. The vicissitudes of our climate in some measure account for and justify the impression, but nevertheless it is too general, and extensively injurious. The duration of the affection has often astonished me; many individuals stating that they have suffered from it for years, and some few during the whole of their lives. But it is disease still; for in health there is an accurate relation between the amount of secretion and the purpose which it serves, viz. lubrication of surface. When, from any cause, its amount is increased beyond what is necessary for this important end, it is morbid; although, in many instances, remedies are scarcely required for its cure. It was stated, when treating of menorrhagia, that climate and peculiarity of constitution were criteria of importance in determining whether menstruation was morbidly profuse. The observation is partially true of leucorrhœa, as in hot climates and in marshy districts—in Holland for example—there is a larger quantity of mucous naturally secreted than in drier and more temperate regions. I do not wish to extend these general observations; but still, without some clearing of the ground, it will be very difficult to convey any correct ideas of the different degrees, and of the various seats of this prevalent malady. Thus, although the vagina is the common outlet for all leucorrhœal discharges, it must not be forgotten, that these differ much from each other, being fur-

nished by parts of different structure and vascularity, whose healthy secretions are far from identical. A precise knowledge of these differences will not only assist us in the diagnosis, but will also render our treatment more efficient.

The mucus naturally secreted by these various parts, although not entirely the same, does not differ in any of its essential properties from mucus furnished by similar membranes in other parts of the body. It consists of albumen and soda, and in transparency, color, and viscidness, it closely resembles the white of an egg in its natural state.

The mucus secreted by the lining membranes of the uterus and fallopian tubes, is correctly characterised by the above description. Its purpose is such a degree of lubrication of the sides of the tubes, and of the opposing surfaces of the uterine cavity, as shall prevent their adhesion. It need scarcely be added, that a very small quantity is sufficient, and that with the exception of the period of pregnancy, when the decidua covers the membrane, its secretion must be constant.

The mucus furnished by the lining membrane of the vagina, is more abundant in quantity, and less viscid than the uterine mucus. This fact is readily proved by examination under procidentia. If the finger be merely introduced into the vagina and withdrawn, it will be covered by a thin mucus only; but if it be carried, as it often may, through the os into the interior of the uterus, the adherent mucus will be found much more ropy and tenacious;

generally, indeed, it may be considerably drawn out without breaking.

The mucus furnished by the lacunæ of the vestibulum, or that part of the vagina external to the hymen, is probably slightly more tenacious than the vaginal secretion, and is said to exhale a peculiar odor. Whether it possesses this latter property independently of pregnancy or morbid action, or in higher degree than the mucus furnished by other parts, admits, I think, of doubt.

The secretion from the glands of the interior of the cervix uteri, is not often found in common leucorrhœa. I had lately an opportunity of examining these glands and their product, in a patient who had died in early pregnancy. The glands themselves were numerous and clearly discernible, and the mucus was easily drawn out entire and unbroken. Sir Charles Clarke, whose work on Female diseases cannot be too highly esteemed, says, "that this mucus contains a smaller proportion of water than any other, approaching nearer to the nature of a solid than a fluid body. These glands, in a state of health, perform the office of secretion in pregnancy only ; or if, at any other time, the matter secreted is of a very different kind, so resembling common mucus as not to be distinguished from it."

A remembrance of these facts will aid us in forming a correct opinion of the nature and precise seat of the several forms of the disease. If, then, these secretions differ from each other in health, doubtless under various degrees of irritation and inflammatory

action, a similar difference will be apparent. The simplest idea of leucorrhœa is obtained, by regarding its mildest acute form as the result of mere hyperæmia or vascular congestion, whether it affect one only, or all the parts enumerated in its definition. Under such an amount of morbid influence, the secretion furnished by these various parts will be more abundant than in health; but it will retain its natural characters, it will still be a white, transparent, and glutinous mucus; there will be derangement of system, produced by febrile excitement, slight ardor urinæ, and some sensations of heat and tenderness about the generative organs. It is easy, after this description, to understand the transition to its more serious forms, where the healthy properties of the mucus are lost; where it has become not only excessive in quantity, but muco-purulent, entirely purulent, or ichorous and watery, and of yellow, green, or sanguineous color; and where the constitutional affection is acute and extensive. Here we shall have no hesitation in believing, that congestion and irritability have been succeeded by inflammation, and that whether several only, or all the parts are affected, they have lost their healthy secretory action, and are pouring out pus, the proper and usual product of an inflamed mucous membrane. Nor is this statement less true of the third or symptomatic form, where the discharge is the consequence of any of the grave structural lesions, of which it is so constant an accompaniment.

Often, in common leucorrhœa, I have examined

by the vagina, but without discovering more than trifling increase of the body of the uterus, some tenderness of the cervix in the inflammatory form, but none in the protracted or chronic variety. The state of the cervix is occasionally soft, and the os rather patulous. Sometimes the orifice is not at all open, but generally the whole of these parts are supple, bathed in discharge, and much more relaxed than in health. In several instances where I have used the speculum, the cervix has been pale, in more acute cases slightly red, and in two severe attacks, it was of a deep crimson tinge. In none where there was not suspicion of venereal taint, have I seen erosion or ulceration. A few days since I had an opportunity of examination, and there were three distinct and large patches of superficial ulceration on the cervix; but the other symptoms were too unequivocal to leave any doubt of the presence of gonorrhœa. I have already stated, that the discharge varies much in quantity; sometimes it is so profuse as to oblige the patient to change the napkins several times daily; at other times it is less in quantity, but acrimonious; and in color and consistency there is almost endless variety.

Viewing the different forms in this way, there will be less difficulty in assigning to each, either a mild, aggravated, or symptomatic character. Examples of the least severe kind, arising from excitement, are most frequent. The blood-vessels of one or several of the secreting parts, from increased circulation, become congested, and soon afterwards ex-

cessive secretion, constituting the leucorrhœa, takes place. In many of these instances, the augmented secretion is probably confined (and in this idea Dr. Burne concurs) to the muciparous glands of the ostium or entrance of the vagina, scarcely affecting the membrane of the whole canal, much less the uterine secretory surfaces. This opinion becomes highly probable from the fact, that recent and mild leucorrhœa often yields to ablutions and lotions, applied, not as injections, but as washes to the external parts, the genital fissure being exposed by the separation of the labia. Here the accompanying symptoms will be so slight, as scarcely to secure the attention of the patient. From this incipient and mild form, every degree and variety will be met with, up to the most aggravated and symptomatic examples of the affection. In some, the vascular excitement and irritation will be more marked, and the local symptoms and constitutional derangement more distressing. The discharge may not only be excessive, but highly irritating, and there may be ardor urinæ, heat of the genital fissure, and dysuria. But this assemblage of symptoms, constituting a case of acute, inflammatory leucorrhœa, may quickly yield to ablutions of tepid water or poppy fomentation, aperients, abstinence from intercourse, spare diet, and rest. These, therefore, are not the cases in which medical aid is anxiously sought. But in a still more severe attack, where, from any of the causes to be hereafter specified, inflammatory action has been followed by excessive and acrimonious se-

cretions, the symptoms will generally prompt the patient to seek immediate relief. In such, there will be rigors, from sympathy with the uterus, heat of surface, a quick pulse, and white tongue, pain in the loins and hypogastric region, heat and pain about the cervix uteri and neck of the bladder, affecting also the vagina, urethra, and external parts, distressing ardor urinæ, and strangury. These symptoms may continue one or several weeks, according to the treatment and its success. If, under the idea of its being a "weakness," tonics and stimulant injections are early exhibited, the discharge will probably become more excessive, purulent or muco-purulent, thin and watery, or ichorous, and the constitutional effects more aggravated. If, on the contrary, anti-phlogistic and soothing treatment be adopted, the morbid secretion will diminish in quantity, and the general derangement will disappear. In many instances, the cure is quickly effected; but in some, even where proper treatment is early and fully pursued, it lasts long, proves very troublesome, and eventually passes into a chronic and inveterate state. It need scarcely be said that the discharges in the varieties now pointed out, originate in increased action of the vessels of the different parts. Females, therefore, of plethoric habit, possessing more than ordinary vigor of constitution, are more liable to such attacks than those who are feeble or less strong. And as the former is not so numerous a class as the latter, it may be affirmed that leucorrhœa, attended by weakness, is the more common

form. Yet it must be remembered that some females indulge in the pleasures of the table, and drink too freely of malt liquor, wine, or spirits. In many affections thus produced, the cares of a family or a business, or more frequently the disinclination to exercise, or eventually the want of strength sufficient to bear its inconveniences, almost compel a sedentary life. Hence they become corpulent, but not strong; a larger quantity of blood is generated, vessels scarcely to be seen before become visible, the pulse is full, the respiration is embarrassed on slight exertion, and the functions of the bowels and the kidneys are badly performed. In these examples, and they are not very uncommon, particularly about the middle period of life, menstruation often becomes profuse, and the leucorrhœa excessive. Great care is required in the treatment; for if these undue secretions are suddenly stopped, apoplexy, inflammation of the liver, of the stomach or bowels may supervene and the patient be quickly destroyed: in the section on treatment these circumstances will receive their full share of attention. In the various degrees now pointed out, leucorrhœa is a common sexual malady; nor is it difficult to believe, from the complication of its causes, the susceptibility of women, the frequent neglect of all treatment, and the injudicious management so often adopted, that every variety of case shall arise.

Second, Chronic and aggravated leucorrhœa.

It is in this form, not in the preceding, that the

cure is difficult. The history of these more serious cases is instructive ; because it generally reveals early neglect or improper treatment. Some females, however, seem to be almost naturally the subjects of discharges, unusual in amount as well as in character. In many instances, amongst the out-patients of Guy's, these leucorrhœal discharges are so habitual, that complaints of congestion in other parts, about the head or chest, pains in the limbs, or neuralgic pains of the abdomen, are almost invariably complained of for some weeks after the excessive and morbid secretion has been entirely or even partially cured. Nor is it at all uncommon, when many remedies have been tried, without benefit, that the disease is allowed to take its course uncontrolled. The frequent results are sterility, from anemia of the reproductive organs, especially of the ovaria, prolapse and procidentia of the uterus, and not unfrequently of the vagina and bladder.

It need scarcely be added that pallor, partial emaciation, or rather thinness of person, indigestion, impaired appetite, and constipation, languor, and weakness, are the constitutional accompaniments. In some instances (*vide cases*), the continuance and aggravation of the leucorrhœa is the fault of the practitioner. Uterine or general plethora has been overlooked ; the morbid state of the cervix or body of the uterus has been disregarded ; abrasion or ulceration affecting these parts or the vagina, may not have been discovered because an examination by the speculum, or the finger, has not been made.

Thus what was at first, and for some time, a case of aggravated and chronic leucorrhœa only, becomes, in the progress of the morbid action, an example of the symptomatic form, and requires for its cure a much more local application of stimulant and alterative remedies. I have known two examples where severe and primary attacks of leucorrhœa, were rendered chronic and aggravated by an unnatural heat of the external parts, produced and maintained by the constant wearing of thick napkins, to secure the patients against the discomforts of large discharges, which were, by this measure alone, rendered still more excessive and constant, (vide cases), a greater supply of blood being thus induced. Where the leucorrhœa is chronic and aggravated, there is great variety in the discharge. Sometimes it is glutinous, transparent, and colorless—the natural secretion in excess—at other times it is decidedly purulent, muco-purulent, or watery, the result of inflammation changing the action of the parts. Nor is the color less variable: a green or brown tinge may indicate excessive irritation, and blood mingled with the discharge will probably result from abrasion or rupture of the capillaries of the uterine surface, or it may announce the approach of the catamenial period.

After these observations, it will be understood that the general health may be fearfully and sometimes, although very rarely, fatally broken down by chronic and inordinate leucorrhœa. If it exist in the young, or in those who have scarcely passed

twenty years of age, amenorrhœa and chlorosis, with their numerous evils, and ultimately phthisis, may occur. Nor would these results appear so astonishing, if by accurate inquiry the quantity of mucus, constantly secreted, was really known. It would then scarcely surprise us that a girl, delicate perhaps from birth, or who, at least, may never have enjoyed good health, should eventually die from consumption to which she may have had a latent tendency, after a drain of blood for months and years, sufficient to furnish an ounce, or several ounces, of leucorrhœal secretion daily. Nor is it more to be wondered at in married women, that menstruation should be long suspended, and that conception should be prevented during the exhaustion produced by these discharges. It cannot, I think, with truth be affirmed, that changes of structure never occur in connection with protracted leucorrhœa, although it may probably be satisfactorily proved, that malignant lesions are not within the scope of its morbid powers. Softening of parts and partial disorganization of the uterus may, according to Andral, and my own observation, take place. I know that a brain may soften, and purulent deposit be found in its substance, as the effect of undue lactation, and there is clearly no reason why some similar effect should not happen to the uterus from excessive and protracted leucorrhœa.

Patients often think because the pain and heat, and constitutional disturbance continue, or are frequently repeated, that formidable uterine disease

must exist. This opinion is strengthened by the acrimony and odour, and the occasional sanguineous tinge of the discharges. Doubtless, under such circumstances, examinations by the speculum and finger ought to be made; but, even in their omission, a hasty conclusion should not be formed, as these symptoms often occur in a functional but severe and protracted case.

There must be noticed also a form of the malady, by some authors denominated the *passive*, but for which a better appellation, judging from its permanency, would be *habitual* leucorrhœa. In many instances it is the consequence of acute and inflammatory attacks; but in still more of constitutional and local weakness. The generative organs of most leucophlegmatic females, are habitually relaxed, and there are not a few where a very small quantity of mucus seems naturally to exude from the surface of the genital fissure. To this condition I have already alluded as one not generally deserving to be regarded as morbid, and only requiring for its control careful and repeated ablutions. But this habitual and trivial discharge dependent originally on constitution, climate, and temperament, may become morbid by its excess; especially when it co-exists with amenorrhœa and chlorosis. Nor must it be forgotten that it has been cured, when of long standing, by marriage, and by the re-occurrence of menstruation.

It is rare in the young, and common in married women, to whom there belong the general condi-

tions already described, and whose strength has been weakened by sexual excess, menorrhagia, abortion, or over-lactation; these having perhaps induced displacement and prolapse of the uterus. The symptoms are slight, and there is scarcely any local irritation. The discharge is generally white, stiffening the linen; and if there be a neglect of cleanliness, it may produce inflammatory abrasion of the upper part of the thighs and heat of the labia. The constitutional effects are trifling; and yet such a patient will often by pallor of face and darkness round the eye-lids, languor and incapability of exertion, afford sufficient indications of the existence of a weakening malady. Occasionally, where the disease has been long unchecked, and where the discharge is on the increase, there will be emaciation, constipated bowels, and depraved appetite and indigestion; and I have often known such patients complain of pain in the stomach, when empty, of a desire for food, without being able to take any, at least with relish, and of dragging and heavy feelings in the abdominal and lumbar regions. The complexion is often sallow and icterode, and several times I have had great difficulty in curing eruptions about the face and forehead, which have long existed in connection with this form of leucorrhœa.

Third, The symptomatic leucorrhœa.

To a certain extent all that has been heretofore advanced is applicable to the symptomatic form. Most of the symptoms already pointed out will exist here; but with great variety as to their causes and

relief. For example, a transparent mucous discharge is equally an attendant of prolapsus uteri, as of inflammatory uterine catarrh : but the accompanying symptoms are widely different ; nor can the cure be accomplished by the same means. Again a muco-purulent, or purulent secretion, may result not only from acute inflammation of the uterine mucous lining, but from a cancerous or submucous tumor. The cure in the one case may be effected with comparative ease : in the other relief only, and that not without difficulty and delay, can be expected. The symptomatic form of the disease is therefore deserving of especial notice ; but, as in subsequent parts of the work, it must be the subject of remark, in connection with the structural lesions of which it is so frequent an accompaniment, it is not necessary at present to make more than these few observations.

The importance of accurate examination by the finger and speculum, where the leucorrhœa is suspected to arise from lesions of an organic kind, can scarcely be too strongly urged. Nor ought it to be forgotten, that more than one such inquiry may be required, as an affection at first confined within the limits of functional disease, may in its progress acquire a totally different character.

There is a *peculiar form of leucorrhœa* somewhat allied to hydrometra, inasmuch as the contents of the uterus in this latter disease are not always serous, but sometimes albuminous and muco-purulent

secretions. In this variety the discharge does not consist of a limpid glairy fluid like common mucus, nor does it come away gradually as in common leucorrhœa ; but the fluid is often entirely purulent, or so closely resembles pus, as to be with difficulty, if at all, distinguished from it, either in color, viscosity, or odor ; and having accumulated in the uterine cavity to four, five, six, or more ounces, it comes away by gush. In these particulars it differs widely from ordinary leucorrhœa, and in one example I thought from the suddenness of its escape, and the similarity of the previous symptoms, that the discharge must have been the result of abscess. This opinion, however, was not confirmed by subsequent events. In all the instances falling under my observation, and they are comparatively rare, muco-purulent leucorrhœa had long existed previously, and although it was suspended during an accumulation going on in the uterine cavity, it returned immediately after the escape of the purulent gush. It is true, nevertheless, that the symptoms assume a character distinct from any other form of the malady, as the time for the eruption approaches, (vide cases). There is fulness about the hypogastrium, a sense of constriction and weight about the neck of the bladder and along the course of the rectum, dysuria, heat, general uneasiness, and sometimes acute pain with forcing about the uterus. In one instance the patient was so distressed by these, that she was compelled to keep her bed for several days

prior to the escape of the pus. The general health suffers from the repetition of this series of morbid actions.

Sometimes there is emaciation, and there is usually great difficulty in the cure. In two instances where widows were its subjects, the disease disappeared after marriage, pregnancy having soon occurred. I have several times examined prior to the escape of the fluid; the uterus has been generally but not greatly enlarged; the cervix swollen and slightly tender, and the os partially closed. In no case has an examination revealed subsequent structural mischief, and in none that I have seen has the uterus been sufficiently voluminous to render it at all probable that it should be mistaken for an ordinary case of hydrometra. I have never seen this affection in young females. Married women, and particularly widows, or those in whom the reproductive organs having been employed are so no longer, seem to be its most frequent subjects.

I have thus attempted to elucidate the history and symptoms of this prevalent disease, without adopting the division into vaginal and uterine leucorrhœa. Independently of symptoms, it is allowed to be very difficult to distinguish what portion of two continuous membranes of identical structure are morbidly furnishing a nearly identical secretion; it seems much easier and more rational that the diagnosis should rest on the severity of the symptoms, and the difficulty of cure. It is known that the vagina is much more frequently the seat of disease than the cavity

of the uterus, and, in the majority of instances, it yields more readily to remedies. Thus where there is marked aggravation of symptoms and considerable constitutional derangement, the uterine membrane is probably implicated; but where, on the contrary, the whole of the symptoms are locally and constitutionally slight and easily cured, the vagina will generally be found to be the seat of the disease. The frequent implication of both the vaginal and uterine secretory surfaces, and the difficulty even where one only is morbidly affected, of distinguishing which it is, will often perplex the diagnosis, whatever divisional arrangement be adopted.

Causes.—These are numerous, and, according to their nature, have a distinct influence in the production of the different varieties of the disease.

The *first* form, which I have denominated the *common leucorrhœa*, and *which is more idiopathic* than the others, owes its origin, especially in delicate and strumous females, to causes inducing increased action, and sometimes inflammation in the secretory surfaces and glandular apparatus of the genital organs. These are, the application of cold or moisture, frequent excitement resulting in debility from excessive sexual intercourse, abortions, from which the patient has only imperfectly recovered, quickly recurring labors, puerperal hemorrhages, menorrhagia, profuse menstruation, and undue lactation. The irritation of a pessary, or of stimulant injections on the vaginal surface and the cervix uteri belong also to this class. There are other causes

which act only *indirectly*, and these, with the agencies already pointed out, may lead, where the common, mild, and more idiopathic disease is uncured, to the *chronic and aggravated form*. These operate through the medium of the nervous system and by sympathy. Thus in amenorrhœa, where the functional or organic nerves of the uterus are affected, a leucorrhœal secretion is frequently set up, not only from the vaginal but likewise from the uterine mucous surface. Intemperance in eating and drinking often induces derangement of the stomach, bowels, and liver; by sympathy with these, morbid actions of the uterine system may be induced, and leucorrhœa will often be the result. Nor must irritation of the spinal marrow be omitted in this enumeration. I lately saw an example where leucorrhœa might be traced to morbid affection of the chord in the sacral region, as evidenced by tenderness when these parts were pressed. Here there was an unusual degree of lumbar and sacral pain, much more than could be fairly attributed to the quantity or continuance of the discharge. In such, a cure is obtained by rest, leeches, and stimulating embrocations about the loins and sacrum. Still, I do not wish it to be understood that dorsal, lumbar, and inguinal pains, are the concomitants of leucorrhœa of this kind alone. For I am quite aware that these symptoms are attendants on cases of leucorrhœa, where there is no such remote and influential sympathy.

Symptomatic leucorrhœa, as its name implies,

being the consequence of other and distinct diseases, may be attributed to any causes which shall produce uterine or vaginal irritation. Amongst these must be mentioned relaxation, prolapsus, and the other displacements of the womb, polypi of various kinds, affecting the uterus, vagina, or urethra, hard or soft tumors of the reproductive organs, ascarides, a pessary, and other bodies intentionally introduced into the vagina.

Pathology.—There can be no doubt that leucorrhœa owes its origin to two distinct and dissimilar conditions. The first, a state of hyperœmia or increased action of the vessels of the secretory surfaces, and the second, debility, either original or produced by the continuance of the former state. By some authors nearly all the cases are supposed to depend on weakness, excepting such only as are accompanied by symptoms of inflammatory action. There is truth in this opinion if the examples be included where the leucorrhœa having been of the first kind originally, has, by its continuance terminated in the opposite state. Let it, however, be remembered, that it does not necessarily follow because the system generally is delicate, that the uterus and vagina must of necessity be in a state of anemia. Local and long continued inflammation often produces constitutional weakness, and certainly the progress of the malady, the irritation and pain, and the increased secretions, point to inflammation as one of its essential primary conditions. Nor must we forget that delicacy often exists without leucorrhœa. Still, original or acquired feebleness of

system may give increased efficacy to the various exciting causes of this prevalent malady.

Probably in all the instances where the uterine lining membrane is implicated, particularly in those where leucorrhœa is vicarious of menstruation, the vessels eliminating the catamenial fluid furnish the morbid discharge. In the symptomatic forms, the pathology is necessarily different, as a displaced uterus, a prolapsed vagina, hard tumors, and various other structural growths and deviations, produce the disease.

Diagnosis.—This is frequently difficult, and between some forms of the disease and gonorrhœa nearly impossible. Still in numerous instances a correct distinction may be drawn, and where difference of treatment is involved, it ought to be attempted.

In mild leucorrhœa it may be assumed, that the muciparous glands at the entrance of the vagina and the lining membrane of the canal are alone affected. Where the symptoms are decidedly severe, the uterine lining membrane is often interested. The diagnosis will be aided by an inquiry into the following circumstances: If the discharge was first observed after abortion or delivery; if it was prior to, or has partially or entirely superseded menstruation; if there be much pain in the hypogastric or lumbar regions, with nausea and vomiting, or uncomfortable sensations about the stomach, liver, or head, these point to an affection of the uterus, rather than of the vagina. With the latter, we know that the constitu-

tion sympathizes but little, while with the uterus, by means of the organic nervous system, its sympathy is most intimate. It has been proposed to use a piece of sponge as a local test, which is to be introduced into the vagina, so as to plug the os uteri, on going to bed; and if, when it is removed in the morning, there be no more discharge adhering to it than would occur from the natural mucus of the canal, the discharge which takes place by day must be regarded as uterine. If, on the contrary, the sponge be thoroughly moistened, the vagina must be considered as implicated in the mischief. But it is evident that this test is not unexceptionable. If the discharge be uterine only, but excessive, the sponge will be much wetted with the absorption, the uterine cavity being so small in its normal state, that it cannot contain more than a few drachms. If the vaginal surface be also secreting in excess, no satisfactory diagnosis can be thus made. Nor will an examination by the finger afford unerring information; as in merely vaginal leucorrhœa, if it be profuse and of long standing, there will be a similar relaxation and softening of the cervix, as is found where the uterine surface is affected; and in most instances of either form, the os will be open, or in at least a dilatable state. Thus we are compelled to depend on the indications previously stated, except where we are permitted to use the speculum, the only certain means of diagnosis. The following account comprises the result of M. Marc d'Espine's researches with this

instrument on the subject of leucorrhœa. They were extracted from the Archiv. Gen. de Med. for February, 1836.

M. d'Espine notices its continuance during the menstrual intervals, and also its occurrence just before or just after the menstrual evacuation. The climate of the middle and north of France appears most favorable to its production, and women with very light or very dark hair seem most liable to it. The character of the constitution exercises very little influence. Out of nineteen women subject to whites habitually, six were robust, nine were moderately strong, and four weakly.

An examination with the speculum gave the following result in 193 cases. In 23 the uterine orifice was found dry—in 40 there was just a drop of discharge in the orifice—in 130 the discharge was abundant. The orifice may be quite healthy—pale red—or bright red, and occasionally it was granulated and bloody.

The following table will exhibit the character of the discharge and the state of the uterine orifice, in 111 cases.

| | Orifice healthy. | Orif. reddish. | Orif. deep red and granulated. |
|--|------------------|----------------|-----------------------------------|
| Aqueous discharge, | 7 | 3 | 1 |
| Albuminous transp. discharge, . . | 30 | 6 | 6 |
| Album. semi-transp. discharge, streaked blue, grey or yellow, . | 13 | 19 | 10 |
| Opaque discharge, streaked, . . | 3 | 7 | 6 |
| | <hr/> 53 | <hr/> 35 | <hr/> 23 |

Doubtless where there is pregnancy with a sealed os, the leucorrhœa, however severe, must be vaginal.

From leucorrhœa, the consequence of structural or malignant disease, the diagnosis will be made by the accompanying symptoms, and by examination of the vagina and rectum, not only by the finger, but by the speculum.

From inflammation of the glands in the interior of the cervix; by the presence of the white creamy discharge; and by the peculiar tenderness of the cervix on pressure, the adjacent parts being quite sound.

From fluids, which very rarely find an outlet through the vagina, after the bursting of an abscess or cyst in the ovary, uterus, or surrounding organs; by previous indications, such as local pain, swelling, &c., which do not occur in leucorrhœa; by the suddenness of the escape, and often by some marked quality of the discharge, as its offensive odor and its color, being often mixed with blood, and its extreme viscosity or acrimonious tenuity.

From gonorrhœa the distinction is often difficult, and in some instances impossible. The character of the individuals, and particularly of the husband, and the previous and present habits of both, if they be highly moral, will go far to negative suspicion. Even in doubtful cases, it must be remembered that leucorrhœa is sometimes purulent, and so far infectious, as to produce from the male urethra a discharge which, in its appearance and accompanying symptoms, is not easily distinguished from gonorrhœa. Generally the secretion in the male is mild, and there is but little of that excitement, heat, and ardor urinæ

so constantly attendant on the real infectious gonorrhœa. It is said, too, that it is quickly cured, and that it is rarely or never succeeded by gleet. These observations are in the main correct, but still they require some qualification. Where by the speculum, erosions or chancrous sores can be perceived on the os and cervix, the syphilitic character will be established. If, also, there be tumefaction of the inguinal glands, pain during coition, and a discharge from the urethra, with a burning pain along its course, and tenderness and inflammation at its orifice, gonorrhœa is probably present. Lisfranc says, "that it is very difficult to ascertain whether these white discharges are or are not contagious, whether they are or are not venereal. He thinks that a white discharge may communicate the venereal disease, especially when the former is connected with small ulcerations of the vagina or urethra, a case more common than is usually thought, but which may be ascertained by examining with a glass those parts, the slightest erosions of which easily escape the naked eye." (Vide Lectures published in the *Lancet*, Nov. 30, 1833.) I presume this singular statement is not intended to convey the idea, that the venereal disease can be communicated by common and unspecific ulcerations, merely because they happen to exist on the cervix uteri; and still, if less than this is meant, there is little if any point in the passage; because the statement is a mere truism, that syphilitic erosions or chancres can produce the syphilitic disease. The perplexity,

therefore, of these cases, is fully admitted ; and it will often happen, that where we are most anxious to arrive at a positive conclusion, we shall be least able to do so. At all events, it behoves the practitioner to be extremely tenacious of the reputation and happiness of parties thus circumstanced. It is always his duty to cure the disease, but rarely to venture upon an exposition of its nature. If he can positively affirm that it is of simple origin, let him do so, if suspicion has been aroused ; if not, it is better to avoid any distinct allusion to the matter. One thing is quite true, that in women of indisputable purity, leucorrhœa is sometimes so acrimonious, as not infrequently to produce discharge and abrasion in the husband ; and on one or two occasions, after abortion, I am almost confident, that eruptions and decided ulceration have been amongst the results of intercourse. In these examples the shadow of suspicion did not rest on the female.

Prognosis or terminations of leucorrhœa.

Acute leucorrhœa, if treated promptly, is usually of short duration. The symptoms gradually subside, and the tone of the parts is regained. If, therefore, there is a leucophlegmatic habit, and a constant excess of moisture about the genital apparatus, it is not improbable that an inflammatory attack, under such circumstances, may glide into the chronic form, and may long continue. Some females, indeed, except when in unusually good health, seem never to be free from habitual leucorrhœa ; nor does it appear seriously to affect them.

But there are cases, where the discharge is so profuse and protracted, that the same results are realized as in excessive menorrhagia. There is a quick and feeble pulse, a cadaverous countenance, impaired appetite, and emaciation. If the patient be married, (vide case,) sterility is not an uncommon consequence; and if single, chlorosis and amenorrhœa, and possibly dropsy or phthisis may supervene. I do not affirm these greater evils to be the frequent sequel of the disease; but the practitioner should be on his guard, more particularly where, in the unmarried, emaciation, amenorrhœa, and chlorosis exist. A cough, fever, morning perspiration, and pulmonary affection, may soon follow.

Treatment.—This must of necessity be different. The various forms of the malady differ so widely from each other in degree, that while in the slighter cases scarcely any treatment at all is required, in the inveterate it is often most puzzling to find any remedy. Thus the mild form easily yields, the inveterate is cured with great difficulty; and the symptomatic leucorrhœa cannot be restrained till the removal of the affection, if that be possible, of which it forms a part. But to be more precise: In ordinary cases, where there is only hyperæmia or simple vascular injection of the secretory membrane, and where the discharge, although increased in quantity, still retains its transparent mucous character,—rest, abstinence from intercourse, if married, animal food and wine, mild aperients, and

the employment, as a wash, of the Liq. Plumb. C., or the Liq. Alumen. C., or the tepid poppy water, will usually, in the course of a few days or a week, cure the disease.

In the inflammatory form, which comparatively we do not often see, where the secretion has become purulent, where the pulse is quick, full, or hard; where there is heat, increased action, and inflammatory congestion of the secretory surfaces, slight swelling of the genitals, and pains in the loins and hypogastric region, the antiphlogistic treatment must be at once commenced. Blood may be drawn from the arm in moderate quantity, or from the loins by cupping. Leeches to the hypogastrium, groins, or perineum, must be promptly employed; and if, by a vaginal examination, the cervix shall be found swollen, shining, red, and tender, leeches, or what are much better, scarifications, may be used. I have now several times scarified, not punctured the neck of the uterus by a common lancet, mounted on a piece of whalebone, with marked benefit. The pain of the incision is most trifling; there is no ulceration nor suffering afterwards, and in twenty-four hours, the cervix generally seems to be entirely free from congestion. In the winter of 1839, I was asked by the late Mr. Fenner to visit a patient of his at Islington, suffering from inflammatory leucorrhœa. She had not been confined more than two months; her own reputation, and that of her husband, were above all suspicion; the severity of the pain in micturition, and the profusion and

acrimony of the discharge, would have induced the belief that it was gonorrhœa. An examination by the speculum showed that the cervix was congested, red, and extremely tender; but there was no discharge from the urethra, nor any swelling of the inguinal glands; aided by the speculum tube, the cervix was scarified, and at least four or five ounces of blood were abstracted, the operation not lasting more than a quarter of an hour. The hip-bath, as advised at page 165, mild aperients, spare diet, salines, and occasionally narcotics, will be required. Astringents are not included in this enumeration, and if they are used during the first few days of the disease, while the inflammatory stage continues, or before the discharge has become thinner and more abundant, pain and aggravation of symptoms will often ensue. I know there are cases easily cured by the compound alum injection, or some spirituous lotion only. In such, the affection is probably the common and mild, not the inflammatory leucorrhœa; or if it be, and a cure is obtained, the patient and the practitioner will not censure this empirical plan, nor trouble themselves about the precise nature of the affection. If there be swelling of the labia, or of the parts within, redness, heat, tenderness, and throbbing, and pain on examination, with a purulent discharge, there is inflammation, and the soothing, not the astringent plan ought first to be tried. These acute symptoms, however, soon subside, but the excessive discharge continues; and at this point the use of injections, regarded by many as the

specific treatment for leucorrhœa, must be commenced. For this purpose the various stimulants and astringents are employed, and often by sponging the parts externally, and within the genital fissure, but more frequently by throwing into the vagina, several times daily, two or three ounces, (following the directions given at page 209), aided by stomachics or tonics, mild aperients and rest, this unpleasant affection is cured. Generally the injections are cold, but occasionally the discharge is increased, and the inflammatory symptoms are reproduced by cold in any form. I have known many patients cured by tepid, and two by almost hot injections. Dr. Gooch (at page 35 of his *Compendium*) says, "that the treatment of leucorrhœa is to a great extent empirical. Cold astringents, among the rational practitioners, are in the most general use; but tepid ones are often equally beneficial. Practitioners have exhausted all the cold astringent remedies, and then, having recourse to tepid ones, the patient has been cured immediately. The liquor plumb. acetat. is now used at the Middlesex Hospital, tepid, and with general success." The various formulæ will be hereafter mentioned. In this way examples of the inflammatory form are cured; but thus far it is presumed, that they are not very severe, nor that there is anything to prevent the beneficial operation of medicines, either in the constitution or in the habits of the patient. But we do not always possess these advantages. Sometimes, where the best means

have been long and judiciously employed, the leucorrhœa continues, and the health declines. If the discharge be only small in quantity, and if the patient has been originally robust, months and even years may elapse without any serious results; but they come at last. I have often wondered to find the pallor, anemia, and other indications of debility, so extreme, where the discharge was scarcely more than by drops, although it had been more excessive. These examples remind us of passive menorrhagia, where there is a continual sanguineous draining from the uterus, attended by a cadaverous countenance, weak pulse, coldness of the extremities, and excessive nervousness. Indeed, these cases are not only similar in their nature, but they are almost invariably benefited, and sometimes cured, by one peculiar remedy, viz. the injection of three or four ounces of tepid, or (after a time) cold water, into the rectum, night and morning. Sometimes the effects of chronic leucorrhœa are so distressing, the discharge so excessive, and the cure apparently so distant, that not only the patient, but the practitioner also, inquires, what further treatment can be adopted, and on what circumstances does this want of benefit depend? In some instances, there is no doubt, that the delay arises from the difficulty of restoring to the secretory membranes their healthy action. Mr. Hunter fixed attention on this point, by the following remark, that "a gleet seems to take its rise from a habit of action which the parts have contracted; and as they have no disposition to

lay aside this action, it is, of course, continued." Thus a vaginal discharge may be perpetuated by a "habit of action," most difficult to alter, but at the same time, satisfactorily explaining the pathology of passive or habitual leucorrhœa. Protraction may also depend on specific or organic disease, such as gonorrhœa, hard or submucous tumors, ulcerated carcinoma, polypi, cauliflower excrescence, &c. The reply, then, to the question, what further treatment is to be employed? will depend on the results of examination by the finger or speculum, as these will furnish the best answer to the inquiry, what is it that prevents the cure? If the existence of structural maladies be discovered, the attention will be directed to these as the source of the local symptoms, for leucorrhœa is then only symptomatic of these graver diseases. But if, so far as can be ascertained, the individual is free from any specific or organic affection, recourse must then be had either to fresh remedies, or the treatment already adopted must be differently and more perseveringly pursued. English practitioners do not frequently examine *per vaginam* in leucorrhœa; and although in the majority of cases such an inquiry may be dispensed with, in dubious instances it is certainly requisite. So long as the discharge is muciform, even if it be excessive, without smell and not sanguineous, it may be presumed to be functional; but where, having long retained these properties, it has become acrimonious and offensive, watery and greenish, or brown like the grounds of coffee, or

decidedly streaked and mingled with blood, there is strong reason for a different opinion, and an examination is absolutely essential. Injections of green tea, solutions of alum, the sulphates of zinc and copper, iodine, sulphate or tartrate of iron, and the carbonates of soda and ammonia, decoctions of bark, logwood, the ergot and catechu, and others (vide formulæ), may all be employed. Nor must it be forgotten that each of these, good though it be, soon loses its effect. I have cured many cases of passive leucorrhœa more quickly than I should otherwise have done, by acting on this suggestion: a week being often long enough to wear out the good effects of one injection. In the employment of measures acting thus locally on the secretory organs, the intention is to convert a morbid into a healthy function, and of course constitutional means, such as good air and diet, iron, quinine and chalybeate waters, with a regulated system of aperients, are not to be excluded. Both classes of agents may be in operation at the same time, without determining, what is often difficult to decide, whether the leucorrhœa be a primary or secondary affection; whether, in fact, it has arisen from constitutional delicacy, or whether the constitutional weakness is the sequel of the local disease. Where the discharge is habitual and inveterate, and where, without disorganization of structure, the secreting surfaces have taken on a permanently unhealthy and disordered action, the nitrate of silver surpasses all other remedies in its restorative power. Its benefi-

cial influence has been fully tested in affections of the mucous tissues of the mouth and throat, and a similar good effect will accrue from its use in chronic and inveterate leucorrhœa. Its exhibition will be explained hereafter, (vide formulæ.) To Dr. Jewel the profession is indebted for a succinct and comprehensive account of its properties. Through the medium of the great sympathetic nerve, and by continuity, the reproductive or sexual are intimately connected with the urinary organs, and hence have been suggested copaiba, turpentine, cubebs, cantharides, and the tinct. benzoin. comp. (vide formulæ), for the treatment of the chronic and inveterate form. Turpentine and cantharides I have given, often advantageously, and a good many times with curative effect. The latter is the great remedy of Dr. Dewees; and, beginning with thirty drops in sugared water, three times daily, he does not hesitate to mount up to a dose of two hundred, three times in the twenty-four hours. He is careful, if there be plethora, that it shall be removed prior to giving the tincture.

“We cause the patient,” he informs us, “to be well purged; confine her to a milk and vegetable diet, and sometimes order her to lose blood; when the pulse is sufficiently reduced by these means, or if the pulse be in a proper condition without them, we commence the cantharides, &c.” It need scarcely be added, by way of caution, that if strangury appear, the tincture is to be left off. “Should the complaint withstand the first strangury, we are

not discouraged, but re-commence the remedy at the original dose of thirty drops, and increase it as before until a difficulty in making water is again experienced ; it rarely, however, withstands the second irritation of the bladder." In hospital, and in private practice, I have secured these conditions ; but I cannot report, as its author does, "that when properly conducted, or sufficiently persevered in, it rarely fails to effect a cure." Still, my confidence in this practitioner is so great, that I am anxious his remedy should be extensively tried :—in other hands it may be more successful than in mine.

Attention to the general health cannot be neglected without detriment to the patient. Lately I saw a case where the discharge, which had been for weeks excessive, was restrained by giving five or six doses of blue pill, followed by an aperient of senna and salts ; the first motions were highly offensive and scybalous ; afterwards they became healthy, and with no other treatment than ablution, and a removal into pure, dry, and mild air, and the adoption of good diet and exercise, by which the function of the skin was restored, the cure was completed.

If the reader will turn to page 43 of this work, he will find in that and the succeeding pages, directions relative to the health of anemiated patients, which may be advantageously followed in chronic leucorrhœa. It is scarcely necessary to state, that menstrual irregularity is one of the frequent consequences of the disease when protracted. Leucor-

rhœa may, indeed, become vicarious of menstruation altogether (vide page 144) ; and certainly, although amenorrhœa induces leucorrhœa, the converse of this position is equally true. Whenever, then, the general health is so far impaired by excessive discharge, as seriously to have deranged the catamenial function, constitutional as well as local treatment must be pursued. A sea voyage, travelling abroad, the air of the sea-coast, foreign and domestic chalybeate spas and iron, constant exercise out of door, living in fact in the open air, are the measures on which we must principally rely. The use of wine and spirituous liquors, strong tea and coffee, is recommended in habitual or passive leucorrhœa. Doubtless such advice requires strict limitation, but still in certain districts, and controlled by medical authority, it is beneficial. I recollect many years ago an old practitioner in the fenny and damp part of Lincolnshire, who said that the disease was almost endemic in his neighborhood during certain parts of the year, and that he combated, and often cured it, by bark, wine, gin, tea and coffee. In Belgium and Holland, and round Berlin, the atmosphere is loaded with moisture, and it is common to attempt the cure of leucorrhœa, which is very prevalent, by spirituous liquors, tea, and flannel clothing. Solid animal food may be eaten twice in the day, and if the digestive powers are much impaired, hot water, with a third or fourth part of brandy or rum, may be the dinner beverage. But, after what has been said at page 43, I need only

refer to the directions there given. A patient, suffering from habitual leucorrhœa, without organic disease, should not sleep on a soft bed, nor frequent heated rooms and crowded assemblies. The excitement of music, the theatre, and late hours, should be exchanged for country air and exercise, moderate riding on horseback, and the simpler habits and scenes of rural life. In these cases, almost everything depends on the improvement of the general health, and this cannot be accomplished without attention to the chylopoietic organs. Let healthy digestion be restored, and the leucorrhœa will gradually disappear. It is not always safe to cure an inveterate leucorrhea, without increasing for a time the action of the liver and the intestines, or putting the patient on a spare diet. This is particularly important where the discharge first appeared on the suppression of some customary evacuation, as, for example, where menstruation has become sparing after previous excess, or where an eruption having long existed, has at once or gradually disappeared. In these instances, some moderate drain is often necessary. Without it plethora, and its injurious consequences, may occur. An issue or seton ought occasionally to precede any curative attempt. In the young and middle-aged, spare diet, purging, and exercise will mostly suffice; but in women of full habit, addicted to the pleasures of the table, this more decided drain is often required. At a more advanced age, when congestions in the different organs are probable, and where the patients are

strumous and feeble, peculiar watchfulness is requisite. After the cure of habitual leucorrhœa, ablutions of cold water, at least, if not injections into the vagina, should be daily practised; avoiding their use for a few days before and subsequent to menstruation.

In Dr. Balbirnie's digest of the practice in Female Diseases, of several eminent French physicians—a book deserving attentive perusal, the fears I have expressed of injecting the uterine cavity are said to be, in the great majority of cases, “totally unfounded, and the mere remnant of ancient prejudice.” M. Lisfranc first injects simply fresh water, then decoctions, or astringent injections or styptics, the strength of which is to be increased by the addition of a few drops of concentrated acid. “A gum-elastic tube, introduced with circumspection, serves as a means for conducting the injected fluid, and we are thus enabled to cure white discharges which obstinately resist every other method.”—(Vide Lectures in the *Lancet*, Nov. 30, 1833.) I shall append to this chapter one or two cases, occurring in the practice of M. Tealier, where injections of soot and water into the uterine cavity were productive of benefit, without pain or any apparent evidences of hysteritis. It is right thus to contrast the contradictory results of a similar treatment. Further experiments, which these examples of success may justify, may establish a correct deduction. In the French hospital cases, reported by Dr. Balbirnie, “narcotic injections” were ordered

by the physician; and as immediately afterwards especial mention is made of "uterine injections" in the private cases of M. Tealier, it is fair to infer, that the narcotic injections referred to above, were merely vaginal, thus establishing the fact, that throwing fluids into the cavity of the womb is by no means a general but a rare treatment. Further on, indeed, M. Lisfranc says, "that sometimes these uterine injections stop the discharge suddenly, as in the male, or they act more slowly, in general requiring twenty or twenty-five days. On other occasions" (and these, I fancy, are not infrequent) "they convert the chronic inflammation into an *acute* one," (an event replete with danger, where the uterine mucous surface is its seat,) "hence the treatment must be modified to the case, and usually twenty-five to thirty days are sufficient for a perfect cure." "As exceptions, there are two cases in which we should proceed with more reserve, viz., when these discharges are very ancient," (the examples in which, by-the-bye in England, such a remedy is generally thought of,) "then they become habitual and necessary to the economy: and it is frequently impossible to supply their place," (this is a wise and extensive interdiction of uterine injections) "and imprudent to attempt it—more especially if the woman be old, feeble, or have any tendency to scrofula. Intermittent discharges also require the same precaution, with respect to their suppression, as uterine flooding."

Inflammation of the cervix uteri.—As this affec-

tion is confined to the glandular part of the uterus, and as it is attended by a peculiar discharge which rarely forms a part of the common leucorrhœal secretion, it is entitled to distinct consideration. It is not always easy to distinguish it from inflammation of the surrounding parts, particularly when, having ceased to be an acute, it has become a chronic malady. Here the white opaque secretion, its distinctive sign, will be partially, if not entirely, lost, by its mixture with the thinner and more transparent secretions. In addition also, the local pain and tenderness on pressure, will be so much less than in the inflammatory stage, that the peculiar characters of the malady will be nearly destroyed. In recent and marked cases, its diagnosis is easy. Sir Charles Clarke is entitled to the praise of having first described the symptoms and treatment. Judging from the record of cases amongst the in and out-patients at Guy's, as well as from private practice, I cannot regard it as a very common disease. Many times, from the pain which patients in the ward have complained of low down about the sacrum and coccyx, and deeply seated behind the pubis, I have thought that there must have been inflammation of the cervix, and yet on examination, although the finger has been covered by a white secretion, there has been no acute suffering from pressure on the neck of the uterus. Out of nearly one thousand cases of sexual disease, treated at Guy's, I find inflammation of the os and cervix has happened only twenty times. It rarely occurs in single females, or before twenty,

and is most common between this age and the period of catamenial decline. It is not dependent on peculiarity of constitution—the plethoric and robust being as frequently its subjects, as the delicate and irritable. I have several times observed it soon after marriage. Its pathognomic *symptoms* are the opaque white discharge and pains behind the pubis, and at the lowest part of the back and sacrum, aggravated by the muscular efforts necessary for the evacuation of the bowels and the bladder; in short, by any circumstance which causes pressure centrally in the pelvis. The constitution is rarely affected, if judicious treatment has been early adopted. Where, however, there has been protracted neglect, it will probably have passed into a chronic state, and, in connection with inveterate leucorrhœa, may have induced excessive anemia. These symptoms—and, if married, pain during intercourse—first excite attention; their continuance, and, as concomitants, irritability of the bladder and rectum, constitute the disease. Generally menstruation is not deranged; occasionally, however, there is dysmenorrhœa or a scanty catamenial flow. Sometimes recovery takes place without any treatment; the symptoms gradually disappear, and the glandular structure again becomes sound. At other times the malady continues, notwithstanding the treatment; and some authors suppose, that from this chronic inflammatory action, tubercular deposit and cancerous disease may have their origin; but such serious results, probably, never occur, except where there is a latent tendency

to structural and malignant disease. In that case it is easy to understand how repeated inflammation may induce morbid activity.

Causes.—Circumstances either of a constitutional, or local kind, which augment irritability, and produce in the cervix increased action. Cold, inordinate exertion, either physical, sexual, or mental, highly-seasoned food, late hours, and excitement, and amenorrhœa suddenly induced.

Diagnosis.—The local pain (pressure on the cervix producing it, while similar pressure on the immediately contiguous vagina, is borne without any suffering), and the white opaque discharge, enable the practitioner to form a correct opinion of the disease. In reference to the latter I may add, that it differs widely from the transparent colorless mucus of common leucorrhœa, and is not likely to be confounded with the watery, or purulent secretions, so frequently occurring in mixed and symptomatic cases.

Sir Charles Clarke characterizes the discharge “as opaque, and perfectly white.” This is its usual color, but in undeniable examples I have seen it of grey tint. He further says, “that it resembles, in consistence, a mixture of starch and water made without heat, or thin cream. It is easily washed from the finger after an examination; and it is capable of being diffused through water, rendering it turbid.” Of the latter part of the statement there can be no doubt, and the facility of mixture with water, certainly constitutes a ready and true diagnosis. Let it, however, be remembered, that

this creamy discharge is rarely copious and free from admixture, except on rising from bed in the morning, the time which ought to be chosen for the vaginal examination.

Treatment.—The abstraction of blood, in the more serious attacks, is a primary measure. And as the best methods of doing this are pointed out at page 167, the reader must refer to this part of the work, where he will also find directions for the bath and injections, which may be beneficially followed where the inflammation is not so severe as to require the loss of blood. The poppy hip-bath used for an hour, twice a day, soothes the pain and irritation better than any other remedy; and where this cannot be obtained, half a pint of warm water, or gruel, starch water, or poppy tea, may be thrown into the vagina several times daily—the prescribed precautions being taken to prevent its immediate return. As aperients, castor oil, or any of the mild forms prescribed in chapter 5, may be employed. Sometimes there is so much irritation about the bladder, that an opiate, or ten drops, two or three times daily, of the *mist. morphiæ acetatis* (vide page 186,) may be administered, or an opium, or a belladonna suppository may be used. It is occasionally necessary to empty the bladder by the catheter; and rest in the recumbent position and spare and unirritating diet must be adopted.

CASE 34.

It is unnecessary to narrate any cases of common leucorrhœa, either of the mild or acute kind, as these are so numerous as to be familiar to all.

INVETERATE LEUCORRHŒA.

July 10th, 1835.—Mrs. J. —, aged 26, residing near Guy's Hospital, has been married six years, and has borne three children. Prior to her first confinement—immediately, indeed, after marriage—she had leucorrhœa; but as it was attributed to the excitement of pregnancy, and ceased soon after delivery, no treatment was adopted. During both the subsequent pregnancies the discharge returned, and disappeared after recovery. She imputes the present attack to over-nursing, having suckled her last infant nearly sixteen months. The weaning occurred in January, 1834, and since this time, now a year and a half, she has never been free from excessive discharge. Prior to the lengthened nursing she was remarkably healthy, “en bon point,” and active; but for the last nine months her weakness has been extreme. She is anemiated and pallid, emaciated, and incapable of any exertion. She has lost her former animation, and sits or lies nearly the whole day on the sofa. Pulse 94, and feeble, skin cool and clammy; urine scanty, and of straw color; appetite most capricious, and frequent vomiting after taking food. Sleeps well at night, and would do so nearly all day, if she were not frequently roused by her mother and children. Cough, pain in the side, and morning perspiration are absent, and none of her family have died of phthisis. The legs are œdematous, and the skin of the face and eyelids is extended and flabby. On the whole, there is more exhaustion, more

complete prostration, than I have ever before witnessed as the consequence of leucorrhœa. On inquiry about the treatment, I found that many remedies had been tried, and although injections had been carefully used she had frustrated their beneficial effects, by always (day and night) wearing two thick napkins. Thus the generative organs were constantly heated by the thickness of the covering, and increased discharge was the result. It was with difficulty she was persuaded to use any further means, she was so determinately convinced that nothing could do her any good. She consented, however, to take the muriated tincture of iron, good diet, and ale, to use nitrate of silver injection three times daily, and, above all, to leave off the napkins. The discharge was usually thin and watery; sometimes viscid, and occasionally, for a few weeks together, purulent. It had, on several occasions, been streaked with blood; but there had never been any offensive odour. She had for many weeks abstained from intercourse. I was curious to ascertain its quantity, and as it was quite necessary to use six napkins in the twenty-four hours, she must, at least, have lost several ounces daily. It is not, therefore, at all surprising, after so protracted a drain, that her constitutional power was exceedingly impaired. Menstruation occurred every month, but so scantily, and so slightly sanguineous, that the leucorrhœa might justly have been considered as vicarious of the function. On examination, internally, by the finger, the vagina was found to be capacious, and so relaxed that there were many folds partially filling up its canal, and a thin secretion bathed its entire surface. The cervix was large, but not tender, the os patulous with thickened edges, and the whole of the parts exceedingly moist and soft. The body of the uterus, examined by the rectum as well as by the vagina, appeared more voluminous than natural, and approached nearly to the os externum. I could not discover any ulceration, although

at the upper and posterior part of the vagina the surface was rather rough, uneven and pulpy.

It would be tedious to narrate, day by day, or even week by week, the effects of the remedies. The principal benefit seemed to be derived from the various preparations of iron, and the frequent use of injections, particularly of the nitrate of silver. These had been employed by her previous attendant; but as he had seen her only at distant intervals, their use was not steadily adhered to. I was more fortunate, as I visited her very frequently on my way to Guy's, and insisted, as the condition of my attendance, that the treatment should be strictly pursued. At one time we were compelled to give up the injections for a few days, as they produced soreness, and she was tired of their use. At another, the iron was temporarily laid aside, quinine and gentian, or zinc and hop, being substituted. The local salt shower-bath over the abdomen and hips was extremely beneficial, and she expressed great satisfaction on finding that she was gradually acquiring tone and strength from its daily use. At first it was employed tepid and subsequently quite cold; and she was rubbed dry afterwards by towels impregnated with bay-salt. The lower part of the body acquired warmth by these frictions, and her whole appearance began to improve. The injection was ultimately used, at 60 grains of the nitrate to ℥xvi. of distilled water. The napkins were entirely and most beneficially abandoned,—frequent ablutions and clean linen being their substitutes. In chronic and inveterate leucorrhœa, the wearing a protection of this kind, and sometimes a pad, which is still worse, perpetuates the disease. And now, in every case, I am particular in my inquiries on this point. At the expiration of eight months this patient had menstruated healthily three times, and she had regained much of her former health. She visited Brighton for several weeks, and in about twelve months from

my first seeing her, she had perfectly recovered. I hear that she has since borne another child.

This is an instructive, because it is not a very rare case of aggravated leucorrhœa. Over-lactation and frequent pregnancy are almost sure, sooner or later, to be succeeded by excessive mucous secretion. Whether it shall be protracted to exhaustion, will greatly depend on the attention and influence of the practitioner. If he regard it as a matter of little moment, it will be allowed to persist, and eventually, similar results to those pointed out, will occur; if, on the contrary, he have sufficient weight to convince the patient of her situation and its certain consequences, if the discharge continue, then remedies will be promptly and efficaciously administered, and the disease will be either cured or relieved.

CASE 35.

CHRONIC LEUCORRHŒA, ATTENDED BY ACCUMULATIONS OF PURULENT FLUID.

August, 1835.—Mrs. —, æt. 38, a widow, and formerly an out-patient of Guy's, was sent to me by Mr. Morgan, one of the surgeons. The history of the case is as follows: She has, up to the commencement of the disease (nearly three years since), enjoyed excellent health. As a girl she was always vigorous, menstruated regularly, and was capable of great exertion. Subsequent to her marriage, in her twenty-fourth year, she was robust and plethoric, having children quickly, nursing them without difficulty, and improving in strength. She has now (1835) been a widow

four years, and for the last three, has suffered from leucorrhœa. When first noticed, it occurred a few days before menstruation, and was not present again till the return of the catamenia. It was so slight, that no means were used. Subsequently, however, it continued throughout the month, and soon became excessive and acrimonious. Occasionally it has been purulent, often muco-purulent, and slightly odorous. In July, 1834, the discharge began to lessen in quantity, and became thicker, to use her own words, "like matter." In a few days more, the leucorrhœa seemed entirely to have disappeared, but not satisfactorily, as there was pain and fulness about the lower part of the belly, and especially about the neck of the womb. She had frequent calls to empty the bladder, there was ardor urinæ, and feelings of tension and weight within the pelvic cavity. The greater number of these occurrences was entirely new; for, although she had frequently, when the discharge was purulent, suffered from vaginal irritation, heat, and pain, yet the symptoms just described were so different, that her attention was painfully excited. The surgeon then in attendance gave saline aperients, enjoined rest and spare diet, and recommended the warm hip-bath. On one occasion, a few weeks afterwards, when she was getting out of bed, she felt something suddenly give way within her, and there immediately escaped from the vagina a quantity of offensive matter. She fainted, but was quite relieved. The discharge continued purulent for a week, when the usual thin and mucuous leucorrhœa returned. This process had been repeated several times prior to my first visit, August 10, 1834. She was then recovering from one of these escapes of purulent matter, and was feeble and altogether ill. Tonics, good diet, porter and wine were allowed; and in a few weeks the secretion had again become muco-purulent, but more excessive than formerly. At this period I examined, but there was no trace of altered structure. The os was more than

usually patulous, and the whole of the parts within reach of the finger were softened, probably by the constant discharges. In a little more than three months, (Nov. 20, 1835,) menstruation having been suspended eight weeks, re-accumulation again took place, and on examination, I was struck with the increased bulk of the uterus. The cervix was tender to the touch, and the os was more closed than natural; still, at the lower, (whatever it might have been at the upper part of the channel of the cervix,) it was not completely occluded. There was, however, a firm, tense condition of the neck, as well as of the body of the womb, and the vagina was rather hot, although still moist and painful on pressure. There was considerable febrile excitement, and the patient was in bed. A few days afterwards the gush occurred, and by measure, it was ascertained, that seven ounces of fluid, possessing all the characters of true pus, not at all streaked with blood, had escaped. Twice afterwards this series of morbid actions was gone through, and on one occasion I was present when the matter escaped. It amounted to half a pint, and was certainly fetid. Her general health had improved, and the leucorrhœa in the intervals had slightly diminished. Iron in various forms and doses had been given, and once I pushed the blue pill sufficiently far to affect the gums, gentle salivation being kept up for several weeks. The nitrate of silver in solution had appeared sometimes as though it would entirely cure the affection, but the discharge again and frequently returned. Under these circumstances, I proposed the injection of the uterus. It was carefully done, by throwing in some portion of an ounce of warm water, with three grains of the sulphate of zinc. There were no immediate effects; but in about six or seven hours, there was agonizing pain in the uterine region and internally, tenderness on pressure nearly over the whole abdomen, but especially at its lower part; a quick, hard pulse; and in fact all the symptoms of hysteritis. The measures described at

page 234 were pursued ; but I was so fearful of an unfavorable result, that fifteen ounces of blood were abstracted, calomel and colocynth purges, and subsequently a full opiate, were given. After these measures the symptoms slowly subsided, and I had the satisfaction to find, in two or three weeks, that she had scarcely any remnant of the disease. This apparent cure was but of short duration. The same discharges again returned, and she left town for the sea-side. She resided there many weeks, was considerably improved, and married. Pregnancy quickly occurred, and when I last heard of her, she had not suffered any return of this distressing malady.

CASE 36.

LEUCORRHŒA, ACCOMPANIED WITH PURULENT DISCHARGE.

REPORTED BY DR. JOSEPH RIDGE.

MARIANNE B——, aged 19, of florid complexion, ordinary stature, and sanguineous temperament, was admitted in July, 1836, into Petersham Ward. She had been in service, and had enjoyed good health, until eleven weeks since, when she began to complain of uneasiness in the hypogastric region, with severe pain in the right groin, increased towards night. This was accompanied with a thick, yellow, and very fetid vaginal discharge, which has continued up to the present time. The catamenia have not been arrested ; and they appeared a fortnight before admission.

Her general health has suffered : she feels weak, and indisposed to exertion. There is a profuse purulent secretion, which comes on at intervals, especially after exertion. On getting out of bed, or in endeavoring to evacuate the bladder or rectum, it passes per vaginam, by gushes, being preceded by a cessation for some hours. Occasionally, it continues

for two or three days together; and then ceases, until its accumulation is relieved by a sudden flow. She has lumbar pain, and occasionally a distressing sense of fulness and bearing-down in the uterine region. Sometimes the pains are severe and lancinating, extending to the pubes and groins: bowels costive: tongue slightly furred: pulse rather full, and moderate.

These symptoms continued for several weeks, with but partial amelioration. The purulent secretion was, at intervals, diminished; but soon afterwards recurred, in equal quantity. She passed over two catamenial periods; and the discharge appeared to be intimately mixed with the sanguineous flow. Some shreds of membrane were discovered, being preceded by more than usual pain.

The treatment consisted in the exhibition of laxatives, with occasional topical bleeding, and sedatives to allay constitutional irritation. An opium suppository was used, with a belladonna plaster to the loins. Injections of an astringent kind, variously modified, with the hip-bath, were employed, but with little advantage.

The obstinacy of the disease, and the marked debility accompanying it, determined Dr. Ashwell to inject the cavity of the uterus with tepid water. This was effected by introducing a gum-elastic catheter with an open mouth, the edges being smooth, within the cervix, and propelling the fluid through its tube. Considerable pain over the pubes followed, which was relieved by anodyne fomentations. The discharge greatly abated, and a second injection was ordered. This was followed by more severe symptoms, and marked evidence of hysteritis; which was relieved by bleeding, both general and local, purgatives, fomentations, and a strict antiphlogistic regimen. The discharge ceased with the cure of the hysteritis; and in a few weeks she was presented, feeling quite well.

I was not prepared for so alarming an attack of inflammation, as the consequence of the injection merely of warm water ; although in several instances, and especially in the somewhat similar one already related, hysteritis of marked severity followed the use of a weak solution of the sulphate of zinc. The remembrance of this induced me to employ tepid water only. It is well known, that in extensive uterine hemorrhage, cold water, and water variously medicated, may be safely employed. But in most of these cases, as already observed, there is at least no evident and probably no real disease of the lining membrane.

CASE 37.

This, and the following case, are extracted from Dr. Balbirnie's work, page 129 ; and I present them here to convey to the reader an accurate idea of the way in which uterine injections are employed by M. Tealier, and perhaps in French practice generally : they are described in the work of this physician on Cancer of the Womb.

Considerable tumefaction, without induration of the neck of the womb—dilatation of its orifice—profuse leucorrhœa—*injections into the cavity of the womb—cure.*

Madame R——, aged thirty years, having had two children, of which the youngest is four years old, lively and irritable, experienced since a year that she had quitted

Geneva, her native country, to live in Paris, all the symptoms of uterine catarrh : dull pain in the hypogastrium, in the loins, and in the groins, where she experienced disagreeable draggings when she stood for some time ; a weight on the perinæum, which rendered long walks painful, and sometimes impossible—a continual and abundant discharge from the vagina of a thick, yellowish brown mucus, or of a glairy matter, like the white of egg, on which were remarked sometimes spots of blood. Painful and habitual constipation—loss of flesh—febrile pulse ; the menses having experienced no derangement. To the touch the neck appeared soft and voluminous ; and the uterine orifice, much dilated, admitted easily the point of the index finger ; all the surface of the os tinæ was covered with a thick mucus, which, when wiped away, presented a greyish white color, contrasting with the red tint of the uterine orifice ; slight lineary excoriations were observed in the direction of the cavity. On pressure being exercised with the speculum on the body of the womb, a considerable quantity of thick mucosities issued from its orifice—pressure with the finger and the speculum was painful—the neck was an inch above the perinæum.

Bleeding from the arm, to the extent of eight ounces, was practised ; and, during eight days, injections of the decoction of the mallow-root, and poppy-heads, baths, a mild regimen, and rest, were prescribed. When the pains of the womb were calmed, these emollients were replaced by a decoction of a handful of soot in a pint of water, with which, each morning, three or four injections were made into the uterine cavity, by means of a gum-elastic catheter, introduced by one of its ends into the orifice. These injections were performed with facility, and without occasioning pain. After having withdrawn the catheter, a pledget of charpie, imbibed in the same decoction, was left upon the neck until next day.

This treatment was continued during fifteen days, after

which they were then stopped, in order to ascertain the state of the discharge : it had almost entirely ceased. Injections, nevertheless, were continued every two days during a month. The patient then no longer experienced any of the symptoms mentioned, and all treatment was suspended. The health of Madame R—— has not been deranged anew for a year succeeding to this treatment. She experiences some leucorrhœa from time to time, to which she has been subject from her infancy, and which does not constitute in her a diseased state.

CASE 38.

Soft engorgement of the neck of the womb, bleeding on the slightest pressure—habitual leucorrhœa—orifice of the neck largely opened—superficial erosion on the posterior lip. Infecundity, the consequence of this morbid state, removed by its cure.

Madame L——, aged thirty, of good constitution, and having had only one child, ten years ago, was tormented with an habitual leucorrhœa, with a feeling of weight at the womb, and some occasional darting pains, which seemed to pierce it. Eighteen months ago, eight days after the cessation of the menses, there commenced an oozing of blood by the vagina, which was very inconvenient to the patient. The discharge had continued several months, when medical aid was had recourse to, in the month of August, 1834.

This lady had been for some time the prey of sadness, from certain painful circumstances, and under the influence of which her indisposition had made sensible progress. On examination, the belly was found voluminous, and painful, on pressure. The pain was especially felt behind the pubis, in the groins and loins ; it was dull and deep ; at times it had

the lancinating character: the uterus was enlarged, sensible beyond the vaginal insertion, and descended to within two inches of the os externum; the neck to the touch was soft and spongy. Seen by the speculum, and compressed by the instrument, it allowed to exude from all its surface a great number of drops of blood; the edges of its orifice were tumefied, and of a lively red; on the posterior lip there existed a small ulceration, somewhat deep. A yellowish white discharge, proceeding from the uterine cavity, impregnated all these parts, and contributed to keep up the soft flaccid state of the tissus that was present.

The patient being removed from the menstrual period, and presenting all the appearances of a strong constitution, blood was immediately drawn from the arm to the extent of twelve ounces. This bleeding, renewed three days after, stopped the discharge of blood; but the leucorrhœal flux continued in great abundance. Injections with soot water were carried, as in the last case, into the uterine cavity; they were continued during three weeks, at the end of which time the leucorrhœal discharge had almost entirely ceased: the womb was returned to its normal state. During these three weeks there had not appeared a single drop of blood. The menses flowed then regularly; and after their cessation, the os tincæ was found firm, and permitting no more the exhalation of blood; its orifice was sensibly contracted, and the leucorrhœal discharge almost gone.

M. Tealier has informed us that this lady, who had been barren from this cause for nearly ten years, immediately afterwards became pregnant.

CASE 39.

LEUCORRHŒA, DIAGNOSIS DIFFICULT FROM GONORRHŒA.
OCCURRING IN THE PRACTICE OF MR. TRACY OF CORK STREET.

May, 1840.—Mrs. —, æt. twenty-three, has been married three years, and since the birth of her first child, now eighteen months ago, her health has always been delicate, and six months since leucorrhœa appeared. She visited Cheltenham in February, 1840, and after an absence of some weeks, during which her health was greatly improved, she returned home. The discharge was at this time watery and thin, although diminished in quantity. Intercourse was resumed, and, as its consequence, the husband had all the symptoms of gonorrhœa. In this case the reputation of both parties was undoubted; but still the secretion from the male urethra continued for ten weeks, notwithstanding persevering and active treatment. Eventually he was cured by steel and a mixture of copaiba mucilage and liq. potassæ, with the oxymuriate injection.

CHAPTER VIII.

OF THE DISORDERS ATTENDANT ON THE DECLINE OF MENSTRUATION.

It is impossible, within a reasonable space, to give a correct definition of these important affections ; although it is by no means difficult to furnish in detail an accurate and condensed account of them. I shall therefore, after a few preliminary observations, describe them in something like the order of their frequency, beginning with the more common, and concluding the summary with the more dangerous deviations. It has become too general an opinion, that the decline of this function must be attended by illness ; but this is surely an error ; for there are healthy women, who pass over this time without any inconvenience, and many whose indisposition is both transient and slight. That this does not more constantly happen, arises from the fact, that nature and health are often sacrificed to fashion and luxury. I have already explained (at page 42), in reference to the physical education of female youth, how injuriously the national practices affect the establishment of the function. The almost entire neglect of out-of-door exercises and sports, the substitution of prolonged in-

door studies, by which both mind and body are prematurely exhausted; a farinaceous and vegetable, instead of an easily digested and nutritious animal diet; clothing inappropriate to our changeable climate; and many other circumstances, too numerous to be recounted, are productive of results in early life, conspicuously inauspicious and hurtful. Only let this enumeration be completed by the subsequent histories of marriage and child-bearing, and we shall be convinced, that the ills attendant on catamenial decline, are attributable not to necessity, but mainly to habits, unwisely begun, and still more unwisely continued.

Females themselves anticipate this period as extremely eventful, denominating it "the critical or dodging time,"—"the turn of life," &c. Nor can it be denied, that they often have sufficient reason for their anxiety. With the extinction of this extraordinary secretion, the reproductive faculty dies—an event of itself of sufficient magnitude in the life of a woman, to give to this epoch an emphatic interest. The consequences may be injurious at any time of life, where even a slight evacuation is suddenly stopped; for although it was originally excessive and morbid, such a process eventually becomes so habitual and necessary, that it cannot be safely done away, without either preparatory antiphlogistic treatment, or the institution of some compensating drain. I have, in an appended note, for which I am indebted to Dr. Stroud, given an extraordinary analogous illustration occurring in the other sex.

There are few practitioners who could not verify the statement from their own observation amongst females.*

We cannot, therefore, be surprised, especially where luxury and dissipation, or penury and disease have already injured the constitution, that the cessation of two such prominent functions of the female economy, as menstruation and reproduction, shall be sometimes accompanied by serious changes in the nervous, vascular, and digestive systems. Let it be remembered, also, that these are the distinctive functions of the sex, exerting for many years a marked influence over their health, and giving even to their disorders a peculiar character—not lost till after their final decline. And yet it must not be supposed, that the effect of these great changes is always morbid. Sometimes it is quite the reverse; for there are women who have never been vigorous and well during the middle period of their lives, and some who have suffered from protracted illness or

* Case of Frederick P——. A young man subject to plethora, and to large discharges of blood from the nose every spring, having for some time labored under mental vexation and anxiety, missed, during last spring (1840), his usual epistaxis. He became somnolent, morose, and dejected, and at length, after some bodily exertion, fell into a sort of fainting fit. Under the direction of Mr. Symes of Tavistock Square, he was largely bled, with apparent relief. Having been placed in bed, he lingered for some hours, with a sense of weight and oppression about the heart, which gradually terminated in death. On-inspection of the body, about three pints of partially coagulated blood were found in the pericardial sac, having been discharged from a ruptured aperture in the superior cava, which would admit the finger. With this exception, there was no other disease, either in the heart or elsewhere.

chronic uterine maladies, who after this time acquire what they term, "a settling of the constitution," and good health.

If the affections accompanying catamenial decline be classed according to their frequency, there can probably be little if any doubt, that—

Functional derangements of the brain and nervous system, are the most numerous.

Next in amount *are the cases of increased action and congestion of different organs.*

And, happily, among the least common, are *lesions of structure and malignant disease.*

A train of symptoms, fairly to be denominated nervous or hysterical, so often accompanies the change, even when most favorably accomplished, that it excites but little attention, if some single symptom or the entire affection is not of unusual severity. Timidity, a dread of serious disease, irritability of temper, a disposition to seclusion, impaired appetite and broken sleep, with physical weakness and inquietude, are common indications. Women are aware that such symptoms may be expected to occur, and they are in consequence alive to their approach. Of course the cessation does not always take place in the same way. Occasionally, but very rarely, it is sudden. The individual having arrived at the usual age, anticipated menstruation is prevented by cold, fright, or by some illness. These circumstances, in earlier life, would have been followed, on their removal, by a return of the discharge; but it is not so now. Nature seizes

this opportunity to put an end to the function altogether, and I have known several patients thus dealt with, who never had afterwards one hour's inconvenience. But a gradual extinction is much more common. One period being missed, there is a return; a longer time then elapses, and there is perhaps an excessive return; afterwards some months may pass away without any appearance, then there is a sparing secretion; and in this way the discharge, sometimes amounting almost to a flooding, and again being so scanty and so slightly sanguineous as scarcely to attract notice, altogether disappears. I have already, at page 214, mentioned the different ages at which the cessation takes place; and as to the time occupied, it is nearly impossible to afford any precise information. Some females pass over the period in a few months, others are irregular for a much longer time, and I have known instances where several years have intervened between the beginning and completion of the change. Hysteria, of marked intensity, not infrequently exists, and in two patients formerly under my care, a stranger, seeing the extent of mental aberration, might, without careful investigation, have concluded, that they were really insane. In one of these instances, a physician attending in my absence, strongly urged restraint and removal. Soothing, temporising treatment, however, must be adopted in these cases. Irritability is their prominent feature; and as the cessation is a process of nature, it is important that its completion should neither be

hastened nor delayed by inappropriate management.

The examples are not rare, where *increased action and congestion occur as the result of catamenial decline*. We do not expect to find delicate women thus suffering, but those who have been plethoric and healthy, who have indulged in good diet and wine, or malt liquor, are exceedingly prone to such affections. Nor must it be forgotten that the tendency often continues for months, and sometimes for years after the entire disappearance of the secretion. Every one at all observant of female diseases, must know that women who have been healthy prior to this change, often become corpulent after its completion, and are more than usually liable to attacks of apoplexy, paralysis, pulmonary obstruction, and cough. Thus affording an illustration of the remark, the correctness of which cannot be doubted, that while certain morbid conditions of the cerebrum produce emaciation, there is another series, amongst which the influences in question must be placed, which induce repletion and obesity. Head-ache then, sensations of fulness about the cerebrum, throbbings of the carotids, and visible distension of the superficial veins of the temples and neck, ought always to excite watchfulness if not apprehension. Cases of partial apoplexy and paralysis do occur as the result of neglected amenorrhœa in earlier life; and several times I have been struck with the relief afforded to affections of the brain, at this period, by an excessive return of the catamenial discharge. Affections of the skin, too, very difficult of cure,

and sometimes almost permanent, are by no means rare. Evanescent eruptions about the face and upper part of the body are common. But there is scarcely any organ or part of the body, and the statement is particularly true of the uterine system, which may not suffer from acute or chronic inflammation as the direct or remote consequence of this great change. Hepatic derangement, and even disorganization, have been frequently attributed to this cause. I cannot, from my own observation, confirm the latter part of this statement, although I have known the liver, in common with the other chylopoietic viscera, seriously disordered.

A very few remarks will suffice on the *treatment* of these various sympathetic affections ; and first, I must be allowed to state, that no more serious mistake can be committed, than to attribute any of them, without the most accurate inquiry, to debility rather than to repletion. Let it be remembered that an accustomed evacuation is about to cease, or has finally disappeared ; that the patients have been previously healthy, and that the probability therefore is, that the weakness is apparent not real. If, for instance, because there is languor and inactivity, a slow pulse, torpid bowels, and depression of mind, stimulants and generous diet are allowed, some important organ will become congested—the brain or the lungs—and either suddenly fatal or structural disease may occur. I know not how often, but certainly very frequently, such errors happen ; and it is, therefore, the more necessary to urge especial caution.

There are instances where too large bleedings have been practised, and where the antiphlogistic treatment has been too long pursued. In such, and in others, where the active symptoms have been subdued, or where from the commencement the disease has been of mixed character, modified measures must be adopted. Further loss of blood and the continued exhibition of cathartics will induce anemia, and extreme irritability, while a sudden and injudicious alteration of the treatment may irretrievably injure some weakened organ or part. Hence, it will be apparent that a middle and cautious course must be chosen. I have now under my care a lady who has ceased to menstruate for three or four years, and who, by the adoption of a spare and vegetable diet, and the almost daily use of purgatives throughout the whole time, has become gradually so exhausted, irritable and neuralgic, that her life is a burden. Many months of watchful treatment will be required ere she can return again to animal food, on which the restoration of her health really depends. More need not be said on these important points. Where symptoms of plethora continue—and there are cases where on even the poorest diet patients will fatten—purgatives or mild aperients, occasional small general or local bleedings, exercise, and abstinence from wine, spirits, and malt liquor, must be strictly enjoined. On setons and issues great stress was formerly laid, but they are not often necessary. Where patients cannot be induced to live appropriately, but will

gratify the appetite, at whatever risk, or where the brain is evidently the seat of frequent congestion, and serious symptoms are constantly present, such remedies are most desirable. Other measures of a derivative kind will naturally suggest themselves, as mustard hip-baths, and pediluvia, frictions, with stimulating embrocations, and the flesh brush, the continuance of sexual intercourse, and the encouragement, by any gentle means, of the catamenial flow.

At page 213, in the section on congestive menorrhagia, the probability of pregnancy is mentioned. Nor must it be forgotten that conception does occasionally occur when the process of catamenial cessation seems to be nearly complete. The practitioner will not, therefore, suppose, if the symptoms of gestation arise, that they must of necessity be fallacious. I grant that spurious or mistaken pregnancy is more likely; and many men have exposed themselves to ridicule by erroneous opinions on this difficult matter. More than this I need not say here, as in the "diagnosis of pregnancy from disease" the distinguishing marks will be fully discussed.

Lesions of structure and malignant disease.—There is an almost universal impression that organic maladies, especially of the breast and uterus, are more likely to take place at this than at any other time. I doubt whether catamenial decline, as it is a natural process, has anything to do with their original production; but I certainly think that the

development of a latent tendency to disorganization may accrue from the derangement, especially where the uterus becomes congested, either as a consequence of a superfluity of blood for which there is no adequate outlet, or as the result of a neglect of its proper local abstraction. Under such conditions, I can easily understand that tubercular or cancerous deposit, either in the uterine or mammary structures, shall receive a stimulus of growth, which may, unchecked, lead to rapid development.

It is scarcely requisite to urge a frequent inquiry as to the state of these organs; the breast may easily, if any suspicion exist, be examined; and although there may be obstacles in the way of vaginal investigations, they will readily yield if the necessity to the patient's safety be urged as their justification.

CHAPTER IX.

FORMULÆ OF REMEDIES.

THE following prescriptions are selected from many which are generally used, and which I have been long accustomed to employ in the diseases of menstruation, characterized by profusion or excess, and in leucorrhœa.

[For the aperients and purgatives reference must be made to page 179.]

STOMACHICS AND TONICS.

I shall add only two additional formulæ :—

FORM. 46.—*Mistura Tonica cum Acido.*

Sir James Clark.

R. Acid. Sulph. dil. ℥iv.

Syr. Aurant. ℥iiss.

Aquæ Cinnamomi ℥j. M. ft. Mist.

Take one teaspoonful three times a day in a wine-glass full of water. If it be advisable, a pill containing one or two grains either of the sulphate of iron or quinine, with or without a narcotic, may be given with each dose.

FORM. 47.—*Mist. Ferri Tartratis.*

℞. Ferri Tartratis Ammoniat. ʒj.
 Tinct. Aurant. ʒj.
 Tinct. Card. C. ʒiv.
 Aquæ destillatæ ʒvjss. M. ft. Mist.

Take one tea, dessert, or tablespoonful three or four times daily.

SALINES WITH PURGATIVES.

FORM. 48.—*Mist. Salina cum Acido.*

℞. Infus. Rosæ C. ʒviij.
 Magnes. Sulph. ʒiv. vel. ʒviij.
 Pulv. Potassæ Nitrat. ʒi. vel. ʒii.
 Acid. Sulph. dil. ʒss. vel. ʒj.
 Tinct. Digitalis ʒiss. M. ft. Mistura.

Two tablespoonfuls three times daily. If it be necessary to take the following pill frequently, the menorrhagic loss being excessive, it should be swallowed half an hour or an hour before the mixture. By this arrangement a considerable quantity of the acetate of lead may be exhibited, without the diminution of its beneficial, and free from the risk of its injurious properties.

FORM. 49.

℞. Plumb. Acetatis gr. i. ad. ii. vel. iii.
 Micæ Panis vel. Confect. Rosæ Gallicæ q. s. Ft. pilula.

ASTRINGENTS.

FORM. 50.—*Mistura Secalis Cornuti.*

℞. Tinct. Secalis Cornut. ʒiij.
 Pulv. Potass. Nitrat. ʒj.
 Aquæ Menth. Pip. ʒvss. M. ft. Mist.

Take one tablespoonful, one and a half, or two tablespoonfuls, every two or three hours; the dose being repeated more or less frequently, according to the urgency of the case.

FORM. 51.

Dr. Dewees.

R. Spir. Æther. Sulph. C.
Tinct. Opii. āā gtt. xxx.
Aquæ Menth. Pip. ʒvij. M. ft. Haust.

One draught to be taken every hour, (in cases of alarming menorrhagia or profuse menstruation) with the following pill:

R. Pulv. Opii. gr. $\frac{1}{3}$.
Plumb. Acet. gr. ij.
Cons. Rosæ Gall. q. s. Ft. pilula.

FORM. 52.

Dr. Dewees.

R. Infus. Rosæ. C. ʒj.
Elixir Vitrioli ℥xx.
Magnes. Sulph. ʒiss. M. ft. Haust.

One draught to be taken every six hours with or without the lead.

FORM. 53.—*Mist. Terebinth. Comp.*

R. Spir. Terebinth. C. ℥xv, xx, ad. xl.
Mucil. Acaciæ ʒvij.
Spir. Lavand. C. ʒj. M. ft. Haust.

One draught every four, six, or eight hours. I have given this with marked benefit in menorrhagia, where the loss is not excessive, but protracted, occurring in connection with leucorrhœa; a few drops of tincture of opium may be added.

FORM. 54.—*Mist. Copaibæ Comp.*

℞. Balsam. Copaibæ ℥j.
Mucil. Acaciæ. ℥ij.
Sp. Lavand. C. ℥ij.
Mist. Camph. ℥v. M. ft. Mist.

One or two tablespoonfuls to be taken three or four times daily. The efficacy of this mixture is increased, if it can be borne on the stomach, by the addition of one or two drachms of the powder of cubebs. The tinctures of cubebs, cantharides, and capsicum, are frequently beneficial in protracted or dropping menorrhagia; and in chronic and inveterate leucorrhœa, fifteen or twenty drops of each may be administered three or four times daily in water, or in an ounce of mucilage. I have lately used the *Extractum Hæmatoxyli*, in doses of fifteen or twenty grains, three times a day; continued for several weeks; it must be suspended in water or mucilage, for if given in pills they become so hard that they will pass through the body unchanged, and without effect.

It is scarcely necessary to give the more common astringent lotions and injections, although I do not wish it to be inferred from the omission, that I think lightly of their efficacy. The compound alum wash, if well used, is one of the most valuable remedies of the kind we possess; but there are tedious examples of leucorrhœa, in which more powerfully astringent and stimulant means must be employed.

FORM. 55.—*Injectio Astringens.*

℞. Decoct. Secalis Cornut. ℥xiv.
Argenti Nitrat. gr. xx.
Tinct. Catechu ℥ij. M. ft. Injectio vaginalis.

Four ounces to be used three times a day. The decoction of the secale is to be prepared by boiling one ounce of the bruised rye in a pint and a half of water, down to a pint.

FORM. 56.—*Injectio Astringens.*

Dr. Copland.

R. Inf. Quercus ℥iv. Pulv. Gallarum gr. xxx.
Tinct. Catechu ℥ij. Ft. Injectio vaginalis.

To be used once, twice, or three times daily.

FORM. 57.—*Enema Astringens.*

Dr. Mackintosh.

R. Plumb. Acetat. gr. xv, xx.
Aquæ puræ ℥iv. Ft. Enema.

To be used by the rectum once or twice daily.

FORM. 58.—*Injectio Argenti Nitrat.*

R. Argenti Nitrat. gr. xv. ad. ℥j.
Aquæ Rosæ ℥xvj. M. ft. Injectio vaginalis.

Three or four ounces to be used three or four times daily. In cases where an unhealthy condition of the vagina or cervix has been ascertained to exist by the speculum, or where, independently of such state, the discharge is inveterate, a much stronger solution is sometimes required, and with this by the aid of the tube, the diseased parts may be directly touched, or washed once or twice daily, a camel-hair pencil being used for the purpose. In a protracted example of leucorrhœa lately under my care, the nitrate of silver was thus used, and with curative effect. Of all the mineral astringents it is the best. Dr. Jewell remarks, "that by some it is thought, that the checking of a vaginal discharge must be prejudicial. This opinion," he says, "is at variance with my

own experience; but I would employ the nitrate of silver, not merely with a view of arresting the discharge, but to produce a perfectly new action, or new excitement, in the part from which the secretion has its origin. The mode I have adopted in the application of this agent, has been either to conceal it in a silver tube, as it is employed in cases of stricture, (except that the tube should be adapted to the size of the 'argenti nitras,') or in the form of a solution, in the proportion, generally, of three grains to the ounce of distilled water, the strength being gradually increased. A piece of soft lint may be moistened with the solution, and introduced into the vagina, for a short period, several times in the day, or a bit of sponge, firmly and neatly tied to the end of a slip of whalebone, and well saturated with the solution, may be passed into the vagina, up to the os and cervix uteri. This can easily be effected by the patient herself. It is necessary that the application should be frequently repeated, or no permanent benefit can be expected. Should it become requisite to employ a strong solution, and to apply it to a certain part, or ulcerated surface, it can be accomplished with a great degree of nicety, by means of a camel's hair brush introduced through the speculum or dilator."

FORM. 59.—*Injectio Ferri Sulphat.*

R. Ferri Sulphatis ℥i, ℥ii. vel ℥j.

Aquæ distillatæ ℥xvj. M. ft. Injectio vaginalis.

Four ounces to be employed three or four times daily. I have of late discontinued the use of syringes, for vaginal injections; india-rubber bottles, fitted with ivory tubes, are far better: there is less difficulty in their employment, and they are not so apt to get out of repair.*

* Patients should be told that the two last forms (58, 59) will spoil any linen which they may happen to soil, imprinting an indelible stain.

FORM. 60.—*Injectio Sodæ Carbonat.*

Dr. R. D. Thompson.

℞. Sodæ Carbonat. ℥i, ℥ii. vel ℥j.

Aquæ Puræ ℥xvj. M. ft. Injectio vaginalis.

Four ounces three or four times daily.

Dr. Thomson is said by Mr. Jones, in his "Practical Observations on the Diseases of Women," to have ascertained, by repeated experiments, that inflammation of mucous membranes always engenders a free acid on their surface, which acts there as an irritant increasing inflammation. To neutralize this, he makes use of the alkali. Mr. Jones confirms this opinion by stating, that whenever litmus paper has demonstrated the presence of a free acid, almost immediate relief has been obtained by the use of the alkali. So far as my exhibition of this remedy goes, it supports these views; certainly in several examples of acrimonious leucorrhœa, it has quickly relieved, and several times cured the malady.

FORM. 61.—*Injectio Succ. Limon.*

℞. Succ. Limon. recent. ℥j. vel ℥ij.

Aquæ Puræ ℥xv. vel ℥xvj. M. ft. Injectio vaginalis.

To be used either warm or cold, as directed above.

Acetic acid in the proportion of half an ounce to a pint of water; nitric, or muriatic acid, ten, twenty, or thirty minims to a pint of water, may be advantageously used in protracted leucorrhœal discharges. Their effects will be either sedative or stimulant in proportion to their strength. In a diluted

form, they will often soothe; whilst in greater intensity, they will not only stimulate, but induce excessive irritation. The sulphate of copper $\mathfrak{z}i.$ vel $\mathfrak{z}j.$ to a pint of water, or the decoct. secalis, is often beneficial; nor must the injection of the black wash, or the oxymuriate lotion be forgotten. Electricity, and a blister to the sacrum, are valuable remedies; and I am anxious to give a place to the following excellent combination of Sir Charles Clarke:—

R. Infus. Cascarillæ $\mathfrak{z}j.$

Aquæ Pimentæ $\mathfrak{z}ss.$

Tinct. Sabinæ C. $\mathfrak{z}j.$ $\mathfrak{z}iss.$ vel $\mathfrak{z}ij.$

Syr. Zinzib $\mathfrak{z}j.$ Ft. Haust.

To be taken three times daily.







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