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A

PRACTICAL MANUAL

OF

GYNÆCOLOGY.

BY

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PREFACE.

GYNÆCOLOGY is a child of the present generation. Its growth has been rapid and vigorous. Yet progress in this specialty has been in the direction of surgery rather than of medicine; partly because we lack a thorough knowledge of the effects of drugs on the female organism, and partly because a surgical operation appears to be a more rapid and definite method of treatment.

The author believes that uterine diseases are largely due to faults either of nutrition or of vascular or nervous supply, and, like other diseases, can be effectually and permanently cured by internal medication. In his practice and experience in teaching he has felt the need of a practical manual of gynæcology in which the general practitioner and student could readily find all the details of minor surgical gynæcology, diagnosis, local treatment, and therapeutics of uterine diseases. This book has been designed, therefore, as a safe and practical guide for these classes rather than for the specialist. Hence the history, anatomy, details of pathology, and major operations, excepting references to careful descriptions of them, have been omitted; not that they are unimportant, but because they are easily found in other works, and

do not have the direct and practical importance of the subjects presented.

The indications for remedies, the recommendations for methods of treatment, and operations to be performed, are based upon the author's observations in many European and American hospitals, upon the study of all carefully recorded cases, so far as he can find them, in a thorough search through medical works and journals in German, French, British, and American literature covering nearly half a century; upon the communications from his professional brethren; and also upon his own experience in private, hospital, and dispensary practice. Many clinical cases are quoted to illustrate the action of remedies.

The writer has endeavored to give others credit for their contributions to gynæcology, either in the list of books, of journals, of authors, or among the footnotes. He also desires to acknowledge the courtesy of Drs. Conrad Wesselhoeft, T. F. Allen, James B. Bell, and others, in allowing him the use of their libraries, from which much valuable aid, otherwise unattainable, was obtained.

Conscious that a work of this kind must be necessarily incomplete, suggestions from members of the profession, statements of careful verifications of symptoms, and reports of cases cured by the use of remedies employed singly, will be gratefully received.

G. R. SOUTHWICK.

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Wiltshire.
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Winter.
Woodbury.
Worcester, S.
Wyder.
Wylie.

ARRANGEMENT.

THE remedies recommended are divided into four classes. The most important are marked with a double bar (||); the next important have a single bar (|); the ordinary remedies without a bar; the least important, and those remedies seldom used, are placed at the close of the therapeutics as an additional list for consultation, the more important remedies of which are printed in Italics.

The characteristic symptoms are generally printed in Italics, and the remedies in parenthesis among the symptoms refer to those remedies having similar symptoms.

The digests are given to facilitate more accurate prescribing, and to serve as suggesting rather than absolutely indicating the remedy. Indeed, the same holds true of those remedies where indications are given, as it is the totality of the symptoms of the case which is our real guide. The indications mentioned, therefore, are those more peculiar to the genital organs, and might be termed the beacon-lights to guide us to the remedy. The study of Hughes's Pharmacodynamics, Cowperthwaite's, Hering's, and Farrington's Materia Medicas, with these symptoms, will be of material help in deciding on the best remedy.

A number of blank pages will be found at the close of this volume to enable the reader to record interesting cases, verified symptoms, practical observations, etc. which can be referred to by marginal notes in the text.

PRACTICAL MANUAL OF GYNÆCOLOGY.

CHAPTER I.

THE CAUSES OF GYNÆCOLOGICAL DISEASES.

WHY are American women so prone to diseases peculiar to their sex? It may be considered an open question, if they are more affected than women of other nations. They have that reputation however; and it seems to be true, that those diseases characterized by various disturbances of the nervous system are not only more frequently met with in the United States than in other countries, but are also increasing.

A young woman has completed her education, perhaps with honor; as a girl she was healthy and robust, but for some occult reason a peculiar train of nervous phenomena, called hysteria, is developed.

Like the fly-wheel of an engine without the steadying influence of the governor, there seems to be a lack of correlation of the nervous forces. The nicely adjusted balance between volition and impulse is lost, and the harmonious action of the vital forces destroyed. The fault may be detected in a piece of machinery, but the human organism is so complex in its structure, that neither physiology nor pathology will always enable us to determine where the trouble lies. On further inquiry in the class of cases referred to, we are liable

to find an unnatural condition of the monthly periods. They may be irregular or profuse, and attended with a varying amount of ovarian pain. The patient may be subject to severe headaches, and in her later womanhood wonder why she is not as well as some of her friends. Like the hot-house plant she can endure but little, and is easily affected by her surroundings. Both have been forced to bloom prematurely. At the time of puberty, the nervous forces are directed from their proper channels, and physical vigor is sacrificed to intellectual development.[1] Instead of the out-door sports and games of boys, rowing, skating, etc., she is taught that such things are hoidenish. While the boys are strengthening their muscles with plenty of out-door air and exercise, she is practising her music, or reading the latest novel. When the menses appear, she is seldom warned and advised concerning them. Instead of taking perfect physical and mental rest at these times, she goes about as usual. Imprudence during the menstrual periods, from ignorance of the consequences, is a fruitful cause of disease. No mother does her whole duty to her daughter who fails to point out and impress upon her the importance of this one thing. At this time, too, the girl just entering into womanhood is undergoing the cramming processes of school life and various accomplishments. The generative organs, which are rapidly developed at this period, suffer from malnutrition in consequence of the perversion of nerve force. One of our most prominent gynæcologists believes this is a fruitful source of imperfect development of the sexual organs, with the consequences of various "weaknesses" and sterility, either absolute or

[1] Dr. William A. Hammond has an interesting article on Brain-Forcing in Childhood, in the Popular Science Monthly for April, 1887. He believes that much injury is done by sending children to school too young, and with too great a variety of studies.

relative.[1] But the demands of education are not the only ones made upon her. Fashion decrees that she must wear longer and heavier skirts and dresses, too often suspended from the waist instead of the shoulders. Tight-fitting corsets must be added to make the latter fit well, and still further impede the free circulation of the blood. Habits of luxury and ease also play a *rôle*. Sitting on stuffed easy-chairs compresses the sides of the pelvis and the blood-vessels, instead of allowing the pressure to come upon the ischial tuberosities, where nature intended. Bodily posture is not without its influence: too often, in sitting down, the pelvis is tilted upward and the body forward, the erect position is lost, and the weight of the intestines allowed to come directly upon the contents of the true pelvis.[2] A similar condition is produced by wearing high-heeled shoes. All these tend not only to cause, but also to perpetuate, a chronic congestion of the pelvic organs from the very beginning of her sexual life.

One of the best ways to study the social life of a nation is to observe the caricatures in its literature. Among

[1] Dr. Matthews Duncan attributes to it not only sterility, but also "destruction of sensuality of a proper, commendable kind, and its consequent personal and social evils." The writer is quite sceptical concerning this statement, as patients of practically no education whatever in the lower classes complain of this fully as much as the better classes. He would also ask, why should higher education under the *same* conditions affect the ovaries of a woman any more than the testicles of a man?

[1] Emmet, Principles and Practice of Gynæcology, pp. 17–25.

[1] See address of Dr. Moore on the Higher Education of Women, before the British Medical Association, British Medical Journal, Aug. 14, p. 295, 1886. Though a good summary of the opinions of various persons, he does not found his opinion on a personal investigation of statistics bearing on this question. It is commended, however, by an editorial in the Journal of the American Medical Association, Sept. 4, p. 267, 1886. A very interesting reply, by Dr. Lucy M. Hall of Vassar College, to Dr. Moore's address, will be found in the Popular Science Monthly for March, 1887.

[1] See also Health and Sex in Higher Education, by John Dewey, Ph.D. Popular Science Monthly, p. 606, March, 1886.

[1] Compare Herbert Spencer's Principles of Biology.

[2] Bodily Posture in Gynæcology, Dr. S. J. Donaldson.

the most common we see are those of young misses discussing their parties, calls, beaux, fashions, theatres, etc. As if the evils of education and fashion were not enough, society itself must conspire against them, and demand their entrance into it two or three years before that of the opposite sex, the boys, who meantime have enjoyed far better opportunities for physical culture.[1] Girls should certainly be allowed as much time as the boys for higher education. The demands of society at an early age are a great and serious mistake, only adding to the high pressure and the nervous strain to which they are already subjected. Let not these remarks be misconstrued. I thoroughly believe in the higher education of women in whatever direction they may manifest peculiar talent and ability, and I also believe in giving the girls a fair chance.[2] It is not so much study as a lack of physical exercise, late hours, improper food and dress, which generally injure a girl's health.

The remedy for these things is simple; plenty of out-door air and physical exercise, rest in a recumbent position during each menstrual period until regularity in time and quantity are established.[3] After this, she need not lie down, but ought to have both physical and mental rest. Teach her proper care of herself, and the danger of suppressing the flow by wetting the feet, or sitting on the ground or on cold stones. Keep her a girl and out of society till at least the age of eighteen. From

[1] Education of Girls connected with Growth and Physical Development. By Dr. Nathan Allen. In Journal of Psychological Medicine, vol. v. Part 2, London, 1879.

[2] Dr. Edward H. Clarke, Sex in Education; or, a Fair Chance for the Girls. Dr. Edward H. Clarke, The Building of a Brain.

[3] Dr. Mary P. Jacobi, in her essay on The Question of Rest for Women during Menstruation (p. 231), expresses her opinion that "mental work exacted in *excess of the capacity of the individual* may seriously derange the nutrition" in young persons, but she thinks there is no need of rest for *healthy women* during menstruation.

fourteen to seventeen avoid hard study and the reading of light literature. Moderate study with out-door air and exercise, going to bed early and sleeping long, is not likely to injure any one. There will still be time enough for her to acquire a collegiate education if she wishes, and, if possible, develop into a strong healthy woman.[1]

After marriage there are three great causes of uterine disease: prevention of conception, the induction of abortion, and lack of proper care during and after parturition. It is impossible to condemn too strongly the cold water, acid, or astringent injections used to destroy the vitality of the semen, or the various mechanical measures to prevent the entrance of the spermatozoa into the uterine canal. The injurious effects of such repeated injections, when the generative organs are excited and congested, must be apparent to every practitioner. Very many seek to rob Nature of her due by withdrawal before completing the sexual act. This tends to produce a nervous erethism and chronic congestion.[2] It thus becomes a fertile cause of disease, which is practised in ignorance of the consequences. Nature's laws may be infringed, but sooner or later she demands a heavy penalty.

The induction of abortion, the murder of a child by its parent, is unquestionably the source of many of the diseases which come to the gynæcologist for treatment. Its pernicious effects are so plainly evident to every physician, it needs no further comment. Lack of care

[1] The health statistics of female college graduates, in the sixteenth annual report of the Massachusetts Bureau of Statistics of Labor, show that the health of such graduates bears a favorable comparison with that of non-graduates. It is noticeable that only about one-third of the number had married, and one-third of these had not given birth to a child. The report unfortunately only comprises 54.65 per cent of college graduates, as the remainder did not answer the circulars addressed to them. The statistics, therefore, can only be considered approximately accurate.

[2] Goodell, Lessons on Gynæcology.

during and after parturition is more often the fault of the doctor than of his patient. Meddlesome midwifery is practised, a ruptured perineum is not sewed up, he neglects to inquire after the various functions, and see for himself that they are properly performed after delivery. The patient may move about too soon, and over-exert herself in various ways. She may be subjected to coitus early, which never should take place during the three months after delivery. Excessive venery and too frequent child-bearing are also causes of much subsequent trouble.

It may not be out of place to mention here what is, to say the least, a great mistake and a positive wrong to our patients. Many a physician has professed to understand and treat cases of uterine disease, of which in reality he knew nothing. Two reasons seem to account for this: first, a desire to make money out of the case; second, the fear lest his patient should not think him skilful if he sent her to some one better informed on the subject. In consultations some doctors seek to consult with one who is sure to agree with them, no matter what the treatment has been, rather than one who might advise differently and aid them in the treatment of the case. This may seem harsh judgment on the profession, but such instances are not infrequently observed. The practice of medicine should be for the good of the patients, and above such mercenary, selfish motives.

Marriage, and especially child-bearing, apparently confer a certain amount of protection against various disorders of the climacteric, particularly the growth of fibrous tumors and mucous polypi. On the other hand, epithelioma of the cervix is seldom seen in the sterile, and with few exceptions is associated with laceration of the cervix uteri. The marital relations serve to keep down excessive nerve force and the tendency to faulty

nutrition, as shown by the growth of various neoplasms. So, too, in the unmarried, those who are constantly and most actively employed work down, so to speak, this superfluous energy, and suffer less from morbid growths at the time when functional activity of the sexual organs ceases. Nature seems to have ordained that the cycles of ovulation and menstruation should be occasionally interrupted and held in abeyance, and that the progressive and regressive changes in the uterus during its growth and involution should be essential to the health of women. Certain it is, that celibacy, which is contrary to the design of nature, tends to the production of certain diseases.

The question of marriage with existing uterine disease not infrequently demands our consideration. There seems to be a feeling among the laity that "she will be all right when she gets married." In the great majority of cases, this is quite the reverse, and the patient's complaints are increased instead of relieved. There are, however, some few conditions which are improved or cured by pregnancy and child-bearing, such as the so-called obstructive dysmenorrhœa, and various displacements of the uterus. In the latter class of cases, it is very often the best remedy. Where the menses are a little irregular in time and quantity, the marital relations will sometimes regulate them. The various forms of hysteria, and all inflammations of any of the pelvic organs, are likely to be increased. Girls who have reached the age of twenty without any sign of the menstrual flow should be examined to ascertain the cause. It may depend on defective development, and conception will not be possible. If the marriage takes place under such a condition, both parties ought to know there will be no offspring. Only a short time ago I was consulted in a case of this kind, where the young woman had married,

hoping it might bring on the menses, and conception result; but all to no purpose.

Fibroid tumors, which are rare in young women, sometimes raise the question of marriage. Unless the growth be very small, marriage should be distinctly forbidden till after the tumor is removed. The increased irritation and congestion consequent upon the new relations would tend to favor its growth. Should pregnancy ensue, delivery might be attended with serious complications from dystocia, or post partum hemorrhage. Fibroid tumors have but little vitality, and the pressure to which they are subjected in labor is liable to cause their death, disorganization, sloughing, and as a consequence puerperal septicæmia. I have in mind, while writing, the death of a young woman from this cause.

Young women in whose family there is very distinct and decided hereditary disease, such as cancer, tuberculosis, or insanity, for two or three generations back, should not marry. Not only will they bestow a fearful legacy on their offspring, but pregnancy and childbearing very decidedly favor the development of these diseases, particularly the two first mentioned.

CHAPTER II.

MINOR SURGICAL GYNÆCOLOGY, AND THE PRINCIPLES OF LOCAL TREATMENT.

NEATNESS, both in person and methods of treatment, is always noticed and appreciated by ladies who have occasion to consult a physician for any peculiar difficulty requiring an examination. Neat, fresh linen is a matter of no little importance. The fingernails should be kept short and clean, to avoid giving unnecessary pain or infecting the patient. It is needless to remark that the utmost delicacy should be observed in any examination, and all undue exposure carefully avoided. This is of so much practical importance to the physician, that the ordinary manipulations will be described in some detail.

A thorough practical knowledge of general practice is essential to any specialist. The various organs of the body are so intimately connected that one influences another, and the suffering may be due to disturbance quite remote from the seat of the disease. In no branch of medicine is this more true than in gynæcology. Not infrequently the trouble is due to imperfect portal circulation, or the disease may be merely the expression of general debility. On the other hand, there are some diseases, more especially those of a neuralgic type, which depend on some form of uterine trouble, though the local symptoms of the latter may be quite insignificant.

A golden rule for every practitioner to follow in treating the diseases of women is to consider carefully every function of the body, and in every case the totality of the symptoms. Many a woman has suffered more from unnecessary and harsh local treatment than the disease itself would have caused, if a little common-sense and hygiene had only been employed, and all because her physician concentrated his entire attention on that much-abused organ, the uterus.

Cleanliness, rest, and good nourishing diet to build up the general health of the patient, will be of great advantage. I do not mean to say that local treatment is unnecessary, — not by any means; but I believe it is very much abused, and the general treatment of the patient too often neglected. Carefully selected remedies should be relied on, rather than local applications, for the permanent cure of the disease. Why is it necessary to apply remedies locally so much more to the mucous membrane of the genital tract than to the mucous membrane of the nose or throat, in treating affections very similar to each other?

A careful record should be kept of every case; the history and symptoms, as well as the remedy and the results. It does not require nearly as much time as it would seem at first thought; the symptoms once noted do not have to be repeated, and only a few words are necessary to record the results at each subsequent visit. The more important cases can be indexed, and in a few years valuable experience is collected in a ready form for reference.

The question when to examine a patient depends very largely upon the circumstances of the case. There is a great difference in persons. Some will not consent to it though it may be very necessary; others feel they consult the physician for special troubles, and that he

fails in his duty if he neglects an examination and a certain amount of local treatment, though the latter may be nothing more than a dry pledget of cotton. The doctor should exercise a certain amount of judgment and tact in each individual case. In patients suffering from considerable pelvic pain, severe back-ache, much bearing-down, and profuse leucorrhœa, or much loss of blood, he should urge upon them its necessity ; while in girls, it should be the last resort, and carefully avoided as far as possible. Unless patients decidedly object to an examination, it is well to make a thorough one at the beginning, enter the diagnosis in the record, and also re-examine occasionally even if there be no local treatment. The record of the case is thus much more accurate and valuable for future reference.

It is exceedingly difficult to explore thoroughly the pelvis with the patient lying on a low lounge or couch. Ladies naturally dislike to climb on to a table for the purpose. There are various kinds of chairs for the physician's use, good, bad, and indifferent. The writer has used Marks' chair for some time with much satisfaction. The great objection to it is the expense, and it requires some strength to raise a heavy person. The Harvard chair admits of a greater variety of positions, but has a more repulsive appearance to the patient. A small cabinet near the chair, to hold the instruments and various medicaments for local use, is very convenient. If good sunlight cannot be had, an ordinary candle with a good reflector attached to the candlestick affords an excellent and cheap substitute. If cheapness is a secondary consideration, there are various small electric lights which are very serviceable. With the patient in the dorsal position, which is the only one allowing a thorough examination, and covered with a sheet to protect her person, the physician is ready to commence

the examination. Having washed his hands immediately before, he anoints the forefinger of the *left* hand if he wishes to examine the *left* side of the pelvis more particularly, or the forefinger of the *right* hand if

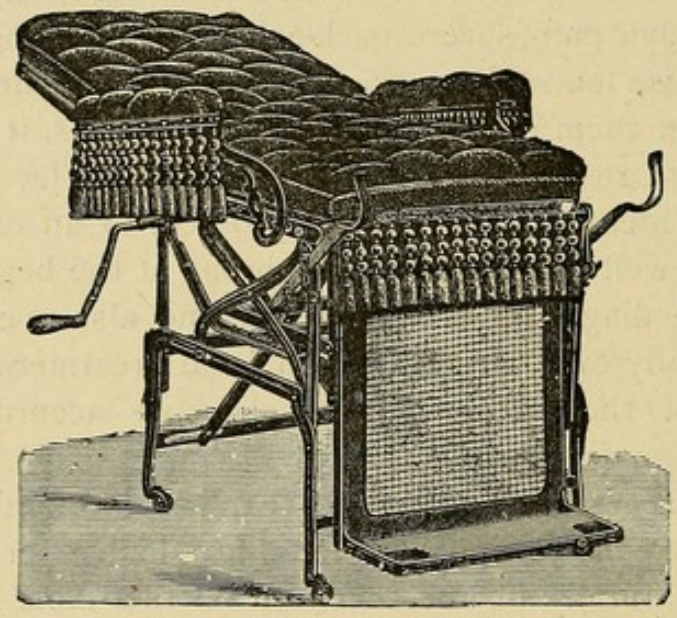


FIG. 1. No. 4, MARKS' CHAIR. Showing straight stirrups, made without the back legs, or adjustment for elevating front of seat.

the *right* side of the pelvis. Only one finger need be used, for as much can be felt with one finger as with two, by pressing firmly backward and upward on the perineum. Unless there is some reason to suspect the presence of venereal disease, pediculi, or some affection of the vulva, the patient should not be exposed before or while introducing the finger. The knuckle can be passed up in the cleft of the buttocks, over the perineum, and the tip of the finger at once glides into the vagina. The condition of the perineal body should be noticed by compressing it between the tip of the finger in the

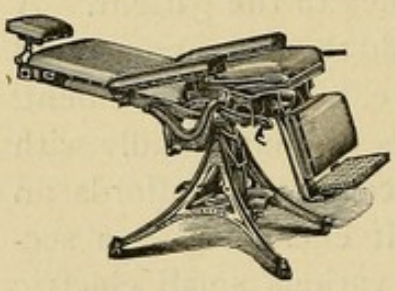


FIG. 2. THE HARVARD CHAIR.

vagina and the thumb against the anterior margin of the anus. The vaginal walls, whether relaxed or not, dry, moist, or hot, next deserve attention. The cervix is finally reached. Here important information may be obtained from its shape, feeling, and direction. The condition of the cervical canal, as well as any bulging into the vaginal vault anteriorly or posteriorly, should be carefully noted. The fingers of the other hand are now placed nearly flat on the abdomen just above the pubes and corresponding to a portion of the pelvic brim. Any tenderness or localized hardness in the pelvis is then ascertained by seeking to bring the tip of the internal finger and the external fingers together, the pressure of the latter being exerted downward and forward. This is called a bi-manual examination, and is absolutely essential to obtain a correct knowledge of the case.

In girls and unmarried women, enough information as to pelvic inflammation or uterine displacement can often be gained by a rectal examination instead of the vaginal. If the latter be necessary, the application of cocaine in a six-per-cent solution, or cerate, will diminish the sensitiveness of the hymen, which will gradually stretch with scarcely any laceration by gentle but continuous pressure till the finger enters the vagina. I have also used the cocaine successfully when the vagina was excessively sensitive.

Outlining the uterus, which is indispensable in arriving at a diagnosis, is so often very difficult for the beginner, that a description will be given in some detail. The difficulty is frequently increased by the almost involuntary contraction of the abdominal muscles. This is best overcome by instructing the patient to keep herself perfectly relaxed, to breathe out, and keep the mouth open. If this is not sufficient, endeavor to engage her in conversation: she cannot talk and keep

the abdominal muscles contracted at the same time. Then crowd the internal finger well up into the anterior vaginal fornix at the junction of the vagina and cervix, by steadying the corresponding elbow against the hip, at the same time pushing back on the perineum and up in the pelvis, while the outside fingers about two or three inches above the pubis press downward and a little forward into the pelvic brim in the median line; next, try to bring the fingers of both hands together, first on either side and then in the median line, where the uterine body will usually be felt. If this manœuvre fails, place the tip of the internal finger on the posterior lip of the cervix, and raise the organ well up and a little forward in the pelvis, at the same time pressing down from the outside as before. If this does not succeed, examine both sides of the pelvis for any lateral displacement. If the uterus be retroverted, the upper portion of the pelvis will be empty, the fundus bulge against the posterior cul-de-sac, and the cervix point upward and forward. Unless there is a flexure of the cervix upon the uterine body, the direction of the former will indicate to a certain extent the position of the latter. Besides the position of the uterus, the examiner will ascertain in a similar manner, whether there is any undue tenderness of the ovaries, or displacement, the existence of inflammation, exudation, or the presence of any foreign growth.

Having obtained all the information possible by a digital examination, the physician is ready to use either sound or speculum. The former is a safe instrument in careful hands, but is liable to provoke some irritation, and should never be used without a distinct indication; moreover, all unnecessary manipulation should be avoided.

Most physicians have the ordinary Simpson's sound,

with the little knob two and a half inches from the tip, the average depth of the normal uterus. In addition to this, a much smaller sound, or Sims' probe, will be of great service, where it is necessary to ascertain the

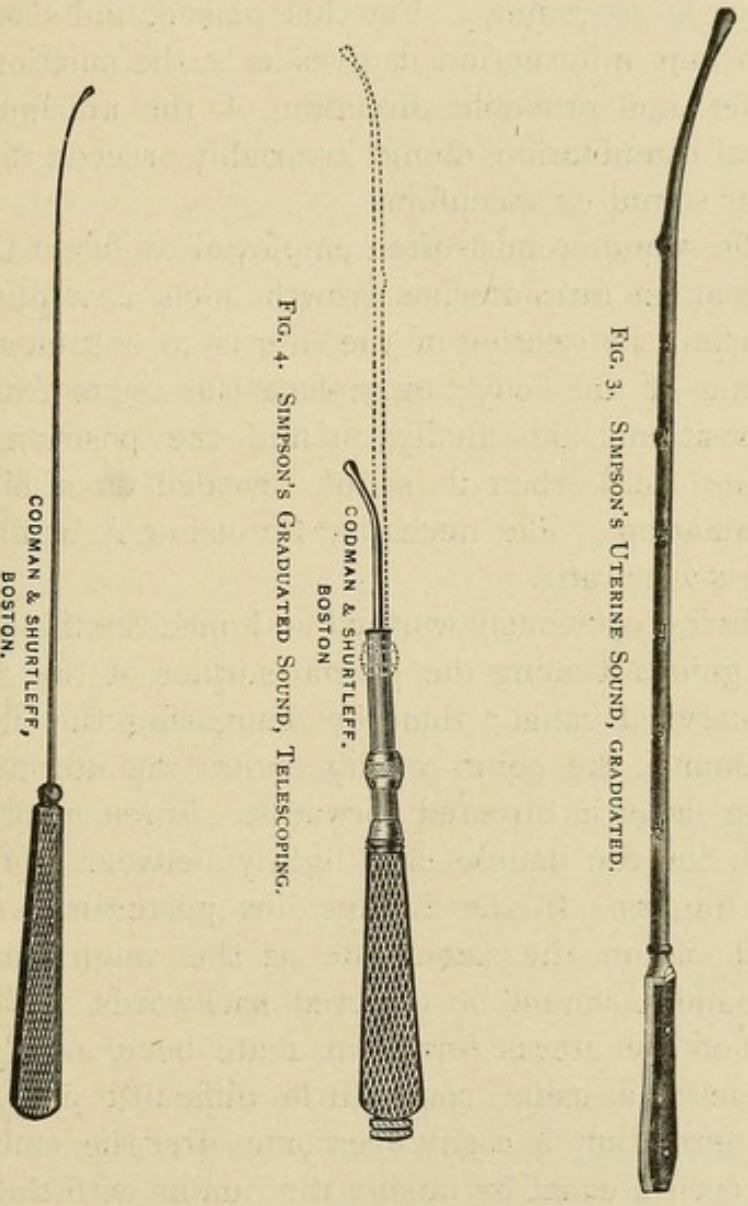


FIG. 5. DELICATE COIN SILVER PROBE.

FIG. 4. SIMPSON'S GRADUATED SOUND, TELESCOPING.

FIG. 3. SIMPSON'S UTERINE SOUND, GRADUATED.

depth and direction of the uterine canal with the least possible irritation, as in sub-mucous fibroids. The Simpson's sound should be passed into the uterus without a speculum, with the tip of the forefinger on the os uteri as a guide; the probe must be used with a

speculum, preferably Sims'. Either is absolutely contra-indicated by any inflammation of the pelvic organs, even if it be of a sub-acute character, endometritis and sub-involution excepted, and also if there be any suspicion of pregnancy. For this reason, and also for the important information it gives as to the position of the uterus and probable direction of the uterine cavity, digital examination should invariably precede the use of either sound or speculum.

The sound is most often employed to detect the presence of an intra-uterine growth, such as a fibroid; to ascertain the relation of the uterus to a tumor in that portion of the body; to replace the organ from some malposition; and, finally, to find the position of the fundus uteri, when it is not revealed on a bi-manual examination. The necessity for using it in the latter case is very rare.

Having previously warmed and oiled the tip, the operator guides it along the palmar surface of the finger to the cervical canal; then, by depressing the handle of the sound, the point readily enters the uterine cavity if the latter is directed forwards. Force must not be used, but the handle held lightly between the thumb and fingers. If the fundus lies posteriorly, the tip, which is on the same side as the rough surface on the handle, should be directed backwards. When the body of the uterus forms an acute bend or angle with the cervical canal, some little difficulty may be encountered, but is easily overcome after the sound is in the cervical canal by raising the fundus with the finger, so as to straighten out the angle; and in some rare cases the instrument must also be bent to correspond with the flexion, or even given two curves, one for the perineum, the other for the direction of the cervical canal.

A decided increased depth of the uterus usually points to the presence of some growth in that organ, or its adhesion to some tumor, which is drawing it up, and stretching out the cavity. In the former case the uterus is low down in the pelvis from the increased weight; in the latter, the cervix is apt to be high up, and hard to reach. If it is due to the presence of a submucous fibroid, the examiner will meet with some difficulty in introducing the probe, owing to the obstruction in the cavity. Where a fibroid is suspected, it can almost always be diagnosed by bi-manual palpation. Place the patient well over on her left side in Sims' position, and with the aid of his speculum introduce the probe — not the sound — very gently so as to avoid all unnecessary irritation. Much information can be gained in this way regarding the size, attachment, and amount of bulging in the cavity. If this is not sufficient, the cervix can be dilated, the uterus forced down into the pelvic cavity, and its interior explored with the finger.

When it is necessary to ascertain the relation of the uterus to some growth, place the patient on her back, and introduce a moderately stiff sound. Note the direction of the cavity in relation to the tumor, and as one or both hands are applied to the latter, motion of the fundus uteri communicated by the sound will give an approximate idea at least of the connection of the uterus with the growth.

No attempt should ever be made to replace the uterus with the aid of the sound, if there are any signs of latent cellulitis. This is a rule with no exception, nor should this instrument be used when simpler means will accomplish the same end. Peaslee's sound, which is large, thick, and less liable to injure the uterus, is best for this purpose. Place the patient well over on her left side in Sims' position, with the hips raised about three

inches higher than the level of her shoulders. Introduce the sound, and, with the help of the fingers of the opposite hand to push up the fundus, gently rotate the instrument, carrying the handle round in a circle about six inches in diameter. Never turn the sound on its long axis, for in this way the point describes a circle, and exerts more force in the uterine cavity. But if the handle of the sound describes a circle, the point rotates in a smaller one in proportion to the size of the former.

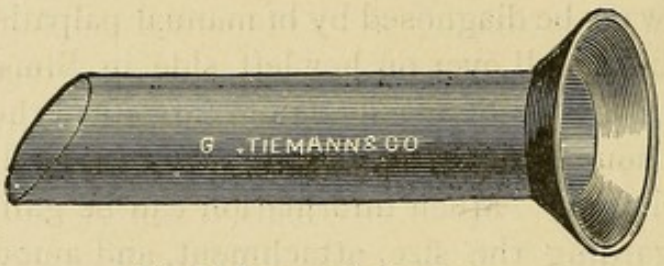


FIG. 6. FERGUSON'S SPECULUM.

In many cases examination with the speculum follows the digital examination. There are three principal varieties in common use: the cylindrical or Ferguson's, the bivalve, and Sims'. The small Nott speculum is

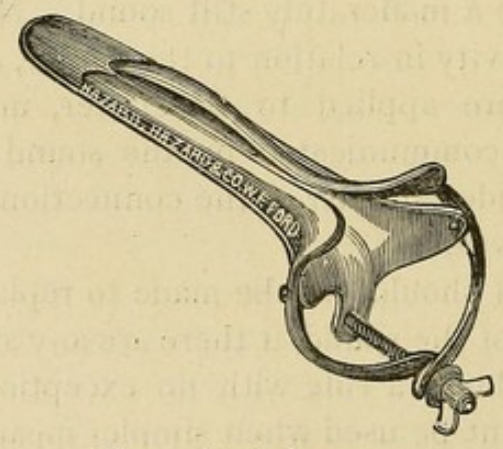


FIG. 7. NOTT'S SPECULUM.

best for young unmarried women, and is also very good for examining the rectum. The smallest Ferguson speculum is preferred by some on account of the reflect-

ing surface increasing the amount of light admitted into the interior. The bivalves, of which Cusco's and Graves' are very good examples, are most used. Sims' speculum has many advantages, but requires an assistant to hold it. The various contrivances invented to hold the instrument are expensive, can only partially

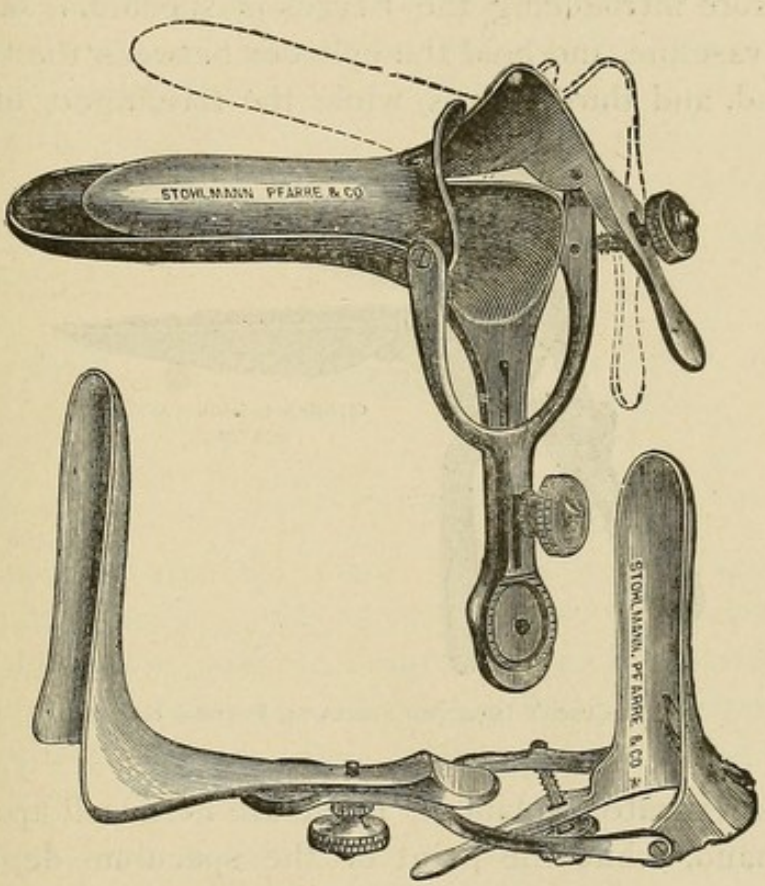


FIG. 8. GRAVES' SPECULUM. USED AS A BIVALVE OR A SIMS' SPECULUM.

serve the purpose, and, in fact, are seldom used by the inventors themselves. Although an invaluable and indispensable instrument, its use is naturally restricted to a great extent to specialists, and the performance of certain operations.

In using any speculum, the examiner should select one corresponding to the size of the vagina. This is of considerable importance. If too large, it is very pain

ful. If too small, particularly if a bivalve, the vaginal folds drop down, making it very difficult to obtain a good view of the os uteri, besides the liability of severely pinching them between the blades on withdrawing the instrument. A physician who needlessly hurts his patients is not likely to be very popular with them.

Before introducing the Ferguson speculum, smear it with vaseline, and hold the cylinder between the thumb, second, and third fingers, while the forefingers of both

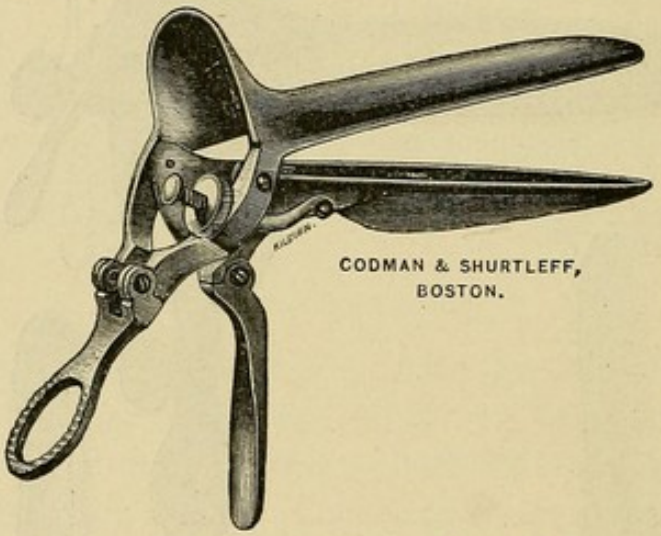


FIG. 9. CUSCO'S IMPROVED SPECULUM, FOLDING HANDLES.

hands separate the labia. These are held well apart by one hand, while the point of the speculum depresses the perineum, and glides downward and backward into the vagina. This instrument is very apt to catch on some portion of the nymphæ and bulb of the urethra, when the point is introduced, and hurt the patient. This can easily be avoided if the operator always takes the simple precaution to look through the speculum as it is being introduced. Any tendency to impinge against the nymphæ or urethra can then be seen at once and prevented. A speculum should always be introduced gently, particularly if there are any sensitive

spots in the pelvis, and the point directed towards the cervix, the position of which has just been ascertained by the finger. The use of the cylindrical speculum exposes a patient much more than the bivalve, though in both the patient occupies the dorsal position. Moreover, the bivalve gives a much more satisfactory view than the cylindrical. In the great majority of cases, then, a good bivalve speculum will be the best for the general practitioner.

This instrument, having been well warmed, and smeared with vaseline, is held in one hand, with the forefinger a little over the end as a guide. Passing

FIG. 10. BOZEMAN'S UTERINE DRESSING FORCEPS (SELF-HOLDING).

the hand beneath the sheet, and without raising the latter, the finger guides it from between the cleft of the nates over the perineum into the vagina. Introduce the long diameter of the oval extremity of the speculum through the vulvar opening, antero-posteriorly, and turn it so the blades correspond to the vesical and rectal walls after one-third has entered the vagina; when fully in, partially expand the blades to retain the instrument. Now press the apron, formed by the sheet over the knees, back between the thighs, without raising it, and fold it around the speculum. With a little practice, this can be done without any exposure of the external genitals, and gives the patient the feeling that her person is protected. The os can then readily be brought into the speculum by raising or lowering the end, or expanding the blades a little more. The latter, however, need not be expanded so far as to cause a

painful stretching of the vaginal vault. The mucus can be wiped away with absorbent cotton, held by a pair of dressing forceps having a bend in the shank, so that the hand of the operator does not obstruct his view. In some cases of endo-cervicitis, the mucus in the cervical canal is so tenacious the cotton will not remove it. However, the canal can usually be cleansed by persistent syringing with one of Goodyear's uterine syringes, by attaching a short piece of rubber tubing to the nozzle and employing suction, or by twisting up the mucus with bits of dry sponge.[1] Before making any application, a towel should be tucked between the buttocks to catch any fluid which may escape and soil the clothing. This is particularly important where iodine and glycerine, pinus canadensis, or hydrastis is employed.

FIG. 11. UTERINE SYRINGE.

Before withdrawing the speculum, the blades are to be partially unscrewed, but not enough to let them come together and pinch the vaginal folds. The sheet is then pulled forward over the speculum, and the latter removed behind it. If a tampon has been inserted, it is held in place by the dressing forceps, while the speculum is withdrawn over it, and then the instruments are removed. A digital examination is now made with the finger to be sure that the tampon is in proper position.

The successful use of Sims' speculum depends largely on the proper position of the patient. She should lie well over on her left side, the left arm extended a little behind her, the thighs flexed on the abdomen, and

[1] The peroxide of hydrogen has been recommended for this purpose; but the writer has not had much success with it, and the preparation is very unstable.

the upper limb thrown a little over and above the lower one. Any constricting bands about the waist should be loosened. Besides a slight cant downwards to the right side, the end of the table or chair towards the operator should be a couple of inches higher than the end occupied by the patient's shoulders and head. This allows the anterior vaginal wall to drop forward as the posterior is retracted by the speculum. The same object may be obtained in a simpler way, for the general practitioner, by raising the patient's hips on a hair pillow about three inches thick. The sheet is thrown over her, so that one corner is folded over the upper limb and buttock, while a towel is tucked in between the thighs and under the hips to protect the clothing. The operator now takes the speculum, which has been previously warmed and oiled, in his right hand; the forefinger, as a guide, projecting a little over the concavity of the blade which is to be introduced, while the left hand holds the opposite blade to steady it. It is then passed over the perineum into the vagina edgewise; after the blade has partially entered, the concavity is turned towards the anterior wall, and care taken to direct the point of the instrument well back against the posterior wall of the vagina. Gentle but firm steady traction is then made backward and a little upward, the nurse or assistant meantime lifting the superior labium with the fingers of her left hand, while the right hand grasps the shank or central portion of the speculum, the blade resting over the junction of the thumb and index finger. Beginners often have some trouble in using Sims' speculum, which would be easily obviated by keeping the inside blade well against the posterior wall while introducing it, and then giving the point a slight forward twist to tilt the cervix out of the hollow of the sacrum. After the physician has exposed the cervix, the nurse holds the instrument in

whatever position is desired. He sits behind the patient on a chair or stool of a suitable height. At his right is the cabinet, and a basin of warm water, in which lie the depressor, dressing forceps, tenaculum, and sound or probe, or, if an operation is to be performed, whatever instruments he may desire. In the latter case, his assistant sits on the right to hand the instruments, etc.[1]

Tampons are used for various purposes, but chiefly for the application of medicinal agents to the cervix and vagina. It is not necessary to make them of ab-

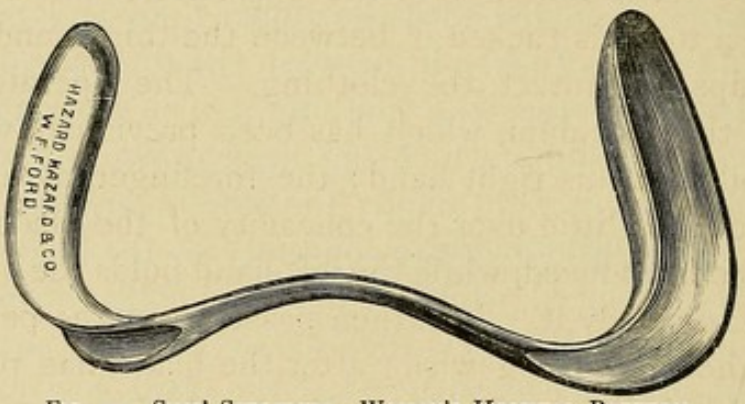


FIG. 12. SIMS' SPECULUM. WOMAN'S HOSPITAL PATTERN.

sorbent cotton. A fine quality of clean white cotton will answer every purpose, unless the absorbent quality is particularly desired, and is much less expensive. The great objection to cotton, the absorbent especially, is that it packs down and feels like a foreign body in the vagina, so that some ladies are unable to wear it. In these cases, particularly if a disinfectant property is desired, marine lint, which is a good quality of tow, makes an excellent substitute. Where elasticity, and comfort for the patient, are desired, antiseptic wool is preferable. This is also best suited to some chronic inflammations of the pelvic tissues, where cotton

[1] The best Sims' specula that I have seen are those known as the Woman's Hospital pattern, in five sizes, manufactured by Hazard, Hazard, & Co., New York.

cannot be borne. A good way to make tampons is to unroll a sheet of unglazed cotton and then re-roll it tightly ; when the roll is about an inch thick, separate it from the rest and tie to it strong linen thread ten inches long at intervals of an inch and a half, then cut the roll midway between the threads. This will make a number of tampons an inch thick by one and a half long, a good average size for general use. I much prefer to use two or three small tampons to one large one. They can be introduced more easily, with less loss of a fluid application, and can be placed in the pelvis to better advantage. A good way to make a long flat tampon, corresponding to the shape of the vagina, is simply to cut a layer of the wool into pieces an inch wide and two and a half long, tying the thread to one end. If fluids are to be applied, such as glycerine, or combinations with iodine, calendula, hydrastis, etc., a tampon is saturated in the liquid, and the excess squeezed out enough to avoid dripping before introducing it, particularly if containing iodine, hydrastis, or tannin, which would badly stain the patient's clothing ; or if it is of an acid or caustic nature, in which case it should be squeezed dry, and a neutralizing agent applied on tampons immediately after to avoid irritating the vagina or external parts. Liquids can be applied nicely to the cervical canal by winding a bit of cotton over Emmet's applicator, dipping it in the fluid, introducing it within the canal, and then withdrawing the stylet so as to leave the cotton in the cervical canal. This can be withdrawn, if necessary, by the dressing forceps, or a thread previously tied to it, but often comes away of itself. If it is to be the carrier of powdered

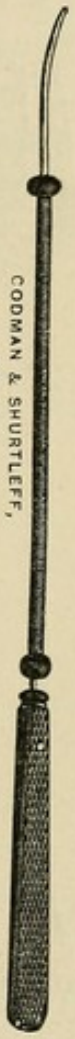


Fig. 13. Emmet's Uterine Applicator.

substances such as tannin, alum and sugar (equal parts), iodoform, etc., the tampon is moistened in glycerine or smeared with vaseline, and then rolled in the powder before it is introduced within the speculum. Powder can also be applied to good advantage with an ordinary insect-powder gun.

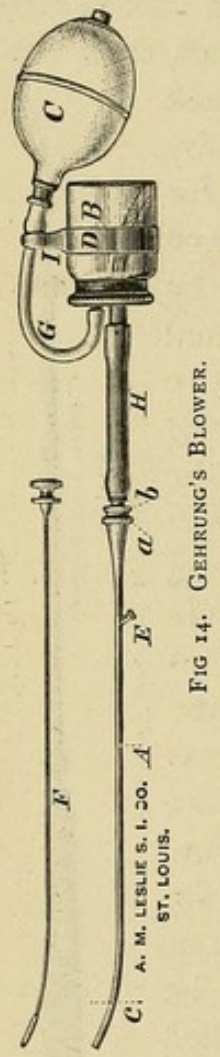


Fig 14. Gehrung's Blower.

Ointments are smeared on a tampon, or injected into the posterior cul-de-sac of the vagina. In making applications to the cervical canal and cavity of the uterus, a whalebone applicator or probe is wrapped with cotton dipped in the liquid, and applied once or twice to the canal. The mucus must be removed first, as previously described.

Pencils of iodoform, tannin, etc., are also introduced within the canal. Astringents are most often used for endo-metritis; and caustics, such as iodized phenol, nitric acid, iodine, etc., for sub-involution and vegetations with consequent metrorrhagia. The use of an applicator wrapped with cotton requires a patulous canal. Where the canal is small, gelatine or cocoa-butter pencils, inserted with the aid of an instrument made for the purpose, are very popular with some gynæcologists. Those most frequently used are iodine, gr. v.–x.; iodoform and tannin, gr. v., gr. iij.; iodoform and alum *aa*, gr. v.; hydrastis canadensis, gr. v.; and I might add bichromate of potash, 1 x. or 2 x., gr. v. It must be remembered, however, that the great majority of cases for which these applications to the uterine cavity are made depend almost entirely on causes quite independent of the mucous membrane of the cavity, such as sub-involu-

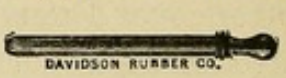


Fig 15. Ointment Injector.

tion, displacement, lacerations of the cervix, etc.; and consequently the causes need to be removed rather than drugs applied, which often do more harm than good.

The question of making local applications, in the great majority of cases applying for treatment, is one which must be settled by the physician himself. While a judicious use of them is to be advised, harm is often done by harsh measures. In the use of homœopathic remedies we occupy a vantage-ground, and can well afford to dispense with the much harsher methods which the old school are compelled to use. Let us use our vantage-ground, carefully select our remedies, and with rest, cleanliness, and simple accessory treatment, we will be surprised to find how much more successful we are than our neighbors who stand aloof. Prescribing *one* carefully selected remedy cannot be advocated too strongly. Not only will the results be better, but more accurate for future reference. A list of the more common applications is given below, with the conditions for which they are employed, for the convenience of those who wish to use them. It seemed best to give the indications for each, as the local treatment used by some practitioners seems to be summed up in glycerine and iodine for every case. Many physicians recommend the use of the same medicine locally which is given internally. This, however, hardly belongs to those remedies used with the express purpose of producing local effects.

ALUM. Where a powerful astringent is desired. It is good for profuse leucorrhœa, relaxation of the vagina, and slight erosion about the os. In these cases it should be diluted one-half with pulverized sugar, iodoform, or some other substance. Powdered alum will often check oozing of blood from the surface.

BELLADONNA can be used in the form of cerate, suppositories, tincture, or fluid extract. Is useful as a mild narcotic in acute inflammation or congestion of the pelvic organs, with much aching or throbbing in the vessels, in which case it has also a curative effect; also, for the pelvic neuralgiæ of chronic pelvic cellulitis or similar conditions. Watery extracts evaporated to the strength of the alcoholic are preferable, because less irritating. For local use, I have the solid extract of belladonna rubbed in a mortar with sufficient water and glycerine to dilute it to the strength of the ordinary fluid extract, mixing this in the proportion of one-half or one drachm to an ounce of glycerine for an application. The cerate is best applied by smearing it on tampons of cotton or wool.

BORACIC ACID. Its action is the same as borax, but more powerful. May be used in cerate, powder, or solution in hot water. It is an excellent, non-irritating, odorless disinfectant. It is good for clear, albuminous, or lumpy, but not for yellow leucorrhœa. (A solution of one drachm of the bi-carbonate of soda, — saleratus, — to a pint of water, as an injection, is also useful for this leucorrhœal discharge, due to profuse secretion of the glands in the cervix.) Sir James Simpson recommended a solution of five to ten grains to an ounce of hot water in the "pruriginous eruption which appears on the mucous membrane of the vulva, and extends up along the vagina as far as the cervix uteri," also in eczema of the vulva.

BROMIDE OF POTASH in a saturated solution is sometimes applied on a tampon for its soothing effect.

CALENDULA, a very valuable application where there are any solutions of continuity, as in erosions of the cervix; besides its use as a cerate, or in tincture, it is an

excellent remedy to mix with the water used for injections in any abrasion of the mucous surface. After the patient has used the ordinary cleansing douche, I direct her to mix two teaspoonfuls of the tincture with half a pint of warm water, to inject it while lying on her back, and retain it from twenty minutes to half an hour. The non-alcoholic preparation is preferable.

CARBOLIC ACID is used chiefly as a disinfectant, in the form of a 2% or 5% douche; the stronger solution for very fetid discharges, the former for ordinary disinfecting purposes. It has also been used as a mild caustic and stimulant for erosions of the cervix.

CHORAL HYDRATE is a good anæsthetic, and also possesses disinfectant properties. It is highly recommended in cancer of the cervix, applied in the form of a solution, one drachm to the ounce of glycerine, or stronger if necessary. It is one of the best deodorizers of iodoform.

EUCALYPTUS GLOBULUS. One drachm to an ounce of glycerine. This is a useful application in cases of profuse leucorrhœa, and superficial erosions about the os with congestion of the cervix. Belladonna is sometimes combined with it, if there is also much active congestion, throbbing and pain in the pelvis.

GLYCERINE is the chief agent used in local applications. It has a great affinity for water, and consequently its application in congested conditions of the pelvic organs is followed by a profuse watery discharge, making it necessary for the patient to wear a napkin. It is an excellent auxiliary, as well as vehicle with which to mix some other remedy in the treatment of acute, subacute, and chronic inflammatory conditions. The physician should warn his patient of the watery discharge

following its application. It is important to use a fine quality. Price's and Bower's are the best.

HYDRASTIS can be used in powder, tincture, or cerate, in cases of profuse stringy leucorrhœa, endo-cervicitis, and erosion of the os. It is often combined with glycerine, one part of the tincture to four of the glycerine. The ordinary fluid preparations produce an almost indelible stain, and the patient should be instructed to wear a napkin. Colorless preparations can be obtained, however, and are quite popular. Among these may be mentioned Luytie's hydrastis.

IODINE. Churchill's tincture is the best for applications. It is employed chiefly as an alterative and absorbent in cases of chronic cellulitis with exudation, chronic metritis with enlargement of the uterus and cervix, sub-acute and chronic ovaritis. So long as there is acute inflammation, and the exudation is very tender to the touch, local applications on tampons are counter-indicated. In applying the ordinary tincture of iodine undiluted, care must be taken not to let it touch the vulva, as it will cause sharp burning sensations for a few minutes. The cervix or vaginal vault may be painted by a camel's-hair pencil, or a bit of cotton wrapped round a stick dipped in the iodine, and the surface touched with it. In either case, be careful that all excess is removed, so that there will be no dripping, or any fluid running down the vagina after the application. This should not be repeated oftener than once a week.

A more common method of application is to mix it with glycerine, one part iodine to eight or more of the former. The addition of ten drops of tincture of aconite, or fifteen grains of chloral hydrate, is useful in cases of much soreness and aching in the pelvis. Dr. Emmet [1]

[1] Principles and Practice of Gynæcology, 3d ed., p. 572.

recommends in hemorrhage from fibroid tumors, the local application of the tincture to the uterine cavity by means of a little cotton wrapped round a probe, and saturated in the iodine. Methyl iodide has been recently recommended instead of iodine, as it is said to combine the absorbent qualities of the latter with some anæsthetic properties.

IODIZED PHENOL. Dr. Robert Battey[1] suggested this combination, made by gently heating two parts of crystallized carbolic acid with one of iodine. It is a mild escharotic, alterative, and a favorite application of some physicians to the endometrium for sub-involution, chronic metritis, and to the cervix for erosions, endocervicitis, etc. This is sometimes diluted by adding an equal bulk of glycerine: I consider this dilution necessary for its use within the uterine cavity.

IODOFORM has excellent antiseptic and some anæsthetic properties. The odor, which is an objection to it, may be counteracted by chloral hydrate, oil of peppermint, or balsam of Peru, one drop to the drachm, or a couple of Tonka beans may be kept in the powder. It is useful as a dressing after operations, for erosions of the cervix, and to destroy the virus of chancroids. The application of iodine is sometimes alternated with a tampon saturated in the following mixture: iodoform, one drachm; chloral hydrate, twenty grains; glycerine, one ounce. Recently iodol has been introduced as a substitute for iodoform.

IRON. The perchloride or persulphate is sometimes used as a styptic where iodine, tannin, or alum fails.

JEQUIRITY. A powerful vegetable caustic. Dr. Porter has found this more satisfactory in the treatment of granulations of the uterus than any of the liquid or

[1] Amer. Pract., February, 1877.

solid caustics. He macerates five fresh beans in two ounces of cold water for two days, then adds an equal amount of hot water, filtering it as soon as cool; one part of this is mixed with four of cold water for an application. Considerable pain is likely to follow the application: a fresh preparation must be used each time.

NITRATE OF SILVER. Perhaps no remedy has been more abused in gynæcological practice than this. Some of the most inveterate cases of ovaritis that I have seen have been the result of persistent cauterization of the cervix with lunar caustic. Since the profession has become acquainted with the true nature of the so-called "ulcerated cervix," and found it was in reality due to a laceration, the barbarous treatment of "burning the ulcer out" has largely been abandoned. It is doubtful whether it should ever be applied to the cervix if there is ovaritis present. Solutions of five, and, less often, ten to twenty grains to the ounce, will be found helpful in stimulating severe erosions to healthier granulation. They are touched with cotton wrapped on a wooden stick, the same as in the application of iodine. The cervix is afterwards dried with cotton, a tampon smeared with vaseline pushed up against it, and the speculum withdrawn. It is particularly useful in vaginitis of a virulent type. In these cases the solution should be applied through the Ferguson or cylindrical speculum. Pour in a teaspoonful of a solution of twenty grains to the ounce (in very severe cases, half a drachm to the ounce is used by some physicians), and as the speculum is gently withdrawn, swab the vaginal walls thoroughly with the cotton-stick; when the tube is almost out of the vagina, depress the end, and allow the fluid to run out in a cup. Now re-introduce the instrument, and insert a long cylindrical tampon well smeared with vase-

line, withdrawing the speculum over it. This silver solution may be applied once a week, milder ones being used as the case improves. It is hardly necessary to add that all solutions of nitrate of silver should be kept in colored glass, and protected from the light.

OPIUM is sometimes added to applications, for its soothing effect. It is much inferior, however, to a rectal suppository containing a small amount of the drug.

PINUS CANADENSIS. The aqueous extract is a popular application for catarrhal leucorrhœa, endo-cervicitis, and a relaxed flabby condition of the vagina. It is essentially an infusion of hemlock-bark, a mild astringent, and stains linen almost indelibly.

TANNIN is an excellent astringent for erosion of the cervix, profuse leucorrhœal discharge, and relaxation of the vaginal wall forming cystocele or rectocele. In these latter cases, moisten a long, slim tampon in glycerine, or smear it with vaseline, and roll it in finely powdered tannin, so that the latter will come in contact with the entire length of the vagina after it is introduced. In recent sub-involution of the vaginal wall, — i.e., when it follows soon after confinement, — this treatment may prove curative. It often gives great relief in cases of procidentia refusing an operation. Here the uterus must be replaced, and a large tampon used, supported by a T-bandage. Instead of tannin, I have sometimes used a strong decoction of white-oak bark, or a dilution of the fluid extract, as an astringent injection. Matico might be preferable to either. Dr. Porter recommends baycurn, one drachm to an ounce of glycerine.

The use of severe caustics, such as nitric acid, pernitrate of mercury, bromine, and the chloride of zinc, has not been mentioned. The particular point to be observed in their use is, that all excess of fluid must be very

carefully removed, and, as a rule, the surrounding tissues protected by the use of a neutralizing agent. They are very rarely called for; and the physician in ordinary practice, unless expert in their use, had better leave them entirely alone. The worst case I have seen of recto-vaginal fistula was the result of these applications and a little dripping of the caustic on the posterior vaginal wall. In another case, a tampon was saturated in a strong solution of caustic potash and applied to the cervix. When the patient rose from the recumbent position, some of the fluid ran out, causing intense pain. Sloughing of the vagina followed, with consequent cicatricial contraction so that a No. 10 catheter could scarcely be passed along the canal. I would earnestly caution any one against their use who is not perfectly familiar with the details of their application.

The proper use of hot water is almost indispensable in the treatment of nearly all uterine diseases. The shrivelled appearance of the hand after soaking it in hot water is familiar to every one. Its action on the pelvic tissue is similar, — decreasing the pelvic congestion and contracting the capillaries. It is indicated, therefore, in all inflammatory and hyperæmic conditions, acute or chronic. In menorrhagia, it will often arrest the flow. Too much stress cannot be placed upon its proper administration, which will be given in some detail, as it does not seem to be thoroughly understood by all the profession. As a rule, it should be given at night on retiring, but some cases require it in the morning as well. It is almost impossible for a woman to give it to herself with the same benefit she would receive with proper aid. Much better results will be obtained from the use of a Davidson's syringe than the fountain,[1] although it is much more difficult to use, and

[1] Emmet, Principles and Practice of Gynæcology, 3d ed., p. 117.

not so practicable on account of the assistance it requires. Care must be taken that the nozzle is not made of metal, as the latter collects the heat and soon becomes painful, but always of vulcanite with the holes on the sides of the tip, and without a perforation in the point of the tube. Unless the patient lies on a very firm mattress, place a small thin board under her, and on this the bed-pan ; otherwise, when the patient's hips rest on it, one side of the pan tilts up and the other sinks down, allowing the water to run over and wet the bed. A good bed-pan can be made of tin with a rubber

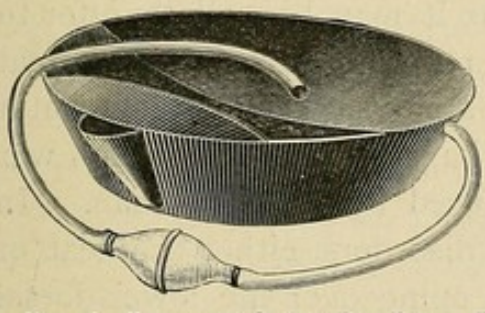


FIG. 16. REYNOLDS' SIPHON BED-PAN.

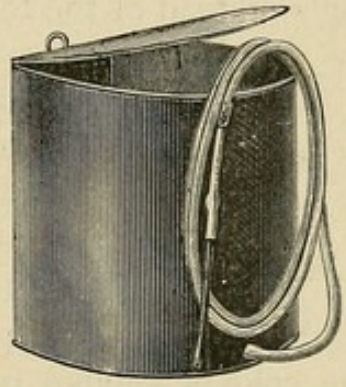


FIG. 17. RESERVOIR FOR VAGINAL DOUCHE.

tube attached to the bottom to drain off the water as fast as it collects, into a pail at the side of the bed. Her hips should be elevated two or three inches above the level of her shoulders, to have the aid of gravity in emptying the pelvic veins. Not less than six quarts of water should be given at a time, as hot as she can bear it, with the bag or reservoir of water two or three feet above the patient, and the injection tube well up in the cul-de-sac of Douglas. In the beginning she may not be able to bear it over 105° F., but it can soon be increased to 112° F. or even more. The hot-water douche must be used till she has fully recovered ; towards the end of treatment the temperature may be lowered to 75° F., and the quantity lessened as well.

The douche should be given daily, except during two days before and after the menses, and the addition of a tablespoonful of glycerine to the last pint of water is often very useful to increase the effect. I may add here, that the way it is often given by the patient sitting over a water-closet amounts to nothing more than washing out the vagina. The three important, or better, essential points in using the hot-water douche are, the position of the patient (i.e., recumbent with the hips elevated), the quantity, and temperature of the water; while Dr. Emmet would add a fourth, a Davidson's instead of the fountain syringe.

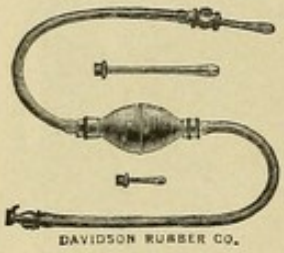


FIG. 18. DAVIDSON'S SYRINGE.

In connection with the hot-water douche, it may be well to refer to another method of applying heat and cold, in the shape of hot-water or ice bags to the spine, which was introduced by Dr. Chapman. In pelvic disorders, either the heat or the cold is applied to the spine over the lower dorsal and lumbar vertebræ.

THE ICE-BAG is said to partially paralyze the nerve-centres or ganglia, and lessen the nervous currents in the vaso-motor nerves arising from them. The result is that the blood-vessels supplied by those nerves dilate, and allow an increased flow of blood to pass through them. The ice-bag has been used, therefore, for suppressed, delayed, and scanty menstruation; and, as it has been useful for neuralgia, it may prove a good adjuvant in treating ovarian neuralgia. I have seen great relief follow rubbing the spine with ice in attacks of extreme nervous irritability and restlessness verging on nymphomania. It is also said to be useful to control leucorrhœa.

THE HOT-WATER BAG (not above 120° F.) has an opposite effect, and is supposed to stimulate the vaso-motor nerves. The arteries contract, and the supply of blood is diminished. It has proved effectual in menorrhagia and metrorrhagia even when ordinary local treatment has failed; and ought to be a valuable aid in the same class of cases as those requiring the hot-water douche, if not used in connection with it.

The mechanical treatment of uterine displacements has been warmly discussed among physicians. If we compare the disputants, it is noticed that the specialists advocate it, while those less familiar with the subject condemn it. The lesson to be drawn is that a very large proportion of practising physicians are not thoroughly familiar with the necessary details, and, of course, fail to obtain good results. There would be quite as good reason for objecting to splints in the treatment of fractures, because a splint suitable for a fractured humerus is bandaged on the thigh in a fracture of the neck of the femur, and the case left to nature without extension or further surgical care. No one at all acquainted with surgery would expect the best possible result.

By mechanical treatment is meant some form of uterine support: either vaginal, as pessaries; abdominal, in the shape of pads or belts; or a combination of the two. It has a distinct place in gynæcology, and certain rules are to be carefully observed. A mere tyro cannot use it to much advantage; as care, a knowledge of what is needed, and how to apply it with a certain amount of mechanical ingenuity, are essential.

The serious objection to mechanical treatment is that it may be used to the exclusion of all other, while not infrequently constitutional or local treatment at the same time is of equal importance.

The most important factor is the use of pessaries. The varieties of these are almost numberless, as not a few physicians have sought to immortalize themselves by making some instrument of slightly different shape, and dubbing it with their names. Space forbids any thing like an enumeration. The principles and rules to be followed in using them are the same, and only

FIG. 19. BOW CURVED.

FIG. 20. HARDING'S.

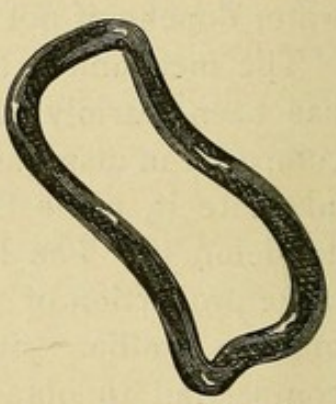


FIG. 21. HODGE'S.

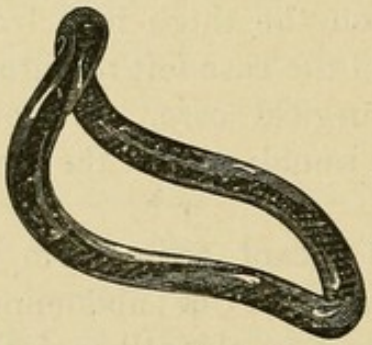


FIG. 22. SMITH'S.

FIG. 23. THOMAS' MODIFICATION OF SMITH'S.

those in most common use will be mentioned. If the reader understands these, he will have no difficulty in using others.

In all cases where the pelvic tissues are sensitive to the touch, a pessary must not be inserted. It would then prove a source of irritation, and increase the inflammation already present. It is absolutely essential that the pessary be made to fit perfectly each individ-

ual case. The vaginæ of different women vary quite as much as the hands, feet, or any other part of the body. We can no more expect all gloves tó fit the same hand, than all pessaries the same vagina. It is this fitting the pessary to the patient which measures the practitioner's success in using it, and requires the most skill. We cannot buy fixed sizes, and merely select the corresponding one: almost always some change is necessary. In order to ascertain the proper size, the uterus must be replaced; the physician can then roughly estimate with his finger the length and breadth of the vagina, the depth of the posterior cul-de-sac, and breadth of the vagina behind the pubes. The presence of a tender spot or prolapsed ovary should be noted. This gives an approximate idea of what is wanted.

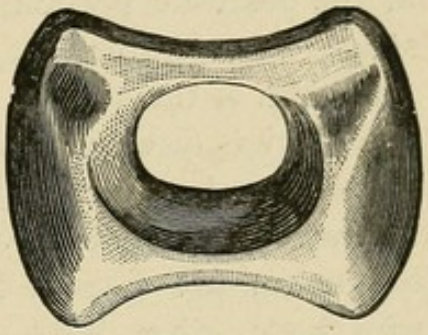


FIG. 24. HOFMANN'S PESSARY.

As retro-displacements are the most common, they will be considered first. In the great majority of cases, a carefully adapted Albert Smith pessary made of hard rubber will be the best. In some cases where the uterus is congested and sensitive, a Hofmann's soft rubber pessary can be worn temporarily with relief when the hard rubber cannot be endured. But "a fit" must be had first; for this purpose, a pessary made of block tin, or, preferably, copper wire covered with pure gum rubber, should be used, as it admits of easy moulding or bending with the fingers, and will retain the shape given it. One of these is selected according to the measurements taken by the finger. The posterior portion, which occupies the cul-de-sac, is curved and widened according to the depth and breadth of the latter, and the height to which the uterus is raised.

This is ascertained by raising the uterus on the finger, to a position that is comfortable to the patient. More than this should not be done, as crowding the organ up unduly, interferes with the circulation, and produces the same discomfort as when it sags down. It should be raised enough to give comfort, and allow free circulation without torsion or compression of the blood-vessels. The upper extremity, i.e., the posterior portion, of the pessary, should be rounded to press up between the utero-sacral ligaments. In some cases complicated by prolapse of the ovaries, a thickened bulb-like expansion of the posterior portion, or a square instead of a round shape, is preferable. It is also made to correspond to the width of the vagina, and curved so that the anterior extremity is directed toward the pubic arch, while the tip is bent downward a little to avoid pressure on the urethra. The breadth of the anterior portion depends on the amount of space behind the pubic arch. Women who have given birth to many children, and whose vaginal walls are relaxed, require as a rule a broader shape. Should there be some tender spot, the instrument must be moulded so it will not press upon it.

Having replaced the uterus, one of the pessaries mentioned is bent, or moulded, as nearly as possible according to the above suggestions, and we are ready to introduce it. Place the patient on her left side in Sims' position. Thoroughly oil the pessary, and hold it from the convex side between the thumb and index finger, the tip of the finger on the inner margin of the broad or posterior end, the thumb on the corresponding outer margin. Stand a little behind the patient, and introduce the pessary edgewise in the vulva, pressing it well back on the perineum. When about two-thirds of the instrument has entered the vagina, rotate the pessary, so as to bring the convex curve posteriorly, and keep

the upper end crowded well back against the posterior wall by the index finger, which is kept in the same place on the pessary; it then readily glides into place behind the cervix. This last is important, as the upper end of the pessary is otherwise very apt to slide up anterior to the cervix, and cause considerable pain. Its introduction through the vulva is not infrequently painful, but once in, if properly fitted, is not felt. The anterior end is then placed behind the pubic arch where it naturally lies, and is kept in place by the perineum. A pessary which projects in the least from the vagina will irritate the vulva, and is not a proper instrument. It should never stretch the vaginal wall, and the tip of the finger must always readily pass all around it, except behind the cervix where it is out of reach, but undue stretching will at once be detected. Now instruct the patient to cough or bear down; if this does not dislodge it, have her get up, walk around, cross her limbs, sit down in a low chair, etc., and ask her whether she can feel any thing anywhere in the "front passage;" finally, re-examine to see if the instrument is still in place. When properly adjusted, it will not be dislodged, and the patient is not able to feel it. If it slips down in any way, or if the patient can detect it, it does not fit, and must be re-adjusted.

Always instruct her how to remove it, if any pain is caused, by hooking the index finger into it behind the pubes, drawing down a little to dislodge it, and then steadily upward and outward. Be careful to tell her that she has one inserted, and if of soft rubber to have it examined once a month; if hard rubber, every two months. Tell her to return in a week. If she has found it the least uncomfortable, the pessary does not accurately fit, and the necessary changes must be made to make it fit. If she has been unconscious of its presence, and ex-

perienced great relief, the fit is good, and it should be reproduced in hard rubber.[1] This may be done by the instrument-maker; but not every physician can conveniently send the block-tin or soft-rubber model pessary away, and he must mould it himself. Carefully remove the one inserted, without bending it. Select another of the same size in hard rubber. Smear it well with vaseline, and heat it over a spirit-lamp, or an ordinary kerosene lamp, till the rubber softens, then mould it into exactly the same shape as the one just used, and plunge it in cold water for a couple of minutes to set it. With a little care, the fingers will not be burnt. It is introduced in the manner just described. These pessaries do not interfere with the marital relations. Sterility depending on displacement is often cured by this treatment.

Anteversions are more difficult to treat than retroversions. Thomas' open cup, Harding anteversion, Grailly Hewitt's, Cutter's, and in rare cases Gehrung's pessaries, will be the best as a rule. They are selected, introduced in a similar manner, and the same tests are to be applied to these as to the former ones. Here, of course, the fundus is to be lifted up in front of the cervix, and the cross-bar or rim of the cup lies anterior to the uterus. The old form of Thomas' anteversion pessary is introduced closed, and the cross-bar drawn up in place by a silk loop previously attached to it. Anteversion pessaries are removed by drawing on the rubber ring lowest in the vagina; the last-mentioned pessary closes, and the open cup turns over in extracting. With the exception of the large, hard rubber ring for prolapsus, the anterior margin of which rests against the pubic

[1] The soft rubber pessaries soon become very offensive, but can be readily disinfected by washing thoroughly, and allowing them to soak a few hours in an ethereal solution of iodoform.

arch, and the posterior up on the posterior vaginal wall, the ordinary hard rubber and elastic ring pessaries will eventually do more harm than good, as they act by dis-

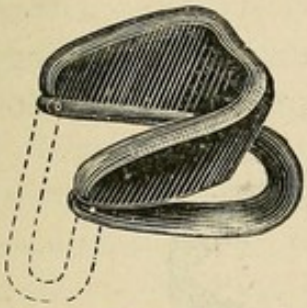


FIG. 25. THOMAS' OPEN CUP FOR ANTEVERSION.

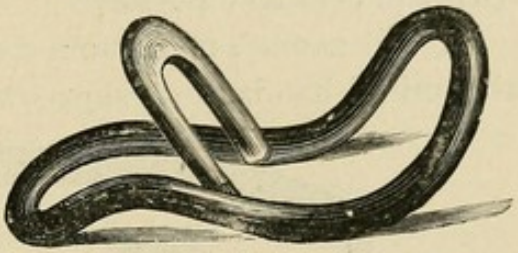
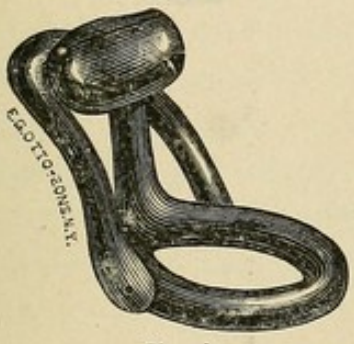
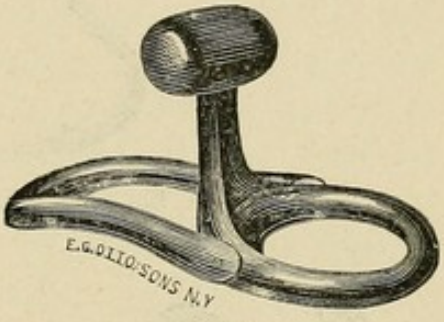


FIG. 26. THOMAS' ANTEVERSION PESSARY. An older and often inferior instrument to the open cup.



Closed.



Open.

FIG. 27. THOMAS' ANTEFLEXION.

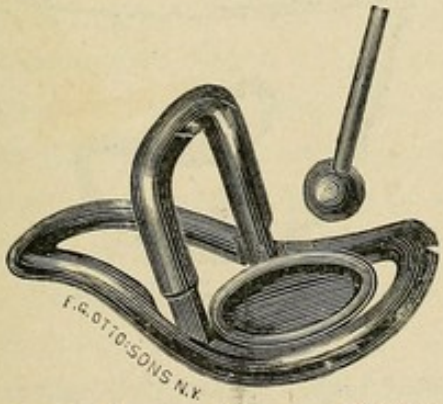


FIG. 28. THOMAS' ANTEFLEXION PESSARY, WITH STEM.

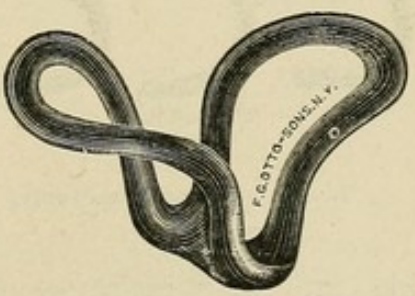


FIG. 29. GRAILLY HEWITT'S ANTEVERSION PESSARY.

tending and stretching the vaginal walls, instead of the lever action exerted by the various modifications of the Hodge pessary. In some cases, where the uterus seems

to be perfectly relaxed, and without any tone whatever, becoming retro- or anteverted if raised from either position, the intra-uterine stem may be used in connection with the ordinary pessary.

In all cases of uterine displacement, a well-fitting abdominal bandage or supporter is a great help by tak-

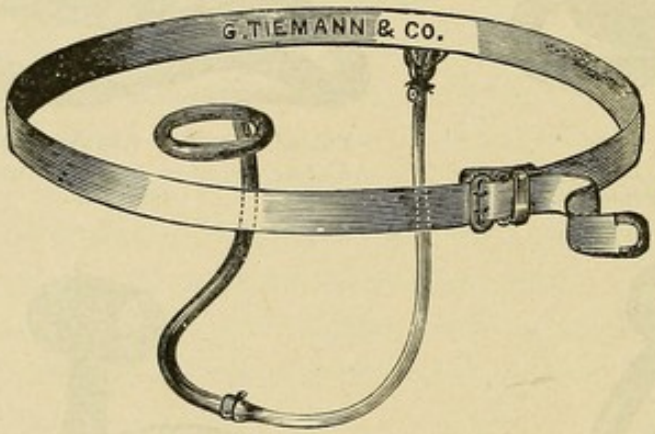


FIG. 30. CUTTER'S RING PESSARY.

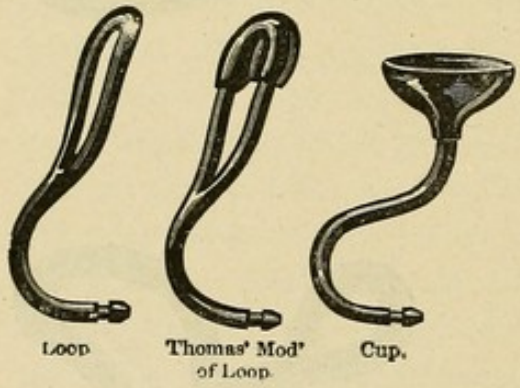


FIG. 31. CUTTER'S PESSARIES.

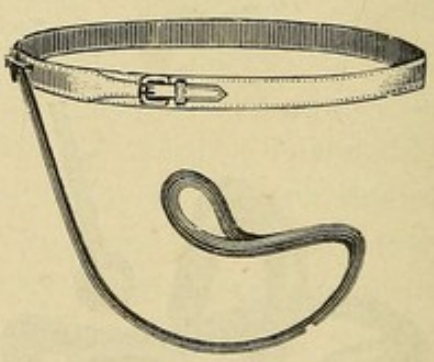


FIG. 32. DONALDSON'S PESSARY.

ing off the weight of the intestines. For the same reason, the dress and skirts should hang from the shoulders. A retroversion is rarely found, where the cul-de-sac of Douglas is very shallow, or there is a lack of perineal support. Here the ordinary vaginal pessary is of no use, and we must resort to a vagino-

abdominal supporter, or cup and stem, such as those of Cutter or Thomas. MacIntosh's supporter is also very useful in many of these cases. All pessaries having an external support are a great annoyance and source of irritation to the patient, who will endure one for the simple reason that it is the lesser of two evils.

Most of the abdominal supporters found in the market are constructed on false principles, being concave to conform to the outward curve of the abdominal wall. I would as soon think of applying a truss curved to fit and cover a hernial sac, as such a supporter. The latter should be either straight, or, better, a little convex, so as to press the abdominal wall gently but firmly upward, and a little inward over the hypogastric region. It then acts as a kind of temporary shelf to keep off the weight of the intestines and pressure from coughing, straining at stool, lifting, etc., from the contents of the pelvis below. When carefully fitted, I have seen great relief from them, not only in uterine displacements, but also in various acute and chronic inflammations in the pelvis. Not all women can wear an abdominal supporter. Those with broad hips, bulging considerably between the trochanters major and crests of the ilia, are best adapted to them, as the supporter is not likely to stay well in place on a straight-hipped woman.

FIG. 33. LARGE RUBBER RING FOR PROCIDENTIA.

I have had the most satisfaction from an inexpensive supporter, which can be made by any ingenious woman in the following way. The patient must first remove her corsets, loosen all the clothing above the hips, and lie down with the pelvis a little higher than her shoulders, and the limbs straight. A firm linen towel is then to be pinned tightly over the hips next to the skin, the same as the binder after confinement, taking care

that it is perfectly smooth, and the lower edge an inch and a half below the trochanters. This holds up the abdomen, and affords a perfectly smooth surface over which a pattern of firm cotton cloth or the supporter itself can be fitted. The latter should be made of a piece of light-weight but firm Russian crash about thirty-two by thirty-eight inches, i.e., wide enough to fold double, and go around the patient. If the crash cannot be obtained, a firm piece of drilling is a good substitute. Firmness is very important, and for this reason flannel, india-rubber sheeting, ordinary cotton cloth, etc., are totally unfit for the purpose. It is folded double, not merely to make it firmer, but especially to have all seams sewn inside, and not press next to the skin. This is fitted smooth and tight over the first binder by folding over the upper border in places, and cutting out the slack cloth in the hollow of the back in a concave line. A V-shaped piece an inch and a half wide and two and a half deep is cut out from the lower margin over each trochanter, and a couple of pieces of strong elastic webbing stitched in. This keeps it snug, and also allows more motion to the limbs. Underneath each gore is a lappet of cloth to prevent chafing the skin. Two buttons are sewed on at either side, to which the stocking-supporters are attached, keeping the supporter from slipping up on the hips. Ten or a dozen small black or brass buckles, and as many pieces of firm webbing an inch wide and three long, are sewed on its ends, which lap over in front and a little to the right side. This allows more perfect adjustment to the form. In some ladies the ilia project anteriorly, and the abdominal walls are so thin, they would not receive sufficient support from a simple binder. In these cases a pad is needed corresponding to the shape of the hypogastrium, and thick enough to exercise gentle pressure

as if the hand were there holding up the bowels. If the pad be thick, curled hair is the best material; if thin, a folded linen napkin answers the purpose. This pad or cushion should be separate from the supporter, and fastened to it by safety-pins. This allows the former to be washed, and by having two or three extra ones the patient can wear a clean supporter as often as she likes.

Sometimes three or four may have to be made before a close-fitting supporter is obtained, which stays in place, and gives comfort to the wearer.

It is not uncommon for women to neglect their instructions to report at stated intervals. They feel so comfortable, the necessity is not apparent, or they forget it. In the course of some years perhaps, or less time, the patient calls again; and the physician finds the pessary so embedded that it is very difficult to remove it. The best way to take it out is to put the patient in Sims' position, introduce Sims' speculum, divide the tissues if they have united at any place over the pessary, carefully insert the director or probe beneath, raise it up, and then extract it. If it has merely embedded itself in the tissues, lying in a sort of groove, pass a strong silk loop through the anterior extremity; as this is gently drawn upon with one hand, introduce the index finger up behind the cervix, if possible, and press down on one side of the ring, thus giving it a little twist, so as to dislodge it from the groove, and from behind the cervix.

The following axioms can be laid down for the use of pessaries: —

1. Never introduce a pessary if inflammation be present in any portion of the pelvis.
2. Always replace the uterus first.
3. Carefully measure the vagina, and mould the pes-

sary to it. Never introduce the instrument with the idea of allowing the vagina to conform to the pessary.

4. Introduce it with the patient lying well over on her left side, with or without the aid of Sims' speculum.

5. Tell your patient what has been introduced; instruct her how to remove it if pain is caused, and to report at fixed intervals.

6. If the cul-de-sac of Douglas is very shallow, it must be stretched first by wearing tampons, or no vaginal pessary will stay in place, neither will it if there be no perineal support. In these cases a Cutter's, Thomas', or MacIntosh pessary, having a support from an abdominal belt, must be worn.

7. A pessary which slips down between or projects from the vulva is displaced.

8. The pessary must not stretch the vagina, but space enough always be left to sweep the tip of the finger easily around it next to the vaginal wall.

9. The clothing must be supported from the shoulders.

10. Absolute cure by merely wearing a pessary is the decided exception to the rule. Other measures are not to be neglected.

Dilatation of the cervix is an operation which the general practitioner is sometimes called upon to perform. It may be gradual, by tents; or rapid, by instruments for dilatation or incision. As the latter is seldom necessary, and is more of an operation than the former methods, it will not be considered here.

The gradual method, by tents, is a favorite with many. The tents most used are made of sponge, laminaria, or tupello. Sponge dilates much more rapidly than the others, but requires great care on account of the danger of decomposition, and septic inflammation. Its meshes penetrate the lining of the

cervical canal to a certain extent, so that after removal the canal is somewhat denuded, and the distended glands destroyed. It is therefore preferable if endocervicitis is present, and in case of sub-involution or hypertrophy of the cervix, the surface is in a better condition to be acted upon by local remedies. Spiegelberg has recommended the introduction of the sponge tent as a means of differential diagnosis between chronic inflammation or sclerosis of the cervix, and incipient cervical cancer. In both, the tissue might feel hard to the touch, and the diagnosis be extremely difficult. In cancer, the tissue would be firm and unyielding, and comparatively unaffected by the sponge tent, while in hyperplasia it would be softened and relax. Should experience confirm this as a reliable test, it would become a valuable aid in establishing the diagnosis.

Laminaria, or sea-tangle, requires much more time to dilate, and is more powerful than sponge. It does not expand as much in proportion to its size, but there is much less danger of decomposition.

Tupello tents unite the advantages of the preceding ones, and expand very evenly. With the exception of the cases mentioned under sponge tents, tupello is preferable to either sponge or laminaria. Sponge tents expand more than the others, about three times their diameter; laminaria, not quite twice; while tupello enlarges to fully twice their size. Sponge and tupello swell in about twelve hours; laminaria requires eighteen or twenty. Dr. Emmet has found tents made from the pith of cornstalks excellent to exercise an alterative effect on the lining membrane, and also to apply iodine to the cervical canal by immersing the tent just before introducing it into the canal. They have, however, very little dilating power.

Dilatation of the cervical canal is indicated when there is not a free exit for fluids from the uterine cavity, as in dysmenorrhœa, associated with a long, small canal, a constriction, or some flexure in it; when there is not a free entrance to the uterine cavity, for the same causes, that render local applications very difficult or impossible, and is not unfrequently associated with sterility; and, finally, in cases needing a digital examination of the cavity, such as fibroids, polypii, retention of placenta, or a dead fœtus. All tents are introduced in the same way. Sponge requires more celerity, as it swells rapidly, and the sides roughen, which increase the difficulty. As with the sound and pessaries, tents must not be used if any inflammation is present; contrary to the former, however, it must be an invariable rule never to introduce a tent at the office, but always at the house. The danger of subsequent inflammation, though slight, is too great to take any additional risk by departing from the above rule. The patient should remain in bed from the time of introduction till thirty-six or forty-eight hours after removal of the tent. This may seem a needless caution in many cases, but an ounce of prevention sometimes saves many a pound of cure.

Before introducing the tent, direct the patient to take a five-per-cent carbolized vaginal douche. Without any delay place her in Sims' position. A bivalve speculum may be used, but Sims' is preferable. After exposing the cervix, seize the anterior lip with a tenaculum, and draw it down a little to straighten the canal and steady the uterus. Probe the canal carefully to ascertain its direction and probable size. If any blood escapes afterward, wait twenty-four hours, when there are no urgent symptoms calling for dilatation. Otherwise, select a tent which will readily enter the canal, and pass through

the internal os. A common mistake is to choose a tent which fits too tight; during the efforts of introduction it swells, and increases the difficulty. This is particularly true of sponge tents. Seize the base of the tent firmly in the dressing forceps, or impale it on a tent carrier, taking care not to entangle the latter with the twine, bury it in a pot of carbolized vaseline, and insert it quickly in the canal. Do not allow the tip of the tent to touch the fundus, or it will be forced out by uterine contraction. It should just enter the uterine cavity, and that is all; i.e., only about an inch and a half or three-quarters should be introduced. Sometimes the finger must hold it in place till a couple of flat cotton disks, saturated in glycerine, can be placed against it to insure retention. The speculum is then carefully withdrawn.

Fig. 34. Emmet's Sponge Tent Carrier.

Sponge and tupello tents may be left for twelve hours, laminaria for eighteen or twenty. All tents are inserted in the same way. When laminaria tents are preferred, and considerable dilatation is desired, several small ones may be introduced, one beside another, forming a little bundle or fagot.

In removing a tent, put the patient in Sims' position, introduce the speculum, seize the projecting tent with the dressing forceps, give a little twist to loosen, and then withdraw it, making counter pressure at the same time with the fingers of the other hand on the cervix. As considerable force is sometimes necessary, it is not wise to direct the patient to remove it by the loop of twine. The operator can now make a digital examination of the cavity, remove the polypus, incise the capsule of a

fibroid tumor, use the curette, or accomplish whatever was the object of dilatation.

The cavity should be cleansed afterward with a three-per-cent solution of carbolic acid, and calendula cerate (made from petrolatum or vaseline) freely applied to the upper portion, which will bathe the lower as it melts and runs down. Though I have not had occasion to use it, I believe the addition of enough muriate of cocaine to the calendula cerate, to make it four per cent, would be excellent to allay the irritation. A dry tampon can then be placed against the cervix, or, if a serous discharge is desired, it is soaked in glycerine, and the speculum withdrawn. The patient must be particularly careful to avoid exposure to cold, and remain in bed till all soreness has ceased.

Anæsthesia is not necessary for the introduction or removal of a tent. The dilatation necessarily causes some pain, and it is customary to insert a rectal suppository of one-fourth grain of morphine when the tent is introduced.

Where dilatation is undertaken for dysmenorrhœa, sterility, etc., also in some relaxed, flabby conditions of the uterus, stems of hard rubber or glass (Wylie's or Thomas') are inserted afterward to insure a patulous canal, or straighten the organ, as the canal is liable to contract again, and may require two or three dilatations to insure any permanent effect. Galvanic stems made of alternate beads or plates of zinc and copper are also worn for amenorrhœa and defective development of the uterus.

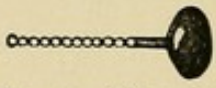


FIG. 35. GALVANIC STEM PESSARY.

The same rules for the use of tents apply to stem pessaries, except the latter are more permanent, and should be removed during the menstrual period, or if the least pain is experienced from them. If the fundus

tips forward, the base of the stem rests against the vaginal wall, and is self-retaining; but when the fundus lies sufficiently backward to direct the stem toward the axis of the vagina, the instrument will drop out, unless supported by a cup-shaped pessary made for that purpose.

The following rules should be observed in the use of tents: —

1. Always introduce the tent at the patient's house, and keep her in bed from that time till thirty-six hours after its removal. In very exceptional cases, she may leave her bed in twenty-four hours.

2. Never introduce a tent if there is any sensitiveness or soreness in the pelvis, or pregnancy suspected.

3. Use careful antiseptic precautions.

4. Never follow one sponge tent immediately by another, or introduce a sponge tent against a wounded surface.

5. Remove sponge and tupello tents in twelve hours, laminaria in twenty at the latest.

6. Be careful in every detail, and do not be afraid of too much precaution. Serious results have sometimes followed this operation.

By rapid dilatation is meant the performance of the operation at one sitting, lasting half an hour if necessary, but usually in much less time. It may be accomplished by a series of carefully graduated sounds, or the diverging blades of some instrument within the cervical canal. The best examples of the former are the hard rubber bougies of Hegar, about eighteen in number, for ordinary purposes, and ten or twelve more up to a diameter of twenty-six millimetres when unusual dilatation is required. The smallest is about the size of a fine probe, and the succeeding numbers increase one-half a millimetre respectively. Professor Fritsch of Breslau uses

steel sounds of similar gradation. They can be used through the speculum, the cervix being seized by vol-sellum forceps for counter pressure, or introduced like the sound without the speculum, the hand outside

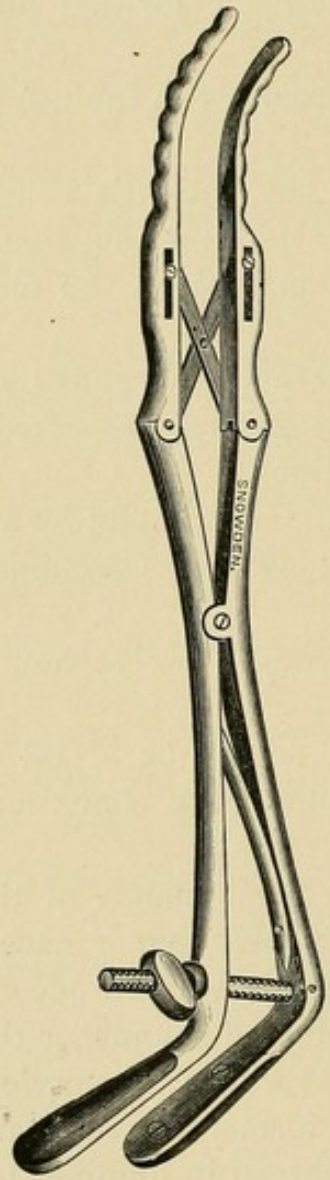


FIG. 36. GOODELL'S MODIFICATION OF ELLINGER DILATOR.

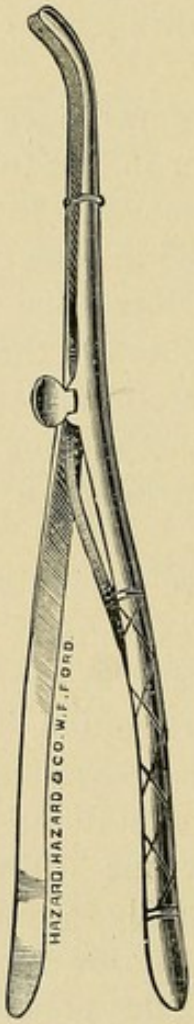


FIG. 37. WYLIE'S MODIFICATION OF SIMS' DILATOR.

crowding the fundus down on the dilator like a glove over the finger. This latter method is recommended by Professor Fritsche. I have never tried it, but believe it more theoretical than practical for the general practitioner.

For a minor degree of dilatation of a very small cervical canal, these graduated bougies serve an excellent purpose, but as a rule too much force is necessary where many are introduced, and I prefer to use an instrument with diverging blades.

Dr. Goodell is a zealous advocate for rapid dilatation of the cervix uteri, and has done much to bring it into notice in this country.[1]

The Ellinger dilator, as recently modified by him, is an admirable instrument for this purpose, but is much more expensive than Wylie's modification of Sims', which is a popular instrument. The latter is better adapted to cases of acute anteflexion of the uterus. The former is made in two sizes, the smaller for use in very small canals, while the larger is much more powerful. The smaller instrument can be used for a minor degree of dilatation, — i.e., up to a quarter of an inch, — at the office without anæsthesia, or to prepare the way for the larger one.

For thorough dilatation the patient must be anæsthetized, and just before the operation a suppository containing one grain of the watery extract of opium is inserted into the rectum. She is then placed on her back or side in a good light, a speculum introduced, and the vagina swabbed or irrigated with a five-per-cent solution of carbolic acid. The cervix is seized with a strong tenaculum, and if the larger Ellinger dilator will not enter the cervical canal, the smaller one is introduced as far as it will go, the blades separated a little for a moment, then closed, and slipped a little farther in, and the same process repeated till the os internum is passed. The handles are now gradually

[1] Goodell's Lessons in Gynæcology, p. 149. Transactions Philadelphia Obstetrical Society, 1878. For operation and statistics in dysmenorrhœa and sterility, see lecture by Professor Goodell in the Medical News, Dec. 12, 1885.

brought together, and held there for a couple of minutes. This dilator is withdrawn, and replaced by the larger one; the handles are slowly screwed together until, according to Dr. Goodell, the scale shows a dilatation of an inch to an inch and a half. Many operators do not care to dilate over three-quarters of an inch, and think half an inch enough for the majority of cases. The margin of the cervix must be watched for any laceration, which rarely happens. If there is marked flexion in the canal, Dr. Goodell recommends the dilator to be introduced with its curve in the opposite direction to the flexion, without rotating the uterus, and the final dilatation to be then made. After the necessary degree of expansion is reached, the ether is withdrawn, and the dilator kept in place for about fifteen minutes, when it is closed, removed, and the vagina again irrigated. The after-treatment is the same as for tents. If the case was one of retroversion or flexion, it would be well to use a carefully adjusted pessary for a short time. In some cases of pin-hole os externum the small dilator will not enter, and the os may be nicked or forced open by the boring motion of the closed points of a pair of straight scissors. In rare cases, it is necessary to repeat the operation, but, as a rule, the canal does not return to its former condition. A slight discharge of blood may follow the operation for a few days, and the patient must remain in bed till all soreness has subsided. The middle of the inter-menstrual period for dysmenorrhœa, or in the last third for sterility, is the best time to operate. Very excellent results will be obtained in some cases of dysmenorrhœa, but not so much can be hoped for in sterility.

Rapid dilatation is much more effectual than by tents, but patients will not always consent to an operation. It is preferable to gradual dilatation in cases of menor-

rhagia, depending on retained secundines, polypus, etc., where the cervical tissue is soft and relaxed, admitting of easy expansion. The canal may also be stretched for the use of the curette, or irrigation of or applications to the cavity.

The use of the curette deserves mention in this chapter, as the operation is not infrequently necessary, can be easily performed with proper care, and is generally followed by excellent results. The counter-indications are the same as for the sound, pessaries, tents, etc. The one main indication is a persistent metrorrhagia in spite of carefully selected remedies. This may depend on retention of a portion of the placenta, as after an abortion at about the fourth month of gestation, fungoid degeneration of the endometrium, and diffuse sarcoma of the mucosa of the uterine cavity, which is so rare that very few physicians meet with it. Sims' sharp curette, with a stiff shank, will be necessary to remove enlarged Nabothian follicles, in severe cases of endo-cervicitis.

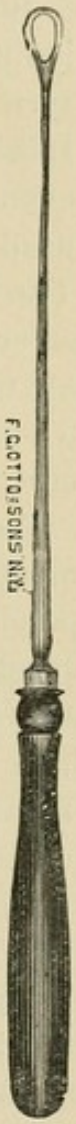


Fig. 38. Thomas' Blunt Curette.

For most cases the dull wire curette is the best to use, and the least likely to do harm. After the usual antiseptic irrigation with a five-per-cent solution of carbolic acid, or one in four thousand of corrosive sublimate, the patient should be placed in Sims' position, Sims' speculum inserted, the cervix seized with a strong tenaculum, or volsellum forceps, and drawn a little forward to straighten the canal. The dull curette is now introduced to the fundus, and drawn downward and outward, going over the entire cavity in routine order, so as not to miss any portion. It is then irrigated with warm carbolized water, 108°–110° F.,

taking care there is a free escape for the fluid through the os. If there is any bleeding after this, the cavity can be swabbed out with pure tincture of iodine applied on cotton, wound over the probe, and afterwards two or three tampons crowded against the cervix to insure against hemorrhage.

Should this fail to arrest bleeding, half a drachm of iodine can be injected into the cavity with a Buttle's syringe, after irrigating the uterus with hot water (112°). If bleeding continues in spite of this, a one to four or even stronger solution of the persulphate of iron can be used, which is the routine practice of Dr. A. Martin. The iodine is usually effectual, however, and is much safer than the iron. With either drug great care must be taken to secure a patulous canal, and prevent any forcing of the fluid through a Fallopian tube by a sudden contraction of the uterus.

Anæsthesia is rarely necessary, but the patient must be enjoined to remain in bed while there is any pelvic soreness. In exceptional cases the dull wire curette is not firm enough to remove the polypi or adherent bits of placental tissue. In these cases I have used Récamier's curette with much satisfaction. The scraping action of this instrument is around the uterus rather than from above downward: otherwise, the operation is performed in the same way, but with either.

The use of Simon's sharp spoon curette, with inflexible shank, is restricted almost entirely to the removal of cancerous masses, and is too formidable an operation to be given in a brief *résumé* of minor surgical gynæcology.

CHAPTER III.

DISEASES OF THE URETHRA.

UNFORTUNATELY there is not much accurately and positively known about these diseases by the majority of the profession, and reflex neuroses are sometimes so prominent as easily to mislead the physician in his diagnosis. Fissure of the anus has caused decided symptoms of cystitis. Malposition of the uterus, or disease of the pelvic organs, such as cellulitis of the utero-sacral ligaments, are common causes of dysuria, and therefore liable to cause error in diagnosis. Many a woman has been treated for cystitis, when only the urethra was affected.

Disease of the urethra, on the other hand, may give rise to various reflex phenomena, such as vaginismus, chorea, or even epileptiform convulsions.[1]

The most common of the diseases under consideration are the following: —

Vascular or neuromatoid growths.

Prolapse of the mucous membrane or urethra.

Laceration of the urethra, or fissures at the neck of the bladder.

Inflammation of the urethra, i.e., urethritis.

The vascular or neuromatoid growths may be flat or pedunculated, more often the latter, and closely resemble a polypus. They are very vascular, bleed easily,

[1] A curious case of this kind, which was cured by an operation, is recorded in Emmet's Principles and Practice of Gynæcology, 3d ed., p. 759.

and are exquisitely sensitive. As a rule, only one is present, but there may be more, varying in size from a small pea to a large cherry. Although the favorite seat is at the external meatus, they may be found in any part of the canal.

The chief symptoms are, pain in the urethra on touching it, pain when walking, and agonizing pain on voiding urine, particularly the last few drops. This last symptom is the most important, and may lead to a suspicion of stone in the bladder; but in this case the pain is less acute, and more like a deep-seated aching or sore pain. There is not infrequently present much reflex irritation of the bladder. uterus, vagina, or rectum.

The diagnosis is easy if the growth is seen in the orifice of the urethra on parting the labia, but when it lies concealed in the urethral canal it is not so simple a matter. In the former case, the excessive sensitiveness to touch will distinguish it from other conditions, such as syphilitic excrescences or partial prolapse of the urethral mucous membrane. If the dysuria cannot be accounted for in any other way by careful examination, the urethra may be opened by Emmet's method, and the mucosa exposed. It is neither difficult nor dangerous, and in no other way can the same amount of information be obtained.

The local treatment in all these cases is essentially the same, wherever the growth is found. It may be removed with scissors or fine forceps, and the base touched with an actual cautery or the point of a sharpened match dipped in nitric acid, which is immediately neutralized by applying a piece of cotton soaked in a solution of bicarbonate of soda.

As little tissue as possible should be removed or cauterized, as the resulting cicatrix is liable to contract,

diminish the calibre of the canal, and in time cause cystitis. These growths are prone to return, though the greatest care may have been taken in their removal.

If the urethra has been opened, and the mucosa is perfectly healthy, excepting the polypoid growth, it may be closed at once, as soon as the excrescence is destroyed; otherwise, it is better to wait till the mucous membrane is in a normal state, and close it in the same way as an ordinary fistula. If the growth is large, has a broad base, and is very vascular, it is better to ligate it to prevent hemorrhage, which is sometimes excessive. Immediate removal followed by the remedy is far better than to reverse the order in treatment.

Prolapse of the mucous membrane or urethra is readily recognized. The symptoms are very similar to those just given for excrescences of the urethra, but the dysuria is not as severe. The diagnosis of urethrocele is easy from the rolling-out of the mucosa at the meatus. It is not as sensitive as a growth, has no pedicle, and can be reduced with a large sound. It may form a complete circle around the urethra, or project from one side, more especially the anterior wall. The history of the case usually dates from child-bearing.

The treatment of these cases, until quite recently, was to excise or cauterize the prolapsed tissue. The results, however, are seldom permanent, and in a few months the patient is often as bad as before.

The best plan is to incise the urethra from the vaginal surface, draw out the slack membrane through the opening till all the urethrocele has disappeared, insert silver sutures, cut off the superfluous tissue, and close the wound. The operation for prolapse of the urethra is somewhat similar, the object being to denude enough longitudinally in the incision to make the urethral canal of the same calibre throughout and prevent

the formation of any pouch for the accumulation of urine.

The diagnosis of fissures at the neck of the bladder must be made chiefly by exclusion, as there are no characteristic symptoms peculiar to this lesion, which cannot be found in other affections such as the early stages of cystitis. If internal remedies fail, the production of a vesico- or urethro-vaginal fistula is necessary to give the muscular tissue rest. Dilatation of the urethra has also been recommended, and is said to be very beneficial for spasm of the bladder.[1] It is worth bearing in mind for chronic cases where remedies fail to relieve.

Laceration of the vesical opening of the urethra, as the result of dilatation, is an obstinate and almost incurable affection. It is characterized by incontinence of urine. As the treatment of this lesion is surgical, and not likely to be of interest to the general practitioner, the reader is referred to Emmet's article on the subject.[2]

Urethritis, either acute or chronic, is often the result of gonorrhœal infection: under these circumstances, it must be treated similarly to gonorrhœa in the male. The thick yellow pus which can be pressed from the meatus by compressing the urethra from above downwards with the tip of the finger on the vaginal surface is characteristic of gonorrhœa. Urethritis may also result from traumatism, or exposure to cold. The history of the case, frequent and painful micturition, with heat and burning in the parts, will be sufficient for a diagnosis. The chemical and microscopical examination of the urine should not be omitted. Injections must be employed with caution, lest the discharge, if any, be driven into the bladder, and cystitis result.

[1] See Emmet, Principles and Practice of Gynæcology, 3d ed., pp. 743, 751, 757.

[2] Ibid, p. 763.

Perfect rest, tepid sitz-baths, and bathing the parts several times a day, are essential. If the physician is desirous of making a local application, the extract of pinus canadensis, with the addition of a little impure carbolic acid, may be tried.

Another excellent application is a cerate of hydrastis, calendula, or iodoform: the former, if the discharge is of a catarrhal nature; calendula, if the disease occurs in the puerperal state and the discharge is purulent, which may be due to the presence of some laceration or linear ulcer; while iodoform is better for the chronic than acute stages. The cerate may be applied by winding a little cotton over a probe, and smearing it with the proper ointment. It is then introduced within the urethra, and allowed to remain for a few minutes. The same remedies may be applied in solution with a syringe. Neither is so neat, however, as to introduce a slender gelatine suppository, properly medicated, which is retained by the bulbous expansion of its point, and allowed to dissolve. An injection of a four per cent solution of cocaine has also been used for temporary relief from distressing tenesmus.

The diet should consist of simple, wholesome food, without condiments. Milk is the best drink. All alcoholic beverages must be strictly avoided. Should the urine be excessively acid or alkaline, the free use of soda-water or lemonade may tend to correct it.

THERAPEUTICS OF URETHRITIS.

| Aconite. Retention or suppression of urine, *from cold*, especially in children, with crying and restlessness. *Painful, anxious, urging to urinate.* (Borax.) *Micturition painful, difficult, drop by drop; urine scanty, fiery, scalding hot, red or dark colored.* (Apis, *ars.*, bell., *cann. ind.*, *cannabis sat.*, *canth.*, capsicum, nux v.)

Arsenicum. *Burning in the urethra during micturition.* (*Acon., can. sat., canth.*) *Involuntary micturition.* (Arnica, bell., *caust.*, cicuta, hyosc., opium, puls., stramon.) *Urine scanty; passed with difficulty; burning during emission.* Suppression or retention of urine. (Acon., camph., hyosc., stramonium, terebinthina.) Hæmaturia. (Arnica, *canth.*, colch., ham., *millefolium*, petroleum, phos.) Albuminuria, uræmia.

Belladonna. Atropine is preferred by some. *Retention of urine, which passes only drop by drop.* (Acon., *canth., nux vom.*) Urine becomes turbid (*Chel.*), with reddish sediment. (Carb. veg., kreos., meg., *sepia.*) Red, sandy sediment, or like brick-dust. (Arnica, cinch., coccus cac., *lycop.*, nat. mur., nux vom., nuphar, phos.) Involuntary micturition. (Arnica, *ars., caust.*, cicuta, hyosc., opium, puls., stram.) Atropine 6x is one of the best remedies for the acute symptoms of gonorrhœal urethritis with concomitant heat and inflammation in the vagina. Bell. 1x is a rarely-failing remedy for nervous dysuria.[1]

Camphor 1x. This remedy is highly recommended by Dr. Hughes for acute strangury of a spasmodic form. The symptoms are urgent and very painful. It is also beneficial if the symptoms have followed the application of a cantharides blister. This remedy usually relieves promptly if at all.

|| Cannabis sativa, compare with cannabis indicus. *Burning, smarting in the urethra, from the meatus backward; posteriorly stitching while urinating. The urethra feels inflamed and sensitive to pressure along its whole length* (Arg. nit.). *Burning while urinating, but especially just after* (August., ant. tart., *canth.*, conium, equisetum) stitches and tearing sensations in the urethra.

|| Cantharis. *Violent pains in the bladder, with frequent urging; intolerable tenesmus. Tenesmus of the bladder* (*Merc. cor.*, capsic., colch.). *Violent burning, cutting pains in neck of bladder.* Passage of blood from the urethra, or *bloody* urine (*Ars.*, arnica, colch., ham., mez., *millefolium*, petroleum, *phos.*). *Violent burning, cutting pains in the urethra before, during, and after micturition* (Ant. tart., *can. sat.*, conium,

[1] Hughes' Therapeutics, Part II., p. 257.

staphis.). *Urine scalds her, passes drop by drop* (Acon., bell.). *Urging to urinate, with burning sensation in urethra.* This is a very effectual remedy for inflammatory dysuria, but Dr. Hughes states that he has had better success with copaiba and eupatorium purpureum.

Equisetum. Bladder feels sore, tender, and as if distended, not relieved by urination. *Constant desire to urinate,* and much burning in the urethra during and pain after the flow of urine (Apis., *canth.*, *can. sat.*). *Urine scanty and high colored* (Acon., apis.).

Eucalyptus globulus.[1] Dr. Woodbury believed he cured several cases of vascular tumors of the urethra with this remedy.

Gelsemium. If this remedy should prove as successful in the female as in the male, to abort urethritis, especially gonorrhœa, in the very beginning of the disease, it will rank as one of our best remedies. It must be given low, — φ or 1x. dil., — to obtain prompt effects.

| Merc. cor. *Tenesmus of the bladder* (*Canth.*, caps., colch.); urine suppressed (Acon., hyos., *stram.*). Frequent urination; *passed in drops with much pain* (Acon., bell., *canth.*). Urine scanty, bloody; *albuminous* (Osm., phos., phyt., plumb.), containing filaments, flocks, or dark flesh-like pieces of mucus. Urethral fever.

Nux vom. *Painful, ineffectual urging to urinate* (Canth.); *urine passes in drops* (Acon., *bell.*, *canth.*) *with burning and tearing in urethra and neck of bladder* (Apis., *canth.*, can. sat., caps.). Urine pale, later thick, whitish, purulent; reddish with brick-dust sediment. *Constipation and blind hemorrhoids.*

|| Populus. This remedy has promptly cured when canth., cannabis sat., and other remedies have failed, though apparently well indicated. It seems to act best in a low preparation, such as populin 1x trit. Urination is painful, with hot scalding sensations, especially during pregnancy. It is also a useful remedy for cystitis. The author has found it a good remedy for tenesmus of the bladder after ovariotomy.

[1] Dr. J. H. Woodbury: New-England Medical Gazette, June, 1875.

Thuja. Judging from its action on various excrescences, it would seem to be applicable to those of the urethra, though the provings do not indicate so marked an action on this region as do many other remedies.

The following remedies may be consulted for further study: ant. tart., *apis*, arnica, benzoic acid, berberis, calc. carb., *capsic.*, causticum, clematis, coloc., con., *copaiba*, *eupatorium purpureum*, ferrum, hepar, hyosc., lil. tig., lycop., nat. mur., nit. ac., puls., sang., sarsp., sepia, *sulph.*, thlapsi bursa past.

CHAPTER IV.

CYSTITIS.

THE pathology and etiology of cystitis, or inflammation of the bladder, in the female, is similar to the same disease in the male; except that in the former there are the additional causes of displacement of the uterus, either irritating or preventing the complete evacuation of the bladder; the prolonged retention of urine after parturition; too early closure of a vesico-vaginal fistula; and the habit of retaining the urine an undue length of time, — a more common cause in women than in men.

As the disease is not peculiar to the female, the reader is referred to the standard text-books on medicine and surgery for more detailed descriptions than will be here given. The treatment varies a little, however, as the organ is much more accessible.

Symptoms. — In the acute form, frequent micturition, only a few drops being voided at a time with much straining or tenesmus afterward, is one of the most prominent symptoms. The bladder often seems intolerant of even a very small amount of urine. In the chronic form, however, the organ often contains a large quantity, which frequently becomes ammoniacal. In both there is more or less dull, aching pain in the region of the bladder. The patient may be unable to completely evacuate the viscus in chronic cystitis, so that it is always a good rule to introduce the catheter

in suspected cases. Sometimes a quart of offensive alkaline urine will be withdrawn in this way. On standing, the urine separates into a clear fluid above, with a varying amount of mucus or pus at the bottom of the vessel. Under the microscope, there is seen epithelium, pus, and blood corpuscles. Membranous exudations are sometimes present.

Pyelitis may have very similar symptoms to cystitis, but the differential diagnosis of pyelitis is made by the lumbar pain, the even admixture of pus with the urine, the acid reaction, the absence of ropy, gelatinous mucus, and the presence of "tailed" cells,[1] or "epithelium from the pelvis of the kidney, distinguishable by the frequent occurrence in a cell, of clearly defined, dark-colored, round granules, and of two nuclei."[2] Flint,[3] however, does not believe the character of the epithelial cells can be relied on to differentiate the two diseases.

The Prognosis becomes more grave in proportion to the duration of the disease. The acute form usually terminates within a week or ten days; the chronic may last for years, and end fatally if left to itself. If the disease has not extended to the kidneys, a cure may be expected in the majority of cases.

The diet should be the same as in the preceding chapter on diseases of the urethra. The free use of milk is of great importance. Mineral water charged with carbonic-acid gas is also useful. Dr. Ludlam warmly recommends clysmic spring water.

Washing out the bladder is an indispensable aid to internal remedies in the treatment of chronic cystitis. No local measures whatever are necessary in the acute form. The following rules should be observed: —

[1] Loomis, Practical Medicine.
[2] Da Costa, Medical Diagnosis.
[3] Flint's Practice of Medicine.

1. Use a fountain syringe, and inject slowly.

2. Proportion the quantity of tepid fluid to the tolerance of the bladder.

3. The irrigation may be repeated one to four times a day, according to the severity of the case.

4. Use either the double-current catheter, or a two-way stop-cock.[1] Dr. Mundé states that pure water should not be used, as it is liable to irritate the bladder.

An excellent way to wash out the bladder is to use a two-way stop-cock, or the T just referred to.

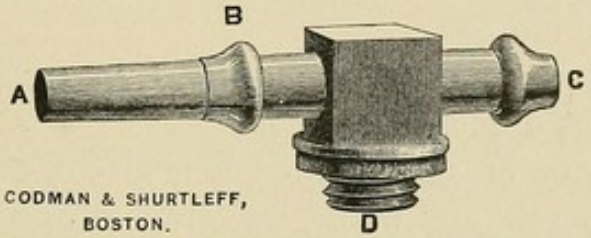


FIG. 39. INSTRUMENT FOR WASHING OUT THE BLADDER.

Introduce a large gum elastic catheter, somewhat shortened, into the bladder, the larger the better if it does not cause an undue amount of pain. Connect this with the long arm of the T (A B), and the syringe with the upright or body of the instrument (D). Attach a piece of three-sixteenths-inch rubber tubing, about eighteen inches long, to the short arm of the T (C). Now let the water run slowly in from the syringe ; when it escapes from the rubber tubing, compress the latter between the thumb and finger; this forces the water into the bladder. As soon as the patient feels a slight distension, remove the pressure from the rubber tube, and the bladder will empty itself. This may be repeated till the water returns clean from the bladder.

[1] Codman & Shurtleff of this city make an excellent T-shaped instrument for this purpose.

Meantime the medicated fluid has been prepared, and, as soon as the washing is finished, is poured into the syringe, and injected in the same way. It may be retained one to five minutes, and then allowed to escape.

Non-alcoholic preparations are preferable. They may be prepared by diluting the solid extract with water and glycerine, or evaporating the watery extract to the required strength. The following are recommended, which should never be strong enough to give pain:—

Hydrastis, 1 : 10 of the tincture, or the muriate of hydrastine 2 grs. to the ounce of water, if the urine is loaded with mucus.

Calendula, 1:10 of the tincture, if the urine is bloody and contains a quantity of pus.

An infusion of these remedies is also excellent.

Common salt and water, one drachm to the pint, has been warmly recommended as a cleansing fluid. If there is much suppuration, a one-per-cent solution of carbolic acid, or one in five thousand of corrosive sublimate, is excellent. When the urine is ammoniacal and offensive, either the solution of carbolic acid, or half a drachm of dilute nitro-muriatic acid to a pint of water may be used; if acid, the same amount of saleratus instead of the acid. A solution of quinine has also met with some favor.[1]

[1] Mr. Nunn finds a solution of quinine very useful for injections in the bladder, when the urine is loaded with pus and *intensely offensive*, the bladder being irritable with a frequent desire to urinate. He uses it in the following manner: Dissolve twenty grains of the disulphate of quinine in twenty-five ounces of water, by the aid of a few drops of dilute sulphuric acid, or a teaspoonful of common brown vinegar. Of this solution, inject two or three ounces, and let it remain. — *London Lancet*, Feb. 23, 1878, p. 270.

Mr. J. Knowlsley Thornton reports two cases of irritation of the bladder after ovariotomy treated very successfully by the quinine solution, two grains to the ounce, dissolved with a few drops of dilute sulphuric acid. Three ounces were injected, and in a few seconds two were withdrawn, leaving one ounce in the bladder. — *London Lancet*, June 1, 1878, p. 786.

Sir Benjamin Brodie found pareira brava very useful where there was a tendency to profuse mucous secretion.

Sir Henry Thompson recommends a strong decoction of triticum repens,[1] which is also well spoken of by Graily Hewitt.[2]

I have had no experience with this remedy, but refer to it because it comes from such excellent authority.

If there is no improvement after a sufficient trial of carefully selected remedies with proper irrigation of the bladder, the production of an artificial vesico-vaginal fistula, i.e., cystotomy, affords the best prospect of cure. It may be done with the thermo-cautery,[3] but incision is preferable.[4]

It is needless to say, that displacements of the uterus should be corrected, and if cystocele be present, it will almost invariably be necessary to operate on it in such a way that no pouch will be left for the retention and decomposition of the urine.

THERAPEUTICS OF CYSTITIS.

Compare the remedies mentioned for urethritis. *For acute cystitis.* *Acon.*, apis, belladonna, cann. sat., *canth.*, eucalyptus globulus, eupator. purp., *equisetum hyemale*, merc. cor., nux vom., *populus*, puls., sepia, sulph., sulpho-carbolate of soda, terebinthina.

While any of the preceding remedies may be indicated, the following are more generally useful *in chronic cystitis:* ammon. mur., benzoic acid, calc. carb., *chimaphilla*, copaiva, cubebs, epigea repens, equisetum hy., *eucalyptus*, hydrastis, lithia carb., lycopod., pareira brava, phytolacca, populus, uva ursi.

[1] Boil four ounces of triticum repens in a quart of water, gently reducing it to a pint; strain and cool; let a third part be taken three times a day. Reynolds' System of Med., vol. iii. p. 476.

[2] Dis. of Women, vol. ii. p. 481, 1883.

[3] Dr. M. A. Patten: Am. J. of Obst., vol. xi., April, 1878.

[4] Emmet's Principles and Practice of Gynæcology, p. 780, 1884.

| Aconite. *Cystitis from metastasis of rheumatism;* acute cystitis from exposure to cold. *Painful, anxious urging to urinate* (Borax). Micturition painful, difficult, drop by drop; urine scanty, fiery, scalding hot, red or dark-colored. (Apis, *ars.*, bell., *cann. ind.* and *sativa, canth.*, capsic., nux vom., *populus.*)

Apis. Cystitis from the abuse of canth., camph., or other drugs. Burning soreness when urinating. Frequent desire, with passage of only a few drops. Urine scanty and high colored, or suppressed (Acon., hyosc., stram.); it may also be frequent and profuse. Burning and stinging in the urethra.

Belladonna. Acute cases: nervous delicate women who do not sleep, and are inclined to greatly exaggerate their sensations. Vesical region very sensitive to pressure or jar. *Retention of urine, which passes drop by drop.* (Acon., canth., nux vom.) Urine hot and fiery red; at first clear, becomes turbid on standing (*Chel.*, turbid on passing), with reddish sediment (Carb. veg., kreos., mez., *sepia*), red, sandy sediment, or like brick-dust (Arnica, cinch., coccus cac., *lycopodium*, nat. mur., nux vomica, nuphar, phos.). Paralysis sphincter vesicæ; constant dribbling of urine. If, with the urinary symptoms, there is acute congestion and bearing-down of the pelvic organs, which are sensitive, and the examining finger feels distinct pulsations of the blood-vessels, belladonna will usually relieve promptly.

Dr. Ludlam reccommends atropine 3, every hour, for very acute cases of gonorrhœal origin.[1]

|| Cannabis sat. This remedy is so closely related to cantharides, it is sometimes difficult to decide which is indicated. Its action is less intense than the latter, and when the particular remedy is not clearly indicated, it may be best to give cannabis, if cantharis has given no relief in twenty-four hours. Dr. F. E. Doughty states that it is particularly useful in gonorrhœal cystitis. *Strangury.* Drawing pain from the region of the kidneys to the inguinal glands, with anxious, nauseous sensation in pit of stomach. *Burning, smarting in the urethra while urinating, and especially just after.*

[1] Dis. of Women, p. 579. 1881.

|| Cantharis. The chief remedy for acute cystitis. Suppressed gonorrhœa with bloody urine, which is discharged drop by drop, with intense burning. *Violent pains in the bladder*, with frequent urging; intolerable tenesmus. (*Merc. cor.*, capsicum, colch., terebinthina.) *Violent burning, cutting pains in the neck of the bladder.* Passage of blood or bloody urine. (*Ars.*, arnica, colchicum, ham., mez., *millefolium*, petroleum, *phos.*, terebinthina.) *Violent burning, cutting pains in the urethra before, during, and after micturition.* (Ant. tart., *can. sat.*, conium, staphis.) *Urine scalds her, passes drop by drop.* Urging to urinate, with inability or difficult emission of a few drops. Urine turbid, scanty, albuminous, contains shreds and mucus; looks jelly-like. Great thirst, nausea, and vomiting. Abdomen distended and painful, especially above the symphysis pubis, with burning pains in the loins. Niemeyer[1] states that in croupous cystitis, which sometimes follows the abuse of cantharides or difficult forceps deliveries, we occasionally see large, tenacious, false membranes discharged with the urine. This hint should not be lost sight of in treating diptheritic, croupous, or gangrenous cystitis. Baehr thinks cantharides are scarcely ever appropriate to the chronic form, and has frequently seen instantaneous aggravations after the third trituration.

|| Chimaphila umb. ♀. A favorite remedy of Dr. Hughes for chronic cystitis. Ulceration of the bladder. *Scanty urine, containing a large quantity of muco-purulent sediment.* Urine thick, ropy, of brick color, and copious bloody sediment. Constipation.

Colocynth. *Frequent desire to urinate, with scanty discharge.* (Apis, dig., graph., *hell.*, *merc.*, nit. ac.) Urine fetid, brown, viscid, deposits copious, jelly-like sediment. The pains, while urinating, are felt over the whole abdomen. It is best adapted to the acute stage, at about the fifth day, when the pains diminish, and mucus begins to appear in the urine.

Dulcamara. Sub-acute form resulting from local damp and cold. The deposit from the urine looks like the white of egg slightly cooked.

[1] Niemeyer, Practical Medicine, vol. ii. p. 70. 1879.

| Equisetum hy. *Dysuria,* extreme and frequent urging to urinate, with severe pain, especially *just after* voiding the urine. Dysuria after confinement and during pregnancy. *Pain and tenderness in region of bladder, with feeling of distention. Urine high-colored and scanty.*

Eucalyptus glob. Dr. F. E. Doughty[1] has found this remedy very useful for sub-acute cases, in doses of three to five drops of the oil.

Merc. cor. Tenesmus of the bladder. (*Canth.*, capsic., colch.) Urine suppressed. (Aconite, hyos., *stram.*) Frequent urination, *passed in drops with much pain.* (Acon., *bell.*, *canth.*) Urine scanty, *albuminous* (Osm., phos., phyt., *plumb.*), containing filaments, flocks, or dark flesh-like pieces of mucus.

Nux vomica. Tenesmus; burning and pressure in the bladder. (Ars., *canth.*, acon.) *Painful, ineffectual urging to urinate; urine passes in drops, with burning and tearing in the urethra and neck of the bladder.* Urine at first pale; but later, thick, with reddish or muco-purulent sediment.

| Pareira brava. *Dysuria. Constant urging to urinate. Urine contains much thick, viscid, white mucus, or deposits a red sand,* and has a strong ammoniacal odor.

Phosphorus. *Hæmaturia.* (Ars., *canth.*, colch., hamamelis, *millefolium*, petroleum.) Urine turbid, whitish, with brick-dust sediment, and variegated cuticle on the surface. Paralysis of the bladder. (Hyosc., caust., carbo vegetalis, plumbum, sulphur.)

| Terebinthina ix. Acute cystitis. *Violent burning, drawing pains in region of kidneys. Urine scanty and bloody,* may be suppressed. The relief is usually prompt.

The following remedies may be consulted in addition to the preceding: —

Ammonia mur.,[2] ars., *benzoic acid*, carbo vegetalis, caust., cocculus, *copaiva*, cubebs, *digitalis*, elaterium, *epigea repens*, eupator purp., graph., *hydrastis*, hyosc., kali carb., lithia carb., lyc., phos. ac., *phytolacca*, plumbum, *populus*, puls., sepia, squills, sulphur, sulpho-carbolate of soda, uva ursi.

[1] Arndt's System of Medicine, vol. ii. p. 216.

[2] This was a favorite remedy of Dr. J. F. Gray for chronic cystitis.

CHAPTER V.

PRURITUS VULVÆ.

THIS, as the name signifies, is an itching of the vulva, a symptom, but not a disease. It is not always limited to the external genitals, and is liable to extend over the adjoining surface in pregnancy, at the climacteric, and if it depends on eczema of the vulva. It runs no definite course, and may last for years, causing much suffering and misery to the patient. The causes are numerous, but the more important ones can be classified briefly as follows: —

LOCAL.

IRRITATING DISCHARGES. — *Leucorrhœa*, acrid discharge[1] from cancer of cervix, dribbling of urine.

SKIN DISEASES. — *Eczema of vulva*, inflammation of the vulvar mucous membrane with or without aphthæ, trichiasis.

PARASITES. — *Pediculi pubis*, acari, ascarides, fungoid organisms.[2]

GENERAL.

Congestion of the pelvic organs, *pregnancy*, *diabetes*.[3] In some cases it appears to be a kind of neurosis, or hyperæsthesia of the nerves.

[1] McClintock states that this is one of the earliest symptoms of cancer. I am not aware that this has been confirmed by other observers.

[2] Some think pruritus depends almost entirely on these growths, as the most effectual applications are also parasiticides. For further information see Friedrich Virchow's Archiv. vol. 30, p. 476; and Wiltshire, Brit. Med. Journal, March 5, 1881.

[3] It is the condition of the urine, rather than the influence of the disease on the organism, which produces pruritus.

Although the surface may be scratched, and show much local irritation, it is always a good rule to test the urine for sugar.

The food should be plain and nutritious. Any form of alcoholic drink, coffee, or an abuse of pepper or condiments, is liable to aggravate the trouble. The wife should occupy a separate room. Feather-beds and too warm clothing tend to cause congestion and increase the irritation.

The same general rules for treating similar conditions on other portions of the body also apply here. As the great majority of cases depend on the presence of some irritating discharge, cleanliness is of prime importance. Frequent ablutions, two or three times a day, with castile or the honey and juniper tar soaps are indispensable. Direct the patient to dry the parts carefully with a linen cloth after her bath, to insert a tampon of dry absorbent cotton in the vagina, and apply calendula cerate in which enough muriate of cocaine has been mixed to make a four per cent oleate. The vaginal tampon is of great importance if there is an acrid discharge.

The cure will be much more satisfactory if made with pure water douches and the accurate prescription of the single remedy. As a rule, however, patients will not wait, and demand something to relieve promptly their present suffering. There is no one cure-all, as the many different applications testify. The following are recommended by good authorities, from which a selection can be made if the former measures are insufficient. It is hardly necessary to mention, that short bristly hairs projecting into the mucous surface should be removed with tweezers by the aid of a magnifying-glass. A pledget of lint or old linen rolled in almond-oil may be placed between the labia or in the vagina, if that be the site of the pruritus. If there is a vesicular eruption

with a raw surface on the mucous membrane, or very marked burning in the urethra, and dysuria, medicate the almond-oil with tincture of cantharis, and apply in the same way. In case the inflammation is of the erythematous form, with a scarlet surface and nettle-like stinging and burning, substitute urtica urens for the cantharis.[1]

Eczema of the vulva is sometimes an obstinate affection. Here, water is liable to aggravate, and success depends almost entirely on the internal remedy. Judging from favorable reports of a one per cent cerate of chrysophanic acid in eczema on the body elsewhere, it might be used with advantage here.[2] Dr. A. Martin has found iodoform ointment beneficial.[3]

In aphthous inflammation of the vulva, a solution of borax and water (five to ten grains to the ounce, or a teaspoonful of boracic acid dissolved in a pint of boiling water) was highly recommended by Sir James Simpson and also by Hering.[4] A lotion of hydrastis is also useful in these cases.

Painting the surface with a solution of nitrate of silver is favorably mentioned by good authority, if the pruritus depends upon a virulent catarrhal inflammation, and for very obstinate chronic cases, especially if syphilitic.

The prognosis is grave when diabetes is the cause of the pruritus. The use of the catheter, thorough bathing after each micturition, and the liberal use of vaseline to protect the parts, will afford much relief. Schroeder states that the Carlsbad water affords the best prospect for a cure.[5]

[1] Ludlam, Diseases of Women, p. 532.

[2] Dr. Utley: New-England Medical Gazette, July, 1884.

[3] Centralblatt für Gynäkologie, July 3, 1880.

[4] Domestic Physician, p. 274.

[5] Schroeder, Krank. der weibl. Organen, p. 528.

In some cases where there is much local inflammation, poultices of linseed, slippery elm, potato, etc., will relieve; though, as a rule, heat is likely to aggravate.

Hewitt[1] finds one part of chloroform mixed with six of almond-oil very useful. This is somewhat stronger than the mixture recommended by Scanzoni (1 : 10), who speaks well also of caladium seguinum locally. In prurigo senilis, pruritus in the aged, a cerate of the oil of staphisagria seeds (one part of the oil to seven of vaseline) is very beneficial.

Schroeder[2] prefers a three to ten per cent solution of carbolic acid, applied with a camel's-hair pencil after an alkaline sitz-bath. In some chronic cases there are found on the labia one or more tubercles or very sensitive spots which are the sites of the pruritus: removal of these by scalpel or scissors has been followed by a permanent cure.[3] When the pruritus seems to constitute a neurosis, relief may be given by electricity, preferably the Faradic current.

Emmet[4] uses one-half ounce of sulphurous acid, mixed with half a pint of warm water, for the aphthous variety, and states that in old people benefit will be derived from arsenic internally and iodoform locally. Tar[5] in alcoholic solution (4 : 30), or with glycerine, is praised by Martin and Weston. Plantago cerate has cured some cases.

Parasites are sometimes the cause of the pruritus. The most common of these is the pediculus pubis, or crab louse. It is so small as to readily escape notice;

[1] Hewitt, Dis. of Women, vol. ii. p. 428.

[2] Ibid.

[3] Schroeder, Die operative Behandlung bei Pruritus Vulvæ. Sitzung d. geburts. Gesellschaft z. Berlin, Nov. 11, 1884; and Küstner, Centralblatt für Gynäkologie, Nov. 11, 1885.

[4] Principles and Practice of Gynæcology, p. 631.

[5] Boston Gyn. Journal, vol. iv. p. 79.

but the presence of nits in the hair and severe itching localized in one place, especially about the pubis, point to them as the cause. They are easily destroyed by the application of one of the following lotions: a five-per-cent solution of carbolic acid; a solution of corrosive sublimate, half a grain to an ounce of water; and the tincture of staphisagria.

In young girls, ascarides sometimes find their way into the vagina, and cause much irritation. Thorough inunction of the parts with an ointment made of one part impure carbolic acid well rubbed up with ten of cold cream or vaseline will destroy both the acari and their ova. Dr. Holcombe states[1] that such cases are cured by nightly injections of a strong decoction of garlic, with an internal dose of ignatia.

It may seem that an unnecessarily large number of local applications have been given; but in many cases any one loses its efficacy after a while, and another must be tried; what is very useful in one case is often worthless in the next, and the physician must have a number from which a selection can be made. The importance of a carefully selected remedy to cure the patient cannot be over-estimated.

THERAPEUTICS.

| Ambra. *Violent itching of the vulva* (Canth., conium, *kreos.*, merc., sulph.) during pregnancy, with soreness, itching, and swelling of the parts, more especially during pregnancy. *Discharge of blood between the periods from slight causes, as after a hard stool or walking.* Menses too early and too profuse. (Aloe, ammon. carb., ars., calc. carb., carb. veg., *bell.*, coccus cacti, *nux vom.*) Emission of turbid urine depositing a *brownish* sediment. Uterine symptoms are worse on lying down.

[1] U. S. Med. and Surg. Journal, vol. viii. p. 49.

|| Caladium Seguinum.[1] According to Raue and Baehr, this is the most efficient remedy. *Pruritus vulvæ, cramp pains in the uterus after midnight.*[2] Pruritus during pregnancy. Itching pimples on the genitals.

Cantharis. Climacteric age. Swelling and irritation of the vulva. Violent itching in the vagina. (Conium, kreosotum, lil. tig., mez., merc.) Pruritus with strong sexual desire. *Dysuria, frequent micturition with burning and cutting pain.* (Acon., bell., can. sat., *merc. cor.*, *nux vom.*)

| Carbo Veg. Red, sore places on the vulva; aphthæ (Helonias), itching, sore and raw during leucorrhœa (Merc.). Leucorrhœa, thin in morning on rising, not through the day; milky, excoriating (compare ars., conium, kali carb., kreosote). Menses too early and too profuse (Aloe, ammon. carb., ars., calc. carb., carb. veg., coccus cac., *bell.*, *nux vom.*); blood too thick, *and of a strong odor.* Varices of the vulva. Carbo veg. is particularly adapted to pruritus associated with aphthæ.

Collinsonia 1x. Distressing itching in connection with prolapsus and *constipation.* Pruritus during pregnancy.

Conium. Severe itching deep in the vagina. (Canth., kreosotum, lil. tig., mez., merc.) Leucorrhœa, with weakness and paralyzed sensation in small of back before the discharge; thick, milky, with contractive labor-like pain coming from both sides, of white, acrid mucus, causing burning. (*Alum*, iodine, kreos., *merc.*, phos., *puls.*) Violent itching in

[1] British Journal of Homœopathy, XIII., 509; XXVII., 592; XXIX., 400, 1871. Compare cases 1, 2, and 3.

(1) *Caladium ϕ.* A girl four years old: violent itching on the external genitals. Six drops of the tincture in three ounces of water, a teaspoonful every three hours, cured. — Dr. Scholtz, *Zeit. f. klin. Med.*, vol. v. No. 1.

(2) *Caladium ϕ.* A girl twenty years old; frequently returning itching on the genitals, finally with voluptuousness; three months later, a mucous discharge and very troublesome eruption of pimples appeared on the genitals. Calad., eight drops of the tincture in six ounces of water, a tablespoonful every three hours, cured her. — *Ibid.*

(3) *Caladium 2x.* Mrs. ———, age 45. The external labia were swollen. There was a papular eruption with itching. Calad. 2x cured. — Dr. J. H. Smith, *British Journal of Homœopathy*, p. 400, 1871.

[2] See proving in Transactions American Institute of Homœopathy, 1881, p. 178.

the vulva and vagina, especially after the menses. It can be also used locally as a wash.

Graphites. *Itching of the pudenda* (*Calad.*, angustura) *before menstruation. Menses too late,* too scanty, and too pale. Vesicles or excoriations in the vagina, on the perineum, vulva, and between the thighs. Aversion to coitus. The skin and general symptoms are important aids in selecting this remedy.

|| Kreosotum. *Violent itching of the labia, also of the vagina* (Canth., conium, lil. tig., merc., mez.), *external genitals swollen, hot, hard, and sore; soreness and smarting between the labia and the vulva.* (Sep.) Itching during and after menstruation. *Leucorrhœa of a yellow color, staining linen yellow, with great weakness.* (Carb. an.)

Mercurius. *Leucorrhœa, always worse at night, greenish discharge; smarting, corroding, itching, burning after scratching.* (Alum., coni., phos., *puls.*) Inflammation of vagina, and especially the external genitals, with rawness, smarting, and excoriated spots. (Carbo veg., graph.) Itching of the genitals, worse from the contact of the urine.

Rhus.[1] *In eczema of the vulva,* vesicular or pustular eruptions with burning and itching.

Sulphur.[2] Burning in the vagina. Troublesome itching

[1] (4.) *Rhus tox. 10x.* Patient past the climacteric; vulva red, swollen, *intense itching*, often worse at night while undressing, aggravated by scratching, and followed by soreness and smarting. Mezereum, which had relieved a similar condition, failed. Rhus tox., 10x dil., cured. — Dr. C. Wesselhoeft, *New-England Medical Gazette*, March, 1875.

[2] (5.) *Sulphur 200.* Mrs. ——, age 47. Violent burning, stinging, and scalding. Labia swollen to twice the natural size, and fiery red; redness extending up on the abdomen, down on the inside of the thighs, and around the anus. Intense inflammation inside the vulva, and the surface thickly studded with miliary points. The pruritus is aggravated by the heat of the bed, and patient suffers intensely after urination. Specific gravity of urine 1030, and an abundance of sugar.

Sulph. 6x. prescribed without improvement of the pruritus. Six days later sulph. 200 was given with marked improvement. In two weeks examination of urine showed sp. grav. 1021, sugar 19.68 grains to the ℥. The same remedy was continued with steady improvement. In another fortnight examination of the urine showed sp. grav. 1014 with only a trace of sugar. In a few days more, the patient felt perfectly well, and was pronounced cured six months after the commencement of the pruritus. — Dr. Mary Brownson, *Hahn. Monthly*, p. 216, 1880.

of the genitals with papular eruption around them. (Merc.) With this remedy, the general symptoms indicating it are of more importance than the local.

Other Remedies to be consulted. — Ars., *calc. carb.*, causticum, coffee,[1] *croton tig.*, ferrum, *helonias*, hydrastis, hydrocotyle Asiatica,[2] kali carb., lapis albus[3] (silico-fluoride of calcium), lil. tig., lycopod., *mezereum*, nat. mur., nit. ac., nux vom., petroleum, platina, puls., sepia, silicea, staphisagria, sulphate of Bebeeria.[4]

[1] Dr. Brown-Séquard has observed cases of pruritus directly caused by drinking coffee. — *Medical and Surgical Reporter*, June 5, 1886.

[2] Cured very severe itching of the vagina in 12c. dil. See British Journal of Homœopathy, vol. 16, p. 589, 1858.

[3] (6.) In a private letter to the author, Dr. Whiting of Danvers, Mass., says that he has used this remedy, always in the 200 potency, with generally good results. He was led to it by observing the appearance of severe pruritus pudendi in a patient whom he was treating successfully for bronchocele with lapis albus (silico-fluoride of calcium) 6x. trit. Omitting the lapis albus, he gave her a placebo, and the pruritus entirely disappeared. She again received lapis albus 200, a dose at bedtime, and in a very few days the pruritus returned with such intensity that she would not take any more medicine. It also cured her of dysmenorrhœa from which she had suffered for over twenty years.

[4] Recommended in five-grain doses in British Journal of Homœopathy, p. 168, 1857.

CHAPTER VI.

LACERATION OF THE PERINEUM.

THE diagnosis of this lesion is easy, whether the sphincter ani be involved or not. An excellent way to estimate the amount of injury is to place the thumb against the anterior margin of the anus, and the tip of the finger just within the vagina ; then bring the two together, and the thickness of the perineal body, if any, is at once ascertained. Visual inspection alone is deceptive, as there may be serious laceration of the perineum and yet the outside skin remain intact.

The treatment of this lesion is surgical, and should not be deferred till cystocele and displacement of the uterus have taken place. A reliable rule, from a clinical standpoint, in deciding upon the necessity for an operation, is to ask the patient if she is troubled at all by an escapement of air from the "front passage." If so, the operation should be performed, as there is not enough perineal tissue to prevent gaping of the vaginal orifice, or to support the uterus ; and displacement will almost always follow in time, if it is not already present.

The amount of support given to the uterus by the normal perineum is a mooted question ; some denying its influence altogether, others considering it all-important and the main support of that organ. Space cannot be given to the discussion of this matter. The

truth must lie between these extremes. The clinical fact is, that with few exceptions severe laceration of the perineum is followed by rolling-out of the vaginal walls, and, in turn, descent of the uterus. A closer examination shows that the vaginal walls seem to be more relaxed, and do not have the same elasticity, and firm attachment to the underlying structures, as in virgins; nor is this always due to sub-involution. In the exceptional cases, which nearly every practitioner of three or four years' experience has seen, there may be severe laceration of the perineum without uterine displacement; but here the vaginal walls are not so flabby, and do not roll down to such an extent, as in the more common cases. How are these differences to be reconciled?

While the author regrets he has not yet had an opportunity of verifying the following explanation by dissections, he ventures to give it as based on clinical observation of such cases. In the former case of laceration of the perineum with prolapsus of the uterus, the fascial attachments of that organ to the surrounding tissues and ligaments at its insertion into the vagina, as well as the fascial and muscular fibres in and about the latter, have been torn or so injured during labor, that when the prop or support of the perineal fascia or body is gone (for laceration of the so-called body must include its fascia), the structures above sag in consequence, and yield more readily to intra-abdominal pressure. As lesions of the perineum vary in extent, so may the injuries to the fascia of the genital tract. If that of the perineum *alone* is affected, the fascia and muscular fibres above it may be quite sufficient to keep the uterus and vagina in place.

Can we not find an illustration of these conditions in the treatment of procidentia uteri? It is well known,

that no matter how carefully the perineum be repaired, and the caliber of the vaginal outlet diminished, after a little time the uterus will again come down, nor does the simple narrowing of the vagina in order to bring the walls into close contact increase to any extent the immunity from a recurrence of the procidentia. *It is not till the vaginal tissues are folded in and so drawn together, at the cervix uteri especially, as to take up the slack of the muscular fibres and fascia, and obtain a new hold on the latter, that any permanent results are obtained.*

While the perineum is an important factor in the support of the pelvic organs above, I believe that the value of the pelvic fascia in sustaining them has been overlooked.

The question of the primary operation, i.e., immediate repair of the injury at the close of labor, belongs to the province of obstetrics. The writer cannot forbear, however, from expressing his opinion that all lacerations more than one-fourth inch in depth beyond the fourchette should be closed at once, taking special care that the whole of the torn surfaces are brought together by sutures. I have had every opportunity of observing a large number of these cases in hospital practice, and never have seen as good union take place without sutures, as can be obtained with them. The apparent extent of a laceration of the perineum after delivery is very deceptive. The tissues are bruised and swollen, and in forty-eight hours what seemed to be an extensive laceration will oftentimes appear like a moderate-sized fissure after the swelling has subsided. This heals by granulation, and not infrequently a cicatrix is formed.

Should the operation not be performed at the close of labor, it is better to wait till involution is completed, and

operate four or six months after the confinement. At this time the scar is still fresh, and forms an excellent guide for denudation; the tissues are also vascular, and unite readily.

The forms of laceration of the perineum vary much, as every physician can testify who makes a careful examination of each case after labor. They very seldom take place exactly in the median line, but usually extend to one side in an irregular direction. Sometimes the perineum is lifted up, or dissected off the entire anterior surface of the rectum, by the advancing head, and then splits in the centre so as to form a Y-shaped laceration, the two arms of the Y representing the surfaces torn off the rectum, and the upright portion the central split in the perineum. More often, only one side is torn, as in this figure *1*. In rare instances the perineum is torn inside while the external skin is intact. Occasionally there is complete laceration of the perineum, involving the sphincter ani and rectum. There are also two other conditions, which have been described, but are very rarely seen: separation of the tendons in the perineum without laceration of the mucous membrane or skin; and central perforation of the perineum, in which the child was born through it without complete laceration of that body.

The immediate operation of perineorrhaphy belongs to obstetrics rather than gynæcology, and will not be discussed here; nor the secondary operation for complete laceration through the sphincter ani, which the general practitioner is not likely to undertake. In these cases a combination of the methods recommended by Hegar and Kaltenbach [1] and Emmet,[2] is

[1] Hegar und Kaltenbach: Operative Gynäkologie, p. 741. 1881.

[2] Emmet: Principles and Practice of Gynæcology, p. 392. 1884.

advisable. The reader is also referred to these authorities for peculiar modifications of this operation required by various severe lesions of an unusual form.[1]

Secondary or deferred perineorrhaphy, for incomplete laceration of the perineum, is one of the most common of the gynæcological operations, and will therefore be described in some detail according to those methods which the author believes from his experience and observation are best calculated to most efficiently repair the lesion.

Clinically these lacerations are divided into two classes, — those without and those with rectocele, each having an operation adapted to it. It is to be remembered, that these operations are also applicable to relaxation or atrophy of the perineum from any other cause.

PERINEORRHAPHY WHEN THERE IS NO RECTOCELE.

For some days previous, the patient should live on a diet calculated to secure a daily soft evacuation from the bowels, and remove any hard scybalous masses which, if passed within a few days after the operation, might impair union. Dr. Thomas recommends a mild laxative to secure two evacuations per day for the same reason.

The preparation of the patient and the room is the same as for a laceration of the cervix uteri, except the foot of the table is not raised. The patient is placed in the lithotomy position, and the second and fourth assistants hold her knees under their right and left arms respectively, so as to leave both hands free to assist the operator. The knees can also be secured by using the crutch, a padded instrument which holds the knees

[1] Hegar und Kaltenbach, p. 750. [1] Emmet, p. 399.

at the desired distance apart, and keeps them flexed on the abdomen by a loop passing from the crutch or stick under one arm and the back of the neck. This can be improvised from a stout broomstick, cotton wadding, and a sheet.

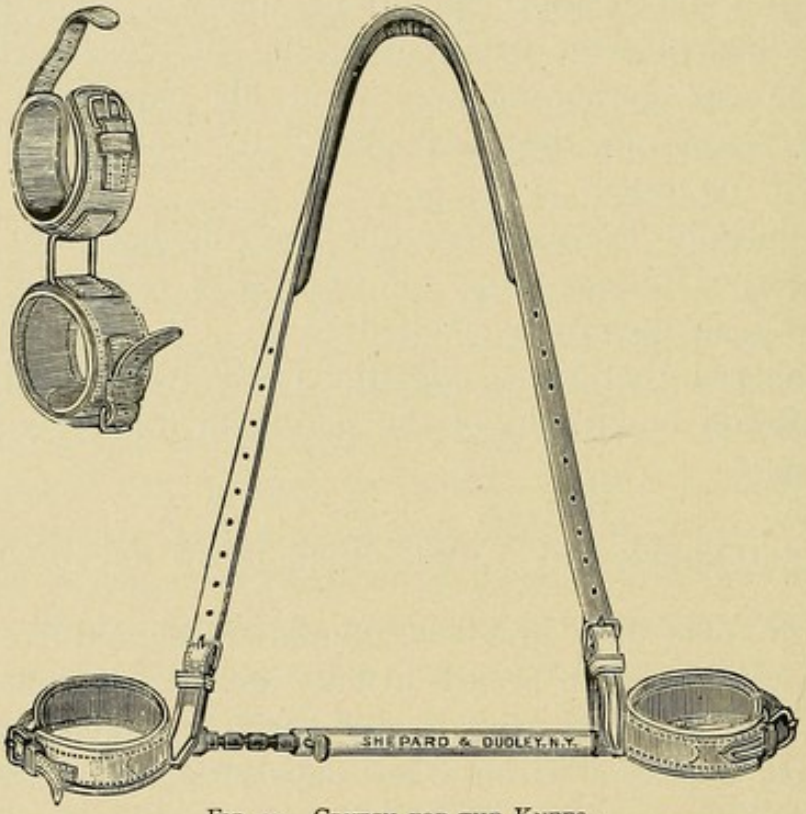


FIG. 40. CRUTCH FOR THE KNEES.

The necessary instruments are:—

2 pair scissors (Emmet's), slightly curved, for the right and left hands.
1 pair scissors, sharp-pointed, straight, and slightly curved on the flat.
4 fine tenacula (3 Sims', 1 Emmet's).
1 mouse-toothed forceps.
6 Péan's artery forceps.
6 sponge-holders, and 12 small fine sponges, as for trachelorrhaphia.[1]
1 Russian needle-holder.

[1] See note in regard to this reference, p. 87.

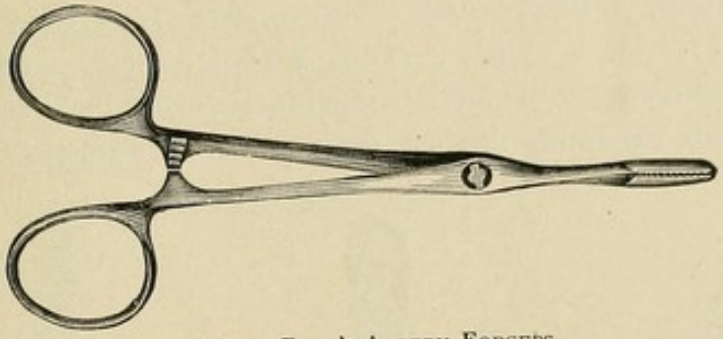


FIG. 41. PEAN'S ARTERY FORCEPS.

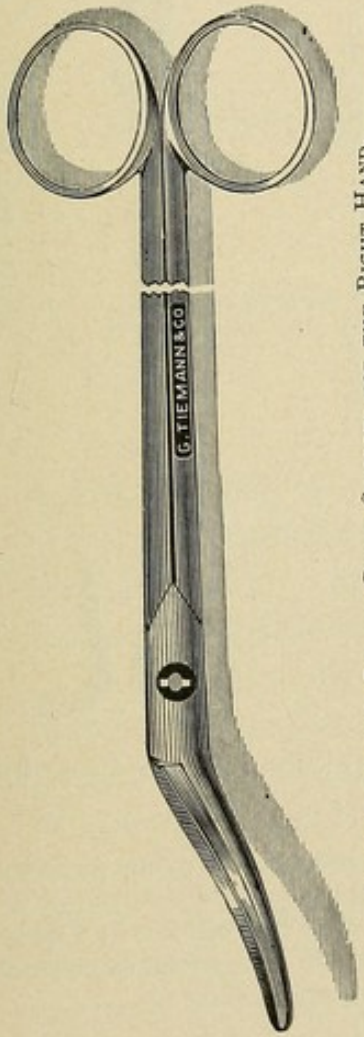


FIG. 42. EMMET'S LESSER CURVE SCISSORS FOR THE RIGHT HAND.

FIG. 43. EMMET'S TENACULUM.

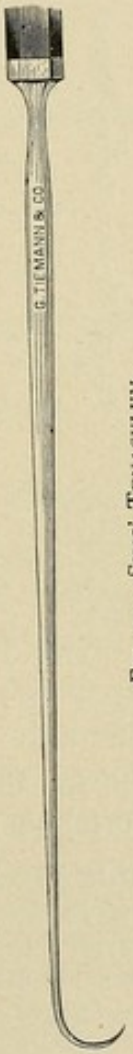


FIG. 44. SIMS' TENACULUM.

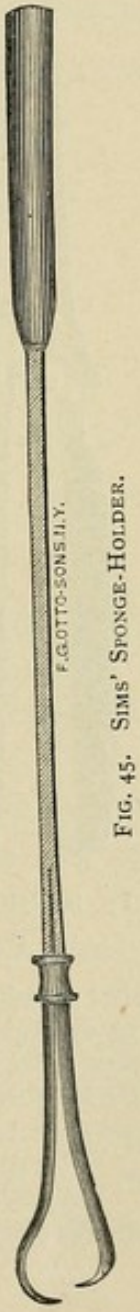


FIG. 45. SIMS' SPONGE-HOLDER.

9 *straight, round-pointed* needles, with large sunken eyes (1 1-in., 3 $1\frac{1}{4}$-in., 2 $1\frac{1}{2}$-in., 2 $1\frac{3}{4}$-in., 1 2-in., and 1 small curved needle for introducing superficial silk sutures);[1] all, excepting the last, threaded as for trachelorrhaphia.[2]

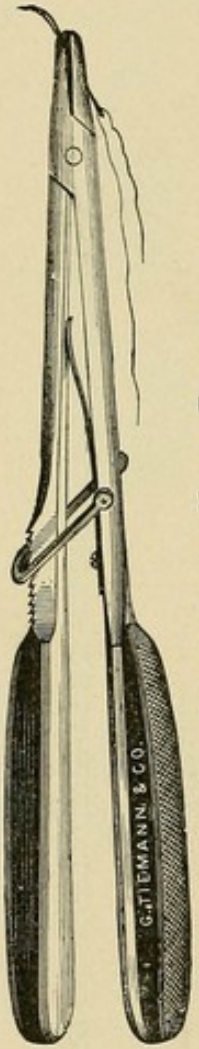


FIG. 46. RUSSIAN NEEDLE-FORCEPS.

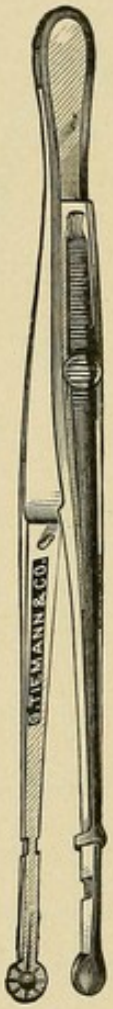


FIG. 47. EMMET'S TWISTING-FORCEPS.

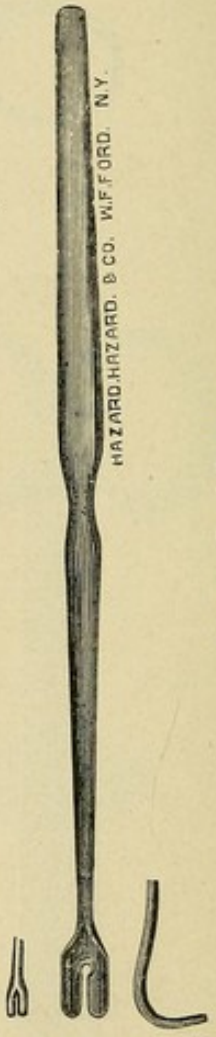


FIG. 48. SIMS' SHIELD.

16 strands No. 26 silver wire, 10 in. long, arranged as for trachelorraphia;[1] some fine silk.[3]

[1] Catgut is used by some operators as a continuous suture in plastic operations on the vagina, especially when it is desirable to operate on the perineum at the same time. It is prepared by immersing it in the essential oil of juniper for thirty-six to forty-eight hours, and then keeping it in a ten per cent solution of glycerine and alcohol. *It must not be allowed to touch water at any time.*

[2] Compare note in regard to this reference, p. 87.

[3] A good way to make the silk antiseptic is to dip it in melted paraffine containing five per cent of carbolic acid, and allow it to cool.

1 counter-pressure hook.
1 Emmet's twisting-forceps.
1 wire scissors.
1 Sims' shield.
12 perforated shot with clean holes.
1 shot-compressor.

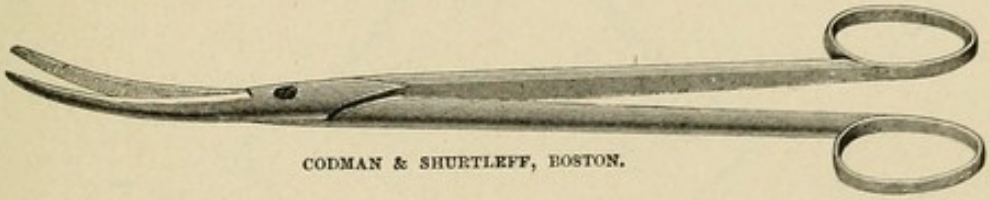


FIG. 49. SCISSORS CURVED ON THE FLAT.

FIG. 50. COUNTER-PRESSURE HOOK.

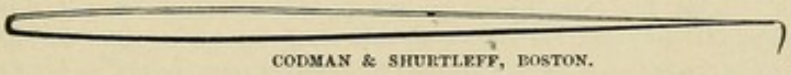


FIG. 51. SOLID TENACULUM.

The patient is placed in the lithotomy position as previously described, her hips flush with the edge of the table, and a sponge or towel tucked between the buttocks to catch any blood which may collect.

An assistant on either side retracts the labium, the fingers being placed at exactly opposite points, and using the same amount of traction ; otherwise the field of operation thus exposed is distorted. If the laceration be quite recent, the scar and discoloration at once show where the tear took place, and indicate the area to be freshened. In long-standing cases, which are very rare without a small rectocele, the discoloration and scar have almost always disappeared. In these, the two sides or halves of the perineum must be symmetrically

freshened and brought together. (Figs. 52, 53, 54.) Each side is similar to a triangle, Fig. 52, R B C R′. The base line B′ R B begins at the lower caruncula on

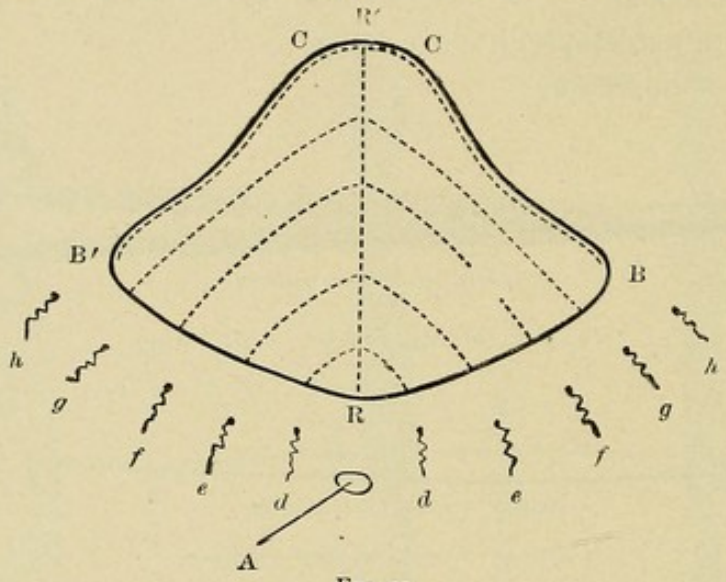


FIG. 52.

This represents the area of denudation lying perfectly flat with sutures inserted. A, anus; R R′, median line over rectum, perpendicular of triangle; R B and R B′, outer margins of freshening, nearly parallel with labia, base of triangle; B C R′, upper margin of freshening in the vagina, the approximate hypotenuse of the triangle; *dd*, *ee*, *ff*, *gg*, *hh*, the sutures, to be inserted in order of the lettering.

either side, and never extends farther out on the labia than this, as it would then include loose areolar tissue

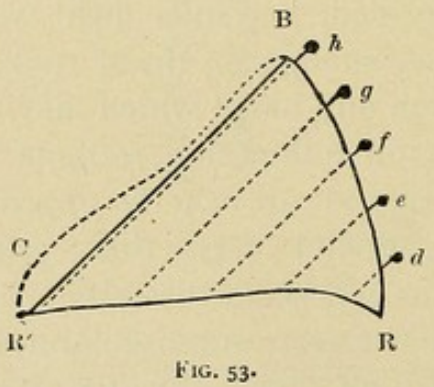


FIG. 53.

Diagram of a section in the median line through the perineum, after it is drawn together, and the sutures twisted. Lettering as in Fig. 52. B R′ shows how the suture *hh* draws together the loose tissue in dotted line B C R′.

which never entered into the formation of the perineum, which can give no support, and which would only cause

discomfort. Art must not unite here what nature never does. The apex line C R′ C lies in the vagina usually from an inch to an inch and a quarter above the line B′ R B, and corresponds to the lower margin of that place where the posterior wall ceases to be firm, and is relaxed and flabby.

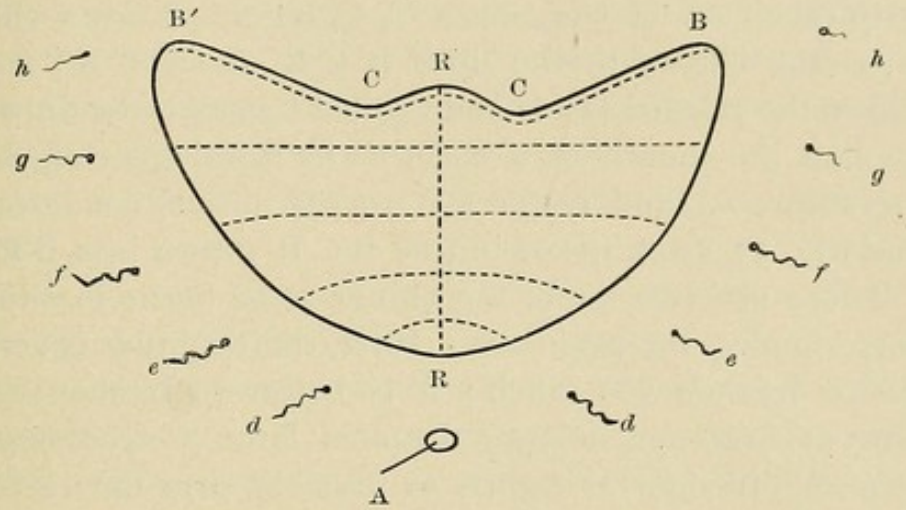


FIG. 54.

Letters same as in Fig. 52. Diagram of freshened surface extending out on the labia more than in Fig. 52.[1]

Having ascertained the amount of surface to be denuded, the operator begins by marking out its boundaries. He inserts the Sims' tenacula at the points B′, R′, B, hands them to the assistants, who put B R′ on the stretch ; this raises a ridge in a straight line between them. The operator picks up the crest of the ridge at B with Emmet's tenaculum or the mouse-tooth forceps, and, with the right-curved scissors, removes it in a fine continuous strip, to R′; the latter point is then put on a stretch with B′, and the denuded strip continued to this point ; lastly, B′ B is put on the stretch, and the strip denuded, with the left-curved

[1] The reader will understand these diagrams better by cutting similar figures out of stiff paper, and folding them in line R R′, and bringing points B B′ together.

scissors, to B. If the operator be ambidextrous, he can remove strips from right to left, and *vice versa*, till the denudation is complete. This is rapidly done, and any points which bleed profusely can be seized with the artery-forceps. The surface should then be examined for any little undenuded places, and one additional short strip taken off at the points C, C, on either side; this gives the curves to the lines B′ C R′ and B C R′, and allows the relaxed fascia and vaginal tissues to be drawn up, like the mouth of a bag with a running-string, by the suture *hh*, and restores it to the normal condition. See Fig. 53, slack tissue in line B C R′ drawn into B R′.

There are two important things to be borne in mind in freshening the perineum. First, the beginner is very apt to freshen too much; it is better to freshen too little at first, and enlarge the area later if necessary: secondly, freshen as lightly as possible, over the rectal wall, by making the strips very narrow and thin, and keeping the curve of the scissors flat on the surface; while, at the sides, it is a good plan to remove the loose cellular tissue more freely, so as to bring the muscular fibres into closer apposition. Very superficial freshening is advised where the surface is blue and thickly streaked with veins.

No attention need be given to moderate oozing. Hemorrhage is readily controlled by the artery-forceps, compression between finger in rectum and thumb on the vaginal surface, or introducing and drawing up the sutures. It is almost never necessary to ligate a vessel. The sutures are now introduced, beginning at the anal margin. The operator inserts the forefinger, and, if necessary, the middle finger, into the rectum, and draws the anterior wall forward, so as to put all parts of the denuded surface in nearly the same plane, and to feel, between the thumb and finger, the course of the point

of the needle, which must never be allowed to penetrate the rectum.

An assistant bends one end of the silver wire sharply down on the silk loop [1] of one of the smaller needles, which is inserted one-fourth of an inch from the lower margin of the wound, carried the same distance up in the line R R′, between the left thumb in the vagina, and the finger in the rectum, and made to emerge at a corresponding point on the opposite side, aided by the counter-pressure hook or the left thumb.

The remaining sutures are inserted, in like manner, about one-fourth of an inch apart, as shown by the dotted lines in Figs. 52 and 54. The last suture *hh*, or the binding suture, is the most important of all, and brings all the margins of the wound together. The point of the needle is first deeply thrust directly backward and upward, so as to obtain a firm hold on the muscular fibres, and great care taken to pass it behind the sulcus of the wound on either side without allowing the point to emerge anywhere on the surface. Another suture is often inserted above this one and the line of denudation, to take off any strain. It is passed through nearly half an inch of tissue, on either side, near B and B′, comes out on the vaginal surface, and picks up a similar amount on the posterior wall just above R′ (Fig. 55, *ff*).

After the sutures are inserted, and crossed over to opposite sides to see if the perineum comes together nicely, the surfaces are separated, and thoroughly sponged with hot carbolized water to remove the coagula and bits of fibrine, and the knees loosened so that the soles of the feet rest on the edge of the table.

[1] Take a piece of fine silk eighteen inches long; thread both ends, in opposite directions, through the eye of the needle, and then tie a half hitch with one of the ends, or twist them with the loop near the needle.

This relaxes the perineum. The sutures, beginning with the one next to the anus, are then shouldered, twisted, and the loops drawn out where they enter the skin, the same as in trachelorrhaphy.[1] A perforated shot is crushed on each suture one-eighth of an inch from the loop, and the wire cut off close over it. If the shot is applied close to the loop, the skin becomes eroded around it. The perineum is again cleansed with carbolized water or with a solution of corrosive sublimate 1 : 4,000, smeared with calendula cerate; and, finally, the knees are loosely bound together with a folded towel between them.

The after-treatment is simple. The diet should consist of soups, gruels, and milk, which will nourish the system without leaving much residue. The patient is allowed to evacuate the bowels at any time; but, at an intimation of a desire to do so, the nurse is instructed to administer a small enema of oil to soften the movement, and the patient urged to retain it a couple of hours for that purpose.

The urine is passed in a bed-pan without a catheter; but, immediately afterward, the knees are elevated close together, and a stream of carbolized water is allowed to flow gently over the parts, from a fountain syringe, and cleanse the wound, taking care to keep the nozzle close to the urethra, and away from the line of union. After this, the calendula cerate, in a melted form, can be dropped over the wound with a small piston-syringe. These douches must be given morning and night if there is any discharge, otherwise they are unnecessary. The patient is instructed to lie *perfectly quiet* during the first forty-eight hours after the operation, so as to secure union by primary adhesion if possible. The less important stitches near the anus, or every other one,

[1] See chapter on Trachelorrhaphy.

are removed on the eighth day, the rest on the tenth or twelfth.

To do this, place the patient on the table as for operating, with the knees together and raised over her abdomen. Seize the shot with anatomical forceps, raise it gently till the shining silver loop is seen, cut the latter on one side *close to its entrance to the tissues*, and draw the shot towards that side in order not to drag on the wound. Cutting the wire at the point of entrance is important; otherwise the end which is drawn through is sharply bent, forming a little hook, and causes much pain.[1]

The patient is again put to bed, and the knees loosely bound together. If union has progressed favorably, she can sit up on the fourteenth day, and go about her room in three weeks; but she must be cautioned not to allow any strain on the parts, by certain positions, or otherwise, for two months after this period. Posterior displacement of the uterus is particularly injurious at any time for some months after the operation; and particular attention must be given to prevent it, or the operator will have done his work to no purpose.

PERINEORRHAPHY WITH A RECTOCELE.

This is the more common operation by far; as a laceration of the perineum of long standing is usually accompanied by a rectocele, or bulging of the posterior vaginal wall into the site of laceration. Under these circumstances, the rectocele must be obliterated by including its anterior portion in the operation so as to take up the slack, and unite the torn fascia and muscular fibres; again, if the lower portion of the perineum were closed, leaving the rectocele bulging over and above it

[1] See p. 106 for coil suture.

in the vagina, the projection of the posterior wall would continue to increase till the new perineum became involved, stretched out, and rendered useless.

The position of the patient, the instruments, the assistants, freshening, and suturing are essentially the same as in the operation just described, as well as the after-treatment. There are, however, three things which deserve special mention.

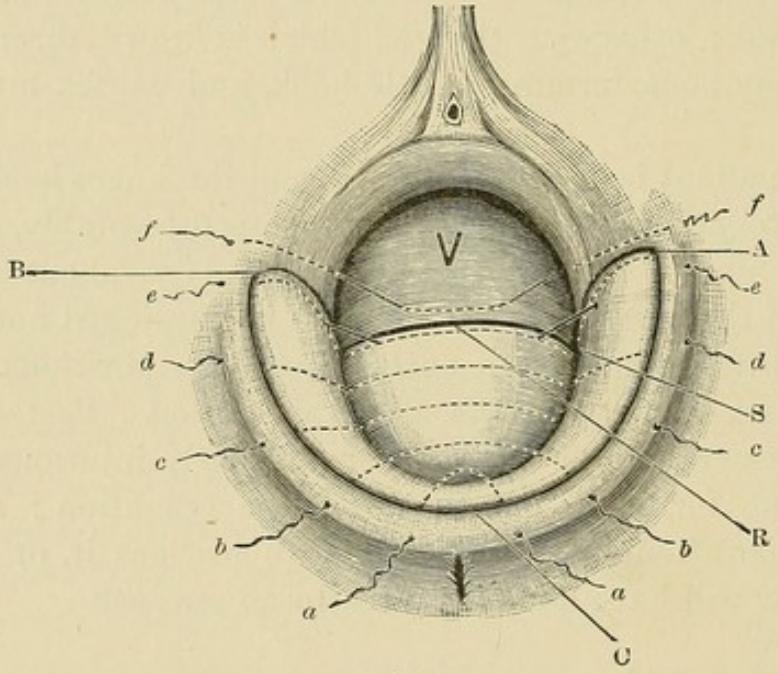


FIG. 55.

Shows area of denudation for laceration of perineum with rectocele. V, vagina; C, anal margin of laceration; R, crest of rectocele; A and B, upper margins of freshening, extending a little out on the labia, near the lower carunculæ; *aa*, *bb*, *cc*, *dd*, *ee*, *ff*, sutures lettered in order of their introduction.

First, it is important to accurately map out the limits of denudation. To do this, pick up, with a fine Sims' tenaculum, three points at A, R, and B, Fig. 55, which will come together readily, without much traction, just below the urethra. A and B correspond to points near the lowest caruncula or vestige of the hymen on either side; R, to a point in the median line, near the crest of

the rectocele, which is easily brought forward to A or B. Snip a bit of tissue off at each of these places, to mark the limits of freshening.

Secondly, much care is necessary in freshening the sulcus (S) on either side of the rectocele, in order to have the margins come accurately together without traction, as these may be said to form the buttresses of the perineum; a very common mistake is to remove too much tissue at these places on the sides of the vagina.

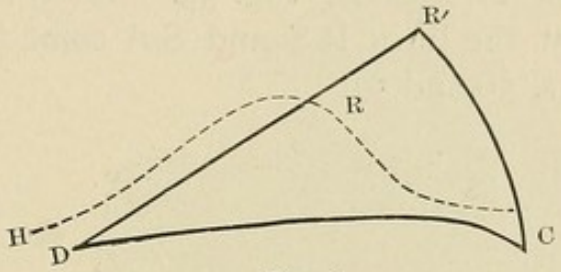


FIG. 56.

Diagram of a section of the perineum through the median line. C, anal margin; D, upper angle of perineum; D C, rectal wall; H R C, dotted line of rectocele; R, crest of rectocele carried up to R′, the crest of the new perineum, which brings dotted line H R into D R′, obliterating the rectocele, and making it the vaginal surface of the new perineum.

Thirdly, in introducing the sutures, as indicated by dotted lines *a*, *b*, *c*, *d*, *e*, and *f*, Fig. 55, it is important that all, excepting *a* and *f*, are passed deeply (three-eighths inch), at the sides, beneath the sulcus (*e* and *f* excepted), and superficially over the surface of the rectum without penetrating it. The point of the needle is made to emerge at the desired spot by pressing on the tissues with the counter-pressure hook or with the thumb of the left hand.

This may seem a little difficult; but if the operator introduces the fore and middle fingers of the left hand in the rectum, draws it forward nearly flush with the surface, and enters the needle fully one-third of an inch from the margin of the wound, directing it first a little upward and backward, turning the point *across* the

rectocele, only when the point reaches the sulcus, by *rotating the wrist, the needle-holder, and depressing the head of the needle at the same time, and never by twisting on the shaft* of the latter, there will be very little trouble in passing the sutures properly or from breaking needles. Sutures *a* and *b* require a needle $1\frac{1}{4}$–$1\frac{1}{2}$ inch long; *c*, *d*, and *e*, $1\frac{1}{2}$–$1\frac{3}{4}$, rarely 2 inches. When these are united, and the perineum restored, the lines A C and B C meet in the median line, and R is brought forward to unite with A and B, Fig. 55. It will be seen, therefore, that the lines R S and S A come in contact. Compare Figs. 56 and 57.

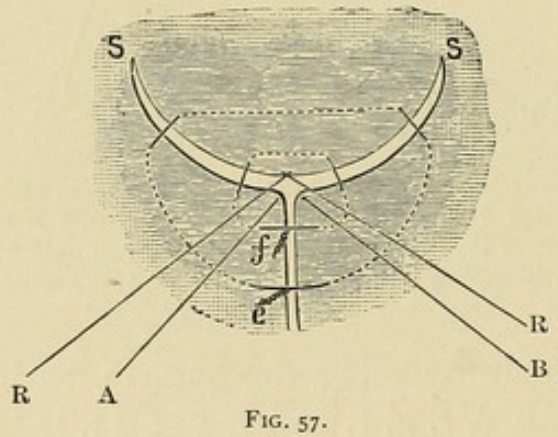


FIG. 57.

This diagram represents the perineum viewed from above when drawn together by sutures. (Only *f* and *e* are shown.) Compare Figs. 55 and 56. S, S, upper margins of sulci; R R, crest of rectocele brought forward to A, B, upper margins of freshening; *e*, *f*, two upper sutures.

The details and after-treatment will be readily understood by reference to the former operation of perineorrhaphy.

Before describing a second method of perineorrhaphy complicated by rectocele, known as Emmet's new operation, it may be well to consider one form of laceration which is particularly liable to lead to this condition. It is a familiar fact to most observers, that laceration of the perineum does not generally take place wholly

in the median line. The upper half leads off to one side of the rectum, and the lower forms irregular surfaces near the perineal raphé. Sometimes the advancing head lifts the perineal structure off the anterior surface of the rectum, and then splits it, forming a Y-shaped laceration (comp. Fig. 57); in the first-mentioned case, one or the other arm of the Y would be wanting. In both, not only is the so-called perineal body torn, but

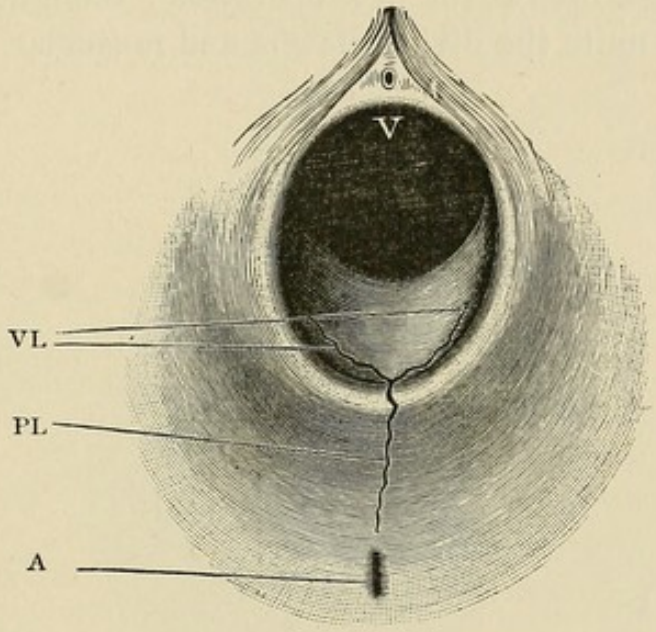


FIG. 58.

Diagram showing Y-shaped laceration previously alluded to. V, vagina; V L, crescentic line of vaginal laceration; P L, perineal laceration; A, anus.

also the fascia and muscular fibres. This weakens the posterior vaginal wall, which is no longer taut, but slack, relaxed, and weakened. It bulges forward, and fæcal masses during straining at stool increase it, owing to the posterior curve of the rectum at this place. The lacerated surfaces retract, contract, and undergo involution, so that the ragged edges become smooth, with at most only a nodule, or carunculæ as their traces (comp. Figs. 58 and 59).

The previous method of operating, which may be termed Emmet's old operation, is much simpler and more easy of execution than his new one about to be described. The latter is rather more effectual, and the vaginal sutures close the wound more perfectly. The arrangement and insertion of the sutures, and limiting the outer line of denudation to the original margin of the perineum, never extending it on the labia, are the distinctive features of the new operation ; though its great aim is to unite the divided fascia and muscular fibres.

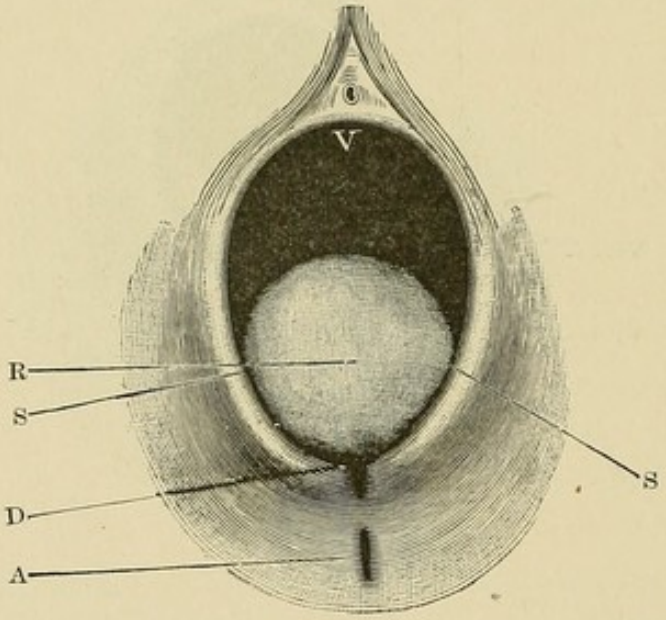


FIG. 59.

Effect of laceration in Fig. 57. V, vagina; R, rectocele; S S, sulci on either side of the rectocele; D, lower margin of the laceration; A, anus.

The preparation of the patient, the arrangements, freshening, suturing, and after-treatment, etc., are essentially the same as in the operation first described, and need not be repeated. The needles should be of somewhat different size, from $\frac{3}{4}$ inch to $1\frac{1}{4}$ inches long. While I have always used silver wire, I am inclined to believe that silk sutures dipped in melted paraffine containing five per cent carbolic acid, and allowed to

cool, have some advantages, and are less annoying to the patient.

The limits of denudation (Fig. 60) are marked out in the following manner. Near the crest of the rectocele, some point, R, is selected, which is easily brought forward, without traction, to B and C, which correspond to the lowest caruncula on either side. These are snipped off as the limits of denudation. If the points

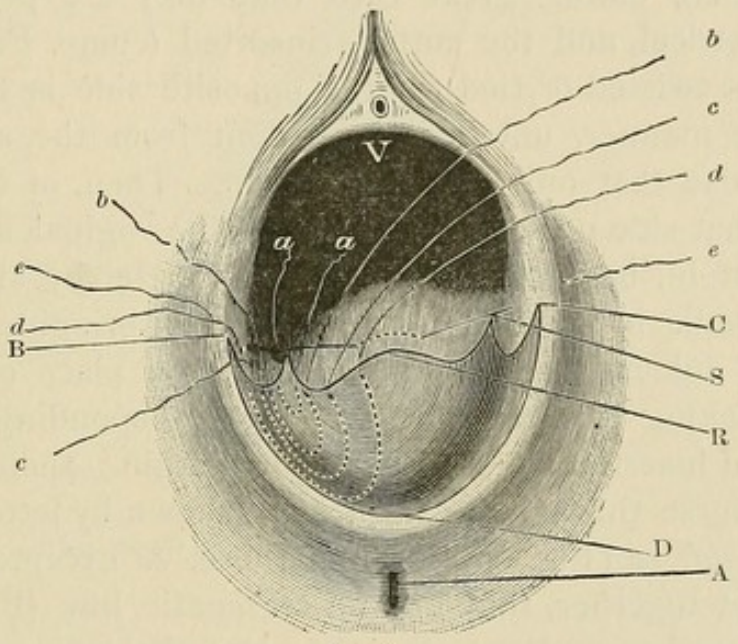


FIG. 60.

Diagram of perineal laceration with rectocele, showing the shape of denuded area with the vaginal sutures in place on one side. V, vagina; R, point near crest of rectocele brought forward and upward to unite with B and C; B C, highest points of freshening at the sides, corresponding to the lowest carunculæ or vestiges of the hymen; S, sulcus; D, lowest margin of laceration just within the muco-cutaneous line; A, anus; *aa*, *bb*, *cc*, *dd*, *ee*, sutures.

R and C (Fig. 60) are brought together by tenacula with slight traction, they will form two ridges, or folds, extending up in the vagina and meeting at S. These are the superior margins of two triangular surfaces to be denuded, one side, R S, corresponding to the rectocele; the other, C S, to the lateral vaginal wall; the base of the former lies in the median line over the

rectum, and the base of the latter in the line C D; while both surfaces, or triangles, unite at the groove or sulcus S D.

The line C D B extends from the lower caruncula on either side along the junction of the skin and mucous membrane, but never out on the loose areolar tissue of the labia.

The two triangles C S D and R S D on this side are freshened, taking great care that they are perfectly symmetrical, and the sutures inserted (comp. Fig. 60), but not twisted or tied till the opposite side is treated in like manner, unless it is evident from the scar or otherwise that only one side is torn. Then, of course, only that side need be freshened. The vaginal sutures are put in, beginning at the upper angle, by sticking the needle in $\frac{3}{16}$ inch from the margin, bringing it out in the sulcus, inserting it again at the place of exit, and making it emerge at a point corresponding to its original insertion on the opposite margin; their order and course through the tissues are shown by letters *aa*, *bb*, *cc*, *dd*, *ee* (Fig. 60). When these, *ee* excepted, are brought together, they lie in a crescentic line (Fig. 61) in the vagina, and out of sight when the labia are not separated, and the two triangles on each side are united. The lines C S and R S unite on one side, and R S and B S on the other. B D and C D are also brought in apposition, but require three or four superficial sutures, D B (Fig. 61). The suture *ee* (Fig. 60) is an important one, and is designed to take off the strain in a measure from the others.

Dr. Emmet does not consider it necessary to use the catheter after this operation, though he advises it in the previous one. A vaginal douche immediately after micturition is necessary, keeping the tube close to the urethral orifice, so that it neither touches, nor

directs a powerful stream of water against, the line of union.

While it is not considered necessary to tie the knees after this method of operating, I am accustomed to do so for a few days, to make doubly sure of good union, and to enjoin absolute rest and quiet during the first forty-eight hours.

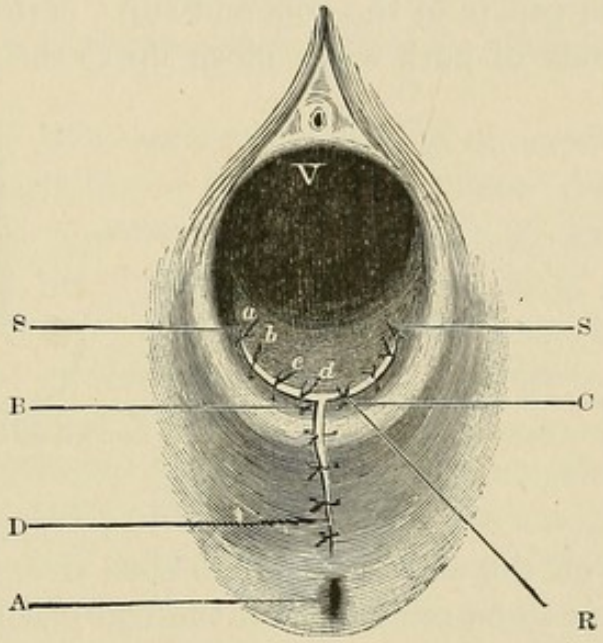


FIG. 61.

Diagram of points B, C, and R, brought together, showing the effect of the operation in restoring the perineum to its original form, and crescentic line of union in the vagina. Comp. Fig. 57. V, vagina; S, S, extreme upper angles of the sulci; *a*, *b*, *c*, *d*, position of these sutures when twisted; *e* is not figured; B, C, R, D, and A, same as in Fig. 60.

The superficial sutures can be removed on the ninth or tenth day; but it is better to leave the vaginal till the twelfth, as they are often difficult to get at without dragging on the new perineum. It must often be done by the sense of touch, though the smallest-size Sims' speculum inserted beneath the pubic arch helps to expose them.

The coil suture obviates many of the difficulties met with in finding and removing the ordinary silver suture. It is made as follows: Take the ordinary silver wire,

leave one inch from the end straight, and then coil it closely around an ordinary No. 6 egg-eyed sewing needle till the coil is at least a quarter of an inch long, and cut the wire ten inches from the coil. The long end of the wire is bent over the silk loop, and introduced in the usual way. When the suture is to be fastened, pass the long end of the wire, the bent end being cut off, through the centre of the coil, and slip a perforated shot over the ends of both wires close up to the coil, crush

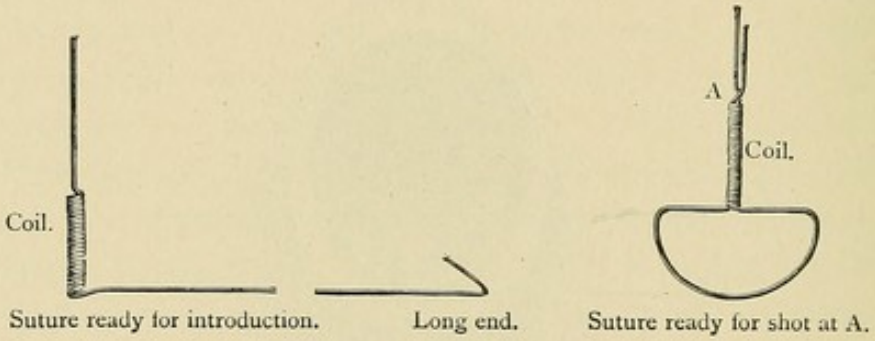


FIG. 62. THE COIL SUTURE.

it, and cut off the ends of the wire close over it. When the suture is to be removed, cut the coil just behind the shot, seize the coil with the forceps, and draw it out; the end within the coil at once slips out, and the suture is easily removed without hunting for the loop, and interfering with the line of union. Furthermore, there are no ends of wire to prick the patient, and the shot is not as likely to erode the tissues as when it is crushed close to the surface.

The reader will find further details in the method of operating first described. (See p. 90.)

CHAPTER VII.

ABSCESS OF THE LABIA, AND PHLEGMONOUS INFLAMMATION OF THE VULVA.

THESE affections are so similar to each other, they are considered together, as their treatment is essentially the same. It will be noticed, that not only abscess of the vulvo-vaginal (Bartholini's) gland, but also of the cellular tissue about the *introitus vaginæ*, is included by these names. The former is much the more frequent of the two affections.

The abscess is most often caused by some traumatism, such as excessive coitus, pruritus, and is not infrequently associated with vulvitis. The diagnosis is easy. The patient complains of pain, on walking, especially during the sexual act, and a sensation of localized heat and throbbing. On physical examination, one of the labia is swollen, usually at or near the vulvo-vaginal gland. The surface of the swelling is reddened, and very sensitive to the touch ; if pus has already formed, fluctuation will be present.

The treatment for abscess of the labia is the same as for an abscess in any other part of the body. When there is distinct fluctuation, the question of opening it demands our consideration. Barnes and Schroeder recommend an early incision. Guerin and Martineau have seen fistulæ follow too early an operation. Thomas and others believe that the evacuation of pus can be left to nature unless the pain is very severe.

It is a safe rule, however, that, where *pointing and fluctuation are distinct, the abscess should be lanced in a direction nearly parallel with the smaller labium*, as the pus is liable to burrow beneath the fascia if not evacuated.

Abscess of the perineum, on the contrary, requires opening as soon as fluctuation is perceptible, as here the pus is likely to burrow, and fistulæ will be the result. In either case, it may be necessary to keep the incision open by a cloth tent or bit of charpie.

When abscess of the vulvo-vaginal gland frequently returns, or tends to become chronic, the sac must be opened freely, thoroughly cleansed, and stuffed with lint smeared with calendula cerate, so that the cavity will heal from the bottom. The dressing must be renewed once in twelve to twenty-four hours, according to the amount of secretion. If this treatment be unsuccessful, the gland can be extirpated, though Dr. Thomas states that he has never found it necessary.

After an abscess has been opened, it is advisable to wash it out with lukewarm water, adding some of the non-alcoholic tincture of calendula in the proportion of two tablespoonfuls to a pint of water. Either a little stronger solution, or the calendula cerate, applied afterwards on a piece of linen, and covered with oiled silk, makes an excellent dressing.

Frequent poulticing is advisable in the beginning. Flaxseed holds the heat better than slippery elm or oatmeal, but is more liable to become rancid. The skin must be freely oiled, and the addition of ten to twenty drops of the tincture of opium or belladonna to the poultice just before it is applied will diminish the pain.

Dry heat from hot-water or bran bags will also give relief, and hasten suppuration.

THERAPEUTICS.

| **Belladonna,** also arnica at the commencement. If the swelling be slight, the skin only reddened, and no pus present, the free use of the tincture locally may disperse it. It is indicated by severe throbbing pain before pus has formed, headache, and much constitutional disturbance.

Apis. Recommended by Dr. Hughes for inflammation of the vulvo-vaginal gland.

Arsenicum. Violent pains and burning during the febrile stage; chills, fever, and consecutive sweat; secretion of offensive matter tinged with blood; muscular prostration, restlessness, tendency to terminate in gangrene.

Asafœtida. Chronic cases. Discharge of discolored and thin matter; pus profuse, greenish, thin, offensive, or ichorous; parts extremely painful to the touch.

Calc. carb. In *scrofulous* persons and chronic cases, or after suppuration is completed; pain slight if any.

| **Hepar sulph.** *Excellent to promote suppuration.* Abscess very sensitive to contact, easily bleeding; burning, stinging pain; discharge corrosive, smells like old cheese; little pimples surround the principal opening. Also, if the process of suppuration be very slow, nux vomica might be useful, as it has been recommended for anthrax.

| **Mercurius viv.** If the abscess be blennorrhagic (Kali iod.); chilliness, with thirst, and *nocturnal aggravation* of the pains; also worse from the heat of the bed; abscess painful, with a copious discharge of thick matter. It is very useful to hasten suppuration when it is inevitable.

Phosphorus. If there are fistulous openings (Silicea), with burning and stinging, watery, offensive discharge; chronic cases.

| **Phytolacca.** Recommended by Dr. Ludlam as the best internal remedy for simple non-specific abscess of the vulvo-vaginal gland.

| **Silicea.** *If the discharge is copious, too protracted, and unhealthy;* tendency to become chronic; fistulous openings. (Phos.)

Sulphur. If suppuration is prolonged, and to prevent the recurrence of abscesses or boils.

Before suppuration. Acon., *bell.*, *merc. viv.*

During suppuration. Ars., asafœtida, china, *hepar sulph.*, lachesis, *merc. viv.*, *silicea*, phosphorus, *phytolacca.*

After suppuration. Calc. carb., china, phos. ac., *sulphur*, silicea.

General vital depression, and tendency to gangrene. Arsenicum, crotalus, lachesis, phosphoric acid.

CHAPTER VIII.

VULVITIS.—VAGINITIS.

INFLAMMATION of the vulva is not infrequently associated with vaginitis, though either one may be independent of the other. It has the same characteristics as inflammation of the mucous membrane elsewhere, and has been subdivided into a variety of forms for convenience of description, as in the following table. The most common causes are over-indulgence of the sexual appetite, and gonorrhœal infection.

Form.	*Etiology.*	*Symptoms and Diagnosis.*	*Prognosis.*
Simple acute vulvitis.	Local irritation from traumatism, excessive venery, overexercise, uncleanliness, or masturbation. The presence of some other disease, such as vaginitis or cancer.	The parts at first are hot and dry, but soon become bathed with a muco-purulent secretion which has an acid re-action.[1] The mucous membrane is red, somewhat swollen, and excoriated. Some pain on motion. Occasionally there is intense pruritus; more rarely, painful micturition. As a rule, there is no febrile action.	Is readily cured.
Acute virulent vulvitis.	Is the result of specific infection.	If the disease has developed soon after impure connection, there is a profuse discharge of thick yellow or greenish pus of an offensive nature, which excoriates the thighs. Urethritis is often present, and vaginitis. The disease develops rapidly, and infects any mucous membrane brought in contact with it. Labial abscess is a common complication. Great care must be taken not to introduce the virus within the eye.	Good, if properly treated.

[1] Dr. Martineau places much stress on the presence of the gonococcus in the vaginal discharge, and of the acid re-action. He thinks gonorrhœa very rarely

Form.	*Etiology.*	*Symptoms and Diagnosis.*	*Prognosis.*
Gangrenous vulvitis.	It is sometimes a complication of puerperal septicæmia, severe cases of scarlet fever, measles, and continued fever. It is probably due to a depraved condition of the blood, and low vitality of the system.	Severe constitutional symptoms, and dark-colored swollen labia. A patch, or vesicle of purplish hue, ulcerates with indurated red margins. This becomes the seat of gangrene, which steadily advances, and discharges an ichorous fœtid fluid if the disease is not arrested.	Fortunately this is a rare disease, as a large proportion of these cases terminate fatally.
Diphtheritic vulvitis.	Occurs during an epidemic of, or complicates, diphtheria. It is really diphtheria of the vulva.	It may be confounded with the preceding form, but is distinguished by the patches of false membrane resembling wash-leather.	A few cases recover.
Follicular vulvitis.	Uncleanliness, pregnancy, vaginitis, eruptive diseases, excessive venery.	There is an increased secretion from the glands, with burning, itching, heat, and soreness between the labia. The sensitiveness may be so great as to cause vaginismus. The mucous membrane is red, slightly elevated in patches, having the appearance of swollen villi, which bleed easily; or there are little red prominences scattered over the vulva, which soon break down, discharge a small quantity of pus, and may leave small ulcerated points.	Is liable to become chronic, and then difficult to cure. If caused by pregnancy, it will almost always terminate with it.
Vulvitis in children.	May be the result of violation, but is more often due to a scrofulous diathesis, ascarides, uncleanliness, or dentition.	If due to violation, signs of traumatism are present, and, during twenty-four hours afterwards, spermatozoa may be found in the vaginal secretions. The affection is less severe than the forms previously described, and is usually of an aphthous character.	Favorable.
Eruptive diseases of the vulva (eczema).	The vulva is subject to the same eruptive diseases as other parts of the body, and from the same causes. Eczema is one of the most common.	Eczema of the vulva chiefly affects the skin, and, to a less extent, the mucous surface. Intense pruritus is a prominent symptom. There is also redness, heat, and numerous little vesicles which break, and discharge a serous, sticky fluid. In chronic cases, crusts or scales may form. Examine the urine for sugar.	It is sometimes an obstinate affection, and difficult to cure permanently.

extends to the uterus. He found only ten instances of it in four thousand cases of gonorrhœa. — *Annales de Gynécologie*, July, 1885.

The Diet. — Highly seasoned food should be avoided. In the gangrenous form, the importance of an abundance of nutritious food and pure air cannot be over-estimated.

Local Treatment. — Pruritus is often one of the most distressing symptoms, for the treatment of which the reader is referred to the chapter on that subject. Cleanliness is of the utmost importance. Vaginal or vulvar douches of tepid water may be used one to four times a day, according to the source and amount of the secretion. After the latter has been washed away, one of the following medicated douches is beneficial: —

CALENDULA. Four teaspoonfuls of the tincture, but preferably a non-alcoholic preparation, to a pint of tepid water, if the mucous surfaces are raw and excoriated.

HYDRASTIS. Same proportion as the calendula. Is preferable for profuse muco-purulent secretion. It can also be applied in powder, with an ordinary insect-powder gun.

KREOSOTE. Ten to thirty drops to a pint of water is a good application for severe pruritus, biting and smarting of the labia, a profuse and offensive discharge.

CORROSIVE SUBLIMATE. Three grains dissolved in a pint of water is the strongest solution which should be used on a raw surface. Compressed tablets of corrosive sublimate are very convenient for this purpose. It is a favorite with many for severe pruritus, also for a greenish purulent offensive discharge. Cases of a specific origin.

PLANTAGO AND BORACIC ACID CERATE is worthy of a trial where the inflammation is of an aphthous type.

NITRATE OF SILVER. Five to thirty grains to the ounce. In very virulent cases of specific origin, after

other means fail. Compare method of using it in chapter ii., p. 32.

After bathing, dry the parts carefully with a soft linen cloth if they are not too sensitive, and place between the labia a small piece of linen or absorbent cotton smeared with vaseline, fresh lard, or mutton tallow. This prevents friction of the inflamed surfaces if the patient is obliged to walk about. If the discharge from the vulva is excoriating, the surrounding skin can be protected by some simple ointment such as vaseline.

In the acute stage, where there is no secretion, the mucous membrane dry and hot, with burning and itching, dusting on a little powdered corn-starch will be grateful to the patient. If the inflammation be more severe, with swelling, throbbing, and pain, a warm poultice of linseed meal, bread and milk, or grated potato, should be applied.

In gangrenous vulvitis, Dr. Thomas states that a powerful caustic, such as the actual cautery or nitric acid, is the only hope. As soon as a gangrenous spot appears, it must be destroyed by this means, and a disinfectant poultice employed. Dr. Parrot, however, recommends the free use of iodoform in powder. For the treatment of eczema and erythema of the vulva, the reader is referred to the chapter on pruritus vulvæ.

Although local treatment is often an excellent adjuvant, it cannot take the place of a carefully selected remedy. The medical treatment is considered in the following chapter on vaginitis, as the two diseases are not infrequently associated with each other, are similar in character, and, in both, the same mucous membrane is affected, though in a little different locality.

VAGINITIS.

This is an inflammation of the mucous membrane of the vagina, and has also been described under the name of vaginal leucorrhœa. It is most often the result of excessive venery or specific infection. The different forms are briefly described in the following table : —

Form.	*Etiology.*	*Symptoms and Diagnosis.*	*Complications or Sequelæ.*	*Prognosis.*
Simple vaginitis may be acute or chronic, primary or secondary.	Exposure to cold and dampness, abuse of sexual intercourse, acute eruptive diseases; local irritation from pessaries, retention of bits of sponge, cotton tampons, chemical agents, irritating discharge from uterus, or extension of inflammation from the vulva (in the last two instances, the vaginitis is secondary); parturition.	There is burning, heat, or throbbing in the vagina; sometimes severe pelvic pain; a variable amount of offensive, purulent leucorrhœa; excoriations about the vulva; an aching and sensation of weight in the perineum; frequent micturition. In the inception of the disease, the mucosa is hot and dry, but there is usually within twenty-four hours an acrid discharge, which becomes muco-purulent later, with swollen, hot labia. There is great sensitiveness to contact, and, if an examination be made with the speculum, the mucous membrane is found red, and congested with abrasions, or there are small ulcerated points on the surface. In the chronic form, the red, injected mucosa and leucorrhœal discharge may be the only symptoms.	Very rarely it may assume a phlegmonous form, and terminate in abscess. It may extend to the urethra, and very rarely to the endometrium, Fallopian tubes, and pelvic peritoneum. It may become chronic, and cause relaxation with consequent prolapse of the vaginal walls.[1]	Good.

[1] Schroeder, *Krank. d. weibl. Geschlechtsorgane*, p. 473, 1881.

Form.	*Etiology.*	*Symptoms and Diagnosis.*	*Complications or Sequelæ.*	*Prognosis.*
Specific vaginitis or gonorrhœa.	Is always the result of specific infection.	It may be exceedingly difficult to distinguish from the preceding form, but the following symptoms point to it: Marked purulent urethritis is often, but not always, present, and a profuse yellow, or greenish-yellow, vaginal discharge having an acid re-action; the severity and rapid development of the disease in a woman previously free, or nearly so, from vaginal discharges. All these symptoms may very rarely exist, however, in non-specific vaginitis, but, in the latter, the gonococcus is never found by the microscope. In this disease, it sometimes happens, that, for a length of time, only the posterior fornix of the vagina is affected. This accounts for the fact that women apparently healthy may transmit gonorrhœa.	Buboes, cystitis, abscess of the vulva. Is much more likely than the preceding form to extend upwards to the endometrium, Fallopian tubes, and pelvic peritoneum, with a fatal issue.	Good if properly treated, and no complications. According to Dr. Noeggerath,[1] however, a permanent cure without sequelæ is questionable.
Granular vaginitis.	May result from either of the preceding forms, but is almost always associated with pregnancy, and liable to re-appear in successive pregnancies.	The subjective symptoms are similar to those of simple vaginitis. On examination, the finger feels numerous granulations, like fine millet seed, scattered over the mucous membrane and cervix uteri. It bears the same relation to simple vaginitis that follicular vulvitis does to the ordinary form of vulvitis.	None.	Good. The disease usually terminates with pregnancy.

[1] *Die latente Gonorrhoe im weiblichen Geschlecht*, Bonn.

Form.	*Etiology.*	*Symptoms and Diagnosis.*	*Complications or Sequelæ.*	*Prognosis.*
Adhesive or senile vaginitis.	Is found in elderly women after the climacteric.	It tends to form adhesions between the vaginal walls, or with the cervix, and is found in the upper third of the vagina. There may be no subjective symptoms whatever. In other cases, the mucous membrane bleeds easily, and the leucorrhœal discharge is tinged with blood, which might give rise to suspicion of malignant disease if an examination be not made.	Adhesions may result, but are not likely to be of serious import.	Good.

The diet and local treatment are the same as in vulvitis. After each vaginal injection, a roll of cotton or oakum, saturated in glycerine and a few drops of impure carbolic acid, must be inserted in the vagina to keep the inflamed surfaces apart. Dr. Emmet recommends a teaspoonful of chloride of ammonium to each pint of hot water as a vaginal douche; and, if there be much heat and swelling, the addition of a few spoonfuls of alcohol to increase the evaporation and lower the temperature. A paste of fuller's earth, made with water and a little glycerine, has been used successfully in severe cases of vaginitis. The vagina is filled and the external parts covered with it. When this earth poultice becomes dry and irritating, it is washed out with a syringe and replaced by another. Dr. Martineau[1] has had good results in the treatment of chronic vaginitis by salicylic acid mixed with powdered gum-arabic and wheat flour, as follows: —

℞ Salicylic acid . . . . . 3 parts.
Wheat flour . . . . . 5 parts.
Powdered gum-arabic . . . . 1 part.

[1] *Medical News*, April 12, 1884.

It is applied by an insufflator to all the vaginal surface. The favorite application for chronic inveterate vaginitis, and especially for the specific form, is a strong solution of nitrate of silver, twenty grains to the ounce, rarely stronger.[1] The preparation is poured into a shallow dish; and with the aid of a Sims' speculum, and a small cotton swab on a stick, it is applied to the cervical canal and entire mucous membrane of the vagina and vulva, coating it white by the formation of the albuminate of silver. The pain is only temporary. As soon as the surfaces are dry, they should be covered freely with vaseline, and a small long tampon introduced thoroughly smeared with the same substance. Vaginal douches followed by fresh vaginal dressings must be repeated two or three times a day. This measure is a severe one, and should not be resorted to until after a reasonable trial other means fail to relieve. Martineau has found a moderately strong solution of corrosive sublimate (1 : 1,000) very useful as a local application.

THERAPEUTICS OF VULVITIS AND VAGINITIS.

Aconite. Baehr believes the use of aconite is merely a loss of time, and recommends the use of merc. sol. or merc. viv. at once. Other careful observers, however, report good results from this remedy. It is best suited to the non-specific variety resulting from cold, and especially in the beginning of the attack. *The vagina is dry, hot, and sensitive* (Bell.); painful urging to urinate; and, in some cases, when the menses have been suddenly suppressed, there co-exists acute ovaritis.

Arsenicum. Dr. Imbert Goubeyre[2] showed that this drug has a marked elective affinity for the vulva; and Dr. Hughes relies on it, in preference to any other remedy, for the treatment of vulvitis, shooting pains from the abdomen into

[1] See chapter ii., p. 32.

[2] British Journal of Hom., vol. xxiii.

the vagina, burning tensive pains in the ovary, especially the right, profuse yellow thick (*Hydrastis*, kali bi.) corroding leucorrhœa (Kali carb.).

Calc. carb. *Scrofulous diathesis.* Profuse sweat about the labia; stinging, burning tubercles on the margin of the labia; aching in the vagina, violent itching and soreness of the vulva, inflammation and swelling of the genitals (Asaf., canth.); leucorrhœa like milk (Carb. veg., conium, lyc., *puls.*, *sepia*, sulph. ac.), with itching and burning.

Cantharis. Swelling and irritation of the vulva (Asaf., calc. carb.); violent itching in the vagina (Conium, merc.); pruritus, with strong sexual desire; if the inflammation involve the urethra, with severe *dysuria* (Cannabis sat.).

Carbo veg *Aphthous inflammation* of the mucous membrane (Graphites, helonias), which itches, and is sore and raw during leucorrhœa; thin, milky, excoriating leucorrhœa (Ars., coni., kreos., lyc., *puls.*, *sepia*) only in the morning on rising; varices of the vulva. This remedy is particularly suited to old people.

| Kreosote. *Burning between the labia on urinating; soreness between the thighs and vulva, with burning, biting pains* (Sepia); *soreness and smarting between the labia; violent itching of the labia, also of the vagina* (Canth., conium); *external genitals swollen, hot, hard, and sore;* yellow leucorrhœa, with great weakness, staining linen yellow (Carb., an.).

|| Merc. sol. Inflammation of the vagina, and especially of the external genitals, with rawness, smarting, and excoriated spots (Carb. veg., graph., helonias). Leucorrhœa, always worse at night, greenish discharge, smarting, corroding, itching, burning after scratching (Alum, coni., phos., *puls.*); itching of the genitals, worse from the contact of the urine.

Rhus tox. *Eczema of the vulva* (Graph., hepar sulph., mez., sulph.), pruritus, vesicles, or crusts; soreness and pain in the vagina; external genitals inflamed, erysipelatous.

| Sepia. *Great dryness of the vulva and vagina; painful to the touch;* itching eruption on the nymphæ, which are red and swollen; *much weight and bearing-down of the pelvic*

organs. Leucorrhœa, yellow, milky (Calc. carb., coni., lyc., sulph. ac., *puls.*), *excoriating* (*Alum*, ars., kreos., sulph.), and especially *before the menses.*

Sulphur. Profuse, yellowish, corrosive leucorrhœa (*Alum*, ars., kreos., sepia); burning in the vagina; troublesome itching of the genitals, with eruption of pimples around them.

Thuja. Condylomata, moist bleeding and offensive (Nit. ac.); vagina very sensitive; pains in vulva and perineum; gleet following gonorrhœa.

Additional Remedies for Consultation. — Ambra, apis, arnica, bell., berberis, cauloph., causticum, cannabis, cham., china, cimicif., *coni.*, croton tig., *graphites*, helonias, hepar sulph., hydrastis, kali carb., lach., lycop., mezereum, mineral acids, nat. mur., *nit. ac.*, puls., sabina, silicea, staphisagria.

CHAPTER IX.

VAGINISMUS. — ATRESIA. — FISTULÆ.

AS the name indicates, this affection consists in a spasmodic contraction of the vagina. The extreme hyperæsthesia of the latter is most marked about the site of the hymen; and the mere touch of the probe, or a camel's-hair pencil, may be sufficient to induce spasmodic contraction, and prevent further examination without ether. It is a symptom of some other condition, rather than a disease in itself, and is often accompanied by sterility, as sexual intercourse cannot be endured.

It is most frequently associated with anæmia and neurasthenia, hysteria, pelvic cellulitis, uterine displacement, urethral coruncle, neuromatoid growths on the vulvar mucous membrane, excoriations or fissures about the labia or anus, chronic inflammation of the endometrium, vagina, or vulva, and lead-poisoning.

The treatment should be directed to the removal of the cause; for unless this be done, permanent cure is not likely to follow. In addition the following course is recommended. Complete sexual abstinence is absolutely essential to success, and the patient's general health must be built up as much as possible if she be at all anæmic. For the first few days, warm sitz-baths, twice daily, and hot vaginal douches as soon as the patient can bear them, should be employed, and belladonna or cocaine cerate can be applied to the sensitive

places after each douche. In about two weeks the abnormal sensibility will disappear, and the patient can bear the presence of a small Sims' glass plug [1] for a short time each day. The size of the plug, and the time it remains inserted, is gradually increased as the patient can tolerate it without exciting an undue amount of irritation. This is continued till all signs of vaginismus have disappeared. Scanzoni states that the cure will be complete in from six to eight weeks.

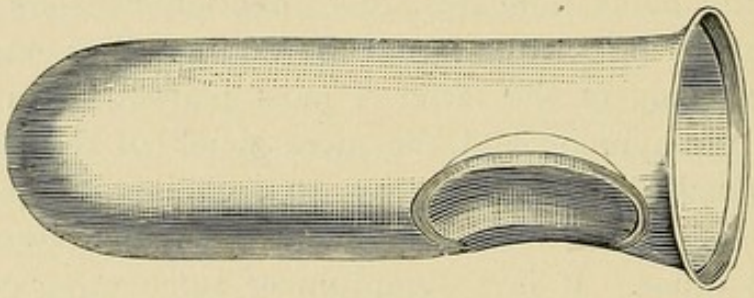


FIG. 63. SIMS' GLASS VAGINAL PLUG.

Should the above treatment be unsuccessful, Dr. Tilt's method may be tried. The operator anæsthetizes the patient, introduces both thumbs back to back in the vagina, and forcibly distends it for a few minutes. A large glass vaginal plug is inserted, retained by a T-bandage, and worn for a number of days.

As a last resort the knife can be used, the hymen removed, and a Y-shaped incision made into the vaginal tissues according to Sims' method;[2] vaginal dilators are to be worn afterward as in the previous methods. In case of sterility, coition has been practised under anæsthesia, with the hope that conception and parturition would effect a cure. The prognosis is generally

[1] The author has used instead, for purposes of dilatation, a series of very strong glass test-tubes beginning one-half inch in diameter, and increasing each tube one-sixteenth inch till the largest measures 1¾ inch. Their length makes them easier to manipulate than Sims'.

[2] Uterine Surgery, p. 318.

regarded as very favorable, though a high authority declares that vaginismus is almost certain to return if the primary cause is not removed.

The medical treatment of this affection is often unsatisfactory. In selecting the remedy the general symptoms of the patient, and those relating to the cause of the disorder, are of more importance than the actual hyperæsthesia and spasm.

THERAPEUTICS.

Caulophyllum. *Women affected with rheumatism, especially of the smaller joints.* (Act. spic., ledum.) Sensation of *weight, fulness*, and tension in the hypogastric region (*Bell.*, puls.). Aphthous vaginitis, *spasmodic pains in uterus* and various portions of the hypogastrium; spasmodic dysmenorrhœa, the pain being of an intermittent character. The vagina is irritable and spasmodic; intense pain.

| Hamamelis. Vaginismus, intense soreness, prurigo of the vulva. Bloody leucorrhœa, with great tenderness of the vagina. *Metrorrhagia, flow passive, venous distension about the vulva and on the legs.*

Nux Vomica. *Menses too early and profuse, attended by morning nausea, with chilliness and fainting.* Titillation in the vagina and much nervous erethism. *Constipation.* Tenesmus of the bladder.

Platina. *Nymphomania, menses too early and too profuse.* Painful sensitiveness and constant pressure in mons veneris and genital organs, genitals very sensitive. Pruritus vulvæ; voluptuous tingling, with anxiety and palpitation of the heart.

| Plumbum. *Vaginismus*, patients subject to violent colic with retraction of the abdomen; excruciating pains in umbilical region, with shooting to other portions of abdomen and body, somewhat relieved by pressure. *Constipation:* stools hard, lumpy, like sheep's dung, with urging and terrible pain from constriction or spasm of the anus. Sharp neuralgic pains in limbs, especially in muscles of thighs; *extreme emaciation; sleeplessness.*

Pulsatilla. Crampy constriction of vagina. Leucorrhœa, milky, thick, with swollen vulva, painless, thin, acrid, burning. *Menses too late, scanty, and of short duration.*

For further study consult : — bell., cannab. ind., cactus, cedron, cocculus, coffea, coni., *cuprum*,[1] *ferrum acet.*, *gels.*, hyosc., ignat., kali brom., lycop., macrotin, *merc.*, sepia, silicea, thuja, zinc.

ATRESIA OF THE GENITAL CANAL.

The closure of the genital canal may be in the cervix uteri, or any portion of the vagina. In rare cases, there is complete atresia of the entire vagina from arrest of development. A fibrous cord is felt between the rectum and bladder, and, as a rule, the uterus is rudimentary.

The causes of atresia are : —

- Congenital
  - Non-development,
  - Imperforate hymen ;
- *or*
- Acquired
  - Extensive ulceration,
    - Syphilis,
    - The local application of chemical agents ;
  - Traumatism,
  - Sloughing,
    - Parturition,
    - Impaired vitality from typhus or scarlet fever, small-pox, etc.

The Diagnosis is easy. The patient has had no menstrual flow, though the usual symptoms attending the

[1] Mrs. ——. has had vaginismus since first and only pregnancy, nine years previous. Spasms came on in attacks lasting from ten minutes to two hours, five or six times a day, and were almost continuous at the time of the menses. Spasms severe enough to cause visible movement, and the finger introduced into the vagina would be clasped tight enough to numb sensation [?]. Cured in three weeks by cuprum 15, and remained so at time of writing three years afterwards. — Dr. Winterburn, *American Hom.*, March, 1884.

menses have been periodically present. There is also disturbance of the nervous system, with backache, and a sense of pressure on the bladder and rectum. Sometimes there is an obscurely fluctuating tumor in the hypogastric region. These symptoms, in girls, point to an imperforate hymen or cervical canal, with an accumulation of menstrual fluid behind it. In another class of cases, the physician is consulted on account of inability to perform the sexual act, which is not due to vaginismus. Physical examination shows the genital canal more or less occluded in a part or the whole of its course. With one finger in the rectum and a sound in the bladder, the vagina is felt between them as a fibrous cord, and sometimes a fluctuating mass above it.

Treatment. — If the examination reveals an imperforate hymen, with the menses retained behind it, the membrane should be perforated with the fine needle of an aspirator, and a small quantity of the imprisoned fluid drawn off, at intervals of three or four days, until the cavity is emptied by as many operations. The action of the aspirator can then be reversed, and the vagina washed out with warm carbolized water. After the patient has fully recovered, the hymen can be partially removed. The best time for using the aspirator is about ten days after the menstrual symptoms have subsided, i.e., about midway between the periods.

The hymen should never be incised with a bistoury, allowing the fluid to gush freely out, as many fatal cases in consequence have been recorded.

For the treatment of atresia from other causes, the reader is referred to the works of Drs. Emmet [1] and Thomas.[2]

[1] Principles and Practice of Gynæcology, p. 188, 1884.

[2] Diseases of Women, p. 220, 1880.

FISTULAE.

The genital canal, i.e., the uterine cavity and vagina, may be connected by one or more apertures, of variable size and shape, with the urinary tract, — i.e., the ureters, bladder, and urethra, — or with the rectum. These openings are termed fistulæ, and named according to the parts connected, such as vesico-vaginal, uretero-vaginal, vesico-uterine, recto-vaginal fistula, etc.

In the great majority of cases, a fistula is the result of parturition, rarely from the unskilful application of the forceps or the performance of craniotomy, and almost always from delay in operating after the presenting part has become impacted. The tissues lose their vitality, a slough of varying extent ensues, and a fistula, which may be no larger than a pin or involve the entire base of the bladder, is the result. Fistula may also follow an abscess, cancerous, syphilitic, and phagedenic ulceration ; the latter more especially in connection with severe continued fevers producing deficient nutrition.

The Diagnosis is not dffiicult. The continuous discharge of urine, the irritation of the vagina, vulva, and thighs produced by it, and the strong urinous odor, direct the attention to a urinary fistula ; while, if there is an escape of fæces into the vagina, especially during an attack of diarrhœa, the fistula is of the fæcal variety. Digital examination usually reveals the opening with an eroded margin, giving a granular or velvety impression to the finger. Very rarely, the fistula may be so small that the finger cannot detect it, and then Sims' speculum must be used so as to bring the vaginal walls into view. If of the vesical variety, the bladder may be injected with milk, which is readily seen as it escapes through the fistula, and indicates its site.

The Treatment is entirely surgical. In the recent state, before the urine has become alkaline, and there are phosphatic deposits on the margins of the fistula, there is a chance for spontaneous cure if the opening is small. This is very materially aided by copious warm-water douches, twice or thrice daily, to which calendula has been added, in the strength of one tablespoonful of the tincture to a pint of water. Though I am not aware that it has been tried, it seems as if the application of calendula cerate to the margins of the fistula, after each douche, would be beneficial. Not only would it promote the healing process, but also protect the granulating surfaces from the urine. A mild solution of the nitrate of silver can be used occasionally to stimulate the edges of the fistula. If phosphatic deposits are present, they must be carefully removed. The urine should be kept acid and diluent, by the use of some acid, such as benzoic, and drinking water freely.

It is of the utmost importance that the health of the patient be as good as possible before operating. Plenty of fresh air, exercise, and a generous diet will materially contribute to this, and the success of the operation afterwards.

The division of cicatricial bands, etc., during the preparatory treatment, belongs to the surgical treatment, and will be found in the books referred to for the description of the operation. The operations of Drs. Sims [1] and Emmet [2] do not differ essentially from each other, and deserve the preference. The latter has written one of the most exhaustive monographs [3] on this subject in the English language, to which the reader is

[1] Hewitt's Diseases of Women, edited by H. Marion-Sims, vol. ii. p. 453, 1883.

[2] Principles and Practice of Gynæcology, p. 817, 1884.

[3] Vesico-Vaginal Fistula, 1868.

referred for the reports of many difficult and interesting cases. Dr. Bozeman has modified the operation, by devising a new button suture, and an apparatus for operating on the patient in the knee-chest position.

Few operators, however, have met with more success in the treatment of this affection, than the late Professor Gustav Simon of Heidelberg. His method differed very materially from that of Sims, and is considered with those of other operators by Hegar and Kaltenbach.[1]

[1] *Die Operative Gynäkologie*, p. 596, 1881.

CHAPTER X.

PUBERTY AND THE CLIMACTERIC PERIOD.

THE advent and close of the menstrual life of a woman are so often attended by phenomena peculiar to these periods, and distressing to the patient, it is hoped that a brief consideration of them may not seem unnecessary.

Puberty is the mile-stone which marks the transition from girlhood into womanhood. During it, the sexual organs undergo development, and menstruation commences. With the climacteric period, or change of life, these conditions are reversed; the sexual organs atrophy, and the menstrual discharge ceases. Both these periods are influenced by climate, heredity, and habits of life. In very warm climates the menses appear much earlier than in very cold countries. In some families, there is an hereditary tendency to menstruate very early or late in life, and for the discharge to be scanty or profuse, which must be considered in forming an estimate of the normal condition. It is apparent, therefore, that no definite age can be assigned as *the* normal time for the appearance, cessation, duration, or the quantity of the menstrual discharge. The establishment of the flow, however, is more rapid and constant than the period of its cessation. The average age of its appearance is fourteen years and two months; of cessation, between forty-two and forty-five years; and of its duration, four days

and a half. The quantity varies so much with different individuals, that it is best considered normal so long as no ill effects of any kind are experienced in consequence.

At puberty, the entire system feels the great change that is taking place; not only is there active growth and local development, but there is also called into play a remarkable amount of nervous energy. This is very largely due to the intimate connection of the ovaries with the sympathetic nervous system; hence it is not uncommon for chorea, hysteria, or even epileptic spasms, to appear at this time, not to mention the general condition of nervous erethism. With the establishment of the menses, aided if necessary by proper medication, these symptoms usually disappear.

Menstruation, which is characterized by the periodical discharge of blood from the female genitals once in twenty-eight days, depends on the ovaries, and is supposed to coincide with the rupture of a Graafian follicle. Its presence, therefore, marks the child-bearing period in women, though instances are recorded of impregnation before the first menses have appeared. The flow of blood comes from the uterine cavity, the lining membrane of which undergoes fatty degeneration once a month, disintegrates, and is cast off, leaving the capillaries exposed and readily ruptured, causing the discharge of blood. The blood pressure in the capillaries and the congestion of the pelvic organs being relieved, the flow ceases; and the lining membrane of the uterus is reproduced by the proliferation of cells, which were beneath the former or superficial layer.

At the climacteric period the change is retrogressive. The Graafian follicles no longer ripen and cast off ova. The menses become very irregular, and finally cease to appear. While the duration of this period is very variable in different persons, it commonly lasts from

two to four years. As might be expected, nervous derangements are very common, especially those of the vaso-motor system. The organism seems to contain a superabundance of blood, and the patient suffers from congestive headaches, impairment of memory, severe flushings like hot water running over her ; she becomes over-anxious, and is easily worried. Besides this, nutrition may become perverted, leading to the development of fibroids in the unmarried or sterile, and cancer in fruitful women, where a severe laceration of the cervix uteri is a focus of irritation. Malignant disease may develop in either if there is an element of heredity. Obesity is of common occurrence. Although this "change of life" is beset with many ailments, chiefly mental, and various neoplasms are far more likely to develop then than at any other time, the patient will, as a rule, enjoy good health afterwards, if she has taken proper care of herself during the climacteric.

Proper hygiene will do much to relieve the various complaints of women at these periods, which mark the rise and decline of their greatest physical vigor.

The periodical losses of blood to the system at puberty, and the demands for increased nutrition, require hearty food in abundance. Meat, milk, and eggs are important articles of diet. Fresh air, sunshine, and exercise are all necessary to the best physical development, unless we desire to have our girls grow up like bleached celery-stalks, and unfit to meet the responsibilities of life. Not less important at this time is absolute physical and mental rest during the monthly flow. If its real value to them in after-life could be half appreciated, there would be no grudging the time seemingly thrown away. As the hygiene of puberty has already been discussed in the opening chapter of this book, there is no need of repeating it here.

The hygiene of the climacteric is at once suggested by the patient's condition. Very little beef is to be eaten when there are symptoms of local congestion. Eggs, fish, poultry, game, and vegetables are in order. If there is a tendency to obesity, which the patient desires to counteract, all food containing much starch, sugar, or milk should be avoided, and water drank sparingly if urea is in excess; fruit, such as oranges, grapes, cherries, and berries, may be eaten *ad libitum*, if they do not disagree with the patient. Plenty of exercise in the sunshine and open air is always advisable. Pleasant society, cheerful surroundings, and enough to do to merely occupy the time without undue fatigue, will materially relieve the mental symptoms.

Having briefly reviewed the subject of this chapter in a general way, it may be well to consider here in more detail some of the anomalies characteristic of each period of life.

Among the symptoms which precede the first menstrual flow for weeks and even months, such as dizziness, epistaxis, general nervousness, etc., the writer has occasionally noticed *albuminuria*. While this may have been independent of the age of the patient, the fact that the general health was little, if at all, affected, seemed to indicate that the kidneys participated in a measure in the congestion and hyperæmia of the sexual organs. Though treatment for it is seldom necessary, further than recommending the free use of milk and beef, careful supervision of the patient, and an occasional examination of the urine for casts should not be neglected, lest parenchymatous nephritis develop unawares.

Arsenicum, belladonna, mercurius corrosivus, and phosphorus are remedies likely to be beneficial.

CHLOROSIS.

Chlorosis is a disease found in girls at or near the age of puberty, the most characteristic feature of which is the anæmic appearance of the patient. Indeed, the resemblance to anæmia is sometimes so close in practice that the dividing line cannot be drawn between them. It gives a better picture of the disease, to call it a special form of anæmia. Dr. Flint [1] states that there is a reduction in the percentage of hæmoglobin of the red blood corpuscles, without a corresponding decrease in the number of the latter; and Virchow lays much stress on the arrested development of the vascular system, particularly the aorta. It is believed to have a nervous origin, as its appearance so often dates from some impression on the nervous system, from the frequency of nervous symptoms, hysteria, etc., in its early development, and, finally, because those remedies which are most effectual in combating it are particularly adapted to the treatment of nervous diseases. Dr. Ludlam lays much stress on the importance of a lymphatic constitution, and scrofula, as a predisposing cause.

Perhaps its most prominent symptom is amenorrhœa. With this there is a greenish pallor of the skin (hence the old term green-sickness); hysteria in some of its protean forms, or general nervousness; perversion of appetite, and morbid cravings for chalk, slate-pencils, pickles, etc.; cardiac palpitation and blowing sounds over the heart and carotids; headache, and a varying amount of mental irritability. Although closely resembling it, chlorosis should not be confounded with the anæmia which often precedes or accompanies incipient tuberculosis in girls of a scrofulous habit.

The most reliable points of the *differential diagnosis of chlorosis from anæmia* are, the marked tendency of

[1] Practice of Medicine, p. 378, 1884.

chlorosis to relapses, greenish pallor of the skin, the frequency of fugitive neuralgic pains, nervous or mental symptoms, hysteria, chorea or epilepsy, its origin from mental causes, and the absence of emaciation. In some cases, as has been stated before, the distinction between chlorosis and anæmia is practically impossible.

The Prognosis is favorable, as a rule, if the disease is not grafted on a scrofulous constitution; but it exhibits little if any tendency to spontaneous cure, and may therefore last a number of years without treatment.

The general treatment consists in building up the patient's health by food, exercise, etc., as already described in the hygiene of puberty.

THERAPEUTICS.

Aconite has been mentioned as a remedy for chlorosis resulting from fright; and Dr. Hempel thought well of it for the same disease complicated with tuberculosis and accompanied by a sallow or greenish complexion, deeply flushed cheeks, palpitation, dyspnœa, and stitches about the chest. The writer believes that constitutional remedies would be necessary intercurrently with aconite.

Argentum nit. Dr. von Grauvogel[1] found this remedy of great benefit in affections characterized by shortness of breath and cardiac palpitation, without organic disease of the heart or lungs. Dr. Hughes adds, sallowness rather than pallor of the complexion. A feeling of lassitude, trembling, and the tendency to muscular twitchings or convulsions preceded by great restlessness, also point to this remedy.

Calcarea carb. is an important constitutional remedy for girls of a *scrofulous diathesis with tendency to obesity and glandular enlargements.* The girl has a morbid craving for chalk, pickles, etc.; takes cold easily; is subject to acidity of the mouth and stomach, and palpitation of the heart after eating; though apparently strong and healthy from the accumulation of fat, the muscles are weak, and she tires from little exertion.

[1] *Lehrbuch der Homöopathie*, § 271–292.

|| Ferrum. While this is a great remedy for anæmia, many physicians consider it equally good for chlorosis. Dr. Hughes recommends ferrum redactum, 1x. or 2x.; Dr. Jousset, ferrum acet. or protoxalate, 1x.; and Dr. Ludlam praises the citrate of iron and strychnia, 3x., as superior to either remedy alone. Dr. Holcombe finds the phosphate of iron very useful. The mucous membranes are very pale, particularly of the mouth. There is great *pallor of the face, with occasional sudden red flushes, with dizziness;* ringing in ears; palpitation of the heart; dyspnœa, and often chilliness, with fever towards night or in the evening.

Helonias has been found a very useful remedy for debility, or chlorosis following diphtheria. The sensation of weakness, dragging, and weight in the sacrum and pelvis, with great languor and prostration, are also excellent indications for this remedy.

Ignatia. When the disease is due to mental or emotional causes, with changeable disposition, tendency to crying and brooding over imaginary trouble, in sensitive or hysterical women.

Phosphorus. Chlorosis, from depressing mental influences, too rapid growth, or self-abuse (China), especially in girls of a tuberculous habit (Calc. carb.), chronic cases, and puberty delayed; palpitation of the heart from emotion; great weakness and prostration of the whole system. She is sleepy in day-time, restless before midnight, and perspires easily, especially at night while asleep.

Plumbum was advocated by Dr. Winter[1] as a remedy for inveterate chlorosis with severe constipation, extreme muscular weakness, variable pulse, want of breath, and great oppression of the chest from exertion or walking. He believes it aids the action of iron, and thinks it should precede it in the treatment of chlorosis in early life, unless the disease has been caused by the loss of blood, when iron must be used first.

Pulsatilla was a favorite remedy for chlorosis with Dr. Jahr. Although an excellent medicine for some of the symptoms incident to this disease, constitutional remedies will be

[1] Brit. Journal of Hom., vol. iii. p. 278.

almost invariably necessary to effect a cure. The patient complains of chilliness, or dry, burning heat, especially at night, without thirst. She also suffers from palpitation, drawing, tearing pains, shifting about from place to place, and feels better in the open air.

Sepia. Menses scanty or absent; *great bearing-down in hypogastric region;* yellow, milky, excoriating leucorrhœa; *sensation of sinking or emptiness of stomach* (Cimicif., ignat., pet., puls., sulph.). The patient suffers from hemicrania, the pain usually darting from the left eye, over the side of the head toward the occiput, and is relieved by eating. There is also much bodily prostration, and a *tendency to herpetic eruptions.*

Sulphur has many warm friends, both as a constitutional remedy for chlorosis, and as an aid to the action of other medicines. Dr. Leadam praises it highly, and states that he has cured patients with it in a short time, after long-continued treatment with iron had failed. The symptoms which may call for it are numerous, but the more important are the following: rush of blood to the head, with cold feet; pressive headache in the morning; loss of appetite, with feeling of fulness in the stomach after eating a little; constipation; oppression of the chest; palpitation, especially at night; frequent flushes of heat; night-sweats, and feeling of great prostration and weariness.

The following remedies have been recommended by various physicians. Ant. crud., *arsenicum* (belladonna), (chamomilla), *china*, cimicifuga, coffea, *conium*, cyclamen, ferrocyanuret of potassium, graphites, kali carb., lycopodium, nat. muriaticum, *nux vomica*, senecin.

Some very interesting cures of chlorosis by calc. carb., china, cina, cyclamen, ferrum, graph., ignatia, ipecac, nat. mur., nux vom., phos., phos. ac., puls., and sepia, with additional remarks on some of the remedies, can be found in Rückert's *Klinische Erfahrungen*, supplement, pp. 597–609. Most of them are cases reported by Dr. Cl. Müller in the *Hom. Vierteljahrschrift*, No. 8, pp. 428–443.

CHOREA, HYSTERIA,[1] OR EPILEPSY.

These affections, developing at or near puberty, probably spring from the same source, the extreme excitability of the nervous system, which is not entirely under the control of the patient. The paroxysms or attacks are worse at or just before the menstrual period. The author wishes to emphasize the fact that hysteria is a functional disorder of the nerve-centres, and does not depend on the uterus or ovaries, as was once believed, though the latter may not be in a normal condition.

Whatever the underlying causes are, they are not thoroughly understood; but the disorder is obvious. The characteristic features of each are presented in the following table: —

Chorea.	*Hysteria.*	*Epilepsy.*
Consciousness not lost.	Consciousness lost gradually, but not complete.	Consciousness entirely and immediately lost.
Muscular twitchings and tremors more or less continuous.	Complete intermissions, with attacks of sobbing, laughing, sighing, tonic and clonic spasms alternate; less often it simulates paralysis with tonic muscular contraction. Attacks may be preceded by hysterical symptoms, but no aura, epileptic cry, foaming at mouth, or facial spasms; the pupils re-act readily. Paroxysm not followed by a semi-comatose condition, but quite constantly by the profuse secretion of pale, watery urine.	Complete intermissions of apparent health between attacks preceded by aura. With a shrill cry, the patient falls unconscious, foaming at the mouth, livid face, distortion of countenance, and very little reaction of the pupils to light. Paroxysms followed by heavy sleep, headache, and mental dulness.
Is less at night.	Not common at night.	Occurs often at night.

[1] Dr. Mary Putnam Jacobi has made an interesting study of hysteria in the Medical Record, Oct. 2, 9, and 16, 1886. For further information concerning these diseases, the reader can consult to advantage Pepper's System of Medicine, vol. v.

Trance and Catalepsy, i.e., swooning away into an apparently lifeless condition for a period varying from a number of hours to several days, belong among the curious manifestations of hysteria. Volumes might be written on this subject, but only those forms likely to be met with at puberty will be discussed here.

The Prognosis of these various nervous anomalies depends on the severity and regularity of the paroxysms; as a rule, it is favorable, unless the attacks continue after the flow appears at regular intervals. Epilepsy is the most intractable of the three conditions mentioned.

General Treatment. — Mental rest, and the careful avoidance of every thing which excites the patient, is one of the first requisites in treating the case. General hygiene, as described in the introductory chapter, is also of great importance. Dr. C. Hering made this observation, that "in all mental diseases it is the most sure sign of recovery if abscesses appear." How true it is, the writer is unable to affirm. The Faradic current has been successfully used for the treatment of chorea and similar forms of muscular spasm, also to rouse the patient from a cataleptic state. The brush electrode would be useful to detect feigned epilepsy; for in the genuine there is complete loss of sensation, while if it were feigned the pain excited by the brush would at once rouse the malingerer. The treatment of a patient during an hysterical attack requires some seemingly harsh measures. Be sure you are right, and then go ahead, is no truer of any other condition than this.

The attacks of hysteria are largely due to a lack of the will-power of the patient, who gives way to them on slight provocation, with very little if any attempt at self-control. The most effectual plan of treatment is through fear, or make the patient forget herself by

exciting her temper. Sympathy, and the comforting remarks of pitying friends, are very prejudicial to the welfare of an hysterical patient. The author refers only to recent cases of hysteria, developing at or near the monthlies in young women, and not to chronic bed-ridden cases where the patient may have really lost control of her will. In all cases, however, confidence in her ultimate recovery, if she will earnestly try, must be encouraged; and any act or word of the physician to the contrary, so that she loses faith in him, will render all his efforts unavailing.

The following cases may serve to illustrate the principles of treatment: A professional friend was called to see a girl subject to hysteria, during one of her attacks. Recognizing it at once, he called for some red pepper, and without any ado told her to put out her tongue, and at once threw on a pinch of the pepper. Without paying any attention to the spitting of the surprised and wrathy patient, who at once forgot her hysterical symptoms, he directed the mother, in a very positive way, if the girl ever had another attack, to give her a heaping teaspoonful without delay. The patient has not had hysteria since.

Another physician of my acquaintance was much annoyed by a similar case. Asking the attendants to leave the patient alone with him a few minutes, he seized her hand in a firm grasp with the peremptory remark, "Are you not ashamed of this nonsense? Stop it at once, or I'll crush your hand." Being a man of far more than ordinary physique, and speaking in a very stern manner, the desired effect was produced, and there was no further trouble.

A large number of the patients, in a female ward of a well-known hospital, were attacked with hysteria. It spread among the cases like an epidemic, and there

was no little difficulty in treating it. Finally, the attending physician had a stove brought into the room, a number of cautery-irons heated in it, and directed the house-surgeon to thoroughly cauterize every case of the new disease the moment the attack began. Care was taken to make some show of the heated irons, and to have each patient understand the directions given in regard to them. There were no more hysterical attacks.

It is needless to add that the teaspoonful of red pepper would not be given, nor a patient injured or actually cauterized; but the physician must make her thoroughly believe that the measure will be carried out in good earnest, for the least suspicion of a sham destroys all the moral effect.

The emetic properties of apomorphia hypodermically have also been used to advantage.

Dr. Emmet has found the following plan useful to cut short an attack of hysteria: About an ounce of the tincture of asafœtida is mixed with a basin of hot water, and stirred up thoroughly, close to the patient's nose. This is very likely to induce vomiting, or call forth some protest from the patient, who is assured that the cause of offence will not be removed until she endeavors to control herself.

In the interval between the paroxysms, when the patient often lies in an apparently unconscious condition (though almost invariably it is feigned, and can be detected by a close observer), she is placed on the left side in Sims' position, and the asafœtida and hot water given very slowly as an enema. The object of this is twofold. It serves to allay reflex irritation, and absorbs the flatus which is often generated in large quantities. It is necessary, therefore, to give a large enema, and encourage the patient to retain it as long as possible, aided by the pressure of the nurse's hand and a folded

napkin against the anus. The bed-pan should receive the evacuation, as the exertion of getting up might cause another attack in spite of the patient's efforts of self-control. When the rectum is not filled with fæces, the insertion of a long rectal tube to draw off the flatus is very beneficial, while the prolonged sound of escaping flatus, the moment the abdominal muscles begin to contract preparatory to an attack, so mortifies a sensitive patient, that she will exert every effort to lie perfectly quiet and behave herself.

There is no disease which depends so much on the tact of the physician for its successful treatment, as hysteria. Before he tries the above-mentioned measures, he should endeavor to win the perfect confidence of his patient; but not through sympathy. The greater the confidence of the patient, the more readily can she be taught to exercise her will-power and self-control. Sometimes her surroundings must be entirely changed to free her from depressing influences, the gossip of neighbors, etc.; while some agreeable occupation — the study of music, painting, or the languages — will serve to divert her attention from herself.

Daily salt-water baths, followed by vigorous friction of the skin, or massage, are excellent adjuvants. In long-standing cases of hysterical paralysis or muscular contractions, rest, diet, and massage should be thoroughly tried. These cases, however, are not peculiar to either puberty or the climacteric, and will not be considered here.

In the Treatment of Epilepsy during an attack, there is little to be done, except to prevent any injury. A piece of soft wood or cork should be kept between the teeth to prevent biting the tongue. Menstrual epilepsy, i.e., epilepsy at the menstrual periods, which is the only form considered here, is often associated with hysteria,

and, unless it disappears soon after the age of puberty, is scarcely ever cured. In these cases, the ovaries have been removed with varying results. Sometimes permanent cure follows the operation, but not so uniformly that any absolute promises of recovery can be made. The most suitable cases for this treatment are those where the ovaries are enlarged and very sensitive, i.e., *diseased,* and where the patient is entirely free from epilepsy between the monthly periods. This also applies to menstrual chorea remaining after the regular appearance of the menses, which resists all other treatment.

The remedies for chorea, hysteria, and epilepsy, overlap each other, and to save space are given together. It is needless to remark that medicines applicable to the treatment of chorea, hysteria, or epilepsy,[1] during middle life or independent of the menstrual flow, are also useful for the treatment of menstrual epilepsy, or during the age of puberty, if the symptoms show a proper correspondence to the remedy. The references, therefore, are not limited to the menstrual forms occurring at the age of puberty, or at the climacteric.

THERAPEUTICS OF CHOREA, HYSTERIA, AND EPILEPSY.

(Compare classification of remedies for these diseases, at close of the therapeutics.)

Agaricus has been useful for both chorea and epilepsy. The symptoms indicate its use in the former rather than the latter malady. Involuntary muscular twitchings, either slight or severe, of *the face* (Cic., *bell.*, ign., nux vom.), *hands*, or *gluteal muscles; sensitiveness of the spine* (Cimicif., *phos.*), especially in the lumbar region; itching, burning, and redness of the toes, as if frost-bitten; tremor of the hands; involuntary movements only while awake.

[1] There is an exhaustive and able article on the Homœopathic Treatment of Epilepsy, by Dr. J. Baertl, in the Hom. Vierteljarhschrift, p. 234, 1862. Translated in the British Journal of Hom., vol. xxii.

Argentum nitricum has proved useful for epilepsy, though the precise symptoms calling for it in this disease are not clearly defined. Dr. Gray of New York asserted that "epilepsies originating in the brain may be promptly and durably cured by a few small doses, while those proceeding from abdominal irritation can be barely palliated by large quantities." Epilepsy from fright (Gels., opium, stram.), during the menses (Cimicif.), pupils dilated a day or two before the paroxysm; periodical trembling of the body; chorea-like, convulsive motions of the limbs; great forgetfulness.

Arsenicum. Dr. Hughes styles it the prince of remedies in chorea and neuralgia. Trembling and weariness of the limbs; *uneasiness of lower limbs, cannot lie still at night; palpitation, especially at night; burning sensations, internally or externally;* sensation of warm air streaming up into the head, preceding the epileptic attacks; frequent starting in and from sleep; great weakness and prostration.

Belladonna. Sulphate of atropia is preferred by many physicians. Menstrual epilepsy, from sudden suppression of the flow (Gels., glon., veratrum vir.), or with scanty menstruation. *Intense cerebral congestion; face glowing red, hot, and swollen;* convulsive movements of the muscles of the face and mouth. The right hand clutches at the throat; intense headache, then epilepsy; finally, menstrual flow. In two cases[1] of this kind, reported cured by atropia sulph., there was a great deal of pain in the left ovarian region.

Bromide of Potash has held high rank in the treatment of epilepsy, but is not likely to be required for the cases considered here. It is a palliative in large doses only, and rarely, if ever, cures the patient; while the after-effects of the drug, impairing the intellect, and producing the well-known acne, if pushed to excess, seem to counterbalance the benefit derived from palliation. Unless life or reason be endangered, the faithful trial of a carefully selected remedy, which does not cause such disastrous after-effects, is recommended.

[1] Raue, Record of Hom. Literature, p. 252, 1875.

Calcarea Ars. Dr. C. Hering[1] wrote of this in 1849: "From no remedy have I obtained such good results, in cases of epilepsy." It has not been proved, but is probably very similar to calcarea carb., which has some reputation in epilepsy.[2] Dr. S. Worcester states that he has found it very valuable in young children. The constitutional symptoms are of prime importance, such as a scrofulous diathesis, tendency to obesity, profuse perspiration, with feeling of weariness and prostration. To these may be added: the sensation, before the attack, of something running in the arm, or from pit of stomach down through abdomen into the feet; great anxiety, and palpitation of the heart; frightened, apprehensive mood, and forgetfulness.

Caulophyllum. Chorea at puberty. Hysterical or epileptiform spasms at puberty, from menstrual irregularities, especially in persons subject to rheumatism of the small joints, as the wrists and fingers.

Causticum. Dr. Jahr praises it for mild cases of chorea. If ignatia fails in the treatment of minor cases of chorea, caused by sudden fright, he gives causticum. Dr. Goullon[3] reports a long-standing case of epilepsy cured by this remedy, in the third dilution. Epileptic attacks, during the time of puberty, with delay of the first menses; also worse during the new moon. (Silicea.)

Cicuta vir. Though the symptoms of this drug resemble an epileptic attack, it only seems to have a palliative effect. The menses are delayed, and there is a spasmodic state if they do not appear. The larger muscles of the limb and trunk seem to be most involved; convulsions, with loss of consciousness, with opisthotonos; paroxysms, with swelling of the stomach, as from violent spasms of the diaphragm; hiccough, screaming, red face, trismus, loss of consciousness, and distortion of the limbs; pupils dilated and insensible.

| Cimicifuga. Menses irregular, delayed, or suppressed; hysterical or epileptic spasms at the time of the menses, espe-

[1] Brit. Journal of Hom., vol. vii. p. 564.
[2] Ibid., vol. xxii. pp. 246, 248.
[2] Case in Hoyne's Clinical Therapeutics, vol. i. p. 386.
[3] Allgemeine Hom. Zeitung, vol. 69.

cially in rheumatic subjects; nervous shuddering; tremor all over the body.

Cocculus ind. This promises to become a good remedy for epilepsy [1] as well as hysteria. Cures of the former by it in the form of a strong tincture, have been obtained by M. Felix Planat.[2] The patient is most subject to attacks at the time of the menses. The flow is scanty and painful; menstrual headache, with vertigo, nausea, and accumulation of flatus, especially at night; involuntary motions of right arm and leg, which cease during sleep. Dr. Jousset [3] found that both cocc. ind. and picrotoxine caused epilepsy, and thinks he obtained good results from it.

Cuprum. Drs. Bayes, Bähr, Jahr, and Jousset consider it an excellent medicine in epilepsy; and Dr. Baertl mentions cases cured by it. The convulsions are extremely violent. Dr. Hughes commends it for the final steadying of the muscles in chorea, after the use of cimicifuga, agaricus, or stramonium; and adds as a characteristic of cuprum in nervous disorders, that they begin with cramps in the extremities, especially in the fingers and toes; spasmodic dyspnœa before the menses.

Hydrocyanic acid. Dr. Hughes [4] recommends this drug, on account of the very great similarity of the symptoms to epilepsy, and states that it is his practice to give from five drops of the third decimal attenuation to three drops of the second decimal three times a day. He has also found it useful for the vertigo of epileptics, when not amounting to the "*petit mal.*" Dr. S. Worcester states that his experience with the remedy has not been satisfactory, but does not say whether he employed the drug in a high or low potency. It appears to be chiefly applicable to acute cases.[5]

[1] Experiments with picrotoxine, the active principle of cocculus indicus, show that it will produce genuine epilepsy. — *London Med. Record*, May 15, 1883.

[2] Hughes' Pharmacodynamics, p. 420, 1886.

[3] Monthly Hom. Review, p. 104, Feb. 1, 1881.

[4] Transac. World's Hom. Convention, vol. i. p. 177, 1876.

[5] In an excellent lecture on epilepsy, Dr. J. Rutherford Russel does not speak favorably of hydrocyanic acid, and mentions the following remedies: *Bell.*, cupr., *ars.*, *naja*, lach., (nit. silver), nux vom., pulsatilla. — *Annals Brit. Hom. Soc.*, p. 258, vol. iii.

Hyoscyamus. Menses preceded by hysterical or epileptic spasms ; laughing loud, uninterrupted ; profuse sweat and nausea. During the menses. convulsive trembling of the hands and feet ; headache ; profuse perspiration, and nausea ; pale flow, with convulsions ; lascivious mania. Drinking is liable to renew the paroxysms.

Ignatia. Recent cases of hysteria, chorea, or epilepsy, due to mental emotions, without hereditary disposition.

Moschus. Dr. Hughes writes : "I know nothing which so rapidly dissipates an hysterical attack, even when it has gone so far as unconsciousness, as moschus. It is equally potent for palpitation caused by nervous excitement, without organic disease of the heart. It needs to be used in about the third decimal trituration."

Oenanthe croc.[1] Dr. S. Worcester writes favorably of

[1] Girl, æt. 16. At nine years of age she was seized with spasmodic jerkings, salivation, and with absolute unconsciousness during the spasms. For a year they were controlled by bromide of potash, and did not return till she was nearly twelve years old, when she had a number of attacks at night, and the menses appeared on the following day. From this time, she had frequent attacks during the day, and nearly every night a number during sound slumber. The menses were very irregular, sometimes skipping a number of months. The patient became debilitated, jaundiced, and had an imbecile expression ; appetite capricious. The attack ceased on taking œnanth. croc. ; the appetite became good ; menses regular, and every appearance of health restored. The remedy was continued for six weeks. — Dr. W. A. Dunn, *U. S. Investigator*, p. 238, Sept. 1, 1882.

Girl, æt. 14. She had been sick two years, and treated, without any improvement, by large doses of potassium bromide, etc. She came under my care April 6, 1884. Her attacks were epileptic in character ; began with a cry ; she then fell and became unconscious ; had clonic spasms in the limbs, with frothing at the mouth, and rolling of the eyeballs ; the hands were clinched with the thumbs inside. During the attack, rectum and bladder were sometimes emptied. The attacks came three or four times a week, or it might be only every two weeks. After the attack she slept five or six hours, and then complained of heaviness in the head, and feeling of exhaustion, as if she had been beaten ; the memory was somewhat impaired. During the attacks she was now red, now pale, in the face. She was well developed, but had not had her menses. Cupr. met. 24x., bell. 6x., ignatia 6x., and puls. 30, were given with little benefit. The attacks became a little less frequent, but still were quite violent. On Nov. 2 *the spasm was violent in the face, and during it the face was of a leaden-gray color, and appeared swollen.* Oenanthe croc. 6x. was prescribed, three drops morning and evening, for nine days ; then to wait four days, begin again, etc. Until Dec. 7, there was no attack. In January and February, 1885, there were two insignificant attacks each month.

this drug for epileptic convulsions. The pupils are dilated; the face livid and turgid, and rapid convulsive twitchings of the facial muscles. All the symptoms are worse from water. (Compare cases and references below.)

Platina. Spasmodic affections of hysterical women subject to melancholia; spasms from sexual erethism; nymphomania; menses too profuse.

Plumbum.[1] Drs. Hughes and Bähr rank plumbum with cuprum as one of the remedies from which the most can be expected in chronic cases of epilepsy. A cure of one case, which had lasted thirteen years, has been recorded,[2] and also a second,[3] successfully treated by this remedy.

Pulsatilla. First menses delayed or scanty; hysteria, with constantly changing symptoms; patient complains of constant chilliness, or dry burning heat, and feels better in the open air. Where there is a decided anæmic condition, pulsatilla is not so useful as where the system is well nourished, and can afford the loss of menstrual blood. In the latter case, the remedy is of great benefit as a stimulant to the menstrual flow, and to promote the establishment of the menses at regular intervals. The writer's experience has been, that if the third decimal dilution fails to produce the desired effect, lower dilutions or the tincture will also fail.

Stramonium. Nymphomania; metrorrhagia; loquacity, singing and praying; hysteria, preceded by great sensitiveness; sexual excitement; chorea or epilepsy from fright; trembling

In April, May, and June, an attack each; and later she was quite well. Memory is good; all the functions are normal; the color of the face is good; and, when I saw the girl in 1886, she stated that the first menstruation occurred fourteen days before, and that she was quite well. She used œnantha croc. until August, 1885; and then I gave her, as a final prescription, sulphur 30, three drops morning and evening. — Dr. Oscar Hansen, *Allg. Hom. Zeitung*, vol. 113, Nos. 2-6, 1886. Translat. in *Hom. Recorder*, p. 168, November, 1886.

For further information, the reader is referred to the *Hom. Recorder*, Sept. 15, 1886; the *British Journal of Hom.*, p. 459, July, 1874; *Dublin Med. Journal;* and *Hale's Therap.*, p. 595, 1880, — where a good description of the post-mortem appearances, caused by this powerful poison, can be found.

[1] A case of epilepsy, from lead-poisoning, is reported in the New-England Med. Gazette, p. 166, 1867.

[2] Monthly Hom. Review, vol. xiii. p. 574. [3] Ibid., May, 1878.

of the limbs; twitching of the hands and feet, or of the tendons; catalepsy (Cannabis indica); convulsions, aggravated by water (Hyosc., œnanthe).

Veratrum Viride. An exceedingly useful remedy for acute suppression of the menses, in plethoric women, with intense cerebral congestion (Acon., bell., gels., glon.). The arterial excitement is great; twitchings and contortions of the body; opisthotonos. Dr. Cooper[1] has found it useful for chorea.

The following remedies for the diseases under consideration have been recommended by various physicians:—

Epilepsy. — *Arg. nit.*, alumina, ars., artemisia,[2] *bell.*, bufo.,[3] calc. ars., *calc. carb.*, *causticum*, cicut. vir., cinch.,[4] *cocc.*, colocynth, *cupr.*, *hydrocyanic acid*, *ignatia*, kali brom., lach., lil. tig., lyc., nit. ac., *œnanthe croc.*,[5] opium, *plumb.*, phos. ac., secale cor., silicea,[6] stram., strychnia,[7] (nux vom.), sulph.

Hysteria. — *Asaf.*, aurum, bovista,[8] *cimicif.*, *cocc.*, coni.,

[1] Brit. Journal of Hom., vol. xxxiv. p. 272.

[2] Nothnagel, Ziemssen's Cyclopædia, vol. xiv. p. 288.

[3] Raue, Record of Hom. Literature, p. 226, 1872.

[4] Cinchonidin will produce true epilepsy. — *London Med. Record*, May 15, 1883.

[5] Girl, æt. 14; had epileptic spasms for the last three years when going to bed, and sometimes after she was in bed. Spasms generally lasted from half an hour to an hour and a half, and were both preceded and followed by unusual faintness. In the daytime she was frequently attacked with vertigo. The fits were suppressed whenever the patient rode in a carriage, and this suppression was proportionate to the length of the ride. Nit. ac. 4x., two doses a day, cured her. — HOYNE'S *Clinical Therapeutics*, vol. i. p. 452.

[6] C. Dunham, Transactions N. Y. State Hom. Soc, 1871; also Lectures on the Mat. Med., vol. i. p. 335.

[7] Hughes' Pharmacodynamics, 1886, p. 694.

[8] Girl, æt. 21, pale, cachectic; has had spasms for a long time, which occur before the menses or after mental emotion, and are preceded by tearing and stitching from the left shoulder to the elbow. They are especially violent at night, and when at rest Spasms sometimes twice a day. She is seized first with constant yawning, followed by stitches in the throat, sensation as if the tongue were cut through with a knife, accompanied with painful tensions in the mouth, and convulsions of all the facial muscles, after which spasmodic weeping and laughter with

graph., hyosc., ignatia, mag. mur., *moschus*, nux mosch., plat., puls., tarrentula, theridion, sepia, valerian, zincum val.

Chorea. — Agaricus, *ars.*, calc. carb., caust., *cimicif.*, cocc., *cupr.*, hyosc., ignatia, naja, phos. ac.,[1] stram., sulph., tarrentula, *veratr. vir.*, zincum, zizia aur.[2]

Nymphomania is fortunately not a common complaint, and is mentioned here as one of the neuroses. A person suffering from this trouble is to be pitied, and not considered at all responsible for her words or actions. The following remedies are the most useful for this affection : agaricus, arsenicum, canth., china, grat., hyosc., lach., lil. tig., lycopod., origanum, picric acid, phos., *platina*, sabina, stramonium, veratr. alb., zinc.

In a limited number of cases, which might be termed emissions in women, i.e., orgasm and discharge of fluid, platinum has proved the best remedy in my practice.

The Headaches[3] which sometimes attend the menstrual period are very distressing, but fortunately are usually curable if they are not hereditary and the causes can be removed. Prominent among the latter are plethora, ovaritis, and uterine displacement, besides the usual causes of headache when it is independent of the monthly flow. Too much stress cannot be laid on the importance of removing any abnormal condition of the sexual organs before a cure can be promised.

suffocation, constriction, or distension of the throat; and, lastly, with spasms of the chest, and dark red face. Bovista 18 cured her. — HOYNE'S *Clin. Therap.*, vol. ii. p. 488.

[1] A very interesting case, cured by phos. ac., is reported by Hempel in Baehr's Therapeutics, vol. i. p. 176.

[2] Hale, New Remedies, 2d ed., p. 1079.

[3] The reader is referred to a very interesting and carefully written article on the Treatment of Headaches, by Francis Black, M.D., in the British Journ. of Hom., vol. v. p. 325 ; also vol. xxii. by the same author; and Headache or Migraine, by Dr. Trinks, Hom. Vierteljahrschrift, vol. iv. p. 100, translated in the British Journal of Hom., pp. 1 and 276, 1863, vol. xxi.

The headaches are of various types, and the same remedies for the more common forms of headache are applicable here according to the symptoms. Not only is it necessary to repeat the medicine at short intervals during the attack till there is improvement, but also to give it at intervals afterwards, to avoid or break up the tendency to recurrence of the paroxysms. In obstinate cases, some constitutional remedy such as baryta carb., calc. carb, graph., natrum mur., sepia, silicea, or sulphur, must be carefully selected, and used persistently for months if necessary, before the patient can be cured.

THERAPEUTICS.

Belladonna. *Severe throbbing*, pulsating headache before or during the menses; also, if this *severe throbbing or stabbing pain follows a sudden suppression of the flow in plethoric subjects*. The face is red and hot, and not infrequently there is much weight or bearing-down in the pelvis.

Cactus has been commended for pressive headache in the vertex, resulting from menorrhagia, also for a similar headache at the menopause.

Cimicifuga. Vertigo, *fulness and dull aching in the vertex;* dull aching, especially in the occiput, with sense of soreness in that region; intense aching, sore pain in the eyeballs; headache worse during the menses from motion and indoors, better in the open air; shooting pains in the ovaries, tenderness over the uterus, and irregular, delayed, or suppressed menses.

Cocculus is highly esteemed for menstrual headache in hysterical women, when the head feels empty and hollow, and there is inclination to vomit with much nausea, especially when rising up, and with flatulent distension of the abdomen; much confusion in the head.

Cuprum. Spasmodic dyspnœa before the menses; also rush of blood to the head, intense pain extending from the neck into the occiput; cramps in the abdomen with nausea and vomiting; headache begins twelve to twenty-four hours before the flow, and is better when the latter is established.

Gelsemium. The writer has had prompt results from the 1x. or 2x. where it failed in higher potencies. If good is to follow, relief is experienced after two or three doses. As a rule, it needs to be re-enforced by some constitutional remedy given in the intervals between the monthlies. Before or with suppressed menses, congestion of blood to the head; severe pain in the head and face, of a neuralgic or spasmodic type, vertigo, blurred vision (Iris), nausea and vomiting; profuse emission of clear urine, which relieves the headache; sometimes a feeling of stupor or drowsiness; less frequently chilliness precedes the headache, which is worse from lying down.

Glonoine. The chief remedy for sudden suppression of the menses in plethoric women, or with scanty menses, accompanied by intense cerebral congestion; violent throbbing headache increased by every motion; head feels full, face red, pulse full and quick; throbbing from neck extending into occipital region. (The congestion of acon., bell., and gels., is not so intense as glonoine; but the actual pain is more severe, and the symptoms of fever and inflammation are much more prominent.)

Graphites. A good constitutional remedy; *menses scanty or delayed;* flow often pale; swelling and induration of the ovaries without much local inflammation; violent headache with eructations and nausea during the menses, or tearing pain in the epigastrium at this time. Constipation, stool dark, large and knotty, half-digested, and offensive; skin eruptions exuding a watery, sticky fluid.

Ignatia [1] Severe pressing headache during menstruation, with frequent spasmodic yawning, and emission of watery urine every few minutes. It is best adapted to nervous, hysterical women.

Natrum mur. Headache before, during, or after the menses, with depression of spirits; heavy pressive pain in the forehead over both eyes; severe bursting headache, also dull, pressive, stupefying headache; headache in schoolgirls (Phos.

[1] The Ignatia Headache: Dr. Shuldham, Monthly Homœopathic Review, vol. xv.

ac.), especially in the morning. The characteristic constipation, emaciation, and sense of prostration, as well as the presence of itching eruptions on the skin, are additional indications for this remedy.

Pulsatilla. Dull, pressive headache, with bruised sensation in the forehead, at the age of puberty before the first menses have appeared, or when the flow is delayed and scanty. The patient is depressed mentally, and complains of chilliness in the daytime, and dry, burning heat without thirst at night. The headache is relieved by pressure, and by walking slowly in the open air.

Sanguinaria. Menses at the right time, with scanty flow, and severe throbbing headache, extending from the occiput over the head to the frontal region, especially the right side; vertigo; face red and hot, less often pale, with disposition to vomit; eruption on the face of young women with menstrual troubles, and especially a scanty flow.

Sepia. One of the best remedies for the radical treatment of obstinate cases with the following indications: heavy pressive pain in the left orbit and left side of the head, with darting pains over the left side of the head, better after eating; morning nausea; sinking, "gone" sensation in the stomach; bearing-down in the pelvic organs; menses irregular or scanty; sexual instinct increased; fœtid perspiration about genitals, axillæ and soles of feet; moth spots or yellowish discoloration of the skin; itching, herpetic eruptions. The constitutional symptoms are more important than those relating solely to the headache.

The following remedies are also useful: —

Apis (headache with right-sided ovarian irritation), baryta carb., *calc. carb.*, cannabis sat., cham., cyclamen, iris vers. (sick headache preceded by a blur before the eyes), lachesis (headache with left-sided ovarian irritation), naja, natrum carb., *nux vom.*, platina, senecio, silicea, *sulphur.*

Toothache is sometimes a distressing complication of

menstruation. Dr. Hering recommends the following remedies, to which a few mentioned by Dr. Baehr, but not by the former physician, are added. The latter are marked by a star, and are not to be considered any more characteristic than the other remedies.

Toothache before Menstruation. — *Arsenicum,* * acon., * bell., * cham., * puls.

Toothache during Menstruation. — Calc. carb., *cham.,* carbo veg., lachesis, natr. mur., * sepia, phosphorus.

Toothache after Menstruation. — Bryonia, calc. carb., cham., phos.

Aphonia or weakness of voice, coming on at each menstrual period, has been cured by gelsemium.[1] Dr. Richard Hughes mentions antimonium crudum when it occurs every time the patient is exposed to heat.

The Anomalies of the Climacteric Period (menopause) may be considered as those of perverted nutrition, such as the development of obesity, benign or malignant growths, and disturbances of the vaso-motor system causing flushings, local congestion, etc. Hysteria sometimes appears, and there is marked irregularity of the menses both in time, character, and duration of the flow. The growth of neoplasms, as well as the derangement of the menses, have already been mentioned in treating of the various forms, and need not be repeated here. The hygiene has been described in the beginning of this chapter, so there only remain for consideration those remedies peculiarly applicable to vaso-motor disturbances, which play such an important part in the sufferings of the climacteric period.

When the monthly congestion of the pelvic organs and the flowing have permanently ceased, atrophy of these structures gradually progresses from year to year.

[1] Meyhoffer, Chronic Diseases of the Organs of Respiration, p. 230.

Consequently, inflammatory diseases common to the menstrual or child-bearing age are very rarely if ever seen in the post-climacteric period. Uterine fibroids, which may have developed, scarcely ever increase after the flow permanently ceases, and, as a rule, slowly decrease or even disappear. The suffering incident to uterine displacement is much relieved; chronic metritis and ovaritis gradually undergo spontaneous cure. Procidentia, especially if complete, seems to be an exception to the rule, and is very seldom benefited by the "change of life."

THERAPEUTICS.[1]

Aconite is more often indicated in the commencement of the climacteric in robust, plethoric women, where there is arterial tension; pulse quick, full, hard, and strong; patient is timid, anxious, restless, complains of vertigo, fulness and heavy feeling in the forehead, sometimes epistaxis of bright red blood, and the senses of smell and hearing are morbidly acute. Drs. Hughes and Leadam urge the employment of only the medium or higher dilutions, on account of the great liability to produce aggravations with the low attenuations.

Amyl nitrite. Flushings of the climacteric when lachesis fails; heat and throbbing, with sensation of intense fulness in the head; much throbbing in the ears; flushing of the face; choking, constricted feeling about the throat.

Argentum nit. Dr. C. Hering marks the following symptom: metrorrhagia, with nervous erethism at change of life, also in young widows, and those who have borne no children; returns in attacks; region of ovaries painful, with pains radiating to the sacrum and thighs; memory impaired; vertigo and buzzing in the ears, and general debility of the limbs, and trembling; boring pain in left frontal eminence, or dull pressive pain on the vertex, relieved by binding something tightly on the head (Silicea).

[1] Dr. Richard Hughes has an excellent article, On some Remedies for Climacteric Sufferings, in the Brit. Journ. of Hom., vol. xxiv. p. 619, 1866.

Cactus. Pressive, burning weight on the vertex (when from loss of fluids, china and ferrum) if lachesis fails; sense of oppression or constriction of the chest or heart, palpitation of the latter.

Caulophyllin 3x. Dr. Ludlam states that he has often prescribed this remedy for post-climacteric nervous conditions, with excellent results; attacks of "great nervous tension and unrest, with wakefulness, and a propensity to work and worry over little things." The presence of rheumatism of the smaller joints would be an additional indication for it.

Cimicifuga 2x. Restless and unhappy state of mind; the patient feels grieved and troubled, with sighing (Ignatia), is irritable, cannot sleep; vertigo; fulness and dull aching in the vertex; *sinking at the stomach* (Hydrocyanic ac.).

Coffea. All the senses are very acute; patient cannot bear pain; mind very active, cannot sleep nights on account of thinking, hears the least sound; a general condition of marked nervous excitement.

Gelsemium 1x. or **2x.** is an excellent remedy for the congestive headaches of the climacteric. The attack often begins with drowsiness, or perhaps chilliness, then severe pain, usually of a neuralgic or spasmodic form, sometimes pulsation of the carotids, and accompanied by vertigo, blurred (Iris) or double vision, occasionally by nausea and vomiting, and is relieved by the profuse emission of watery urine.

Glonoine has been warmly praised for congestions of the head, and flushings limited to the face, also for its characteristic headache; violent throbbing in the head, or from neck into the occipital region; head feels full, face red, and the pulse is full and quick.

Helonine. An excellent uterine tonic; profound melancholy, with sensation of weight and soreness in the uterus; dragging, aching, and weakness in the sacral region, with marked debility.

Jaborandi 1x. Dr. Hughes mentions this remedy for flushings at the climacteric accompanied with sweating.

|| Lachesis. The chief remedy for flushings at the climac-

teric (Kali brom., sang., sepia) ; also hot vertex, metrorrhagia, and fainting at this time (China, nux vom., ferrum) ; there is painful distension of the abdomen from flatulence (Carbo veg., china, lach., kali carb.), and the patient can bear no pressure of the clothes. Not infrequently there is considerable irritation from the left ovary, which is swollen, indurated, or is the site of neuralgic pains. She wakes in the morning with vertigo and a sense of great exhaustion or weakness of the body, and at times suffers from headache extending into the root of the nose, or, less frequently, one-sided or occipital pain, extending into the neck and shoulders, sleeplessness.

Sanguinaria. Dr. Jousset[1] considers this the principal remedy for migraine or hemicrania, especially at the climacteric in women whose menses are profuse. He uses from the 12th to the 30th dilutions ; vertigo, rush of blood to the head with buzzing in the ears, and flushes of heat ; headache in paroxysms, beginning in occiput, it spreads upward and settles over the right eye ; headache, with nausea and chilliness, followed by flushes of heat extending from the head to the stomach ; sometimes bilious vomiting, short shooting pains in the head, and shivering. The headache is better in the open air, from lying down, and from sleeping. It is an excellent remedy for flushes of heat at the climacteric, and fœtid corrosive leucorrhœa at this time (Kreosote, nit. ac.).

The following remedies are also useful : —

Sulphate of atropia or *belladonna*, china, crocus, digitalis, ferrum, kali brom., lycopodium, nux vom., physostigma, polygonum,[2] *sepia*, sulph., sulph. ac., theridion, valerian, veratrum vir.

[1] Eléments de Médecine Pratique.

[2] Dr. A. E. Small states that he has found the infusion of smartweed the best remedy for superficial ulcers and sores on the lower extremities at the climacteric period, both locally and internally. — *Practice of Medicine*, p. 815, 1886.

CHAPTER XI.

AMENORRHŒA.

LIKE other anomalies of the uterine discharges, insufficient or absent menstruation is not a disease in itself, but an expression of some abnormal condition of the system, when it occurs during the generative life of a woman, except during pregnancy and lactation. In the latter, it is purely physiological, and need not be considered here. Its forms and etiology are outlined in the following table: —

Amenorrhœa	Suppressed flow	Plethora.
		Mental emotion, such as fright, anxiety, disappointed love, etc.
		Cold and wet, such as wetting the feet during the menses.
		Exhausting diseases, such as tuberculosis, or chlorosis.
		Sea-voyage, or change of climate.
	Scanty or delayed flow	Lack of ovarian stimulus, mental strain, and overwork.
		Local inflammation, such as ovaritis.
		Imperfect or non development of the sexual organs.
		Atrophy of the uterus or ovaries.
		Lack of fresh air, exercise, and good wholesome food.
	Retention of flow	Occlusion of some portion of the genital canal. If congenital, it is usually at the entrance of the vagina; if not congenital, the occlusion is most common in the upper third of the vagina.[1]

The causes of the first two forms may produce either condition, though most often the relations are as classified above.

[1] See Atresia of the Vagina.

Suppression of the menstrual flow, from mental emotion, cold, wet, and tuberculosis, is one of the most common disorders the physician is called upon to treat. Amenorrhœa, associated with a slight cough, emaciation, or rise in temperature, for any length of time, should always be looked upon with grave suspicion, especially in scrofulous subjects, as it is not infrequently the forerunner of phthisis.

The effect of a sea-voyage on emigrants, in producing amenorrhœa, is due to the poor fare on shipboard, and the change of climate on their arrival, rather than the voyage itself. The latter, in fact, is one of the best remedies for this condition in those who have been overworked mentally and physically, and need absolute rest: among these belong schoolgirls just entering on their menstrual life, and young women who have been compelled to study hard, in addition to the demands of society and fashion. The nerve-force is diverted from the natural channels, and some derangement is sure to follow.

On personal inquiry, the writer has been surprised to find the prevalence of amenorrhœa in young women from sixteen to twenty in our colleges and seminaries. This is not invariably the case, however: Dr. Hall, of Vassar College, informs me, that, of sixty-six girls who had studied hard preparing for college, thirty-seven report little or no inconvenience at any time during their menstrual histories; eleven have improved since their first menses, and have little or no inconvenience now; seven are slightly more inconvenienced than at first, two decidedly more so; and nine, who are somewhat troubled, report no change since the function was first established. Dr. Hall thinks the few disturbances of the menses which occur are due to change of climate and surroundings rather than study. Excluding defec-

tive development, she has found these cases the most difficult to treat while pursuing their studies; next to these, amenorrhœa depending on ovaritis has proved very stubborn.

The lack of fresh air, exercise, and proper food, very commonly leads to defective nutrition and chlorosis. Nature is obliged to close the safety-valve, and retain the blood for the use of the body, just as in exhausting diseases.

This is partially compensated for by a watery leucorrhœa instead of the usual flow. It need not be viewed with apprehension, but rather shows the monthly congestion of the pelvic organs is taking place, and that Nature will again assert herself when the organism can afford to lose the menstrual blood.

The Prognosis of amenorrhœa depends largely on the exciting cause. If the latter can be removed, the prognosis as to cure is very favorable; indeed, there are comparatively few incurable cases.

The General Treatment is indicated by the above; i.e., remove the cause. For the treatment of scanty and painful menstruation, the reader is referred to the chapter on dysmenorrhœa. The hot-water foot-bath described there for the congestive form is very useful for suppression of the flow from cold and wet. If due to a low vitality of the system, or chlorosis, hygiene is of prime importance. Well-ventilated sleeping apartments; exposure to the sun's rays, with exercise in the open air, either walking, riding horseback, or playing tennis, but never to such an extent as to make the patient feel exhausted afterwards; plain nutritious food, *mental rest* in schoolgirls, physical rest at the time of the expected monthly, and early retiring-hours are very essential for a cure.

Milk and cocoa are the best drinks; strong tea and

coffee are sometimes positively injurious, particularly the former. An inquiry into the patient's habits of eating and drinking will often give a clew to the best method of treatment. These measures may be aided by a change of air or a sea-voyage. In short, the great object is to develop robust health and strength, and Nature will see to it that the menses return without the interference of art. Here, forcing remedies and powerful emmenagogues would do positive harm.

The patient may be in fairly good health, but suffers from sudden suppression of the menses; the symptoms are those of cerebral, and, less often, pelvic congestion, dizziness, flushed face, epistaxis, together with a feeling of fulness and weight in the pelvis, especially at the time when the next period should appear. In these cases, mild emmenagogues are admissible just before and at the expected time; enemas of quite warm salt and water, and the hot foot-bath, are excellent adjuvants.

In the old school, ergot, savine, nux vomica, quinine, and, quite recently, permanganate of potash, two grains three times a day, have met with some favor. The peroxide of manganese, sometimes recommended instead of the latter, is not sufficiently reliable in its composition. Besides these, a combination of aloes, iron, and nux vomica has been largely used. Excellent as these may seem from a physiological standpoint, they are inferior to the following remedies if a careful selection be made.

The Faradic current is useful in some cases, but the indications for it have not been clearly defined. Begin with it about a week before the time for the flow to re-appear, and employ a mild current every other day, about twenty minutes at a sitting, till the flow appears, or the menstrual epoch has passed. Place one pole

— it makes no difference which — on the hypogastric region, the other over the sacrum. This is also worthy of trial in non-development or atrophy of the sexual organs. As a rule, however, the prognosis will be very unfavorable in such cases, unless the treatment be commenced at or near the usual age of puberty, which is very seldom done, as the patient generally does not apply to the physician till a much later period. To be of any benefit, the Faradic current should be used three times a week for some months, and no stronger than the patient can easily bear.

In infantile or non-developed uteri, the wearing of galvanic stem pessaries, i.e., alternate beads or disks of copper and zinc on a flexible stem, has sometimes proved beneficial. It is necessary for the patient to wear Thomas' cup pessary to retain the stem.

The question naturally arises, when does amenorrhœa in young girls demand interference? As a rule for all cases, *so long as the patient is perfectly well, leave her alone to Nature aided by good hygiene.* But when the menses are scanty and painful, or there is not a drop of menstrual blood, notwithstanding she has had all the symptoms of menstruation for a continuous number of monthly cycles (imperforate hymen), a thorough examination is imperatively necessary without further delay. Unless there is a faulty or inflamed condition of some of the pelvic organs, local treatment is inadmissible, and quite uncalled for, as then amenorrhœa is but a symptom of the general condition of the patient.

As in dysmenorrhœa, the medical and hygienic treatment should be of a constitutional character, every symptom between the menstrual epochs being carefully considered. If the flow fails to appear, continue the same plan of treatment until about a week before the

period should come, and then substitute some remedy having a more decided action in promoting a menstrual flow. This may be aided by hot foot or sitz baths, which are of little or no use in the interval. It is hardly necessary to add, that while the patient is improving in general health, and there is a decrease of morbid symptoms, the same remedy had better be continued. Even if the flow does not appear for two or three months, Nature will assert herself in time.

THERAPEUTICS.

| Aconite is an invaluable remedy for sudden suppression of the menstrual flow, from a *chill*, fright, or vexation, with the usual congestive phenomenon (Bell., glonoine, plat., puls.), especially in plethoric women. Ovaritis may accompany it, with painful urging to urinate, and *high fever*, also *anxiety* and *great restlessness*. The best results from it will be obtained when it is given promptly at the time of the exciting cause. If a number of days have elapsed, and the next period does not appear, pulsatilla is generally more suitable; less often, lycopodium. Rückert records a case of six months suppression in a plethoric young woman, with præcordial anguish and asthma, which was entirely relieved by aconite.

Belladonna. Amenorrhœa in plethoric women; sudden suppression of the flow, with *much pressure and throbbing in the head* (Acon., glon.), hæmatemesis; *feeling of weight and fulness* in the pelvic organs. When amenorrhœa is due to plethora, Dr. Hughes recommends belladonna in the intervals, and aconite at the periods; epistaxis, tickling in the nose; drawing pains from the sacrum extending down the thighs, *much bearing-down in the pelvis*, and profuse sweat before the menstrual flow.

|| Calcarea carb. A very important remedy for delayed menstruation in *scrofulous girls*, those who are fleshy, weak (with large abdomens), fair complexion, *perspire very easily about the head*, and are subject to *acidity of the stomach* and

constipation. There is reason to believe this remedy may avert the development of tuberculosis in these cases. Dr. Ludlam says, "Abundant experience has satisfied me that the calcarea carbonica is, perhaps, the most prominent and useful remedy for the relief of those menstrual irregularities which are incident to pectoral disease."

Glonoine. *Severe throbbing in the head,* and pale face, with amenorrhœa, particularly in plethoric women; the cerebral congestion is intense from the sudden suppression. This remedy acts very promptly, if at all, and is very useful at the climacteric period.

|| Graphites ranks near pulsatilla as a remedy for delayed or *tardy* menstruation with scanty, pale flow. Dr. C. Wesselhoeft, who has recorded a number of cases of insufficient menstruation treated by it,[1] thinks it is better adapted to patients over thirty years old, and is to the climacteric what pulsatilla is in youth. Dr. Dudgeon has shown its application to amenorrhœa with indurated ovaries,[2] and Hahnemann recommended it for delayed menstruation associated with great constipation. The stools are offensive, dark, half-digested, and lumpy, united by mucous threads. The skin is unhealthy, with excoriations, fissures, or itching blotches, from which exudes a corrosive, sticky, watery fluid. The patient tends to obesity, and her troubles to become chronic. Dr. Bönninghausen[3] mentions it for amenorrhœa, with itching or eczematous spots between the fingers.

Kali carb. Some of the older writers state that they prefer it to pulsatilla. Menses do not appear at the age of puberty, or are scanty, of a pungent odor, acrid, and cause an eruption on the thighs; menses suppressed, with anasarca or ascites. Dr. Jahr states that he has had some cases which could only be brought around by this remedy. The characteristic symptoms of sac-like swelling between eyebrows and lids, the susceptibility to cold, the sticking, stitching pains, and aggravation of the

[1] New-England Med. Gazette, vol. xi. p. 459.
[2] Brit. Jour. of Hom., vol. xxxi. p. 183.
[3] *Allg. hom. Zeitung*, vol. xxxiv. p. 252.

symptoms at two or three o'clock in the morning, will aid in selecting the remedy.

Magnesia carb. Scanty and delaying menses, of thick, pitchy consistence, and dark color; more profuse at night than in the daytime.

Natrum mur. The first menses are delayed or scanty. The patient is depressed mentally, and suffers from severe headache, constipation, is emaciated, and very easily fatigued.

|| Pulsatilla. While this is the chief remedy for amenorrhœa from exposure to cold and wet, or for a flow which is scanty, too late, and of short duration, it is often abused by prescribing it, in every case, as routine practice. It is very useful for delayed first menses in girls of a mild, tearful disposition, who are in fairly good health; menstrual suppression complicated with ophthalmia or supra-orbital neuralgia. The general symptoms should be considered in selecting this remedy. Dr. A. E. Small[1] records a case cured by puls. nut., when puls. nig. had failed. The menses were delayed and irregular, and the young woman suffered from severe pain in head, back, and stomach, with great restlessness.

Senecin ix. has been recommended by Dr. Holcombe[2] for retarded or suppressed menstruation. The patient is nervous or hysterical, and does not sleep well.

Sepia. Menses are scanty, flow dark. Dr. Jahr recommends it, next to pulsatilla, for the delay of the first menses if there is a leucorrhœal discharge instead, with determination of blood to the chest, and a pale face. It is an excellent remedy for the discolorations of the skin and face in women subject to menstrual derangements.

Serpentaria virg. Dr. Marcy[3] states that he has often used this medicine for suppressed and delayed menses from cold, violent emotions, and the debility consequent on fevers, with marked success.

Sulphur. Dr. Jahr ranks sulphur with pulsatilla for insuffi-

[1] Practice of Medicine, p. 814, 1886.
[2] U. S. Med. and Surg. Journal, vol. viii. p. 44.
[3] Theory and Practice, p. 512.

cient menstruation with pale flow. There is pressure in the pit of the stomach during the menses, and the patient is subject to flushes of heat, cramps in the calves of the legs and soles of the feet, with burning in the latter at night, rush of blood to the head, and heavy, pressive, frontal headache, especially in the morning, or on the vertex, like a heavy weight on top of the head.

The following remedies are less frequently useful :-

Alumina,	China,	Ferrum et strychnia,
Amm. carb.,	Cicuta,	3x.,[5]
Apis,[1]	Cimicifuga,	Hellebore,
Appocynum can.,	*Cocculus*,[3]	Helonin,
Arnica,[2]	*Conium*,	Hyoscyamus,
Arsenicum,	*Cuprum*,	*Ignatia*,[5]
Aurum,	Cyclamen,	(Iodine),
Baryta carb.,	Digitalis,	Lachesis,
Bryonia,	Dulcamara,	Leptandria,
Carbo veg.,	Euphrasia,[4]	*Lycopodium*,[6]
Causticum,	Ferrum,	Mercurius,

[1] Dr. J. R. Coxe (Hering's Amer. Arzpfg., p. 287) reports a case of amenorrhœa which had lasted for six years, cured by apis. It was associated with violent headache, rush of blood to the head, delirium, swelling or œdema of the legs and some of the abdomen.

[2] Girl, aet. 18, brunette, well developed; menses suppressed by a chill fifteen months previous. Puls., graph., sep., sulph., and rhus, given without benefit; no symptoms except headache, slight pressive pain in the breast. The use of arnica 12, three days before the menstrual period, was followed by the appearance of the flow, and the following monthlies were more profuse than the first. — RÜCKERT, *Klinische Erfahrungen*, vol. ii. p. 219.

[3] Dr. Stens relates an interesting case cured by cocculus 30. Suppression of the menses in a young girl was accompanied by periodical mania with intermissions of two or three weeks. — *Allg. Hom. Zeitung*, vol. lxxxix., No. 15.

[4] This cured a case reported by Dr. W. P. Defriez, characterized by the peculiar symptom, which had been constant for some months, menses regular in time, but *last only one hour*. The flow at the next monthly after the use of euphrasia lasted a number of hours, and the second one was normal.

[5] Dr. Ludlam praises this combination for chlorosis, also ignatia. — *Dis. Women*, p. 108, 1881.

[6] Amenorrhœa with rheumatic pains.

Nitric ac.,	Polygonum hydro-	*Silicea*,
Nux mosch.,[1]	piper,[3]	Strontia,
Opium,[2]	Rhododendron,	Veratrum alb.,
Phosphorus,	Rhus tox.,	Veratrum vir.,
Plumbum,	Sabadilla,	Xanthoxylum,[4]
Podophyllum,	Sarsaparilla,	Zincum.

As a help in selecting a remedy, the following digest has been prepared for suggestions to the reader: —

Amenorrhœa, with bleeding in some other portion of the body than the uterus at the menstrual epoch. — (See Vicarious Menstruation.) Bell., bry. (ham.), lach., millefolium, phos., puls., sulph., veratr. alb.

Amenorrhœa with Cardiac Disturbance. — (Compare remedies for chlorosis and debility.) Ars., iodine, lach. (lycopus v.); also acon., apis, bry., caust., cimicif., cupr., kali carb., lil. tig., nux mosch.

Amenorrhœa with Cerebral Congestion or Headache. — *Acon.*, *bell.*, ferrum, *gels.*, *glon.* (macrotin), merc. (nat. mur.), opium (silicea), sulph., verat. alb., verat. vir.

Amenorrhœa with Dropsical Symptoms. — *Apis*, *apocynum can.*, ars., calc. carb., hellebore, kali carb., merc.

Amenorrhœa with Gastric Aeffctions. — Aletris, ars. (china), helonine, lycop., puls.; also kali carb., lach., nux mosch., nux vom., podo.

Amenorrhœa with Mammary Symptoms. — Bry., *cimi-*

[1] This promises to be an excellent remedy for scanty, irregular, or suppressed menses from cold, with the characteristic mental and head symptoms. Dr. H. C. Houghton relates a case of suppression of the flow by a bath, followed by intense labor-like pains, fainting at acme of pain, recovering with a start, and agonizing expression of the face. — HOYNE'S *Clinic. Therap.*, vol. ii. p. 96.

[2] Amenorrhœa from fright, with great drowsiness.

[3] Dr. A. E. Small has known an infusion of this plant (smartweed), in five-drop doses, to succeed in delayed menstruation when many other remedies had failed, and has used it with "more than ordinary good results." — *Practice of Medicine*, p. 815, 1886.

[4] Dr. C. D. Williams, U. S. Med. and Surg. Journal, 1871, p. 35; and Raue, Clinical Records, p. 179, 1872, and p. 178, 1875.

cifuga (china), *conium*, cyclamen, dulcamara, phos., *puls.*, rhus tox. (silicea).

Amenorrhœa with Nervous Phenomena, chiefly Hysterical. — (See Puberty and the Climacteric Period.) Causticum, cicuta, *cimicifuga*, cocculus (coffea), cuprum (cypripedium), ferrum (gels.), hyosc. (theridion).

Amenorrhœa with Congestion of the Pelvic Organs. — Acon., *bell.*, cauloph., merc., puls., *sepia*, sulph.

Amenorrhœa with Skin Eruptions. — Carbo veg., dulc., *graphites*, kali carb., sarsaparilla, sepia, sulph.

Flow Absent or Delayed in girls old enough to menstruate. — Acon., baryta carb., apis, *calc. carb.*, *cimicifuga*, digitalis, droscera, *graph.*, *kali carb.*, nat. mur., *puls.*, sepia, *silicea*, *sulph.*

Flow too Early and Scanty. — (Compare Dysmenorrhœa.) Alum., (ars.,) carbo veg., cauloph., *manganum*, nitric ac., phos., silicea.

Flow too Late or Delayed, and Scanty. — Amm. carb., aurum, baryta carb., conium, cyclamen, dulc., *graph.* (lachesis scanty, may be too early, too late, or regular, like sepia), lith. carb., mag. carb., nat. mur., *puls.*, sarsap.

Flow Intermittent. — Appocynum, causticum, crotalus, hyosc., puls., sabadilla.

Flow at Irregular Periods. — Apis, *cimicifuga*, iodine, nitric ac., nux mosch., sabadilla, sabina, senecin, staphisagria.

Flow suppressed from Chlorosis. — (Compare chapter on Puberty and the Climacteric Period.) Ars., calc. carb., china, conium, cyclamen, ferrum, ferrum et strychnia, *ignatia*, nat. mur., phos., plumbum, puls.

Flow suppressed from Cold and Wet. — *Aconite*, bell., cimicifuga, dulc., glonoine, nux mosch., *puls.*, rhus tox., senecin ; also cauloph., cham., gels., sepia, sulphur.

Flow suppressed from Debility — (Compare Chlorosis.) Aletris, ars., china, helonin, nat. mur., senecin.

Flow suppressed from Mental Emotion (fright, anger, chagrin, disappointment, etc.). — *Aconite,* causticum (china), coloc., conium, hellebore, ignatia, lycop., opium, pulsatilla.

Flow suppressed from Ovaritis. — Acon., *apis,* bell., cimicif., coni., lil. tig. (phytolacca), (podo.), thuja, zincum.

Leucorrhœa in place of the Menses. — (Alumina), arsenicum alb., china, cocculus, nux mosch., phos. (ruta grav.), senecin, sepia, silicea.

CHAPTER XII.

MENORRHAGIA AND METRORRHAGIA.

THE former term means profuse menstruation; the latter applies to a discharge of blood from the genitals, between the menstrual periods. Neither can be considered a disease in itself, but is secondary to or symptomatic of other diseases, such as: —

Fibroid tumors of the uterus.

Polypoid degeneration of the endometrium (endometritis prolifera or hyperplastic endometritis).

Retention of the placenta after abortion. Sub-involution. Ovaritis.

Engorgement of the portal circulation.

Telluric influences, such as malaria.

In short, *a persistent flow of blood from the uterus is often due to some neoplasm or growth within that organ, if its history does not date from pregnancy.* There are some women who naturally flow very profusely, and yet are not well unless they do. Such persons are liable to have the monthly period come on in three or four months after confinement, and flow so severely as to make them anæmic, hysterical, and seriously interfere with their ultimate recovery, unless the discharge is controlled in some manner.

The quantity is so variable, that the question whether the patient is flowing too much should be decided by its effect on the organism. If a woman flows profusely, and is pale, weak, anæmic, has white ears, complains of

dizziness, and the mucous membrane of the mouth and tongue is pale instead of pink, there is reason to believe it is due to loss of blood. In all cases of profuse and persistent flowing, an examination should be made to ascertain the cause, and, if possible, to remove it. Some cases depending on the presence of foreign growths, such as fibroids, will partially and occasionally wholly yield to treatment, so that the patient will pass safely through the climacteric without having to submit to a surgical operation.

In many cases, this can hardly be hoped for; and the physician should be careful in making such promises. This question will be considered under the proper chapters (see Fibroid Tumors, Polypi, etc.).

The Diet should be generous: milk, eggs, beef in some form, or a good extract of it; mutton chops; strong broths and soups in small quantities, but often. Lemonade, oranges, and grapes are refreshing to the patient, and the acid in them seems to have a beneficial influence. Stimulants are to be proscribed, as they often do more harm than good, except in rare instances to temporarily revive a patient with tendency to syncope. Where there is marked anæmia, I have sometimes seen good effects from the use of beef, wine, and iron; but in the very great majority of cases, patients will do much better without it, if the physician carefully selects *the one remedy*, and properly feeds his patient.

Local Treatment. — In many cases very little, if any, is necessary other than the removal of the growths, if present. The proper remedy, carefully selected, will prove the best styptic. Douches of hot water will sometimes diminish the flow temporarily; and the benefit to be derived from the hot-water spinal bag must not be forgotten. The douches can be repeated as often as three times a day if necessary, and if the patient does

not feel exhausted afterward. In severe cases, a vaginal plug may be resorted to, as a temporary measure. Styptics, astringents, etc., have no *curative* value, and cannot always be depended upon, even when applied directly to the source of the hemorrhage.

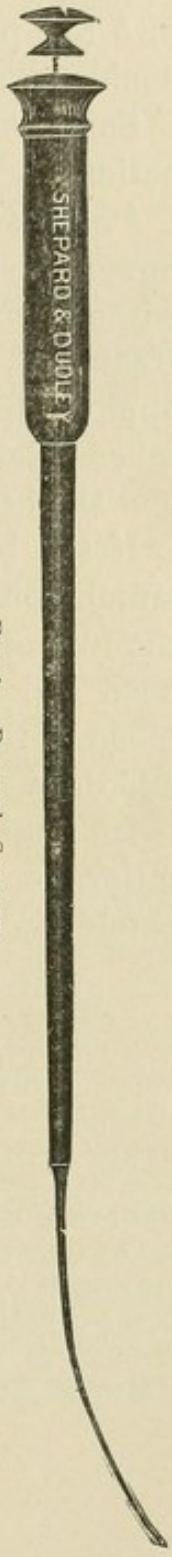


FIG. 64. BUTTLE'S SYRINGE.

Among the simplest applications are tampons squeezed out of a saturated solution of alum, and crowded close against the cervix. When these are taken out, pledgets of glycerine should be inserted, to soothe the dry, puckered condition of the vagina. Obstinate cases, depending on polypoid degeneration (hyperplastic endometritis) will require thorough curetting, and the intra-uterine application of iodine, either by Buttle's or Braun's syringe, or by cotton wrapped tightly round a uterine probe or sound. If the hemorrhage returns in a few weeks, and will not yield to remedies, the curette should be used again, and the persulphate of iron applied instead of the iodine, preferably in a solution of one part of iron to three of water. Dr. Martin of Berlin uses fifteen drops of undiluted iron with Braun's syringe. Though I have often seen him do this, I should fear serious results in the hands of a less competent person; and believe the diluted preparation quite as efficacious and far less hazardous.

An invariable rule, never to be forgotten, in all injections into the uterine cavity, is to have the cervix well dilated;

even then it may contract, and the imprisoned fluid cause great pain, or escape through the Fallopian tubes into the peritoneal cavity, if the injection tube be not double so as to provide for a return current.

Sometimes a change of air alone will cure the patient.

I have seen a lady well advanced in the climacteric flow very profusely and continuously at the seashore, without receiving any benefit from local or internal treatment, even from curetting the uterus, and the application of iodine. But on removing four or five miles inland, the hemorrhage ceased in a short time, and she became perfectly well.

If the bowels are constipated, and hinder free portal circulation, they should be emptied by enemas. Raising the foot of the bed a couple of inches, and keeping the head and shoulders low, tends to lessen the amount of blood in the pelvis. Plenty of fresh cool air, cool food and drinks, in the most severe cases, are advisable.

In some cases of metrorrhagia, from an atonic condition of the uterus, the Faradic current has been employed with success.[1]

[1] Mrs. ——, æt. 30. Has had three children, and one abortion at three months. Since the latter, has suffered from slight but constant discharge of blood from the uterus. A careful examination showed there was no portion of the placenta retained, neither a tumor nor polypus of the uterus to account for it. Irrigation with hot water, ergotin, liquor ferri, and plugging of the vagina were tried, without success. The hemorrhage still continued. As the last resort, electricity was used. One pole of the Faradic current was placed on the hypogastrium, the other was applied to the neck of the uterus. The patient complained of pain, but the bleeding stopped in five minutes. It recurred in three days, but disappeared after a more prolonged application of the current; and the patient recovered completely, under a tonic and hydro-therapeutic treatment. — Dr. Ramos, *Bullet. Général de Thérapeutique*, No. 1, 1886.

THERAPEUTICS.

Generally speaking, the remedies applicable to menorrhagia and metrorrhagia are also valuable in the therapeutics of abortion. The efficacy of medicine is beautifully illustrated in its effect on uterine hemorrhage, if it be of non-puerperal origin; but in the majority of cases, one remedy alone will not be sufficient to cure the patient. New symptoms may arise, others be cured, and a second or even a third remedy must be substituted for the *one* previously given. In prescribing for the conditions under consideration, the ovarian symptoms accompanying the flow are of great importance, and should be carefully ascertained.

Arsenicum.[1] Menses too early, too profuse; exhausting menorrhagia; hemorrhage, with lancinating, burning pains, especially in the right ovary. If there is also chronic endometritis. It is not a common remedy, but has proved curative in some obstinate cases in material doses.[2]

|| Belladonna.[3] The uterine and menstrual symptoms resemble sabina, but the general condition of the patient is characteristic of bell. *Great pressure downward in the genitals, as if the contents of the abdomen would protrude through the vulva* (Lil. tig., plat., sepia); *menses too early and too profuse* (Calc. carb., nux vom.); *bright red* (Ham., ipecac.), *or thick, decomposed, dark red blood which feels hot to the parts;* burning, throbbing in the right ovary; tremulous feeling through the whole body. Gentle pressure on the uterus, or motion of the hands and feet, causes vertigo and nausea, without retching or heaving. Dr. Carroll Dunham recommended it for offensive metrorrhagia, and for extremely offensive menstruation in young unmarried women.

[1] Hughes' Pharmacodynamics, 4th ed. p. 250.
[2] Hahn. Mat. Med., part i. p. 18, Ars.
[3] Hahn. Monthly, December, 1870, Dr. O. P. Baehr.

| **Calcarea Carb.** is an invaluable remedy. It is indicated by the general conditions and symptoms of the patient, rather than those peculiar to the sexual organs. Menses *too early*, last too long, and are *too profuse*[1] (Bell., nux vom.); *leucorrhœa like milk* (Conium, lyc., *puls.*, *sepia*, sulph. ac.), with itching and burning in the genitals, *strumous* diathesis, and tendency to pectoral disorders; *feet feel cold and damp;* much sweat on labia, and sweating of the feet. Dr. Guernsey recommends calcarea, and also silicea, for menorrhagia in nursing women.

| **Chamomilla.** The mental symptoms are important. *The flow is dark and clotted;* the clots large, and associated with *severe labor-like pains in the uterus; drawing, griping pains from the sacrum or small of back* forward to the pubic bones. The pains are followed by the discharge of clots. The menses are too early, profuse, and sometimes offensive. The metrorrhagia is in paroxysms.

China. This remedy is not only of great value in relieving the debility from loss of blood, but it also has symptoms of its own, resembling crocus. It can be given with advantage between the periods, in case of anæmia, — here I prefer the second or third trituration of the bark, — while some other remedy, such as crocus, is used instead at the time of the flow. Cases of malarial origin, where the symptoms show a marked periodicity, and also for women suffering from sexual excesses. *Profuse perspiration at night; patient complains of being chilly, with thirst before or after the chill;* menses too early, profuse, black clots, with spasm in chest and abdomen.

Cinnamon.[2] Well recommended by Dr. Winterburn, where the flow comes on suddenly, is profuse, and of a bright red color.

|| **Crocus.**[3] *Metrorrhagia of dark, viscid, stringy blood, in*

[1] Hahnemann states that if the menses appear at the regular period, or later, calcarea will do no good, even if they are not scanty.

[2] Arndt's System of Medicine, vol. ii. p. 393.

[2] Dr. Moffat states that it induced metrorrhagia in a lady medical student, who tried to ascertain if it would cause it. — *North Amer. Jour. of Hom.*, May, 1883.

[3] Hughes' Pharmacodynamics, 4th ed. p. 443.

black clots, worse from least motion; functional menorrhagia, particularly in young women. I prefer the 2x. dilution.

Digitalis. Where the flow is secondary to engorgement of the portal circulation,[1] especially if from cardiac disease, and the symptoms present indicate digitalis. Symptoms of passive venous congestion prevail; the face is pale or livid, and the skin cold. In these cases, it may be necessary to use it strong enough for physiological effects.

Hamamelis 2x. If the flow be passive, small amount, but continuous, color usually dark, may be bright. *If there be a hemorrhagic diathesis, and tendency to venous engorgement,* menorrhagia associated with sub-acute ovaritis, the blood slowly trickles away, and is not coagulated. Dr. D. Dyce Brown[2] recommends hamamelis for uterine hemorrhage, especially if abortion is threatened, or if it follows abortion. The flow is more often dark, venous (Erigeron, arterial), but he does not limit its action to any color of the discharge.

| Ipecac. *Menses too early, profuse, and of bright red blood,* which coagulates readily. It is accompanied by nausea, great weakness, and cutting, griping pains in the abdomen.

| Magnesium Carb. Menses delayed. The discharge is usually viscid and glutinous, but may be coagulated. A peculiar symptom, often verified, is that *the flow is more profuse at night than in the daytime.*

Nitric acid[3] has been found very useful for menorrhagia or long-continued passive or irregular hemorrhage, *after abortion* (Secale cor.), confinement, or at *the climacteric* (Vinca min.); bearing-down in hypogastrium, pain down the thighs, needle-like pains in the body; urine strong, like horse's urine; aching in the rectum, after stool; loss of strength and appetite; headache; weak, irregular, sometimes rapid pulse, and other symptoms of anæmia; flow shreddy and dark-colored.

[1] Cardio-Uterine Remedies. — E. M. HALE, M.D., *Am. Hom. Jour. of Gyn. and Obst.*, August, 1885.

[2] Monthly Hom. Review, Aug. 1, p. 473, 1870.

[3] Dr. Ludlam reports a case of menorrhagia with remittent fever, and a very obstinate case of menorrhagia alternating with convulsions, cured by nitric ac. 6x. — *Dis. Women*, pp. 262 and 266.

| **Nux Vomica.** The mental and other general symptoms are important. *The menses are too early and too profuse; during the menses, nausea in the morning, with chilliness, attacks of faintness, and pressure toward the genitals.* The symptoms are worse in the morning after eating, from motion, and in the open air; great irritability of the nervous system.

| **Platina.** *Menses too early and too profuse*, last too long, *discharge dark and thick;* may be clotted, and accompanied by bearing-down pains in the abdomen (Bell., sepia). There is increased sexual desire, particularly after the flow ceases; also *painful sensitiveness and constant pressure in the mons veneris and genital organs;* body feels cold, except the face;[1] hypersensitiveness and irritability of the genital organs; the patient has the most exalted self-esteem; premature development of sexual instinct; and for older women when the metrorrhagia is associated with melancholia.

|| **Sabina.** Dr. Hughes recommends its use both during and between the periods;[2] *metritis accompanied by flooding;*[3] *menses too early, too profuse, last too long; hemorrhage from the uterus in paroxysms* (Trillium), *worse from motion, blood dark and clotted,* or may be light-colored and florid; *after abortion or labor; pain from back to pubis.* Increased sexual desire. Hering states that the metrorrhagia is increased by the least motion, but often better from walking.

|| **Secale cor.** has been recommended for uterine hemorrhage, when the uterus is atonic and hyperæmic, in doses of the tincture sufficient to secure uterine contraction. It is also useful in dilutions, but in either case the preparation must be fresh. *Hemorrhage from the uterus, worse from the least motion;* discharge black, fluid, and very fetid, also if it is attended with labor-like pains. Dr. Kafka[4] states that he has used ergotin in many cases of profuse menstruation, especially for women who have given birth to many children near together, when the flow

[1] Lectures on Materia Medica, C. Dunham, vol. ii. p. 135.
[2] Manual of Therapeutics, Hughes, p. 283.
[3] Brit. Jour. of Hom. xxi. p. 342.
[4] Allgemeine Hom. Zeitung, No. 55, p. 114.

was *perfectly painless and increased by the least active or passive motion*, and never has known it to fail.

Trillium. Hemorrhagic diathesis; flow returns every fortnight (Plat.), with yellowish creamy leucorrhœa during the intervals; the flow is of bright color, and comes in gushes on the least motion (Sabina). It is especially suitable to the climacteric, and has been used with success for uterine hemorrhage depending upon the presence of fibroid tumors.[1]

Tarantula has been recommended by Dr. Jousset, if the type of the fever accompanying a menorrhagia is intermittent.[2] Nit. ac. 2x. has been used successfully for similar cases.

The following remedies are less frequently used, but may be referred to if none of the preceding ones seem to be indicated: —

Acon., aloe, ambra, *ammon. carb.*, apoc. can., argentum, arnica, borax, bovista, bryonia, caust., carb. veg., carbol. ac., cimicifuga, coffea, *cyclamen*,[3] erechthites, *erigeron*, ferrum, helonias, hepar sulph., hydrastis,[4] hyosc., ignatia, ferrum, kali carb., kreosote, *lycop.*, laurocerasus,[5] millefolium, merc., nat. mur., phos., puls.,

[1] Ludlam: Dis. Women, p. 998.

[2] Lectures on Clinical Medicine, Jousset, p. 46.

[3] Mrs. ——. The menstruation was very profuse, obliging her to lie down, and always accompanied by the discharge of a membrane; flow profuse, dark, and clotted. Eighteen months previous she had a miscarriage, and was ill for five weeks; since then she has had this menorrhagia, and thirty-six hours after the flow commences, a little membranous bag is discharged, rarely in shreds, and without pain. Cyclamen 3x. was given, and the membranes appeared only once afterwards, and the menses became normal. — Dr. A. C. Pope: *Monthly Hom. Review.*

[4] Hydrastis has been recently considered almost a specific for menorrhagia and metrorrhagia, in doses of twenty drops of the fluid extract three or four times a day. Though many cases have been reported, the exact symptoms indicating the drug have not yet been defined, and it must be used empirically. Dr. Wilcox has given a summary of Schatz's paper (who introduced it for uterine hemorrhage), the results of other experimenters, and brief records of forty-three cases, in which he employed the remedy with generally good effect. (See New-York Med. Journal, p. 199, Feb. 19, 1887.)

[5] Dr. J. L. Arndt has found this very useful in the tincture for severe uterine hemorrhage, with extreme prostration, especially at or after the climacteric, and

rhus tox., ruta grav., sepia, silicea, sulph., ustilago, veratr. alb., vinca m. IX.,[1] zinc.

In patients predisposed to hemorrhage, i.e., of a hemorrhagic diathesis, Dr. Ludlam recommends one of the following remedies: china, ipecac, sabina, platina, secale cor., ferrum, nux vom., nat. mur., hamamelis, trillium, rhus tox., calc. carb., bell., crocus, carb. veg., phos., ars. alb., sulphuric acid, nitric acid.

If associated with a scrofulous diathesis, he uses calc. carb., calc. phos., hepar, silicea, baryta carb., iodine, phytolacca, carbo veg., mezereum, merc. sol., merc. iod., nitric, muriatic, or sulphuric acid.

In obstinate cases of passive uterine hemorrhage, when carefully selected remedies fail, try those of an antisyphilitic nature; such as, kali iod., thuja, merc. precip. ruber, and nitric acid.

In chronic cases associated with ovaritis, which may have preceded the abnormal flowing, try bell., colocynth, hamamelis, lilium tig., lach., carb. veg., sepia, conium, veratr. vir., platina, merc. cor., puls.

Menstruation oftener than once in twenty-eight days, and scanty. — Asafœtida, (cactus,) carbo an., *mangan. acet.*, *phos.*, sarsap.

Menstruation oftener than once in twenty-eight days, and profuse. — Aloe, amm. carb., arg. nit, ars., *bell.*, borax, bovista, bromine, bry., *calc. carb.*, canth., carbo veg., caust., cham., china, cocc., cycla., *ipecac.*, kreosote, mezereum, mur. ac., *nux vom.*, *plat.*, *sabina*, stannum, sulph., trillium.

Menstruation delayed beyond twenty-eight days, and

reports three cases in Hoyne's Clinic. Therap., vol. ii. p. 300. The symptoms calling for it are: too early and too profuse menstruation; blood thin, liquid; with stupor or coma, and nightly tearing in the vertex.

[1] Dr. Hughes has found this useful to check passive uterine hemorrhage occurring in women long past their climacteric. — *Manual of Pharmacodynamics*, p. 909, 1886.

scanty. — Acon., alumina, amm. carb., aur., bov., cocc., coni., drosc., dulc., euphrasia, *graph.*, helonias, lycop., lith. carb., mag. carb., *puls.*

Menstruation delayed beyond twenty-eight days, and profuse. — *Chelidonium*, ferrum, kali iod., staphisagria.

Menstruation protracted. — Acon., calc. carb., carbo an., caust., china, crocus, ham., lycop., mez., *nux vom.*, *plat.*, *sabina*, secale, silicea, trillium, ustilago.

Menstruation irregular. — Arg. nit., cimicifuga, iodine, nit. ac., nux mosch., puls., silicea, staphisagria.

Blood bright red. — Acon., *bell.*, brom., *cinnamon*, *erigeron*, *ham.*, hyosc., ipecac, millefol., sang., trillium.

Blood decomposed, dark red (*fluid*). — Bell., bry., carbo an., hamamelis.

Blood black, almost inky. — Cactus, canth., *cyclamen*, *kali nit.*, secale, sulphur.

Blood black and clotted. — Amm. carb., cham., china, cimicif., coffea, *crocus*, *cyclamen*, ignatia, kreosote, lach., lycop., mag. carb., platina, puls., *sabina*, secale, ustilago.

Blood dark, viscid, stringy. — Cactus, *crocus*, *amm. carb.*, *cyclamen*, ignatia, mag. carb., platina.

Blood, offensive odor. — *Bell.*, bry., *carbo veg.*, caust., cham., helonias, ignatia, *kreosote*, sang., secale (silicea), (sulph.).

Blood acrid, makes thighs sore. — Amm. carb., aurum, carbo veg., caust., kali carb., lach., rhus tox., sarsap., sulphur.

Exhaustion or fatigue during or after the flow. — Alumina, amm. carb., ars. alb., carbo an., china, cocc., erigeron, ferrum, helonias.

Well only during menstruation. — (Mental condition, stannum.) *Zinc.*

Flow only in the morning. — Sepia.

Flow only in the morning and evening. — Phellandrium.

Flow more profuse early in the morning. — Bovista.

Flow only during the day. — Caust., puls.

Flow during the day, and especially while walking. — Puls.

Flow ceases in afternoon. — Magnes. carb.

Flow lessens in afternoon. — Magnes. carb.

Flow increases in afternoon. — Sulphur.

Flow worse at night. — Amm. mur., bovista,[1] *mag. carb.*, zinc.

Flow only at night. — Bovista.[1] *Only in the evening*, coffea.

[1] Miss. ——, aet. 33. Previous health fairly good. The menstrual flow appeared at proper time, but did not cease. It was painless, slightly clotted, of a brighter red than during the menstrual flow proper, and in sufficient quantity to necessitate a change of cloths every four or five hours. The marked features of the case were: absence of aggravation from moving about; the decided increase of the flow at night in bed; the appearance of the discharge, as the continuation of the normal catamenia, and the total absence of any local or constitutional symptoms to account for its existence. Ipecac, nux vom., secale, cham., millefolium, puls., and ars. were given till the time of the next monthly, which amounted almost to flooding; sabina and china also failed. A very careful physical examination revealed nothing except a relaxation of the vagina near the cervix; the uterus high up in the pelvis, congested, and perfectly movable. The condition of the patient was now desperate. A pledget of lint soaked in dilute tincture of iron was placed against the cervix, and the vagina firmly packed. This did no good, nor did the injection of two drachms of dilute tinct. muriate of iron into the cervical canal; ergot in formidable doses was of no effect. Bovista 4x. trit. every half-hour was then given; uterine contractions were produced at short intervals after the third dose. She continued to improve from this time, and made a perfect though slow recovery, with the help of ferrum, ars., crocus, and cocculus. There has been no return of the hemorrhage. — Dr. W. Wesselhoeft: *New-England Medical Gazette*, p. 461, vol. ii. 1876.

[1] Mrs. ——. Menstruation always profuse. After bearing children her catamenia became a fearful menorrhagia, completely exhausting her. There was nothing particularly characteristic, further than a wonderful flow of blood, and an amelioration during the daytime when on her feet, and an aggravation at night when lying down. This condition continued for months; all remedial agencies brought no relief through allopathic therapeutics, further than terrible spasms of the uterus, apparently brought on by an indiscriminate use of ergot. After exhibiting remedies as they occurred to me, and then only palliatives, as they would not control the hemorrhage flow, I administered bovista, and she recovered. During this trouble her attendant advised her to become pregnant, which seemed impossible, although during thirteen months, to use her own words, "we never tried to prevent." Three months after taking bovista she became pregnant, when they did try to prevent, and was delivered, at full term, of a fine healthy boy. — Dr. Isaac Cooper: *Hahn. Month.*, p. 168, November, 1874.

Flow ceases at night. — Caust. (puls.).

Flow ceases on lying down. — Cactus, grand., causticum.

Flow only during sleep or absence of pain. — Mag. carb.

Flow between the periods. — *Ambra,* bell., bovista (caust.), hepar, mangan. acet., silicea.

During menstruation, nausea. — Apoc. cann., capsi cum, ipecac., kali bi., nux vom., puls., viburn. op.

During menstruation, diarrhœa. — *Bovista,* caust. (erig.).

During menstruation, eruption on the skin. — Dulc., kali carb., sarsap.

Flow less on motion. — Cyclamen.[1]

Flow worse on motion. — Arg. met., cocc., coffea, *crocus,* erig., nit. ac., puls., *sabina, secale,* trillium, ustilago, zinc.

Flow too profuse at the climacteric. — *Lachesis,* laurocerasus, *nitric acid,* secale cor., trillium, ustilago,[2] *vinca minor.*

[1] Mrs. ——, aet. 44; always well till within two months. The flow had continued all through each month; discharge pale and watery, at first dark and clotted; general appearance somewhat exsanguinated; mouth, tongue, and lips pale; she always felt best when moving about; *the flow almost ceased as long as she was moving about at work, but as soon as she sat down quietly in the evening the flow re-appeared, and continued after she went to bed.* Cyclamen 2x. relieved her promptly; she improved in general, and continued so, the menses returning monthly until March, 1873, when the troubles of the last year re-appeared. After two doses of the same remedy she remained well. — H. RING: *Raue's Record Hom. Lit.,* p. 233, 1874.

[2] Mrs. ——, aet. 40; had always been subject to profuse menstruation, sterile; was a large, fleshy, flabby, bloated-looking woman, with a very sallow complexion, inclined to be (and formerly had been) dropsical from excessive loss of blood; profuse menstruation, which seems to her to be principally "water and clots;" she says there is no outward flow when she lies still, but the clots pass out of the uterus when she gets up, and also water; she feels so full in the uterus that she must rise to get rid of the clots. She received sabina, which did not arrest the flooding. At my second visit in the afternoon she seemed better, and I believed that sabina was the right remedy. But she *flowed fearfully during that night;* when I saw her in the morning, she was no longer able to rise to get rid of the clots; the flow still continued; she was very low, scarcely able to speak aloud, and

in a most critical condition. Ustilago maidis, in the tincture, was prescribed mixed with water. From the moment of commencing to take it she improved; but she had been so reduced by the enormous loss of blood, that it was two or three weeks before she was able to sit up a little. After six months there has been no return of the trouble; she has improved in health, and her old trouble seems to have left her for good. Hale in his "New Remedies" gives as a characteristic, menorrhagia at the climacteric period; active and constant flowing, with frequent clots. — DR. J. H. P. FROST: *Hahnemannian Monthly*, p. 145, November, 1874.

CHAPTER XIII.

VICARIOUS MENSTRUATION.

THIS name has been given to a periodic flow of blood from some other portion of the body than the uterus, at the menstrual epoch. As a rule, it is from some mucous membrane. There is, however, scarcely any part of the body from which it has not been known to occur. The most common places are the nose, stomach, hemorrhoidal tumors, lungs, breasts, and ulcers. Instead of a discharge of blood, there may be a serous transudation, and the patient suffers for the time with a profuse watery diarrhœa.

The most common cause is a poor state of health or faulty nutrition. In other cases, it seems to be due to high arterial tension, and a slight discharge of blood may precede the regular flow from the uterus by a few hours. In a case of this kind now under my care, it comes from the right nipple.[1]

When it is seen in young women who have never menstruated normally, it is well to make a careful examination, and be sure that there is no obstruction to the flow of blood from the uterus. If for a number of successive months the blood comes from the lungs, there is reason to fear tuberculosis will follow, especially in scrofulous women, or those having an hereditary taint.

[1] This case was cured by pulsatilla.

The general treatment of vicarious menstruation is just the same as for amenorrhœa, to which the reader is referred. The importance of constitutional remedies and treatment must never be overlooked.

THERAPEUTICS.

|| **Bryonia.** Besides other symptoms which may be present, it is applicable for vicarious menstruation in the form of epistaxis; also, for suppression of the menses with epistaxis (Carlsbad water, ham., puls., sepia) in women accustomed to too early and too profuse menstruation (Calc. carb.). The blood is florid, and the bleeding is most often in the morning, sometimes waking the patient from sleep. While bryonia is especially applicable to the above, it should not be forgotten in other forms of this affection, as clinical experience shows it is one of the chief remedies.

Ferrum. Dr. Leadam's favorite remedy; anæmic women subject to fiery red flushing of the face; suppression of the menses with hæmoptysis (Dig., millefolium, phos.).

| **Hamamelis.** Vicarious menstruation of dark or venous blood from the nose, mouth, stomach, or hemorrhoids. The presence of varicose veins, and a fluid rather than clotted condition of the blood, are additional indications.

| **Pulsatilla.** Epistaxis, hæmatemesis, or expectoration of pieces of dark coagulated blood, with suppression of the menses. The pressive throbbing headache, palpitation, chilliness, and the above symptoms, with scanty or delayed menstruation, are additional indications for this remedy. Dr. Kapper[1] reports an interesting case cured in six weeks by this remedy. The principal symptoms were, violent headache, dazzling before the eyes, twitches in the nose, tightness of the chest, fulness of the mammæ, and oppression of the stomach, followed by violent epistaxis and flow of blood from the breasts, with relief and cessation of all the symptoms. This had been repeated a number of successive months. The girl was apparently well, eighteen

[1] Zeitsch. f. Hom. Klinik, vol. i. p. 106.

years old, and had never normally menstruated; warm sitz-baths, leeches, and purgatives had been tried without any benefit.

The following remedies are less frequently useful: — Alumina, *bell.*, calc. carb., calc. phos., Carlsbad water, digitalis,[1] kali carb., lach., lycopodium,[2] natr. mur., *phos.*, sang., senecio,[3] sepia, sulph., veratr. alb.

[1] Dr. W. H. Hoyt reports a case cured by digitalis, characterized by the following symptoms: pain in and about the chest, and sometimes epistaxis before the menses, followed by choking spasmodic cough at night, and the expectoration of a solid, bloody mass of mucus with immediate relief. This mucus was very difficult to detach, and often presented a rusty, black, and clot-like appearance. — *Transactions N. Y. State Soc.*, 1869, p. 309.

[2] Dr. Leadam reports a case cured by lycopodium. The patient was subject to very irregular menstruation; in the intervals, first serum and then blood oozed out of the right nipple. — LEADAM: *Diseases of Women*, 1874, p. 33.

[3] The menses appeared at the age of fourteen; she was regular till sixteen; since then for three years the menstruation has entirely ceased, and instead she has hemoptysis, spitting blood for one day during every month. Pulsatilla IX. three times a day was given for twenty days; it was then five weeks since she last spit blood, but the menses did not appear; she then received senecio IX. two drops three times a day, and the flow appeared on the tenth day after using senecio. — DR. HARMAR SMITH, *Hom. World*, p. 537, Dec. 1, 1882. (Though not positively stated, it is inferred that the case was permanently cured, or it would not have been reported as a case of vicarious menstruation cured by senecio.)

CHAPTER XIV.

DYSMENORRHŒA, OR PAINFUL MENSTRUATION.

LIKE leucorrhœa, this is not a disease in itself, but a symptom; i.e., it is secondary to some primary affection. It has been classified, for convenience of description, as neuralgic, ovarian, congestive, obstructive, and membranous dysmenorrhœa; but these forms so often overlap each other, that frequently a case cannot be positively assigned to any one of them. The pathology is not well understood, and eminent physicians have very different opinions concerning it. Fortunately, this does not interfere with the successful treatment of a large majority of these cases.

It would seem that hyperæsthesia of the nerves, or perturbation of nerve-force in and about the uterus, plays an important *rôle* in nearly all cases of dysmenorrhœa. The same causes producing neuralgia in other parts of the body produce a similar condition in the pelvic organs.[1] In other cases, the hyperæsthesia may be caused by the inflamed or engorged ovary or uterus, which is relieved by the escape of the menstrual blood. This is not unlike the pain of any localized inflammation, such as a whitlow, which is relieved by lancing, and the escape of blood.

The theory of obstruction to the escape of the menstrual flow, as a cause of painful menstruation, will

[1] Austie: Neuralgia, and the Diseases that produce it, p. 69.

hardly account for so large a proportion of cases as some authors have thought. How many times physicians observe patients having a pin-hole os, or an extremely small cervical canal, who do not suffer much during the menstrual period; while others, having a much larger canal, are in agony at such times.

The cervical canal may be large enough in uterine flexions; but the bending of the cervix on the body of the uterus will more or less occlude its canal, the calibre of its blood-vessels become altered, and a varying degree of engorgement of the blood-vessels results. The conditions are then similar to the preceding form. It is noticeable, that, when the site of flexion is above the vaginal junction, the dysmenorrhœa is more often severe, and not always relieved by enlarging the canal by incision. When the flexion is below the vaginal junction, or the contraction at the external os, i.e., where the circulation is not disturbed, dysmenorrhœa is rare.

The pain caused by the mechanical dilatation of the uterus, and subsequent contraction to expel its contents, which have accumulated in consequence of a spasmodic stricture at the internal os, occlusion of the canal by a polypus, or from any other cause, cannot be ascribed to a nervous origin.

Another argument in favor of nervous irritability or hyperæsthesia, as the cause of painful menstruation, is, that the most effectual medicines in its treatment are among the best for the treatment of nervous disorders in other parts of the body. The dilatation of the inferior segment of the uterus, by parturition or instruments, can be compared to nerve-stretching for neuralgia, or dilatation of the urethra for cystalgia.

There is little positively known concerning the etiology or pathology of membranous dysmenorrhœa. It must be accepted, however, as a clinical fact, that

apparent shreds of membrane, or casts of the uterine cavity, are expelled with great pain, and that this form of membranous dysmenorrhœa is often exceedingly difficult to cure.

The varieties of painful menstruation mentioned are convenient for purposes of description, and are therefore given in the following table: —

Form.	*Etiology.*	*Symptoms.*	*Prognosis.*
Neuralgic dysmenorrhœa.	Patients subject to rheumatism or neuralgia. Any thing which depresses the system, or enervating habits leading to neuralgia in other parts of the body, may cause it here. Laceration of the cervix uteri.	The pain is of a sharp, fixed character, usually local, and, less often, in distant parts of the body. It varies in intensity, sometimes appears before the flow, and may stop with, or continue during, the discharge.	If the patient has not been subject to neuralgia for a long time, and can be built up to a high standard of health, recovery is probable; otherwise it is doubtful.
Ovarian.	The same as for chronic ovaritis. Particularly, repeated and severe cauterization of the cervix with nitrate of silver.	There is often pain at intervals between the menses; it commences a few days before the flow, and diminishes with it. The pain is dull, aching, and often accompanied by depression of spirits, nervous phenomena, and sympathetic disturbances in the breasts.	Unless the case is a recent one, recovery is improbable, especially so if the ovaritis followed cauterization of the cervix with nitrate of silver. Sterility is common.
Congestive.	Inflammation in or about the uterus; displacement of the latter; any cause producing congestion, such as the presence of a fibroid tumor or polypus; slow circulation in the portal vein; mental shock; the action of cold and wet, especially at the time of the menses, or in plethoric women. The latter is a very common cause of congestive dysmenorrhœa in girls, while uterine displacement is a more frequent one in later life.	Severe pain comes on suddenly during the period, with a decrease or arrest of the flow, and considerable fever in proportion to the amount of congestion or inflammation.	Good if the cause can be removed.

Form.	*Etiology.*	*Symptoms.*	*Prognosis.*
Obstructive.	Congenitally small cervical canal, or contraction of the latter after the application to it of strong caustics; bending of the canal on itself, as in retroflexion; a polypus or fibroid in the cervix, encroaching on its canal; occlusion of any portion of the vagina; endometritis is almost always present in consequence of the pent-up fluids in the uterine cavity.	The usual menstrual symptoms appear, but with very little, if any, discharge of blood. The latter gradually collects in a few hours, and distends the uterus. Spasmodic, labor-like pains are excited till the uterine contractions overcome the obstruction, and there is a gush of the imprisoned blood, with one or two clots, which relieves the pain. In some cases of marked obstruction, the process is repeated till menstruation ceases.	Good in the great majority of cases.
Membranous.	By some means, the lining membrane of the uterine cavity is cast off either entire or in pieces. The true causes of this affection are not known. It would seem as if it might be called a variety of endometritis.[1]	Pain commences with the flow, gradually increases in severity, and becomes labor-like, till the membrane is discharged, and then ceases. The flow is then more profuse, and is followed by a variable amount of leucorrhœa.	As a rule, unfavorable.

[1] Fibrinous endometritis forms a complete cast, very similar to that of membranous dysmenorrhœa. The outer surface of the former is smooth, and the cast usually solid, while the surface of the latter is rough and papillary, and the cast is hollow, i.e., it forms a sac with three openings. A microscopic examination will readily show the difference (compare *Orth. Diagnosis Path. Anat.*, p. 255).

[1] Dr. Kleinwaechter in the *Wiener Klinik*, February, 1885, quoted in *Am. Jour. of Obstetrics*, p. 1115, 1885, terms it exfoliative endometritis. Dr. Alexander J. C. Skene agrees with him that the membrane is an exfoliation in mass of the mucous membrane of the uterus at the menstrual period. — *N. Y. Med. Journal*, December, 1885.

DIFFERENTIAL DIAGNOSIS.

Neuralgic.	*Ovarian.*	*Obstructive.*	*Congestive.*	*Membranous.*
Pain not expulsive.	Pain commences some days before the flow, and does not affect it.	Pain expulsive, labor-like, finally followed by discharge of blood and clots, which relieves the pain.	Pain comes suddenly during the period.	The discharge of the membrane is sufficient to distinguish it. It is recognized from blood clots, fibrin casts, or early abortions, by the discharge of only one membrane during the period, its characteristic elements under the microscope, and its recurrence each month.
No constitutional disturbance, such as fever or inflammation.	No constitutional disturbance, such as fever or inflammation.	Constitutional disturbance slight.	Constitutional disturbance, headache, flushed face, and fever, in proportion to severity of congestion or inflammation.	
Flow steady; develops gradually, and is habitual.	Flow steady; dates from an attack of ovaritis, or exposure during menstruation.	Flow usually interrupted; may be congenital, or have slowly developed.	Flow diminished, or arrested; comes on suddenly, during a period, in women accustomed to painless menstruation, and is not habitual.	
Examination reveals no physical cause for pain.	One or both ovaries are usually enlarged and inflamed; nervous symptoms and sympathetic irritation of the breasts; nausea and vomiting.	Examination with finger or probe during menstruation shows an obstruction to the flow.	Examination reveals congestion, or a varying amount of inflammation in or about the uterus.	

The successful treatment of dysmenorrhœa depends very largely upon the removal of the cause. In most cases an examination is necessary, in order to treat the patient intelligently. In young unmarried women, or girls, the advisability of it may be questioned. When, however, pain continues to a marked degree, throughout the period, and is repeated from month to month, in spite of carefully selected remedies, an examination must be made. In young girls, enough information can often be obtained through the rectum, instead of the vagina, i.e., a displacement of the uterus, cellulitis, or ovaritis; but if an examination *per vaginam* is necessary after this, ether should be used. It is an important fact, as Dr. Emmet has shown, that, of all married women who had dysmenorrhœa in early life, 71.90 per cent were sterile. It is a false delicacy which allows diseases and consequent suffering to become established, which might have been cured at their commencement.

In some cases marriage has a very beneficial effect, especially if followed by parturition.

It is quite unnecessary here to go into the details of the treatment of inflammation in or about the uterus, of displacements, or other causes which will be found elsewhere in this book. Although many authors admit they are forced, at times, to use suppositories of morphia and belladonna, all unite in condemning the use of anodynes as a most pernicious practice.

Neuralgic Dysmenorrhœa should receive the same general treatment as neuralgia occurring in other parts of the body. Not only is a nourishing, generous diet important, but often a change of air, out-door exercise, or a sea-voyage is very beneficial. The passage of a large sound through the cervical canal, the day before the expected monthly, may entirely relieve the patient

from pain; and if this fails, rapid dilatation[1] is advisable, provide dremedies are ineffectual. Electricity in this, as in the following form, will sometimes promptly relieve the patient.

Ovarian Dysmenorrhœa is very stubborn to treat, and likely to be attended by sterility. The only local treatment advisable is that used for ovaritis, such as hot sitz-baths, and soothing vaginal injections. Unless complicated with some of the other forms, dilatation of the cervical canal would probably be useless.

Under this head may be mentioned a form of scanty and painful menstruation in young women or girls, in which there is a marked tendency to amenorrhœa, or progressively diminishing menstrual flow. This seems due to non-development of the ovaries, and tends to atrophy of them ending in sterility, or immature development of the genital organs. Here, again, nutrition of the system, rest from mental work, outdoor air, and exercise are of prime importance, and may alone suffice. This will be shown by the increase of the menstrual flow, and proportionate decrease of pain. Besides the removal of any focus of irritation in the pelvis, Dr. Emmet recommends the use of a small sponge-tent, immediately before the expected period, to bring on the flow. Electricity has sometimes proved useful, by passing a Faradic current between the hypogastric and sacral or lumbar regions, the electrodes being placed externally; or by wearing the intra-uterine galvanic stem pessary, composed of alternate layers of zinc and copper plates.

Congestive Dysmenorrhœa is much more susceptible to treatment. Any deviation of the uterus, from its normal position, must be corrected; and if the flow has been suppressed by exposure to cold or wet, measures

[1] See chapter on Minor Surgical Gynæcology.

must be taken at once to bring it on. The best way to do this is to have the patient prepare for bed, and, sitting on the edge of the latter, soak her feet in hot water and mustard, with blankets well wrapped around her till the skin begins to perspire. The action of the skin may be hastened by drinking hot weak tea, or hot water with a little essence of ginger, while the temperature of the foot-bath is increased gradually by the addition of a little more hot water. A bottle of gin is very often kept in the house as a remedy for scanty or suppressed menses. When perspiration commences, the patient lifts her feet out of the water, keeping them in the blankets, without stopping to wipe them, and lies back in bed. This, with proper medicines, is usually sufficient, unless some few days have elapsed, when it is of little use to try it before the time of the next period. In the interval between, copious hot-water vaginal douches, with an occasional application of glycerine, are useful to allay the tendency to passive congestion.

The injurious effects of tight lacing, and heavy dresses suspended from the waist, in obstructing free circulation in the abdominal veins, must not be overlooked. The weight of the dresses should come on the shoulders, by buttoning the garments on a waist or skirt-supporter; while, if it is a rule to have the corsets fit loose enough to easily pass the hand up beneath them after lacing, little harm can be done.

Chapman's spinal ice-bags are sometimes very useful for dysmenorrhœa, with *scanty* and tardy discharge. Use one for half an hour, once or twice a day, when the pain comes.

Obstructive Dysmenorrhœa, of all the forms, is the most difficult to cure by any other than local treatment. Medicines are of little avail till after the exciting cause has been removed, and then seldom necessary. The

removal of a small fibroid or polypus, the straightening of the uterus, or dilatation of its canal,[1] is followed by very marked and prompt improvement or cure. As a rule, dilatation is the most effectual, and is superseding the treatment of incising the cervix, in cases of flexion, which was so ably advocated by Simpson and Sims.[2] One great reason for this is the slight amount of risk involved. It must, as a rule, be thorough to be effectual, and followed by the occasional use of an intra-uterine stem, of glass or hard rubber, to prevent a possible contraction of the canal.

Membranous Dysmenorrhœa is, of all forms, the most difficult to cure. Local treatment, except as it may relieve various complications, is of no use. Dilatation of the cervix, just before the period, has been tried, to facilitate the extrusion of the membrane; but this, like anodynes, is often merely palliative, except as it allows the blood to escape more freely, relieves congestion, and, in turn, may possibly avert the tendency to hyperplasia of the lining membrane of the uterine cavity. It is possible that the intra-uterine application of the negative pole of the galvanic current might have an alterative effect on nutrition, and thus prove beneficial. The current, however, must be very weak.

The Medical Treatment of dysmenorrhœa, excepting the obstructive and membranous varieties, is usually quite satisfactory. In the dominant school, the valerianate of ammonia has quite a reputation for dysmenorrhœa in hysterical young women, but it is merely palliative. Not infrequently one remedy must be given between the periods, and another at the time to relieve the pain. The clinical value of the remedies is very much injured, however, when more than one is used. As a

[1] See chap. ii.

[2] See Notes on Uterine Surgery, by Marion Sims, M.D.

rule, the intercurrent remedy should be directed to the cause of the dysmenorrhœa; whatever that may be, its removal is absolutely essential to a permanent cure.

THERAPEUTICS.

Aconite.[1] Congestive dysmenorrhœa, in consequence of suppression of the menses, especially if from fright (Lyc.) or vexation, in plethoric women, accustomed to profuse flowing. Ovaritis may be present. The pain is sharp and cutting; the vagina hot, dry, and sensitive (Bell.), with painful urging to urinate. The patient is very restless, and tosses about; thirsty, and the pulse full, hard, and strong.

Ammonium Carb. Recommended by Dr. I. T. Talbot[2] for dysmenorrhœa in persons of nervous, sanguine temperament, when the pain is cramp-like, confined to the uterine region, and occurring, for the most part, before the flow, with pallor of the countenance. The flow is blackish or clotted, too early and abundant. The acetate is preferred by some physicians. Dr. H. H. Read found this remedy not only cured the dysmenorrhœa, but also had an excellent effect on the general health of a patient who suffered from cramps and diarrhœa coming three or four days in advance of the menstrual flow. Several remedies had been given previously, without any relief.

Belladonna. Atropine is sometimes used instead. Dr. Dunham[3] found it a very effective remedy for the following symptoms: Very severe pain, dragging, and pressing-down in

[1] Girl æt. 22. Strong and plethoric. Has always had severe, agonizing dysmenorrhœa. Violent cutting pains in the back and loins, like labor pains, for the first two days. On the third day, violent cutting pains in the abdomen. On the last day, very severe pressive headache. Menses every three weeks, discharge copious and dark. Bell. helped the backache, puls. the abdominal pains, ignatia the headache; but they only proved palliative. Suspecting inflammatory irritation as the cause, I gave aconite 6. The pain soon ceased. She had two doses of aconite the next month. The flow then became regular every four weeks, and painless. This was thirteen years ago, and she has had no return of it in that time. — Dr. Elb. Zeitsch, *J. Hom. Klinik*, vol. i. p. 4.

[2] New-England Med. Gazette, vol. iv. p. 56, 1869.

[3] Lectures on Mat. Med., vol. i. p. 262, 1878.

the pelvis; also cutting pains through the pelvis, i.e., horizontally, not around it like sepia and platina. These pains are paroxysmal, and precede the menstrual period from six to twenty-four hours. The ovary, more often the right, is inflamed and prolapsed, making defecation painful at this time. It should be given just before the menstrual epoch, and, if necessary, be persisted with for many consecutive months.

It is also useful for sudden suppression of the menses from cold, with *severe bearing-down pain* and *throbbing* in the hypogastric region; flushed face, *throbbing headache*, and difficult or painful micturition.

Borax. The action of this remedy on the uterus is not thoroughly understood. It has been successfully used for membranous dysmenorrhœa,[1] but is by no means a specific for it. The best results from it have been obtained from the pure substance in from three to five grain doses. This use of the remedy is said to have originated with Dr. Henry Bennet. Dr. Guernsey gives "fear of downward motion" as a great characteristic of this drug. Dysmenorrhœa with sterility.[2] The menses are too early and profuse, with nausea and colic; *leucorrhœa like the white of egg* (Amm. mur., bovista, calc. phos., mez.), *with sensation as if warm water were flowing down.* It may be chronic and acrid, accompanying sterility with great nervousness.

| Caulophyllin. *Spasmodic pains in the uterus and various parts of hypogastrium.* The flow is either normal or scanty, in patients subject to rheumatism of the small joints. It is also useful for moth-spots on the face in women subject to menstrual irregularities or leucorrhœa (Sepia). Dr. D. Dyce

[1] Dr. A. H. Tompkins, New-Eng. Med. Gazette, December, 1879. Two cases of membranous dysmenorrhœa cured, one with five-grain doses of the crude drug; the other, with 2x. trit.

[1] Transactions N. Y. State Hom. Soc., vol. x. p. 279. The first attenuation was used.

[1] Case of radical cure reported by Dr. E. M. Hale, Brit. Journal of Hom., vol. xxix. p. 748, 1871. In this case pure borax was given, in five-grain doses, three times a day.

[2] Hahn. Monthly, March, 1880.

Brown thinks highly of it, both at the time of the pain and between the periods.

| Chamomilla. Neuralgic dysmenorrhœa (Coffea). The flow is too early, too profuse, and offensive (Bell.) ; *drawing pain from sacral region forward; griping, pinching, labor-like pains in the uterus, followed by the discharge of large clots of blood;* the patient is impatient, irritable, and very sensitive to pain.

| Cimicifuga. Macrotin, an impure resin (not the active principle), obtained from the tincture, is preferred by many practitioners. *Rheumatic dysmenorrhœa*, i.e., dysmenorrhœa in patients subject to muscular rheumatism, and an apparent metastasis to the uterus, which is irritable, and feels sore or bruised on examination. (Dr. Dewees, in the old school, introduced guiac. as a remedy for this condition.) Menses irregular, delayed, or suppressed ; hysterical or epileptic spasms at the time of the menses ; pains in ovarian region shoot upward, in uterine region, from side to side ; bearing-down and tenderness in the hypogastric region ; limbs feel heavy.

| Cocculus. Dr. Edward Blake considers this the best remedy for dysmenorrhœa, as well as menstrual colic from flatulence generated by the intestinal walls, more often at night, and especially during menstruation and pregnancy. Menses too early, with cramps in the abdomen, and colic pains ; great weakness during the menses (Amm. carb., carb. an.), severe headache on third or fourth day of the flow ; light and noise intolerable, and accompanied by nausea, like the heaving up and down of the stomach in sea-sickness ; sudden cessation of the flow, followed by severe spasmodic pains ; dysmenorrhœa in girls and childless women ; flow may be scanty, or very profuse, with pain in the breasts, restlessness, groaning, vomiting ; small pulse, and great weakness ; leucorrhœa between the periods. Dr. Lobeth praised it as a remedy between the monthlies, but did not value it as highly during the monthly epoch. Dr. Hartman esteemed it very highly ; but in extremely severe cases, when the attacks resembled epilepsy, he used cuprum met. instead.

Collinsonia is a good remedy, especially between the periods, for dysmenorrhœa associated with passive congestion of the uterus, hemorrhoids, and constipation.

Colocynth. Severe left-sided ovarian dysmenorrhœa, causing the patient to double up; colicky pain two or three days before the menses, extending below the navel to the genitals, relieved by warmth, and associated with cold feet. The pains are also relieved by flexing the thigh on the abdomen.

| Gelsemium 1x. is best given in hot water, a teaspoonful every fifteen minutes, and less often as soon as there is any improvement, which will be sure to follow, if at all, after three or four doses are taken, provided the remedy was administered as soon as the pain commenced. It is one of the very best remedies for spasmodic dysmenorrhœa; but, as a rule, some other remedy, such as caulophyllum, is required between the menstrual periods to effect a cure. Severe, sharp, labor-like pains in the uterine region, extending to the back and hips (Cimicif., secale cor.); dysmenorrhœa, preceded by sick headache, vomiting; congestion to the head; *confused vision;* deep red face; bearing-down in the abdomen; *the patient passes large quantities of limpid, clear urine, which relieves the headache.* It is esteemed very highly by Dr. D. Dyce Brown.[1]

Hamamelis has been praised as a remedy for ovarian dysmenorrhœa. There is severe pain through the lumbar and hypogastric regions, and down the legs; the ovaries are sore and painful, the veins distended, and the flow profuse.

Pulsatilla is an excellent remedy for dysmenorrhœa, given between the periods, rather than at the time of pain, when some other medicine is often more applicable. It is particularly useful for suppression of the menses from wetting the feet, and is always to be remembered with aconite in congestive dysmenorrhœa from this cause; also for delayed, scanty, and painful menstruation. The pain is constrictive, labor-like, more often in the left side of the uterus, and obliges the patient to bend

[1] He recommends *gels.*, cauloph., xanthox., cimicif., cocc., cupr., and ignatia, in his lecture on the Diseases of Women, at the London School of Homœopathy. —*Monthly Hom. Review*, p. 464, Aug. 1, 1881.

double. In aconite, the discharge is bright red, and the patient inclined to plethora. In pulsatilla, the discharge is dark and clotted, and the patient of a lymphatic temperament.

Senecia.[1] Painful menstruation, with scanty flow (Cactus, conium, graph., puls., sepia), and urging to urinate, worse at night; menses irregular. Dr. J. Moore[2] emphasizes this remedy in his list of remedies for dysmenorrhœa.

Sepia is chiefly useful as a remedy between the periods where there is passive congestion of the pelvic organs (also sabina); severe bearing-down in the latter, and yellow or milky excoriating leucorrhœa worse before the menses.

Veratrum vir.[3] Dysmenorrhœa; menses preceded by intense cerebral congestion in plethoric women. It has been recommended for spasmodic dysmenorrhœa at or near the climacteric, six drops of the first decimal in half a cup full of hot water, a teaspoonful every fifteen minutes till the patient is relieved.

|| **Viburnum op.** ϕ[4] is best given in hot water, at intervals of ten or fifteen minutes. It is one of the best remedies to allay the pain, but often requires some other intercurrent remedy to effect a cure. Cures of membranous dysmenorrhœa from its use have been reported.[5] Before the menses there is bearing-down, aching in sacral and pubic region; excruciating, crampy, colicky pains in hypogastrium; much nervousness; and occasional shooting pains in the ovaries. The pain and nervous restlessness continue during the flow with nausea. Dr. E. M.

[1] If there is dysmenorrhœa, with the usual flow, Dr. W. H. Holcombe prefers caulophyllum. — *U. S. Med. and Surg. Jour.*, vol. 8, p. 44.

[2] Monthly Hom. Review, p. 671, Nov. 1, 1871.

[3] The following case of long standing had been treated by able physicians without relief: menses regular in time, quantity, and character, but preceded for three days by terrible menstrual colic; pain extends all over the body; head and face look bloodshot, as if the vessels might burst; pain runs into the head from the neck; pulsation in head, neck, and carotids; sight disappears at times, every thing moving in confusion before her eyes; tongue feels heavy, but is clean and natural; great thirst; pulse full and bounding. Verat. vir. IX. was given in five-drop doses every half hour, for six hours, at the time of pain. In four months she was perfectly well. — DR. EGGERT: *North-Am. Jour. of Hom.*, November, 1873.

[4] Dr. J. C. King, Hahn. Monthly, p. 80, 1877.

[5] Dr. T. C. Hunter: Hahn. Monthly, January, 1875.

Hale[1] considers it almost a specific for neuralgic and spasmodic dysmenorrhœa.

Xanthoxylon. This remedy promises to become almost a specific for neuralgic dysmenorrhœa, with very severe pain extending down the genito-crural nerves, down the anterior surface of the thighs, and chiefly left-sided, though in recent provings[2] the *right* ovary was particularly affected. Menses too early; profuse; and the ovarian pain was followed by profuse milky leucorrhœa.

Zincum val. is a favorite remedy with some physicians for neuralgic dysmenorrhœa in very nervous, hysterical women. Dr. E. E. Marcy[3] has found the cyanuret of zinc very useful in a number of cases. He was led to use it by the symptoms of a case of poisoning.[4]

Other Remedies for Consultation. — Agnus cast.,[5] apis,[6] arg. nit.,[7] ars., *cactus grand.*, calc. carb.,[8] cannabis ind. 1 x.,[9] *coffea*, collinsonia, conium,[7] cupr.,[10] graph.,

[1] American Observer, April, 1874.

[2] Publications Mass. Hom. Med. Soc., vol. viii. p. 228, 1885.

[3] North-Am. Hom. Journal, vol. ii. p. 100, 1852.

[4] A young lady, aged twenty-two, took two grains of the cyanuret of zinc twice a day, and was attacked with cramp-like pains in the uterine region; severe pain in the back; colic pain in the bowels; vertigo; convulsive movements in various parts of the body; great restlessness and nervousness; oppressed and rapid respiration; frequent and feeble pulse.

[5] Recommended by Dr. Winterburn, in Arndt's System Med., vol. ii. p. 402, for obstructive dysmenorrhœa.

[6] Miss ——, aet. 32. Dysmenorrhœa for several years; during the period severe, spasmodic, bearing-down, labor-like pains, which last a whole day, and are followed by a scanty discharge of dark bloody slime for twenty hours; great emaciation; wax-like skin; poor appetite; regular but hard stool; croc., puls., sabina, and sulph. were of little service. Apis 3, a day before the period, which was much less painful, and the blood of better consistency. Apis repeated before the next two periods completely cured her. — Dr. J. R. Coxe-Hering, *Amer. Aztrfg.*, 287.

[7] Dr. John Moore: Monthly Hom. Review, p. 671, Nov. 1, 1871.

[8] Dr. J. T. Kent speaks well of calc. phos. in too frequent and painful menstruation, especially at puberty, and if brought on by exposure to wet. — *Hom. World*, p. 554, Dec. 1, 1884.

[9] Dr. Carfrae speaks highly of it. — *Hahn. Monthly*, p. 269, vol. vii. 1872.

[10] Dr. D. Dyce Brown, Lecture on Dis. Women. — *Monthly Hom. Review*, p. 494, Aug. 1, 1881.

hyosc., [1] ignatia,[2] [3] kali carb.,[4] lach., lil. tig., mag. mur., millefolium,[5] naja, natr. mur., nitrate of amyl,[6] [7] *nux vom.*,[8] phos.,[9] phytolacca,[10] plat.,[10] rhus tox., sabina, sar-

[1] Dr. D. Dyce Brown, Lecture on Dis. Women. — *Monthly Hom. Review*, p. 464, Aug. 1, 1881.

[2] Mrs. ——, aet. 26, married and sterile; excitable temperament. For fifteen years from the commencement of her scanty menstruation, had been attacked at every period by violent spasms and labor-like pains lasting several days. Various remedies did no good; ignatia cured before the next period, and she has been well since. Dr. Hilberger, who reported the case, believes that ignatia is the best remedy for dysmenorrhœa originating in irritability of the nervous system, rather than congestion of the uterus. — RÜCKERT'S *Klinische Erfahrungen*, *Supplement*, p. 590.

[3] Dr. H. Goullon mentions this remedy for dysmenorrhœa, in women who menstruate profusely with an intermitting pulse. — *Allg. Hom. Zeitung*, p. 7, vol. 80, 1871.

[4] I always give to girls, who suffer from dysmenorrhœa, a dose of *kali carb.* daily for a week before the approaching menstruation, especially when they menstruate copiously, and there are intermissions in the wave of the pulse; *sepia*, on the contrary, is indicated for scanty menses, unilateral headache (migraine), weakness of sight, nausea, hard stool; *pulsatilla*, dysmenorrhœa with chilliness, gastric complaints (vomits after every thing), pressure on the precordial region, soft stool; *graphites* and *ferrum* have simultaneously constipation and anæmia. — DR. H. GOULLON, Jun., in *Allg. Hom. Zeit.* Translated in the Journal of Hom. Clinics, p. 130, September, 1869.

[5] An infusion of this plant and a single application of iodized phenol apparently cured a case of membranous dysmenorrhœa (?). — DR. E. M. HALE, *Hom. Jour of Obst.*, January, 1886, p. 20.

[6] For scanty and painful menstruation, congestive dysmenorrhœa, where vib. op. and caul. fail. — DR. E. M. HALE, *Hahn. Monthly*, p. 407, 1877.

[7] Fraulein ——, aet. 26. Without any known cause menstruation became painful at seventeen; has been treated nine years unsuccessfully by the opposite school; has to go to bed; severe cramping, pressive pain from the uterus towards the navel, sometimes extending to the stomach, and then it causes great nausea; chill and heat with the latter, general redness of the face; nux vom. 10 was prescribed; the flow appeared in three weeks, and lasted five days; there was no pain, nor did it recur afterwards. — SCHWARTZ, RÜCKERT'S *Klinische Erfahrungen*, vol. ii. p. 238.

[8] Fraulein ——, æt. 20. Dysmenorrhœa for four years, following the abuse of saffron. Since then, the flow is always profuse and weakening; eight days before the period, the pain begins in the abdomen; lancinating, tearing, and bearing-down in the pelvis; it is most severe two hours after the flow commences; the cutting and tearing extend from the pelvis to the knees; the patient cannot straighten the lower limbs, which are spasmodically and painfully flexed; the hypogastrium is very sensitive to pressure. Prescribed nux vom. ϕ, six drops in water, four spoonfuls of it each day for eight days before the period. There was improvement at the next monthly, and in a few months the patient completely recovered. — *Ibid.*

[9] This remedy has been considered one of the most important for membranous dysmenorrhœa, and is advocated by Dr. Eaton.

[10] Dr. John Moore: Monthly Hom. Review, p. 671, Nov. 1, 1871.

saparilla,[1] secale cor. (expulsive forcing pains with dark, coagulated, or scanty disharge), silico-fluoride of calcium,[2] [3] sulph.,[4] strontium carb.,[2] thuja, verat. alb.

Remedies to be given between the Periods for Dysmenorrhœa. — Cauloph.,[4] cimicif.,[4] cocc.,[4] collinsonia,[4] ham.,[4]

[1] Menses began at the age of eleven years, and with the exception of one year she has had dysmenorrhœa for twenty years; the monthly begins early in the morning, with bitter vomiting, diarrhœa, fainting-fits, very cold perspiration, dreadful pain in the back, thighs, and hypogastrium; has to go to bed; pain lasts two days, and goes off the third; *the left nipple is retracted*, with extreme sensitiveness of the left breast, and severe pain in it extending down the left arm. She was given twenty-four powders of sarsaparilla 30, one to be taken at night. The next menstruation was *painless*, the first time for fifteen years; the breast was still very painful, but was relieved by a higher dilution. She remained well at time of reporting the case, a number of months afterward. — Dr. J. C. Burnett, *Hom. World*, p. 62, Feb. 2, 1880.

[2] Silico-fluoride of calcium (lapis albus) is an important constitutional remedy for dysmenorrhœa in scrofulous subjects. Dr. Whiting of Danvers, Mass., writes me, "I think it is best indicated in subjects of a lymphatic temperament with indurated glands, when the pain precedes the flow; pathologically, I have found chronic congestion of the cervix uteri to such a degree as to very much contract the canal. If the flow is not attended with pain till the day of termination, at which time severe forcing pain expels large clots, strontium carb. is *the* remedy;" also if "the pain comes on in from three to five days after the flow." He kindly sent me the record of the following case of dysmenorrhœa, for which he gave sil. fluor. calc. 200, dose at bedtime.

Miss ——, aet. 34; she had measles at twenty, since then has had pain at commencement of menses so severe for first day or two as to cause syncope; Professor Safford found the cervical canal so minute she could not pass the finest probe; patient otherwise healthy. Four months later she wrote, "I have been waiting to thoroughly test the medicine before writing you. The first month after taking it I had none of that terrible nausea, and but little swelling of the mammæ, but they were still very sore; pain at the period did not last so long, but was equally intense; next month there was a still greater improvement, with *no* pain the first day as usual, but on the second day instead, though it did not last so long; third month, *no* premonitory pain, no swelling of mammæ, no sensitiveness; have not lost a meal this month, and have had no nausea. For first day and a half no pain, not even an uncomfortable feeling; but after working hard all day, had an hour and a half slight pain, but slept all night, while as before I would have been tortured for two or three days and nights. I can live and be happy, should I not improve more; but I think that the medicine will cure me."

[3] Particularly recommended by Dr. Ludlam for membranous dysmenorrhœa from repelled eruptions.

[4] Dr. D. Dyce Brown, Lecture on Dis. Women. — *Monthly Hom. Review*, p. 464, Aug. 1, 1881.

ignatia, kali nit.,[1] nux vom.,[2] plat.,[2] puls.,[2] sabina, sepia,[2] *sulphur*,[2] xanthox.[2]

Ovarian Dysmenorrhœa.[2] — *Apis* (right ovary), bell. (right ovary), calc. c., cactus grand., coloc. (left ovary), *ham.*, kali iod., lach. (left ovary), merc., naja (left ovary), plat., *thuja*, vespa (left ovary), xanthoxylon frax.

Rheumatic Dysmenorrhœa.[3] — Acon., bry., *macrotin*, nux vom., rhus tox.

Neuralgic or Spasmodic Dysmenorrhea.[3] — Acon., agnus cast., ammon. carb., apis, asclepias tub., atropine, cactus, cannabis ind., castoreum, *cauloph.*, coffea, collinsonia, cuprum, *gels.*, ham., hyosc., ignatia, lil. tig., mag. carb., moschus, *macrotin*, nat. mur., nux vom., plat., puls., thuja, veratr. alb., *veratr. vir.*, *vib. op.*, xanthoxylon frax.

Congestive Dysmenorrhœa. — *Acon.*, bell., bry., cocculus, collinsonia, gels., glonoine, ham., *kali carb.*, lach., *puls.*, sabina, secale, *sepia*, *veratr. vir.*, xanthoxylon frax.

Membranous Dysmenorrhœa. — Apis (during the attack), *borax*, bromine, bryonia, *calc. carb.*, cham., collinsonia, cyclamen, guiac., iodine, millefolium (?), phos., sulph., viburnum op.

When membranous dysmenorrhœa can be dated from some repelled or repercussed skin eruption, the following remedies may be borne in mind as possibly useful; sulphur is the best as a rule: —

"*If from an eruption like urticaria.*[4] — Ars. alb., rhus tox., urtica urens.

"*If from an eruption like 'hives.'* — Apis, bell., cham.

[1] Dr. John Moore, Monthly Hom. Review, p. 671, Nov. 1, 1871.

[2] Dr. D. Dyce Brown, Lecture on Dis. Women. — *Monthly Hom. Review*, p. 464, Aug. 1, 1881.

[3] Compare Ludlam, Diseases of Women, 5th ed.

[4] R. Ludlam, M.D., Transactions World's Hom. Convention, 1876, vol. p. 975.

"*If from a herpetic or vesicular eruption.* — Canth., rhus tox.

"*If from a squamous or scurfy eruption.* — Borax, ars., nux mos., dulc., silicea, sepia.

"*If a scrofulous or unclassable eruption.* — Sulph., calc. carb., calc. fluor., merc., hepar sulph.

"*If syphilitic.* — Thuja, nit. ac., merc. iod., kali iod., mezereum.

"*If from suppressed rubeola, or if it alternates with ophthalmia.* — Pulsatilla. *Or, in the former case especially.* — Cuprum acet.

"*If it is erysipelatous.* — Bell., canth., rhus tox., apis." [1]

[1] Recommended by Dr. Gray in drop doses of the tincture. — *Transac. N. Y. State Soc.*, 1873-74, p. 384.

CHAPTER XV.

DISPLACEMENTS OF THE SEXUAL ORGANS.

THESE can be briefly classified as follows:—

- **Vagina**
  - Prolapse of the anterior vaginal wall; i.e., *cystocele.*
  - Prolapse of the posterior vaginal wall; i e., *rectocele.*
- **Uterine displacements**
  - The fundus tipped back and cervix forward without flexion of the uterine axis; i.e., *retroversion.*
  - The fundus tipped back and cervix bent down with flexion of the uterine axis; i.e., *retroflexion.*
  - The fundus tipped forward and cervix backward and upward without flexion of uterine axis; i.e., *anteversion.*
  - The fundus tipped forward and cervix bent downward and forward with flexion of uterine axis; i.e., *anteflexion.*
  - The fundus tipped to right or left side of the pelvis, without flexion; i.e., *lateroversion.*
  - The fundus tipped to right or left side of the pelvis, with flexion of the cervix and body; i.e., *lateroflexion.*
  - **Prolapsus uteri, or "falling of the womb"**
    - First degree. Uterus sags down so that the cervix rests on the pelvic floor.
    - Second degree. Uterus descended so that the cervix presents at the vulva.
    - Third degree, or procidentia. Uterus partially or entirely outside of the vulva.
  - **Inversion of the uterus**
    - Complete when the fundus has escaped through the cervix so that the endometrium forms its external covering.
    - Incomplete when the fundus has not escaped from the cervix.

The ovaries sometimes become displaced either in or near the cul-de-sac of Douglas, and very rarely have been known to enter hernial sacs.

Displacements are very rare before puberty, infrequent before marriage, more so after, and most common after child-bearing. Prolapsus of the vagina is almost invariably caused by sub-involution and relaxation of the vaginal walls, associated with a laceration of the perineum. The latter also favors cystocele, as it no longer supports the base of the bladder. Distention of the latter from habitual long retention of urine, and chronic constipation, tend to produce cystocele and rectocele, especially in the conditions just mentioned. When the uterus sags, or is forced low down in the pelvis, the length of the vaginal tube is diminished in proportion, and it consequently tends to roll out.

The causes of uterine displacement are much more complex, and are classified in the following table: —

Lack of sufficient support to the uterus	Laceration of the perineum.
	Relaxation of the vagina as in sub-involution.
	Weakness of the uterine ligaments.
Morbid conditions of the uterus, especially those increasing its weight	Tumors of the uterus.
	Chronic congestion.
	Hyperplasia or sub-involution.
	Lack of tone or relaxed condition of uterine tissue.
Force acting on the uterus from above	Tight or heavy clothing supported from the abdomen.
	Tumors, or a distended bladder, crowding the uterus out of place.
	Sitting in easy-chairs, the pelvis tilted a little backward, and the body bent forward, so as to allow the weight of the abdominal organs and forces exerted on them to act directly on the fundus uteri.
	Straining at stool.
	Falls or jumping.
	Undue exercise, such as lifting, reaching, and too long walks.
Traction on the uterus	Dragging of prolapsed vagina.
	Abnormally short vagina, especially a short anterior wall.
	Cicatrices or contracting masses of lymph in the pelvic peritoneum or areolar tissue.

Displacement of the ovaries may be secondary to that of the uterus, or from increased weight in consequence of congestion, inflammation, and enlargement.

The symptoms of *prolapsus vaginæ* are, a sense of dragging in the pelvis, and a feeling of something protruding between the labia. In fact, the patient usually states that she thinks she has "falling of the womb." On inspection, the anterior, posterior, or both vaginal walls are seen to roll down into the vulvar commissure if the patient is told to force down. If there be any doubt as to the nature of the presenting part, the finger in the rectum will enter the pouch, and establish the diagnosis of rectocele, or the silver catheter in the bladder of cystocele. In the latter, the catheter passes directly downward into the vesical pouch, which often contains a variable amount of urine. The patient not being able to empty the bladder below a certain level, the residual urine becomes ammoniacal, and cystitis develops as a consequence of the cystocele, which cannot be permanently cured without removing the cause.

A surgical operation [1] only will cure these cases, except in very rare instances of acute vaginal prolapsus following confinement. There is scarcely any danger, and a properly selected operation carefully performed is almost sure to bring relief. If the patient positively refuses to submit to an operation, a large, hard, or an inflated rubber-ring pessary, tampons of antiseptic wool or oakum medicated with some astringent, such as glycerine and tannin, alum, or fluid extract of white-oak bark, may be used, and supported, if necessary, by a T-bandage. This same treatment applies to prolapsus of the second and third degrees.

[1] For the operation for cystocele, see Emmet, Principles and Practice of Gynæcology, p. 358, 1884; and Hegar und Kaltenbach, Operative Gynäkologie, p. 689. For laceration of the perineum, see p. 90.

RETROVERSION AND RETROFLEXION OF THE UTERUS.

These have similar symptoms, except that very frequent and sometimes painful micturition is much more common in the former than in the latter. In each, there is back-ache, a sense of weight in the pelvis, inability to walk but a short distance; going up and down stairs is very fatiguing to the patient. Inability to walk any distance, with bearing-down in the pelvis, is a very characteristic symptom of uterine displacement, particularly if it has existed for some time. Dysmenorrhœa and tenesmus of the rectum are sometimes present. Less often the local symptoms are not marked, but there is spinal irritation and exceedingly severe headache just before or during the menses. In acute cases resulting from a fall, the pain is very severe, and the patient unable to walk.

On examination the fundus is felt more or less prominent in the cul-de-sac of Douglas, and the space anterior to the cervix is empty. In retroversion the cervix points upward against the base of the bladder; in retroflexion, the cervix is nearly or quite in the axis of the vagina; the fundus is posterior in both instances. Too much stress cannot be laid on the fact, that the *bimanual examination and the accurate outlining of the body of the uterus is absolutely essential in making a diagnosis of uterine displacement.* This last statement may seem quite superfluous; but the writer has repeatedly seen eminent practitioners place one hand behind them, the forefinger of the other in the vagina, and, with their eyes rolled up to the ceiling, make a diagnosis (?). The prominence in the cul-de-sac of Douglas may give rise to the suspicion of a small pedunculated fibroid on the posterior wall of the uterus; but the passage of the uterine sound will at once decide the diagnosis, for if it

is a fibroid the uterine cavity will not occupy the centre of this tumor. An enlarged prolapsed ovary in this situation would be sensitive, smaller than the fundus uteri, and movable if not fixed by adhesions.

For purposes of treatment, these displacements can be divided into two classes, — the reducible and non-reducible. In the latter, the fundus may be fixed by adhesions, or some local contraction of tissue in the posterior wall of the uterus may spring the organ back immediately after replacement. Prolapse of the ovaries with fixation, inflammation of the cellular tissue, shallow posterior pouch of the vagina from insertion of the latter near the tip of the cervix, and the presence of a fibroid or other tumor causing the displacement, are very troublesome complications.

FIG. 65. NOTT'S UTERINE ELEVATOR AND DEPRESSER.

Fortunately, most displacements can be reduced at once with prompt relief to the patient. Place her in Sims' position,[1] with her clothing loose about the waist, and the hips slightly raised; stand behind the patient, and pass the first and second fingers of the right hand along the posterior vaginal wall; make gentle pressure against the fundus uteri upward, and a little to one side of the sacral promontory; as the fundus recedes, keep the middle finger in place, and put the forefinger on the anterior lip of the cervix, pressing it well up into the hollow of the sacrum. If necessary, the sound can be used to help elevate the fundus.[1] Sometimes Nott's elevator is useful to elevate the fundus, as well as to press the anterior wall away from the Sims' speculum so as to obtain a view of the cervix.

[1] See chapter on Minor Surgical Gynæcology.

The same manœuvre may be tried with the patient in the knee-and-chest position. Some authors recommend introducing one or two fingers in the rectum to push up the fundus, but this is scarcely ever necessary. When the fundus is so large and heavy that it does not readily slip up, it is a good plan to hook a tenaculum or volsellum forceps into the cervix, and draw it down a little, so as to gain more room to press the fundus up.

Unless something is used to keep the uterus in place, it will become displaced again in a few minutes after the patient takes the erect position. It does little good, therefore, to reduce this dislocation without applying a splint, i.e., a pessary,[1] if there is no inflammation ; or, if the latter be present, tampons can be placed behind the uterus. These are best made of non-absorbent cotton, antiseptic wool, oakum or sponge, and medicated with glycerine, iodine, belladonna ; or some preparation to allay pain, such as chloral hydrate, conium, or hyoscyamus. These tampons should be removed in twelve hours, or earlier if pain is excited, and followed by copious hot-water injections. A well-adjusted abdominal belt to take off the weight of the intestines is a great help.[1] The uterus must be replaced and tampons inserted from three to four times a week, unless it increases the inflammation ; then the case must be treated as if it were pelvic cellulitis, and no manipulation be attempted till the inflammation has subsided. If a pessary is fitted, tampons are unnecessary except to allay any local irritation. In uncomplicated cases, if the pessary is well adjusted, the patient need not be seen more than once in one or two months.

The above treatment also applies to those cases where the uterus at once returns to displacement after being

[1] See chapter on Minor Surgical Gynæcology.

replaced, either from changes in its parenchyma, or from slight and lax adhesions.

Displacement of the uterus with partial or complete fixation is tedious to treat, and requires great patience on the part of both physician and patient. No force which causes much pain and suffering should be used to replace the uterus. It is very apt to cause inflammation of the peritoneum, of the cellular tissue, or the tearing of adhesions, which might result in hematocele.

The best method of treating these cases is that of graduated pressure by tampons of antiseptic wool or non-absorbent cotton. Place the patient in the knee-chest position, or a modified Sims', having her lie at least one-third over on her abdomen, and the hips elevated not less than three inches above the level of the shoulders. Introduce a Bozeman's or Sims' speculum, and, in addition to the atmospheric pressure, push up the fundus uteri so as to put the adhesions on the stretch; now take dry disks of the wool or cotton, and make a pyramid or column, the base of which rests against and below the fundus, and the apex against the rami of the pubis and the pelvic floor. The object of this is to exert elastic pressure on the adhesions, which gradually stretch and yield. This is not a vaginal plug, and must not be used in such a way as to pack, distend, and stretch the calibre of the vagina.

This column of dry wool or cotton is allowed to remain forty-eight hours; it is then removed, a vaginal douche of hot water taken, and another cotton column put in. Of course, none can be worn during the menstrual period.

This course of treatment may have to be pursued for three or four months before there are any signs of improvement; but soon after that, the uterus will be found a little more movable. This gradually increases

till the fundus can be thrown forward, and a pessary worn with ease. It has been the writer's experience, that, after some mobility is once secured, progress is much more rapid. This same treatment applies to prolapse and fixation of the ovary, though it is less satisfactory, and also where the posterior vaginal pouch is too shallow. Until the latter can be stretched sufficiently to gain greater depth, an ordinary vaginal pessary cannot be worn, and it is necessary to give external support with some other pessary, such as Cutter's, if the cotton is not used.

If the cervix is flexed on the body of the uterus so sharply as to partially close the canal, and cause retention of fluids above, dysmenorrhœa, or sterility, it can be dilated by Goodell's method.[1]

The galvanic current is also advisable in the treatment of adhesions; the negative pole posterior to the uterus, the positive on the hypogastrium. A mild current should be used every second day for three or four months if necessary; it can be continued to advantage with the use of tampons.

One of the best cures for any form of uterine displacement is pregnancy, but the patient must take unusually good care of herself after delivery. She ought not to stand on her feet till after the first three weeks of the puerperium; and any work, lifting, or reaching, for the succeeding six months, should be absolutely prohibited. The uterus must be examined occasionally during this period, any tendency to displacement corrected, and, if necessary, either a pessary or tampons worn. In conection with the treatment of posterior displacements, see also the treatment of prolapsus uteri.

The operation of shortening the round ligaments for

[1] See chapter on Minor Surgical Gynæcology.

inveterate cases of posterior displacement, i.e., Alexander's operation, has not been tried sufficiently as yet to be regarded in any other light than as an experiment.[1]

ANTEVERSION AND ANTEFLEXION OF THE UTERUS.

The symptoms produced by these conditions are very much alike; backache and rectal irritation are far more frequent in the former than in the latter. Both are usually accompanied with much vesical irritation, difficulty of walking, dysmenorrhœa, sterility, leucorrhœa in consequence of the interference with circulation and subsequent congestion of the uterus, pain in and about the pelvis.

Diagnosis. — On bi-manual examination, the fundus uteri is found impinging too far forward on the bladder, and, if the displacement is very marked, it lies down on the anterior vaginal wall so as to slightly depress it. If it is a case of anteversion, the cervix is pressed up against the sacrum in proportion as the fundus tips down in front; if anteflexion, the cervix is bent forward in the vaginal axis, forming an angle with the body. This flexion of the cervix on the body of the uterus may be so acute as to constrict or occlude the cervical canal, and to cause sterility or dysmenorrhœa without marked displacement of the fundus uteri. It is important, therefore, to ascertain always the relations of the cervix with the body of the uterus in every examination for the diagnosis of a displacement. The introduction of the uterine probe sharply curved, if necessary, will at once enable the examiner to decide

[1] Dr. Polk publishes a report of fifteen cases of Alexander's operation, in thirteen of which the uterus had remained in place as far as he had been able to ascertain. This paper, containing a description of the operation, as well as its discussion by the New-York Academy of Medicine, can be found in the Medical Record, July 3, 1886.

whether the protrusion is a fibroid tumor, cellulitic exudation, or the fundus uteri. In the latter only is there a cavity which the probe readily enters.

The uterus is replaced, with the patient in the dorsal position, and the hips well raised to take off the weight of the viscera above; the operator then introduces the first two fingers of the left hand into the vagina, presses up the fundus, and at the same time endeavors to push it up with the fingers of the right hand placed externally below the uterus. Having succeeded in raising the fundus, it is held by the fore or middle finger in the vagina, and the hand externally, as the finger of the former pulls the cervix from behind forward. The organ can now be kept in position by vaginal tampons anterior to the cervix, or an anteversion cup pessary.[1] Gehrung's[1] or Hewitt's anteversion pessaries are excellent in some cases, but the former is liable to become displaced. The writer has succeeded best with Thomas' open cup, or his modification of the Hodge pessary for anteversion. If vaginal support cannot be given, one of Cutter's anteversion pessaries is often useful, and this may be combined advantageously with an abdominal belt.[1] In case there is a flexion of the cervix on the body of the uterus, causing sterility or dysmenorrhœa, dilatation of the cervical canal, by Goodell's method,[1] can be tried; and, if this fails, incision of the posterior lip of the cervix will be necessary to straighten the canal.[2] Intra-uterine stem pessaries of vulcanite or glass have been worn for this purpose, sometimes successfully; but they are liable to excite inflammation, and require very careful watching. One of the best instruments of this class is Dr. Thomas' cup-and-stem pessary.[1] Quite recently, Dr. Graily Hewitt has pro-

[1] See chapter on Minor Surgical Gynæcology.

[2] See Notes on Uterine Surgery, by Dr. Marion Sims.

posed to straighten the canal by removing a longitudinal strip of mucous membrane from the posterior surface of the cervix, and bringing the edges together with sutures. The cervix is thus drawn back, the canal straightened, and its patency increased without mutilation. Success in the treatment of anterior displacements is measured largely by the perseverance of both physician and patient. They require far more care and ingenuity than retroversion or flexion.

Lateral Flexion of the uterus results from the shortening of one of the broad ligaments, and is diagnosed by bi-manual examination of the uterus, and the use of the probe. It is very difficult to treat, and requires the use of the cup-and-stem pessary.

PROLAPSUS UTERI.

Prolapsus uteri in either of the three degrees mentioned is readily diagnosed. The symptoms of the first degree are the same as those accompanying retroversion, except that the sense of weight and bearing-down is much more marked. In the second degree, rectal and vesical irritation is prominent among the patient's complaints. She feels the protrusion at the vulva, either of the cervix, or the cystocele or rectocele, which commonly come down in advance of the uterus. In the third degree the symptoms are most marked, and the patient states that there is a large mass outside the vulva. Walking is very difficult, and cystitis not uncommon. Congestion with consequent enlargement of the uterus becomes more marked in the successive degrees. When the uterus has remained for some time outside of the vulva, the mucous membrane covering it becomes pale and thickened, resembling the skin proper. Ulcerations from friction, and cicatrices where they have healed up, are very common in chronic cases.

The Diagnosis of the First Degree is readily made by bi-manual examination. The finger at once impinges on the cervix, and the entire uterus is felt to be much longer in the pelvis. In the second degree the os is felt at the vulva, and prolapse of the vaginal walls is almost invariably present. A peculiar and very rare form of hypertrophy and elongation of the cervix might be mistaken for prolapsus, though the two are more often associated with each other. The elongation is due to peculiar alterations of the cervix and blood-vessels, rather than to an actual increase of tissue as was once supposed. Inspection is sufficient to diagnose the third degree of prolapsus. The presence of the cervical canal, the passage of the sound in the bladder over the anterior surface of the uterus, and the empty pelvis, as shown by the tip of the finger in the rectum meeting the sound at the fundus of the bladder with no intervening body, make a positive diagnosis from any other condition.

The Prognosis, as regards cure, is not very favorable in the worst cases. The first and second degrees can often be cured permanently.

The Treatment varies somewhat with the form. The first degree is managed in the same way as retroversion. If there is a laceration of the perineum, an operation[1] must be performed, no matter what the form of prolapsus is, as no vaginal pessary can be retained. In the second degree, in addition to the measures taken for the preceding form, it is often necessary to operate on the rectocele or cystocele; the former by Emmet's,[2] the latter by Emmet's[3] or Simon's[4] method. In complete prolapsus after the child-bearing period, Neugebauer[5]

[1] Emmet, Principles and Practice of Gynæcology, 1884, p. 358.
[2] Ibid., p. 374. [3] Ibid., p. 362.
[4] Hegar und Kaltenbach, Operative Gynäkologie, 1881, p. 689.
[5] Centralblatt für Gynäkologie, Nos. 1 and 2, 1881.

has united the anterior and posterior vaginal walls. This is known as Le Fort's operation. Should the patient not be fit for an operation, or refuse to submit to one, astringent tampons of alum, tannin, or a decoction of white-oak bark, may be tried. These can be retained in place by a T-bandage if necessary, and must be renewed every day. They are seldom curative, but will add much to a patient's comfort. In other cases, an abdomino-vaginal supporter is beneficial, such as Cutter's or MacIntosh's, or the abdominal supporter[1] previously mentioned.

When the uterus has protruded from the vulva for a considerable length of time, it becomes very much enlarged, and cannot be easily replaced. The best plan here is to put the patient in bed, apply glycerine dressings every other day to the prolapsed organ, and douche it twice daily with five quarts of water at 110° F. Calendula cerate is a useful application to the erosions or ulcerations. Within a week the uterus will be so much smaller, that it can be readily returned within the pelvic cavity in the following manner. Place the patient on her back, with the thighs flexed on the abdomen, and the hips slightly elevated; raise the uterus a little, and let it rest in the hand a short time to allow the venous blood to return to the pelvis, and then replace it in the same way as if it were a hernia of the intestines, i.e., return first that part which came down last. The organ is then retained by some of the methods just mentioned for that purpose. In many cases, however, this is no easy matter, and it is far better to have an operation performed. In ladies over sixty years of age, it is best not to perform the usual operation, but simply close the vaginal outlet, leaving a small opening for the escape of any discharge. This will be sufficient to retain the

[1] See chapter on Minor Surgical Gynæcology.

uterus, and make them comfortable during the few years they are likely to live.

In inveterate cases of posterior displacement or prolapsus of the uterus, which operations on the vagina fail to relieve,[1] Dr. Olshausen recommends opening the abdomen, and stitching the fundus of the uterus to the abdominal wall with silver wire. One case was a failure, but others were cured in this way.

Inversion of the Uterus is, what the name signifies, a turning inside out of that organ, so that its cavity is lined with peritoneum, and directed toward the abdominal cavity, with which it is continuous, while the external covering consists of the endometrium. It may take place slowly in consequence of the traction of a pedunculated fibroid or polypus, but in about eighty-eight per cent of the cases it follows the third stage of labor. It may be divided into the acute and chronic forms: acute when the inverted uterus has not undergone involution; chronic after this stage has passed, and when it is caused by a tumor.

Acute inversion belongs to the province of the obstetrician, and need not be considered here, though the manner in which it is produced may be of interest.[2] It is believed there is a localized weakness, or a paralysis of some portion of the uterine wall, probably at the placental site, or, in case of a tumor, a fatty degeneration or loss of tone about the site of attachment. In either case, the weak portion of the uterine wall sinks into the uterine cavity from the traction on the placenta of the tumor, or from abdominal pressure with a cor-

[1] Centralblatt für Gynäkologie, No. 43, p. 698, 1886.

[2] Dr. Henry Crampton has an interesting article on Inversion of the Uterus after Parturition, and tabulates the records of one hundred and twenty acute and one hundred and four cases of chronic inversion, in the American Journal of Obstetrics, pp. 1009 and 1146, 1885.

responding depression on its peritoneal surface. The inverted portion, aided by muscular contraction of the uterus and abdominal pressure, increases, sometimes slowly, or so rapidly that complete inversion may take place at once, or, again, it may be arrested so that only one angle or horn of the uterus is inverted as far as the internal os (incomplete inversion) or through the external os (complete inversion), which is the more common form. The chief symptom of inversion is very profuse menorrhagia and metrorrhagia, producing great anæmia and weakness. Besides this, there are the bearing-down and pelvic pains, so characteristic of other uterine displacements.

The Diagnosis is not difficult. There is no fundus felt in making a bi-manual examination in the usual manner. The sound will not enter the cavity by the side of the tumor at any portion of its circumference to a depth of two and a half inches. If the tumor is drawn down by a slip-noose over it (volsellum forceps or tenacula will tear out and cause bleeding), the finger in the rectum can feel the depression on the peritoneal surface of the tumor, and a sound passed into the bladder at once impinges on the rectal finger, showing that the body of the uterus cannot lie between them. Furthermore, the external surface of the tumor bleeds easily, and is sensitive to the prick of a needle. A careful examination of this kind will distinguish it from any polypus or pedunculated fibroid, the only conditions for which it could be mistaken by the most superficial examiner.

The Prognosis is unfavorable for most cases, in consequence of the loss of blood, unless the displacement can be reduced. On the average, two out of three can be successfully treated in this way. The duration of the inversion, even if it be for many years, should not deter the physician from careful and persistent efforts at reposition.

The Treatment may be classified as follows : —

Reposition { Immediate, by the hand or instrumental aid.
Moderate, elastic pressure applied continuously.
Thomas' operation.

Amputation.

The obstacle to reposition is the contraction of the cervix and uterine tissue, especially about the region of the internal os, forming a ring around the prolapsed mass. If the inversion be caused by a tumor, the latter must be removed if not malignant, and then the following measures can be tried : Before attempting replacement of a chronic inversion, it is well to build up the patient's strength, and hold the hemorrhage in check by vaginal irrigations of hot water (115° F.).

If the patient does not object to taking ether, and relays of competent assistants can be had, the immediate method of reposition by the hand can be tried first. In preparation for this, the vagina should be distended by the colpeurynter, or a Barnes' bag, placed well up in that canal. If neither of these is at hand, packing the vagina full daily with antiseptic wool might be tried. This makes room for the operator's hand, and, in six cases, has been known to cause reposition. This will have to be continued for ten days, or longer, till the vagina is somewhat expanded ; then, having the patient anæsthetized, and in the lithotomy position on a table, seize the fundus of the uterus in the right hand, crowding the fingers up, as far as possible, along the base of the tumor. The fingers are then expanded to press the ring out as the fundus is crowded up, and the left hand makes counter pressure on the abdominal wall. A cone of wood about four inches long is sometimes very useful for counter pressure. When one person becomes tired, another takes his place, till the ring yields, and

the fundus is finally completely replaced. As the hand is soon tired, Bryne's repositor, an ingenious cup-and-stem instrument, can be substituted with advantage.

In other cases, hooking one or two fingers in the peritoneal depression per rectum, and exciting counter pressure with the thumbs, has been tried successfully. Dr. Noeggerrath advised indentation of one horn of the inverted fundus, and to crowd this upward as a wedge in the canal, reducing the displacement in this way.

If these efforts are unavailing after two or three hours of well-directed taxis, provided the patient's condition admits of such long manipulation, she should be put to bed, and a colpeurynter, or vaginal tampon, used to secure what has been gained. If the fundus has risen through the external os, though it is not completely replaced, Dr. Emmet advises bringing the lips of the cervix together temporarily with silver sutures, so as to keep what has been accomplished, and in hopes it may undergo self-reposition.

If repeated attempts of this kind fail, elastic pressure may be tried. Some operators prefer to try this method first. The two principles involved are elastic pressure on the inverted fundus, and counter pressure on the abdominal wall. The first is met by applying a cup to the fundus, with a firm, slightly curved stem, to which are attached four elastic bands, two passing in front, and two behind, to be fastened to a firm abdominal bandage. Adhesive plaster is useful to keep the bandage in place. Counter pressure can be exerted by layers of cotton-batting, over the hypogastrium, secured by a broad, firm bandage over the pelvis similar to the obstetric binder, and so applied as to exactly meet the pressure from below.

While an old-fashioned wooden stethoscope has been successfully used, the cup-and-stem repositor of Thomas

or Bryne is preferable to exert pressure on the fundus. The latter must not only be in the direction of the axis of the inverted uterus, but also in the axis of the pelvis. This can be regulated to a nicety, as well as the amount of pressure, by tightening one or more of the elastic bands. In order to keep the uterus from bending on itself, it is padded, on all sides, with antiseptic wool; the cup repositor is then applied to the fundus in the vagina, packed around, in the same way, to prevent slipping, and, finally, the elastic bands are adjusted so as to exert only a moderate pressure. The instrument must be removed and re-applied each day to observe the effects, and note any tendency to sloughing. This method should not be abandoned till it has been tried at least three weeks.

Inversion[1] of the uterus has been successfully treated, in a similar way, by fastening to one end of a smooth piece of broomstick a soft, thick rubber ring (doughnut pessary), which would fit the vagina loosely, and when inserted lie against the fundus uteri. A piece of soft rubber tubing was tacked on the other end, which projected about two and a half inches from the vulva; the two forming a T-shaped instrument, the wood the upright part and the tubing the arms of the T. This tubing formed an elastic strap for exerting pressure against the fundus, and was fastened to an abdominal bandage by safety-pins. Pressure in any desired direction, and to any reasonable amount, could be readily regulated by tightening or loosening either the anterior or posterior end of the tubing.

The instrument was adjusted, and the patient kept on her side. Once in twenty-four hours it was removed, cleansed, a hot vaginal douche given, the instrument

[1] Dr. F. W. Johnson, Am. J. of Obstetrics, p. 815, 1884.

replaced, and the patient put on the opposite side. As the fundus receded, smaller pessaries were used till it was within the cervix. A small round stick was then substituted for the piece of broomstick; and, instead of the pessary, a rubber cap, such as is used on chair-legs, was slipped over the end, and over this were tied two or three layers of a rubber bandage. This formed the pad, which was placed against the fundus, and made to follow it up to its proper place. One case of twenty-three months' duration was thus reduced in ten days; another, of two and a half months, in two days.

The majority of these cases can be reduced by the above measures. If they are not successful, and the life of the patient is sufficiently endangered to require amputation of the inverted uterus if it is not replaced, Thomas'[1] method may be tried, of opening the abdominal cavity, inserting an instrument similar to a glove-stretcher into the peritoneal opening of the fundus, stretching the ring of constriction, and returning the uterus to position by the efforts of taxis already described. The last resource of all is amputation.[2] The mortality of the latter operation is about thirty-three per cent.

Displacement of the Ovaries is of common occurrence. In rare instances, the ovary has been known to enter hernial sacs, as well as the peritoneal cavity of the inverted uterus. The most common displacement is prolapsus into the pouch of Douglas, or at one side of it, and when fixed by adhesions, and complicated by retroversion or flexion, it is exceedingly difficult to treat successfully.

The normal position of the ovaries, like the uterus,

[1] Diseases of Women, p. 440, 1878.

[2] Hart and Barbour's Manual of Gynæcology, p. 380, 1886; also Hegar und Kaltenbach, Operative Gynæcology, vol. ii. p. 133, 1887.

is very variable;[1] but they may be considered prolapsed when they lie below the level of the junction of the cervix with the body of the uterus, assuming that organ to be in a normal position.[2]

The frequency with which prolapse of the ovaries is associated with posterior displacements of the uterus suggests that the latter drags the ovaries after it. This, with chronic congestion and increased weight of these organs, accounts for the etiology of nearly all cases. Jolts and falls are also said to cause it.

The Symptoms are those of pelvic pain radiating in various directions, painful coition and defecation, with general nervousness and irritability.

The Prognosis for recovery is fairly good for recent cases without adhesions, and doubtful with the conditions reversed.

The Treatment consists in rest during menstruation, avoidance of sexual excitement, and the regulation of the bowels so as to secure a daily movement. Hot-water vaginal douches, glycerine, and hamamelis, either on wool tampons or mixed with the last pint of water used as a vaginal douche, so as to form a strong solution, and suppositories of belladonna, iodoform, or similar substances, are useful to allay the congestion and sensitiveness. When the ovary can be replaced by having the patient occupy Sims' position with the hips raised, and gently crowding the ovary up with the finger, a pessary

[1] As the result of about twenty post-mortem examinations of nulliparæ from fifteen to thirty years of age, and a number from one to fourteen years old, Waldeyer believes that, in the normal position, the ovaries lie just below the middle of the linea innominata, with their long axis perpendicular when the body is in an upright position. The ureters are close under the hilum of the ovary. He states the uterus is in a position of anteversion and anteflexion when the bladder is empty, and confirms the views of Schultze and His. — WALDEYER: *Die Lage der innern weiblichen Bechenorgane bei Nulliparen*, *Anatomischer Anzeiger*, No. 2, 1886.

[2] For palpation of the ovaries, see chapter on Diseases of the Ovaries.

CHAPTER XVI.

ENDOMETRITIS.

ENDOMETRITIS, or inflammation of the lining of the uterine cavity, may be acute or chronic, and affect the cervix, body, or the entire endometrium in either form.

Form.	*Etiology.*	*Symptoms and Diagnosis.*
Acute endometritis (catarrhal).	Traumatism, such as improper use of the uterine sound, tents, intra-uterine pessary, contact with irritating chemicals, abuse of coitus; effects of cold, especially during menstruation, with suppression of the flow; inflammation of the vagina extending upward, particularly if gonorrhœal; improper evacuation of retained menses from imperforate hymen; acute eruptive diseases, such as measles, scarlatina, small-pox, etc.; retrocession of eruption in these diseases.	The symptoms are not severe unless from parturition, or evacuation of retained menstrual flow. There is a sense of weight, dragging, and pain in the pelvis. The latter may also be present in the back and thighs, and accompanied by frequent and painful micturition. After a few days there is a leucorrhœal discharge, which may be sufficiently irritating to excite vaginitis and produce excoriations on the external genitals.
(Fibrinous.)		
(Hæmorrhagic.)		The uterus is somewhat enlarged, the cervix swollen and sensitive, the os open and the margins red; the canal is filled with a plug of albuminous and very tenacious mucus.
Differential diagnosis.		The mobility of the uterus, the absence of inflammation in the surrounding tissues, and the lack of marked constitutional symptoms, will distinguish it from other diseases.

Form.	*Etiology.*	*Symptoms and Diagnosis.*
Chronic endometritis (cervical).	This is sometimes the continuance of the acute form and may be produced by the same causes. When the acute form passes into the chronic, there is often present a scrofulous diathesis, an enfeebled condition from any of the causes producing anæmia, or imperfect circulation from mode of dress, disease, etc. The more marked exciting causes of this disease are laceration of the cervix, polypi in the cervix, obstruction to escape of menstrual fluid, sub-involution, prevention of conception, or the induction of abortion.	The only symptom which may bring the patient to the physician is leucorrhœa. There is a sense of bearing-down or pelvic pain, worse on exercise, and menstrual disorders not infrequently develop. Symptoms of anæmia are often present. Physical examination shows the cervix is enlarged, and a little sensitive. There is usually more or less erosion about the os; the lips of the cervix may have a rough, raw appearance, i.e., granular degeneration, and, in addition, swollen follicles and chalk-like concretions are seen, giving a raspberry appearance to the cervix. When this is the condition, ectropium is present, and there is almost invariably laceration of the cervix. Sometimes the cervix has a normal appearance, and there is nothing but the excessive amount of tenacious cervical mucus to mark the presence of the disease, which affects the glands of the cervix in particular. In the chronic form, the cervix suffers most, forming cervical endometritis or endocervicitis.
Corporeal. (Fibrous.) (Hyperplastic, or polypoid.)	Same as above, and presence of tumors in the uterine cavity or encroaching on it.	The cervix and cavity of the uterus may be simultaneously or separately affected. In corporeal endometritis, the leucorrhœa is less tenacious and viscid than when it comes from the cervix, and is sometimes tinged with blood. Menorrhagia is not uncommon. The endometrium bleeds easily, and is abnormally sensitive to touch with the sound. Sterility is often present. These symptoms distinguish corporeal from cervical endometritis, as the others are common to both.

The only complications are those resulting from extension of the inflammation to the neighboring struc-

tures. Specific endometritis may extend to the peritoneum through the Fallopian tubes with serious results. Endometritis from septic puerperal causes, or after the evacuation of retained menses, may be of a dangerous or even fatal character; otherwise, the prognosis is favorable in acute cases. The chronic form is one of the most common of the gynæcological diseases, and, at the same time, one of the most difficult to cure, especially when associated with ovaritis.[1] As a general rule, the more the Nabothian glands are involved, the more obstinate is the disease.

The pathology of endometritis is very like inflammation of mucous membrane elsewhere, plus the inflammation of the utricular and Nabothian glands, and the increased secretion in consequence. The causes of this disease are very similar to those producing catarrhal inflammation in other portions of the body, and the same general principles of treatment apply to both; but how far those remedies particularly adapted to the one will cure the other, is not known.

LEUCORRHŒA.

It may not be out of place here to call special attention to this symptom of catarrhal inflammation of the lining membrane of the genital tract. When it occurs as a symptom of vulvitis or vaginitis, the reader is referred to those chapters.

From a practical point of view, leucorrhœa may be divided into two classes: physiological and pathological. The former is of slight amount, short duration, and is more often found in women having a scrofulous

[1] An excellent study of the relation of endometritis to ovarian disease, by Dr. Mary Putnam Jacobi, will be found in the American Journal of Obstetrics, p. 352, April, 1886. Compare also her Studies in Endometritis, American Journal of Obstetrics, 1885.

taint; for example, some women have a slight leucorrhœa during cold weather, the mild forms of leucorrhœa in pregnancy, a small amount of leucorrhœa immediately before and just after the menses, which entirely ceases during the interval. In the last instance it may be that the leucorrhœa is a safety-valve of the organism, the sudden suppression of which by astringent injections would result in inflammation of the pelvic structures, which would not be the case were it checked more gradually by milder treatment. The leucorrhœa during cold weather is often cured by wearing closed flannel drawers, and using a chair in a warm room instead of the cold, open privy. The great characteristic between physiological and pathological leucorrhœa is, that the former is transient, the latter constant but subject to variations; the former requires very little treatment, the latter may tax the powers of the most astute physician.

Though the etiology is that of the disease producing the discharge, such as endometritis, there are three great causes of leucorrhœa, which must be remembered for the successful treatment of this affection.

1. Scrofulous dyscrasia associated with anæmia or chlorosis
   - Heredity.
   - Too frequent parturition or prolonged lactation.
   - Anything producing anæmia.
2. Congestion of the pelvic organs
   - Retarded portal circulation
     - Diseases of the heart or liver.
     - Chronic constipation.
   - Local irritation
     - Growths in the uterus.
     - Displacement of the uterus.
     - Sub-involution.
     - Ovaritis.
     - Incomplete or excessive coition.
     - Masturbation.
     - Acute exanthemata.
     - Ascarides, especially in little girls.
3. Specific
   - Gonorrhœa.
   - Syphilis.

Three forms of leucorrhœa are usually described: vulvar, vaginal, and uterine. The first is sebaceous or sero-purulent; seldom profuse. The second has an alkaline re-action, usually of milky character, and contains an abundance of pavement epithelium undergoing fatty degeneration. The third has often, but not always, an alkaline re-action; the discharge from the cervix is thick and gelatinous, from the uterus thinner and more like mucus. The last two forms are often found together.

Leucorrhœa from specific causes usually flows from both urethra and vagina, has an acid re-action, and is characterized by its thick, yellow, or purulent appearance.

A very offensive watery discharge, sometimes containing blood, is one of the earliest symptoms of malignant disease, and calls for a careful examination.

Whatever the form of leucorrhœa, the principles of treatment are the same. The axe must be applied to the root of the tree; the cause must be carefully investigated and removed. The treatment must be aimed at the source of the disease. If anæmic, the patient must be built up by generous diet, out-door air and exercise, sea-bathing or a sponge-bath with salt water and vigorous friction, as well as the use of proper medicine; if the uterus is displaced, it must be replaced; if the ovaries are inflamed, they must receive particular attention. It is hardly necessary to recapitulate each particular cause, the treatment of which will be found in its appropriate chapter.

The importance of a generous diet cannot be overestimated. The loss of albumen from the system is a constant drain, and tends to increase the anæmia. Nature tries to offset it by arresting the menstrual flow; but the waste in the system needs replenishing, not by the pickled-limes, olives, chalk, and slate-pencils

of school-girls, nor the highly-seasoned food of their mothers, but by plenty of lean beef, mutton, milk, and eggs, — in short, a plain non-stimulating diet. Where the digestion is weak, and meat cannot be borne, the author has successfully used beef-juice, prepared in the following manner: Take a juicy steak, preferably the round; cut off the fat; broil it quickly over hot coals, merely enough to sear the surfaces without cooking the meat inside. Cut a few gashes in it, and press out the juice with a lemon-squeezer or, far better, a meat-press. This can be seasoned, and taken clear or mixed with bread-crumbs. In this way a patient can easily take the juice of two or three pounds of steak a day, and derive much more benefit from it than that popular delusion, beef-tea, which is stimulating, but contains scarcely any nourishment. The local and medical treatment is the same as for endometritis, of which it is a symptom.

The Treatment of Acute Endometritis consists in removing the exciting cause so far as possible, enjoining perfect sexual and physical rest, and the use of copious hot-water vaginal douches night and morning. No local treatment is necessary.

The Treatment of Chronic Endometritis is a different matter, and may baffle the physician's skill to cure it permanently, particularly if the body of the uterus is affected. Vaginal douches should be employed twice daily, to which a little impure carbolic acid, calendula, eucalyptus, hydrastis, or glycerine can be added. If the cervical canal is very small, or the external os is a little contracted so that the cervical secretions are somewhat pent up, it is absolutely necessary to dilate the canal or incise the cervix sufficiently to allow them a free exit.

Before a local application can be made with any de-

gree of efficiency, the plug of mucus in the cervical canal must be removed, which is not always an easy matter, as the mucus is so tenacious. It can be done with a uterine piston syringe having a short piece of rubber tubing on the nozzle, which is introduced well into the external os. The plug of mucus is sucked in by drawing the piston quickly out; or a small, narrow piece of dry sponge can be introduced in the canal, and rotated with the dressing forceps so as to entangle and bring out the thick mucus: but it is of no use to try it with cotton.[1] Sometimes a stream of water from a syringe will cleanse the canal most effectually.

After the diseased mucous membrane has been thoroughly cleansed by one of these methods, an application can be made of impure carbolic acid, eucalyptus, Churchill's tincture of iodine, iodized phenol, or thick extract of pinus canadensis. Gelatine or cocoa-butter pencils of iodoform, tannin, hydrastis, etc., are favorites with some; or the same substances, including calendula, eucalyptus, and boracic acid, may be used as a cerate or mixed with glycerine. An occasional application of a solution of nitrate of silver (five grains to the ounce) is sometimes necessary on account of its stimulating properties; but its use should be restricted, as severe and almost incurable ovaritis has resulted from its use.[2]

The distended follicles must be opened, and if they are seriously involved it is often necessary to remove them with a curette.[3] Sponge tents are also used for

[1] The local use of the peroxide of hydrogen (twelve volumes) has been recommended for this purpose, but the author cannot speak very favorably of it from a limited trial, except when the discharge is purulent. The preparation is very unstable, and soon deteriorates.

[2] For the indications for the use of these applications, see p. 37.

[3] The writer has noticed that a very large proportion of cases of leucorrhœa were associated with laceration of the cervix, and promptly cured by operating on the latter. When the lacerated surfaces and cervical canal are both filled with distended follicles and nodules, Schroeder's method of excision of the cervical

this purpose, and exercise a decided alterative effect on the tissues.

The use of injections into the uterine cavity should never be attempted unless the canal is patulous. It is a question with the writer, how far local applications to the endometrium of the body of the uterus will result in permanent benefit to the patient. This membrane is constantly undergoing degeneration and repair from the muscular structures beneath. These must be put in a condition to produce a healthy lining to the cavity, and this can be best accomplished by constitutional treatment. Excellent authorities, however, recommend the use of the compound tincture of iodine or iodized phenol; and others believe in thorough irrigation of the cavity with a double-current uterine catheter, or the application of iodoform in pencils or powder. Dr. Gehrung[1] has invented an ingenious instrument for blowing powder into the uterine cavity or vagina. Should severe menorrhagia be a prominent symptom, it probably depends on the presence of polypi or a fungoid degeneration of the endometrium. In these cases the thorough use of the dull wire curette, followed by the local application of iodine, will control the menorrhagia. It is exceedingly difficult to cure chronic endometritis without perfect rest during the menstrual period, and absolute sexual abstinence.

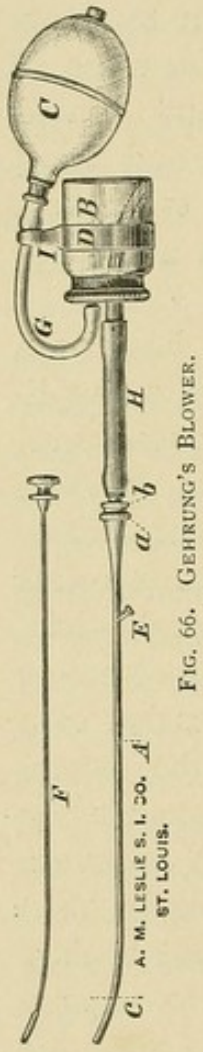


FIG. 66. GEHRUNG'S BLOWER.

membrane can be combined with Emmet's operation. For a description of this operation see Schroeder, Krankheiten der weib. Geschlechtsorgane, 1881, p. 135.

[1] American Journal of Obstetrics, p. 1233, December, 1886.

In leucorrhœa depending on a gonorrhœal vaginitis or endometritis, Fritsch [1] warmly recommends a solution of equal parts of chloride of zinc and water. 20 g. (one tablespoonful) of this solution is added to a litre of water (one quart+), and used for a vaginal injection at a temperature of 30° R. (99.5° F.), and continued through menstruation if necessary. The leucorrhœa generally ceases after ten injections, but returns if the cervix, endometrium, and tubes are involved. In this case the uterine cavity is cauterized with a stronger solution of chloride of zinc, and an iodoform pencil introduced.

THERAPEUTICS.

In prescribing for leucorrhœa, the character of the discharge is generally less important than the general symptoms, and those arising from the physical condition of the patient. The symptoms attending the menstrual flow, and of the ovaries, are of no little value in selecting the remedy.

|| Antimonium tart. Many physicians consider this one of the most important remedies for chronic corporeal cervicitis,[2] the cervix is much enlarged, with a superficial erosion about the os. It is an excellent remedy both for the inflammation of the endometrium, and for the body of the cervix.

| Arsenicum. Chronic endometritis of the body of the uterus, particularly if menorrhagia is a marked symptom.[3] It is also useful for endocervicitis, if the patient is weak, the discharge thin, and the pelvic pains of a burning character; leucorrhœa profuse, yellow, thick (Hydrastis, kali bi.), corroding (Kali carb.); pressive, burning, lancinating pains in the ovary,

[1] Dr. H. Fritsch: *Die Behandlung der gonorrhoischen Vaginitis und Endometritis. Centralblatt für Gynäkologie*, No. 30, p.477. 1887.

[2] Dr. Ludlam, New-England Medical Gazette, November, 1877; and Dr. Gourbeyre, Clinique, July, 1881.

[3] Hahn. Mat. Med., Part I. p. 18 (arsenic).

more often the right, extending into the thigh, which feels numb and lame, worse from motion or bending over. White leucorrhœa, acute from taking cold, or debility of exhausting disease, cancer, kidney, cardiac, or pulmonary disease.

|| **Belladonna** is an invaluable remedy in acute endometritis either of the body or cervix of the uterus; also, if the inflammation has extended beyond the endometrium, so as to involve the muscular tissue. The cervix is very sensitive, swollen, and reddened; the mucous membrane about the os is of a bright scarlet hue, and there may be superficial excoriations; there is much heat, dryness, throbbing pain, and *bearing-down*, in the pelvic organs.

Bryonia. If the endometritis follows imperfect development or retrocession of some skin eruption, and there are also other symptoms belonging to this remedy, it deserves a trial, though the author has not met with reports of cases verifying this indication.

|| **Calc. carb.** Compare also calc. phos. It is especially useful for *scrofulous* patients, and is indicated more by the general than the local symptoms, when *strumous disease*, especially of the cervical glands, is present; perspires on the least exertion, particularly about the head; *very hungry in the morning, acidity of the stomach; feet feel cold and damp;* menses *too early* and too profuse; leucorrhœa before the menses; *milky leucorrhœa* (Coni., lyc., *puls.*, *sepia*, sulph. ac.), at times profuse, with itching and burning. Dr. Ludlam thinks this remedy is not indicated in cervical endometritis, unless the inflammation extends up beyond the internal os uteri. Leucorrhœa in children (Sepia, cannab. sat.).

Cimicifuga. This remedy is warmly praised by Dr. D. Dyce Brown,[1] in a very able article on the Treatment of Endocervicitis. The general symptoms are of great importance. *The patient is nervous, neuralgic*, and *hyperæsthetic*, but not so hysterical as the ignatia patient; the uterus is engorged; the cervix eroded and hypertrophied; examination shows a marked sensitiveness of the pelvic organs, especially the ovaries, and

[1] Transactions Internat. Hom. Congress, London, p. 244, 1881.

the left rather more than the right, not from pain but from the general hyperæsthesia; headache in the vertex, forehead, over the eyes, or in the eyes; the pain is dull, pressive, and heavy in the eyes, and there is the same heavy pressure, with a drawing sensation, in the fundus of the eyeball; the pupils dilated.

Graphites. *Profuse leucorrhœa of very thin white mucus*, with weakness in the back; leucorrhœa occurs in gushes day or night; *abdomen distended; menses delayed*, scanty and pale. Dr. Jahr concurred with Dr. Wahle in recommending it for the cauliflower, wart-shaped excrescences on the neck of the uterus. The latter also prescribed it for induration and congestion of the cervix; painful tubercles on the sides of the cervix; great weight and lancinating pains in the lower part of the abdomen and uterus. These point to graphites as a valuable remedy for laceration of the cervix with follicular disease.

Guaco. Dr. Eduardo Fornias,[1] in his lecture on "exotic drugs" states, that *guaco* taken in appreciable doses produces a copious, corrosive, putrid leucorrhœa, which is very debilitating. A lady who had never suffered from these symptoms before taking the drug, reports that she sometimes "felt as if fire were running out of her parts, and that the inside of her thighs was materially tanned, and her clothing always stained yellow; she complained also of a terrible itching and smarting, especially at night."

Helonias. *Leucorrhœa with general debility;* melancholia with a sensation of weight, soreness, and dragging in the uterus. It may be accompanied by intense pruritus, heat, and swelling, with exfoliation of the epidermis.

Hepar. Scrofulous subjects; profuse catarrhal discharge, with streaks of blood in it; erosions about the os uteri which are sensitive to touch, bleed easily, sting and burn, have an odor of old cheese.

Hydrastis. *Tenacious, thick, ropy, yellow leucorrhœa. severe* erosion of the cervix; constipation with hemorrhoids, and dyspepsia, with a faint or sinking sensation at the stomach.

[1] Hom. Jour. of Obst., May, 1886, p. 231.

Kreosote.[1] *Yellow leucorrhœa with great debility* (Carbo an.). White leucorrhœa having the odor of green corn; *soreness, smarting, and burning between the labia* and thighs, with burning, biting pain; *violent itching* of the vagina and labia; external genitals sometimes swollen, hot, hard, and sore.

| Lycopodium is highly recommended by Dr. Leadam. Patient looks pale and sallow; complains of pressive or full headaches; sleeps badly, and is always chilly; feels full after eating; "bloating" or distension of the abdomen from accumulation of gas; constipation with hard stools; red sediment in the urine. There seems to be a general sluggishness of the muscular, venous, and digestive systems, preventing the normal peristaltic action of the intestines; there is dryness and burning in the vagina; darting pains in the uterine region; coition is painful. The leucorrhœa may be like milk (Calc. carb., coni., kreos., *puls.*, *sepia*, sulph. ac.), bloody, or corroding.

|| Mercurius. The *solubilis* is preferred by Dr. Matheson[2] for superficial erosion of the os uteri. Dr. Hughes[3] states that merc. cor. is his favorite remedy, if the eroded portion appears deeply excavated, and the cervix is swollen and indurated. Dr. Ludlam[4] recommends merc. iod. for endo-cervicitis in scrofulous subjects, with erosion of the os, and enlargement of the nabothian glands. It is especially valuable

[1] Mrs. ——. For ten years she suffered from a frequent and copious leucorrhœal discharge, staining the linen yellow, and stiffening it; worse between the menses; vulva a little irritated, but there was no other trace of disease. Kreosote cured her. — DR. LANDRY, *Bull. de la Soc. Méd. Hom. de France*, vol. xii. No. 5.

[1] Miss ——, aet. 25, brunette. Amenorrhœa for six months, from chill, when the menses returned; cannot lie on either side; constant dull pain in the region of both ovaries, and inability to bear pressure there; urine colorless in the morning; brownish-yellow, acrid leucorrhœa. She was given kreosote 20x. before each meal. In two days the pains were less, the leucorrhœa became diminished, less acrid, and she could lie on the left side for a short time. She then received kreosote 4x. once a day; the morning urine now became of a normal color. In fourteen days she could lie on both sides, the leucorrhœa was quite gone, also the pains in the ovaries, and she remained well. — DR. PRALL, *Allgemeine Hom. Zeitung*, vol. xcii. No. 11.

[2] Dr. Matheson, Four Lectures on the Diseases of Women.

[3] Dr. R. Hughes, Manual of Therapeutics, vol. ii. p. 300.

[4] British Jour. of Hom., 1884, p. 302.

in cases of gonorrhœal or syphilitic origin, and severe erosions of an unhealthy type; *profuse, greenish, yellow, or purulent leucorrhœa, worse at night;* smarting, corroding, itching, and *inflammation of the vagina.* It is a superior remedy in hypertrophy of the uterus, or chronic metritis.

| **Nitric acid.** This was a favorite remedy of Dr. Jahr[1] for flat, superficial erosions on the cervix (Thuja, sepia), resembling ulcerated aphthæ; erosions resulting from syphilis, discharging dirty yellow pus; excrescences on the os uteri. Dr. Leadam recommends its persistent use in alternation with sulphur at long intervals.

| **Phosphorus** ought to be a good remedy, as it has caused endometritis,[2] but there are very few reports of its use. The *menses are too early and too scanty*, or there may be frequent and profuse metrorrhagia, acrid excoriating leucorrhœa.

| **Pulsatilla** is one of the best remedies for *leucorrhœa with delayed or scanty menses; the leucorrhœa is thick, creamy, or milky* (Calc. carb., coni., *sepia*, sulph. ac.), *with swollen vulva, painless;* acrid, thin, burning (Alumina, ars., coni., kreosote, *merc.*, *phos.*); pressive pain toward the uterus, with morning nausea; involuntary micturition at night; frequent, profuse flow of urine; dyspepsia.

Rhus tox. has been recommended for erosions of the cervix, having a raspberry appearance, probably due to distension of the follicles.[3]

| **Sepia.**[4] Enlargement of the uterus, probably from venous engorgement; prolapsus, with *much bearing-down;* great dryness of vulva and vagina, which are painful to the touch; *leucorrhœa yellow, or like milk, excoriating* (*Alumina*, ars.,

[1] Forty Years' Practice, p. 179; Diseases of Females, p. 246.

[2] Hausmann, Berl. Bitr. z. Geburt. u. Gyn., Bd. I. s. 265.

[3] U. S. Med. and Surg. Journal, July, 1874.

[4] Girl, æt. 5. Pale, emaciated, no appetite, and strength rapidly decreasing. For fifteen months has had an unceasing and terribly exhausting leucorrhœa. The discharge was sometimes thick, and of a yellowish green color, sometimes thin, and always very profuse; running through the night-dress, sheet, and down into the mattress on which she lay at night. Sepia 4x., a few pellets every third night, for four weeks, completely cured her. — Dr. Charles Sumner, *N. Y. State Trans.*, p. 314, 1871.

kreosote) at the climacteric, and especially *before the menses;* flat, superficial erosions about the os; tendency to mucous catarrh everywhere; constipation and piles; a pale, sallow complexion, pimples or skin eruptions on the face and genitals; much general itching of the skin. It is very serviceable in chronic inflammation of the uterus. Dr. Dyce Brown uses the twelfth centesimal with great confidence.

| **Silicea.** Scrofulous diathesis; profuse, thin, acrid, corrosive (Ars., kreosote, merc., puls.), or purulent leucorrhœa; constipation, weakness, and sense of great debility; sensitiveness to cold air. The characteristic headache and nervous symptoms of silicea are important in prescribing this remedy.

| **Sulphur.** It is a valuable remedy for the so-called chronic metritis, and seems to reduce the venous engorgement, by stimulating the portal circulation. This remedy is indicated by the general rather than the local symptoms. The leucorrhœa is profuse, yellowish, and corrosive, burning in the vagina; the patient is melancholic, irritable, and peevish, complains of great mental confusion, vertigo, weight on the vertex, rush of blood to the head; appetite is gone, or excessive, fulness and pressure in the stomach after eating; constipation, or early morning diarrhœa; copious and frequent urination at night; numb sensations in hands and feet; burning of the soles of the feet at night.

Thuja was recommended by Dr. Hartmann for indurations and readily bleeding excrescences about the os and cervix uteri; but Dr. Jahr[1] has never seen the least benefit from it, and speaks highly of graphites and kreosote, suggested by Dr. Wahle of Rome for the same condition. Superficial, aphthous erosions about the os, and on the cervix uteri. *Left-sided ovaritis*, worse at each menstrual period.

Dr. Jahr states that he has found the following remedies efficacious for catarrhal leucorrhœa: puls., sepia, sulph., calc., cocc., graph., lyc., silicea. Dr. Clotar

[1] Forty Years' Practice, p. 179.

Müller[1] recommended especially calc., china, merc., nat. mur., phos., puls., sabina, and sepia. He also wrote the following digest, to which some additions have been made: —

Leucorrhœa purely in consequence of chlorosis, without any granulations or excoriations. — Calc. carb., china, ferrum, nat. mur., phos., puls., sepia.

Leucorrhœa with marked irritation, erosions, granulations, etc. — Ant. tart., arg. nit., bell., calendula, hydrastis, iodine, merc., sabina, thuja.

Leucorrhœa with cachectic appearance, and organic disease of the uterus and neighboring organs. — Carbo veg., ars., kreosote, merc., graph., sulph.

Leucorrhœa with digestive disturbances. — Nux vom., phos., puls.; if also hysterical and nervous, cocc., calc. carb., coffea, lycop.

Leucorrhœa with sexual excitement, lustful crawling in the genitals. — Plat., china.

Leucorrhœa with indifference or aversion to coitus. — Causticum, nat. mur.

Leucorrhœa of slimy, white, or yellowish mucus. — Calc. carb., natrum, puls.

Leucorrhœa more purulent. — China, merc., nit. ac., nux vom.

Leucorrhœa, thin and watery. — Alum., ars., graph., ferrum, iodine, sabina.

Leucorrhœa, thick and fluid. — Ars., mez., natr., sepia, zinc.

Leucorrhœa, excoriating, biting. — Alum., ars., helonias, iodine, kreosote, merc., nit. ac., phos., puls., sepia, silic., sulph.

Leucorrhœa, offensive. — Carbo veg., kreosote, nit. ac., sabina.

[1] *Hom. Vierteljahrschrift*, p. 448, 1860.

Leucorrhœa, bloody slime, or like meat-juice. — Calc. carb., *cocc.* 2x., china, kreosote, lycop., nit. ac.

Leucorrhœa, white and milky. — Calc. carb., ferrum, lycop., nat. mur., puls., sabina, silic., zinc.

Leucorrhœa, greenish. — Carbo veg., kreosote, merc., sabina, sulph.

Leucorrhœa, yellowish. — Ars., kali sulph., lycop., sepia.

Leucorrhœa before the menses. — Calc. carb., phos., graph., carbo veg., china, sepia, puls.

Leucorrhœa after the menses. — Puls., alum., graph., silicea, ruta, calc. carb.

Leucorrhœa instead of the menses. — (Alumina), ars. alb., china, cocculus, nux mosch., phos. (ruta grav.), senecin, sepia, silicea.

The following list of remedies may be consulted for further study: —

Alumina, ammon. carb.,[1] arg. nit., aurum, bovista,[2] calendula, cannabis sat.,[3] carbo animalis and veg., *cauloph.*, ceanothus am.,[4] cham., cicuta, conium, *ferrum*,

[1] Mrs. B ——, æt. 46. Constant feeling of weight in the epigastrium, worse after food, especially meat; no relish for food. Menses every fortnight, profuse, black, coagulated; profuse *milky* leucorrhœa, with itching of the vulva, and backache, especially before and after the menses; urine reddish, and flow often interrupted. Ammon. carb. 4x. cured in about two weeks. — DR. R. M. THEOBALD, *Hahn. Monthly*, p. 332, February, 1872.

[2] A sense of enlargement and fulness in the head, in an obstinate case of leucorrhœa, led Dr. Teste to give bovista with success. — *Brit. Jour. of Hom.*, p. 292, 1877.

[3] This is said to cure infantile leucorrhœa with the greatest certainty. — *American Observer*, p. 539, November, 1872.

[4] Constant and severe pain in the left hypochondrium of more than two years duration; also pain under the left ribs, with yellow leucorrhœa; menses once in two weeks. Ceanothus amer. 6x. prescribed. The pain ceased in two days, and the leucorrhœa soon after. — DR. J. C. BURNETT, *Hom. World*, p. 14, Jan. 1, 1880.

gels., ham., *hepar s.*, hydrocotyle,[1] ignatia, iodine, ipecac,[2] kali carb., lach., lil. tig., mag. mur., nux vom., phytolacca, *platina*, puls., sabina, secale,[3] tarantula,[4] xanthoxylon.

[1] Highly recommended by Dr. Andouit for severe erosions, with profuse leucorrhœa. — *Allgemeine Hom. Zeitung*, also *Brit. Jour. of Hom.*, p. 587, 1859.

[2] Dr. Imbert Goubeyre has given it a limited trial, and thinks it has a positive effect. — *British Jour. of Hom.*, p. 21, 1870.

[3] Mrs. ——. Leucorrhœa in gushes every four or five days; *very severe bearing-down, dragging-out feeling in the lower abdomen;* cannot promptly start the flow of urine, must always wait a few minutes. She has always had rheumatism. Secale 3x. dil. promptly cured her. — Dr. J. C. Burnett, *Brit. Jour. of Hom.*, p. 87, 1877.

[4] Dr. Nunez, North Am. Jour. of Hom., vol. xx., pp. 456 and 486.

Description of Plate.

No. 1 shows a double left-sided laceration of the cervix, extending well up into the canal. The angles are drawn apart to obtain a better view. The dotted line marks the external line of denudation, and extends around from A (original external os) back to A. The dark shading in the centre corresponds to the erosion.

No. 2 represents the cervix drawn to one side, with silk sutures inserted. A marks the external os.

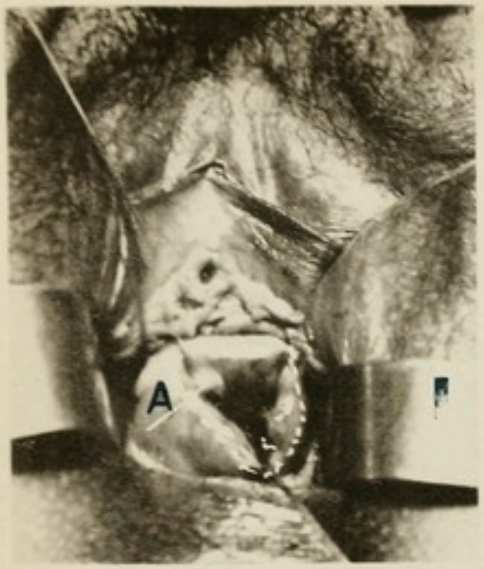
No. 3 was photographed from a very severe double laceration of the cervix, extending beyond the vaginal junction. The lips are held apart by tenacula, to show the erosion, which is shaded dark.

No. 4 and *No. 5* are more common forms of bi-lateral laceration, with the patient in Sims' position.

No. 6 was photographed from a bad case of bi-lateral laceration, a little deeper on the left than the right side. As in the others, the dark shading corresponds to the erosion.

No. 7 shows *No. 6* with silver wires *in situ*.

No. 8, the same as *No. 7*, with cervix drawn one side to show the sutures laterally.



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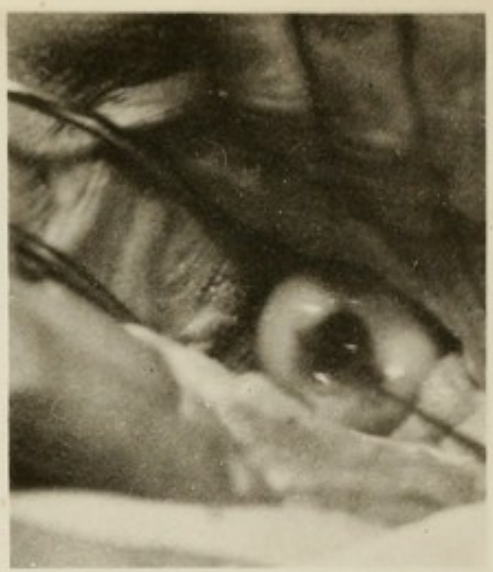

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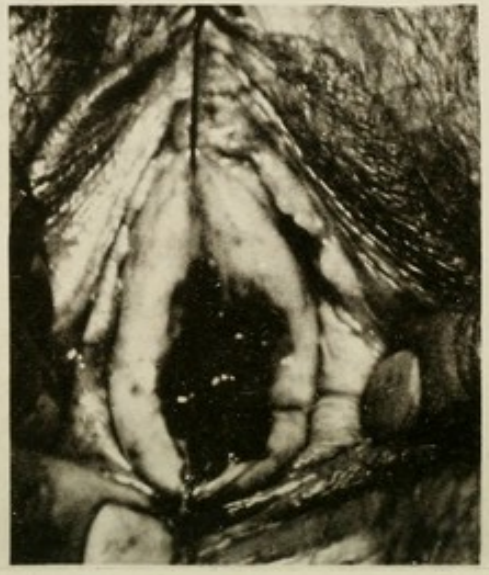

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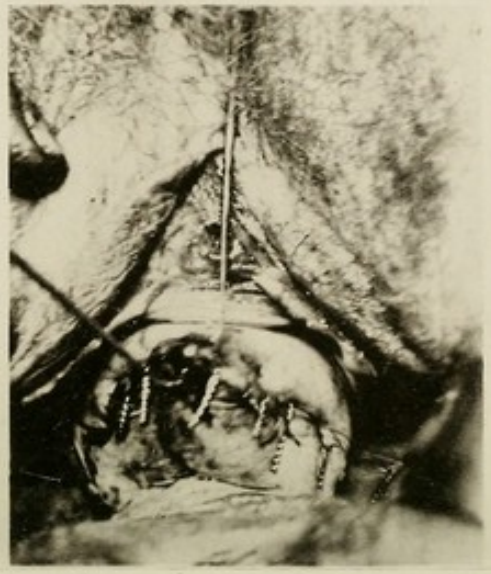

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CHAPTER XVII.

EROSION, ULCERATION, AND LACERATION OF THE CERVIX UTERI.

IN connection with endometritis, it may not be out of place to describe the above lesions, which so often accompany it, and are of so much practical importance. This has seemed all the more necessary, as so many practitioners are not aware of the relation of erosion of the cervix, laceration of it, endometritis, and leucorrhœa, to one another. Many do not make a distinction between erosion and ulceration. A genuine ulcer of the cervix is scarcely ever seen, except in malignant disease; and the "ulcer on the womb," which strikes terror to the heart of the patient, and makes the case too often a profitable one to the doctor, is merely an abrasion of epithelium, more or less severe. Its real name is erosion. This may be so severe as to have a red, angry appearance, with tufts of villi on the surface, feeling rough or slightly granular to the touch; the follicles are enlarged, and in some places have dried up, leaving chalk-like or cheesy granules on the surface.

It may be laid down as a rule, with few exceptions, that, *where severe erosion is present, there is also a laceration of the cervix as the primary cause.* The erosion may temporarily heal, but is almost sure to return if the laceration be not properly closed by an operation. Some of the effects of laceration are shown in the

following diagrams, which also serve to explain why it is not always easy to make a diagnosis.

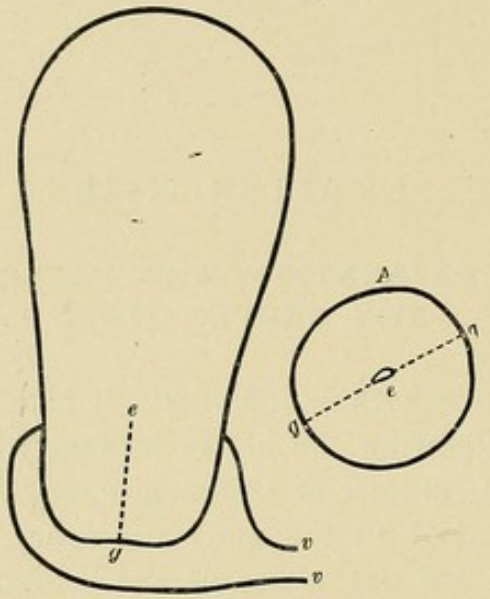


FIG. 67.

Diagram of uterus. The line of laceration, *eg*, which may be uni- or bi-lateral; *v*, *v*, vaginal walls; A, diagram of cervix as seen with a speculum.

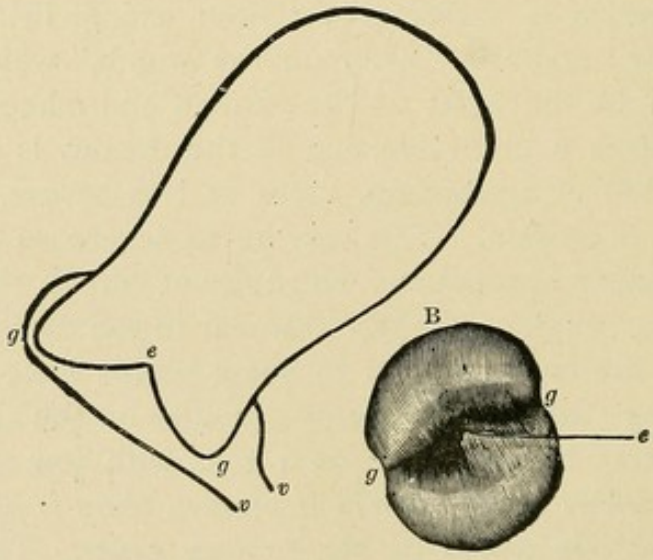


FIG. 68.

In this diagram, the lacerated surfaces, *e*, *g*, have flattened out against the vaginal walls, *v*, *v*; they are eroded, and the follicles enlarged. B, speculum view of the cervix, the shading representing the area of laceration. Compare Fig. 67.

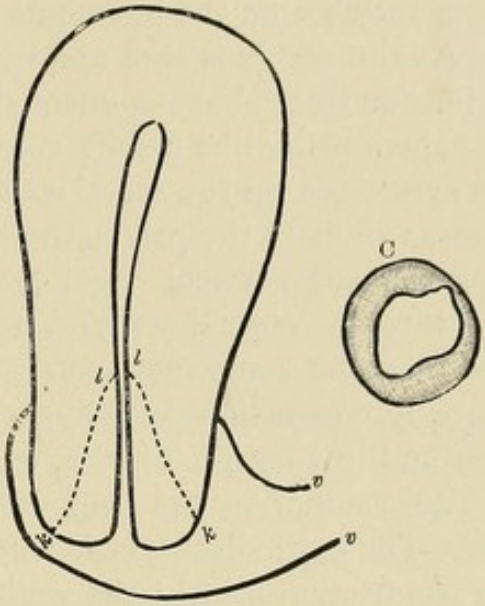


FIG. 69.

Section of uterus showing laceration of the cervical canal extending to the line *lk*; C, speculum view of cervix with large irregular os uteri. Compare Figs. 67 and 68.

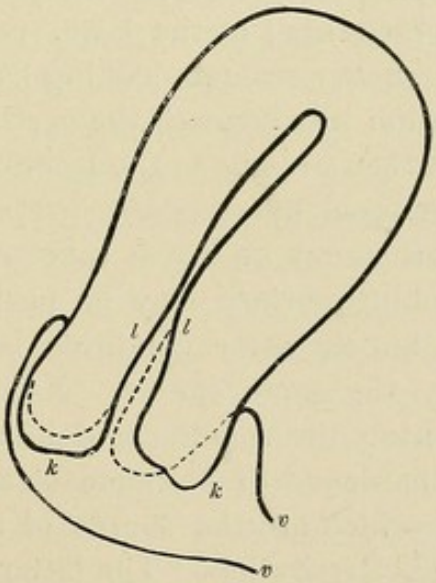


FIG. 70.

The same as C, showing the cervical hyperplasia, and rolling-out of the cervical mucous membrane, the dotted line representing the normal contour.

When a laceration of the cervix takes place, the uterus is enlarged, heavy, and sinks down in the pelvis

so as to drag somewhat on the ligaments by which it is suspended. As the cervix is torn and its outer surface divided, the tension from above is unequally distributed, and the lips gape a little, like a split celery-stalk. The posterior lip may catch on the sacral wall, and the more the heavy uterus sinks in the pelvis, the more the lacerated surfaces and the cervical canal are flattened out against the posterior vaginal wall. The blood-vessels in the cervix may be somewhat constricted in consequence; there is congestion and hypertrophy of the cervical lips, and involution of the entire uterus is retarded. The capillaries are engorged, and serum poured forth. The epithelial layer is softened and cast off, aided by the friction against the vagina. The follicles are also involved, their excretory ducts occluded, and the secretion collecting in the interior distends them with a peculiar pearly lustre. They may burst, and discharge the contents; or the latter may dry up, leaving a whitish, cheesy residue, looking like a particle of chalky concretion just beneath the surface.

It is evident that so long as the lacerated surfaces are continually irritated by constant friction against the vagina, no permanent cure will take place. The red, raw, angry-looking surface may be healed temporarily by treatment, but the same condition is almost always reproduced by the same causes. Nature attempts to cure it by uniting the wound; and in consequence we find plugs of hardened or so-called cicatricial (?) tissue in the angles, which are the source of a large amount of direct or reflex irritation. The latter may be in the form of various neuralgias in different parts of the body, without unusual pelvic symptoms pointing to local trouble. Leucorrhœa is frequently present. On examination, the angles of the laceration are sensitive, the erosion has a soft velvety feeling, the follicles feel like

bird-shot beneath the surface, and often cicatricial bands extend to the areolar tissue. Localized cellulitis near the angles, and sub-involution, are often present. Be sides sore aching pains in the pelvis, there are the symptoms arising from various complications, and not infrequently reflex neuralgia.

The reason why so many cases of laceration of the cervix are mistaken for erosions or so-called ulcerations is, that most practitioners use a tubular or bivalve speculum ; this distends the vaginal vault, and stretches the cervical lips apart so that the eroded surfaces appear to lie in nearly the same plane, and bear a close resemblance to a granulating ulcer (see Fig. 68, B). The Sims' speculum is the only one giving a view of the cervix without disturbing the relation of the parts.

The presence of a laceration, if it is not felt by the examining finger, can be readily ascertained by hooking two uterine tenacula into the lips of the cervix, and bringing them together, when the eroded surfaces will roll into partial apposition, and the line of laceration appear on the outer margin of the cervix.

The Sequelæ of cervical lacerations are sometimes serious, though not in every case. It has been truly said, that there is scarcely any portion of the body where comparatively slight lesions may produce so much suffering as in the pelvic organs. Perhaps the most important of the results of laceration of the cervix is the increased susceptibility to epithelioma of the cervix, from the continued irritation of the raw granular surfaces. The latter has been so marked, that distinguished specialists with an unusually large experience have mistaken it for epithelioma.

Besides the local symptoms already described, there are hysterical manifestations, neuralgias, sub-involution, menstrual derangements, anæmia, and even a partial loss

of mental power. The only remedy is an operation which will remove the plugs of hardened (cicatricial) tissue, and restore the cervix as nearly as possible to its original condition. Not every case needs it, nor does the necessity for an operation depend entirely upon the extent of the lesion. A small laceration, with a large amount of hardened tissue in the angle, often gives rise to more severe symptoms than deep lacerations with less cicatricial (?) tissue.

The necessity for an operation depends upon the symptoms remaining after the cellulitis has subsided, and the endo-cervicitis healed so far as possible, except in cases where there is a family history of malignant disease. In the latter instance, the operation should always be performed to remove any possible focus of irritation for the development of epithelioma.

If there are troublesome symptoms remaining, such as pain, leucorrhœa, headaches, neuralgia, menorrhagia, etc., after a careful selection of remedies, combined with local treatment, an operation is advisable, more especially if the patient dates the trouble from some particular confinement.

Two questions come up for consideration in connection with this operation: first, whether it entails sterility; and, second, if not, the possibility of recurrence in a subsequent pregnancy. Much has been written, and statistics collected, to decide the question if possible. So far, there is reason to believe it favors rather than prevents child-bearing, more especially in those cases where a deep cervical laceration destroys the normal resistance of the inferior segment of the uterus, and the latter expands with the growing ovum, allowing it to escape prematurely. It is not unlikely that an expert operator might succeed in constructing a very narrow cervical canal which would materially diminish

the chances of conception. During normal labor, the cervix should not be meddled with by stretching it in any way. This is a common cause of laceration, though the lesion is unavoidable in many cases.

Careful observers believe that the slight cicatricial tissue in the line of union is absorbed within six months afterward, and does not cause rigidity of the cervix. This is probably an instance of the alterative effect which commonly follows the operation, as an enlarged uterus not infrequently becomes smaller, apparently as the result.

Should a laceration be discovered during the lying-in period, it might heal spontaneously if kept cleansed by vaginal douches of warm calendulated water, but closure by suture should not be attempted till after the period of involution has passed, i.e., not earlier than three months after labor. If the lesion has existed for some time, and is complicated by pelvic cellulitis, endo-cervicitis, granular degeneration of the cervix, etc., careful preparatory treatment is essential to success. It is important that the congestion and erosion of the cervix be reduced as much as possible; and all local inflammation and soreness about the cervix must have disappeared before it is advisable to operate on the laceration, i.e., perform trachelorrhaphy, or hystero-trachelorrhaphia as it has been more properly termed. The preparatory treatment is therefore the same as for endometritis and inflammation of the pelvic cellular tissue and peritoneum, to which the reader is referred.

There is very little risk to life; in over three thousand cases, ten deaths occurred, and these when the operation was less understood than at the present time. The percentage of failures to secure union is larger in hospital than private practice,[1] which seems to show that it is for

[1] Dr B. H. Wells, American Journal of Obstetrics, June, 1884.

the advantage of the patient to have the operation performed at home or in a private house rather than in a hospital.

HYSTERO-TRACHELORRHAPHIA, OR THE OPERATION FOR THE CURE OF A LACERATED CERVIX UTERI (EMMET'S OPERATION).

In some cases where women object to ether, or the presence of renal or cardiac disease counter-indicates it, this operation can be performed with or without a six-per-cent solution of cocaine, as the cervix is not composed of very sensitive tissue. The cocaine can be applied freely before the operation, with a camel's-hair pencil, and at intervals of five or ten minutes during it if necessary. Freshening the surfaces will not be felt, but the insertion of the needles is sometimes painful. As a rule, it is better to give ether.

About half an hour before the operation, the patient should undress, put on a vest, nightgown, and stockings, and then take a vaginal douche of six quarts of hot (112°) mercurialized (1 : 4000) water while lying on her back. This not only cleanses the vagina, but also diminishes the amount of blood in the veins and capillaries, and thus lessens oozing. The rectum should be emptied by an enema.

While this is being done, the room where the operation will take place is prepared in the following manner: Place a table (a kitchen-table does nicely) about two by four feet, in a good light, with the foot of it towards the window, and raised a couple of inches on a piece of plank or a couple of bricks; cover it with a couple of folded blankets; a waterproof over them, at the foot, and put a pillow at the head. Near the latter place a slop-pail, and a small stand with a couple of wash-bowls and pitchers of hot and cold water for

washing sponges. The latter are first cleansed in one bowl of carbolized (three-per-cent) water, and rinsed in the second bowl of water carbolized in the same way, taking care to squeeze them quite dry before they are passed to the second assistant. If the operator prefers, a solution of corrosive sublimate or the bin-iodide of mercury (1 : 4000) can be substituted for the solution of carbolic acid.

Another small stand is placed near the foot, and to the right of the operating table. The instruments to be used are put for a few minutes in a five-per-cent solution of carbolic acid, wiped dry, and laid on a clean towel which covers the small table. It is well to have them grouped together for convenience; i.e., tenacula in one group, scissors in another, and those used in applying the sutures in a third group, etc.

The operation about to be described is that of its originator, and the method universally employed in New York. It is more difficult, and requires more time, than the method of placing the patient in the exaggerated lithotomy position, freshening with the knife, and using curved needles with silk sutures. I have tried both, and prefer the former method. The chief objections to the latter are, liability to excite pelvic inflammation by dragging on adhesions or sites of previous cellulitis, weakening of the uterine ligaments, and a remote possibility of causing hæmatocele by the tearing-away of an adhesion, or rupture of varicose veins[1] in the broad ligaments; its advantages are the ease and rapidity with which the operation can be performed.

It is a good plan to explain to each assistant, if inexperienced, the details of what is expected of him,

[1] Dr. Emmet records a very serious case of hæmatocele caused by traction on the cervix, in his Principles and Practice of Gynæcology, p. 227, 1884.

names of instruments, etc. This advice may seem superfluous; but the rapidity and success of an operation depend largely upon the detail of preparations, and the knowledge as well as experience of the assistants. Much of the time occupied by an operation is often spent by the operator having to do his own sponging, waiting for instruments, etc., instead of having every thing at hand the instant it may be required.

There should be six assistants, arranged in the following manner; but it is possible to get along with half that number: —

The first one administers ether.

The second stands to the right of the table, and, bending over the patient, sponges; he has also charge of the tenaculum to steady the uterus in the left hand, uses the counter-pressure hook and wire scissors. He must always watch the field of operation, passing soiled sponges over his shoulder, and picking up fresh ones from a towel laid over the patient at his right.

The third assistant sits at the right of the operator, watching him closely, and anticipating him in the choice of instruments by holding the proper one where it can be seized at once, receiving in return the one previously used.

The fourth assistant holds the speculum, and raises the upper labium with the left hand. It is of great importance to keep the speculum in the precise position given by the operator.

The fifth assistant thoroughly washes the sponges without removing them from the holders, and places them with the handles toward the operator on the upper thigh of the patient; or, better, hands them to the second assistant.

The sixth assistant does errands about the room, and helps wash and hand the sponges.

The following instruments will be found necessary: —

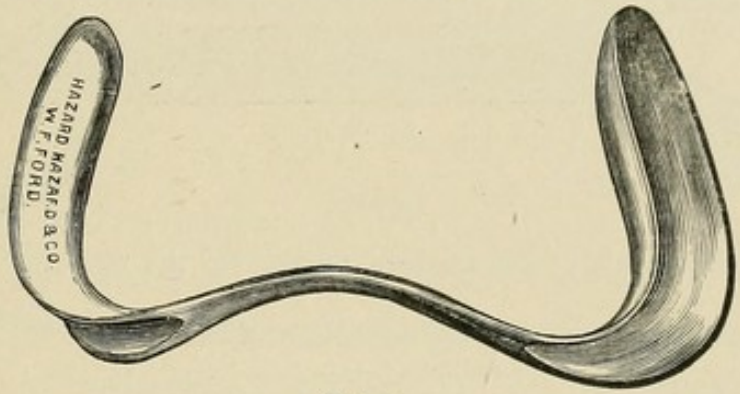


FIG. 71.

1 broad, short, and flat Sims' speculum.

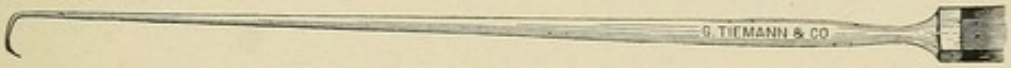


FIG. 72.

1 Emmet's tenaculum.

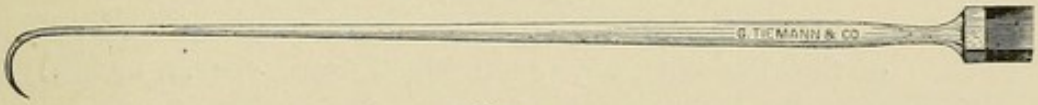


FIG 73.

1 Sims' tenaculum.

FIG. 74.

1 heavy tenaculum of solid steel, short hook and heavy shank.

1 long mouse-toothed forceps.

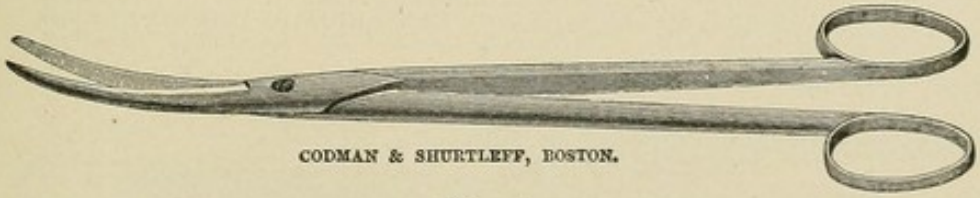


FIG. 75.

1 pair straight sharp-pointed scissors, slightly curved on the flat (Dawson's).

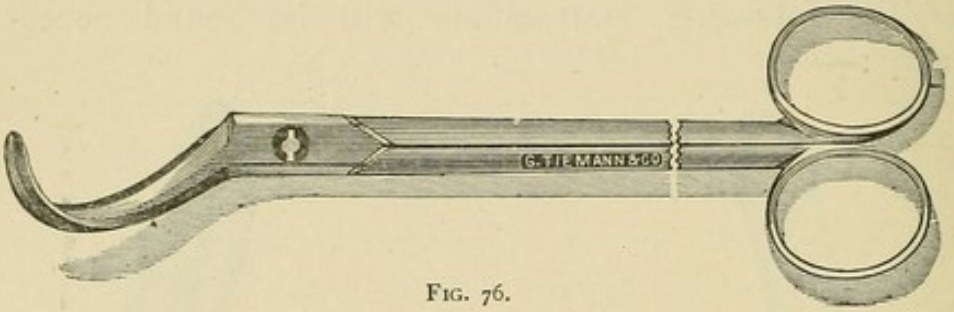


FIG. 76.

1 pair Emmet's cervix scissors, curved for the right hand.

FIG. 77.

1 counter-pressure hook.

1 Sims' needle-forceps.

6 Emmet's needles, latest pattern, sizes varying from ¾ in. to 1¼ in. long, threaded by passing the ends of a piece of fine braided and waxed silk ligature, sixteen inches long, through the eye of the needle, in opposite directions. The needle and ends of the silk are twisted a little, to prevent the loop, which is about six inches long, from slipping out. A neat way to prevent tangling of the threads is to baste them coarsely through a strip of chamois-skin.

12 pure annealed silver wires (No. 27), twelve inches long, with half an inch of one end of each bent at a sharp right angle, to hook in and bend close down on the silk loop.

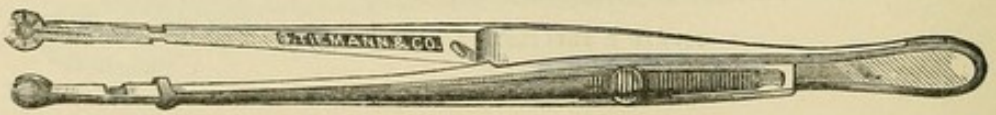
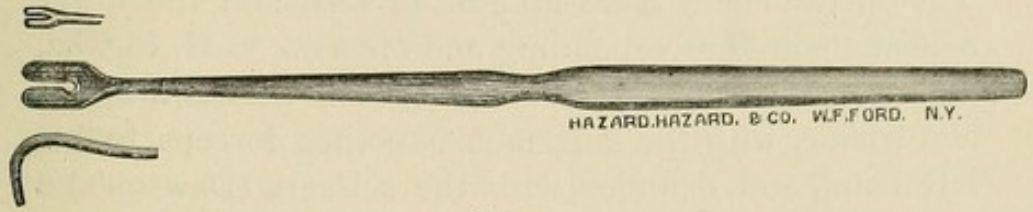


FIG. 78.

1 Emmet's wire-twister.



FIG, 79.

1 Sims' shield.

1 pair of wire scissors.

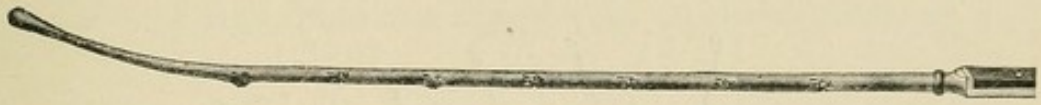


FIG. 80.

1 uterine sound.

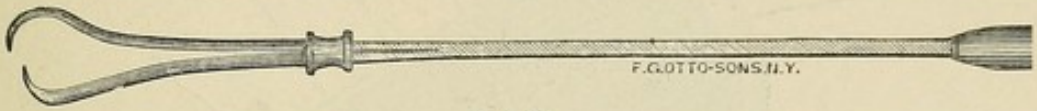


FIG. 81.

6 solid sponge-holders, in which are firmly fastened as many very small, fine, aseptic sponges; and an equal number of sponges in the clean carbolized water.

It is better to etherize the patient in an adjoining room, bring her in, and place her on the table in Sims' position. A towel is folded from before backwards, over each thigh and buttock. The speculum is inserted so as to properly expose the cervix, and given to the assistant to hold. The cervix is now seized in the median line, with the solid tenaculum, on the anterior lip (at K, Fig. 82), and drawn a little forward, so as to put the tissues somewhat on the stretch, and obtain a better view of the torn surfaces; the posterior lip is seized with a second tenaculum, and the two lips are brought together to ascertain the amount of denudation necessary to obtain a symmetrical cervix.

The solid tenaculum is then given to the second assistant, who holds it in, and thus steadies, the uterus with his left hand while he sponges with his right.

The operator now takes up a bit of tissue on the lower side at a point corresponding and opposite to G, Fig. 82, with Emmet's fine tenaculum, or, if the tissues are soft and friable, with the long mouse-toothed forceps in his left hand, and denudes with the scissors (Dawson's) a thin continuous strip up to the angle F, which is met by a corresponding strip on the posterior lip. The sharp curved scissors are often useful in denuding the angle.

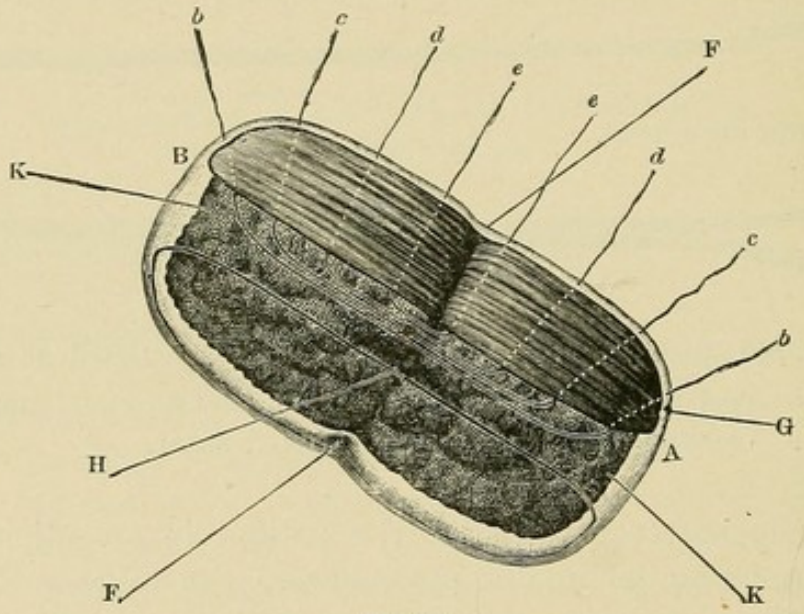


FIG. 82.

Diagram of a bi-lateral laceration of the cervix, with the anterior (A) and posterior (B) lips drawn apart, the shape of the denuded strips with the sutures inserted in the upper one; K K, undenuded strip left to form the cervical canal; F F, angle of laceration, and divergence of the lips; G, denuded strip; *ee*, first suture inserted at the angle; *dd*, second suture; *cc* and *bb*, also sutures; H, cervical canal.

Here the dissected strips must not be pulled on hard while the scissors are cutting behind them, on account of stretching and removing much more than is necessary.

All enlarged follicles must be entirely removed, as well as hardened pieces of tissue at the angle. The latter, or supposed cicatrices, are seldom as large as peas, and the operator should not feel it necessary to

excise a large section on account of "the cicatrix." The area of denudation, which is shown in Fig. 82, ought not to extend far out on the external mucous membrane of the cervix; and a strip about three-sixteenths of an inch wide (K K) must be left for the cervical canal, a little larger at the outer ends so as to avoid too small an external os after union and shrinking of the tissues. A similar strip is then removed in like manner from the upper side of the cervix. It is

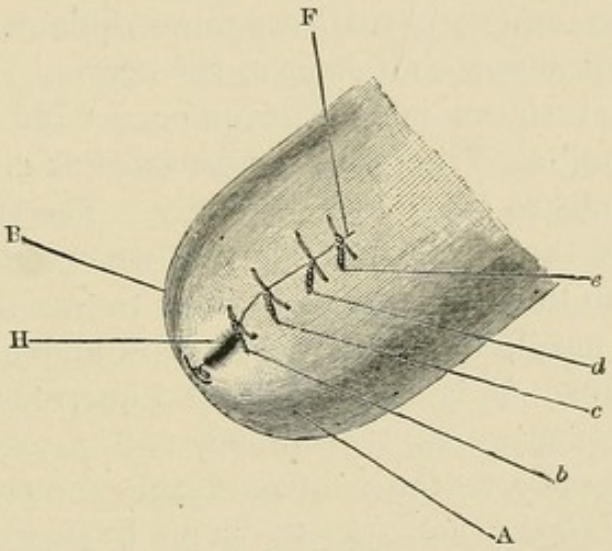


FIG. 83.

Diagram of the cervix after the lips are drawn together and the wires twisted. Letters same as in Fig. 81.

important to bear in mind that the strips on the anterior and posterior lips are corresponding halves, and must be symmetrical, the anterior with the posterior portion, in order to obtain good union.

If the laceration is on one side, only that side is denuded. The question of uni- or bi-lateral laceration is easily settled by passing a sound in the uterus, and holding it in the median line, and the extent of laceration on one or both sides of the sound at once makes the diagnosis. Some allowance must be made when lateral displacement is present.

There is little use in waiting and sponging for bleeding to cease. If there is some point which bleeds freely, it can be seized with artery forceps (Pean's) till the wires are in ready for twisting. The best way is to proceed at once to insert the sutures, beginning at the angles, and, if the laceration be bi-lateral, put in the suture first on one side, then on the other; for, if all the wires are inserted on one side first, there is less room to put in the others on the opposite side. For this reason, unilateral tears are more difficult to suture than laceration of both sides of the cervix.

The first suture is at a level, or a trifle above the denuded angle. When this is tightened or drawn upon, it rarely fails to control the bleeding. The third assistant bends the silver wire close down upon the loop attached to the needle (three-fourths to one inch long), puts the needle in the needle-forceps, and hands it to the operator. It is inserted about a quarter of an inch from the margin of the wound, and passed straight through nearly to the centre of the undenuded strip for the cervical canal. As the point is seen to emerge on the surface, the second assistant presses on the cervix at that place with the counter-pressure hook, and the needle is pulled through with the needle-forceps. It is again inserted, and made to emerge at corresponding points on the other lip. The loop and wire are then held taut in the hands, and the wire is made to pass through by a quick to-and-fro motion. One end of the wire is bent over and twisted a little around the other end, and slipped up within two inches of the cervix, while the free end is caught by the fingers of the nurse, if on the upper side; if the lower, it is passed beneath the lower edge of the speculum.

Each suture is inserted in this way, with a space of three-sixteenths of an inch between them; three on a

side are usually sufficient; a little puckering of the edges can be remedied by superficial silk sutures.

The object of passing the needle through each lip separately is to secure greater accuracy of adaptation. A common mistake is to pass the needle near the denuded surface; the result is, when the suture is tightened it puckers the surfaces together like the running-string in a bag, and there is only external union, leaving a dilated cervical canal in which the secretions collect, and the patient derives little if any benefit from the operation. The same objections apply to the curved needle, which necessarily passes in a curved direction, and drawing on the suture tends to force and pucker the tissues round a common centre more than when the straight needle is used in the above manner.

The difficulty in introducing the first sutures at the extreme upper margin of the angles arises from lack of space to use the needle and its holder. This can be obviated by passing two needles, one through each lip, from the cervical canal out to the surface where it can be easily seized. One loop is passed through the other, the latter is drawn out through the lip carrying the former loop with it, which now extends through both lips; a silver wire is then easily bent down in it, and drawn through as before.

After the wires are all in place, the lips of the cervix are gently separated, and all coagula or bits of fibrine carefully sponged away.

The sutures are fastened in the following manner: Both ends of the wire at the angle are seized by the twister, about two inches from the cervix, and the long free end cut off by the second assistant. Holding the wires by the twister, the operator kinks them down together immediately over the proposed line of union by the tenaculum, slips the shield over them

close to the cervix, bends the wire down sharply over the shield, and twists till the twist of the two wires meets at the edge of the wound, and removes the shield. A fine tenaculum is now slipped beneath the wire loop, and draws it out slightly where it enters the cervix on either lip; this diminishes the tension and danger of cutting out at these points. The twisted end is bent close down on the cervix at right angles to the wound, and cut off, leaving an end half an inch long which will not prick into adjacent tissues. If the latter are blanched about the wire, it is too tight, and must be loosened by untwisting.

Each suture is fastened in this way; the margin of the wound being held by tenacula, if necessary, to secure perfect adaptation, or prevent rolling-in of the margins.

Finally the sound is passed, to be sure that the cervical canal is pervious, the uterus placed in anteversion, retained if necessary by a small tampon smeared with vaseline, and the patient put to bed. She should be kept as absolutely quiet as possible for forty-eight hours, so as to secure primary union. On no account must she rise or sit up in bed for the first few days. The urine or fæces can be passed in a bed-pan. Night and morning, as well as after each micturition, a vaginal douche should be given of two quarts of warm water and one tablespoonful of the non-alcoholic extract of calendula; some surgeons prefer hydrastis to the calendula. The night and morning douches can be dispensed with after the fourth day, if there be no discharge. It is not uncommon to have very slight oozing for the first twenty-four hours, and on the third or fourth day a reddish discharge may appear for a short time, similar to the menses. This need cause no alarm, and very seldom interferes with union.

There is scarcely ever any pain or rise of temperature (above 99°) after the operation; indeed, it may be said, there are few if any operations known which so often give as much relief with as little pain and risk as trachelorrhaphy. The great risk in properly prepared cases is wounding the circular artery by cutting too deeply in the angles. The best remedy for this is to pass a deep suture above the angle and twist it up.

If the laceration was deep, and required seven or eight sutures, they should remain ten days; otherwise, they can be removed on the eighth day. For this purpose the patient is again placed in Sims' position, the speculum inserted, the cervix brought a little forward, and steadied by a tenaculum inserted in the posterior surface of the posterior lip. The wire twist is gently raised with the forceps till the shining loop is seen, which is cut with the wire scissors near its insertion in the cervix; it is then withdrawn *across the line of union* so as not to drag the surfaces apart. Great care must be taken not to cut off the twist, which makes it very difficult to find and extract the loop. It is important to remember the number of sutures on a side, as it is easy to overlook one.[1] On more than one occasion have I known excellent surgeons to be censured for the oversight.

After the wires are removed, the patient is again put to bed; and the suture canals soon close. On the fourteenth day she can sit up, and in three weeks from the day of the operation go about the house if she has done well. Sexual intercourse must be absolutely prohibited for two months, and if the physician fears his directions will not be followed, it is well to leave a suture in the cervix; tell the patient, without comment, that it is

[1] See coil sutures, p. 105.

necessary to leave a sharp wire there for a couple of months, which will do her no harm.

The best time for operating is a week after the menstrual flow. While it is easy to perform with proper instruments, and union almost invariably follows, the best results are only obtained by careful attention to detail, a thorough knowledge, and some experience with the operation.

Never try to trim a hypertrophied cervix down to normal dimensions in freshening, as the cervix will undergo a kind of involution, as well as the fundus, if enlarged, after the operation. Do not promise the patient immediate relief, though some may be experienced, after the operation. The best results will be seen six months afterward. The small cicatrix of complete union between well-adjusted surfaces almost always disappears in six months, and will not cause rigidity of the cervix in a future labor. Unless the canal is made abnormally narrow, the operation does not cause sterility. If three years have elapsed between the operation and the next labor, laceration of the cervix is no more likely to take place again than at a first labor with the same conditions present.

CHAPTER XVIII.

ACUTE METRITIS.

THIS term is used to designate acute inflammation of the uterus from various causes. By far the most common is inflammation of the uterus after delivery, which is generally associated with septicæmia. This form will not be considered here, as it belongs to obstetrics rather than gynæcology.

Acute metritis is liable to become chronic; but with proper care and treatment, the acute symptoms subside within a week, and the others soon after, except in cases of great severity.

The causes of this affection are: chill during the menses, with sudden suppression of the flow; traumatism from the use of the sound, curette, tents, intra-uterine pessaries and medications; production of abortion and surgical operations on the uterus; excessive venery and gonorrhœa.

The constitutional disturbance will vary with the severity of the attack, and the extent to which structures adjoining the uterus are involved. A chill may mark its commencement, especially in septicæmic cases; following this there is a rise in temperature, with much local pain, sensitiveness, and sometimes throbbing in the uterine region, bearing-down, not infrequently tenesmus of rectum and bladder, and nausea and vomiting when the peritoneum is affected. On vaginal examination, the cervix is found congested, with heat,

dryness, and there is so much tenderness to pressure, the uterus generally cannot be mapped out by a bimanual examination.

The diagnosis of acute inflammation of the uterus is easy; but whether it is limited to that organ alone, it is sometimes impossible to decide. In severe cases the peritoneum is generally involved. The pathological changes consist in congestion, enlargement, and a little softening of the uterus. Abscesses seldom, if ever, form within its walls, unless the inflammation is the result of septic infection.

The Treatment consists in perfect quiet in bed, a nourishing fluid diet, such as milk, eggs, soups, and gruels. In the very beginning of the attack, a copious hot-water vaginal douche is excellent to control the inflammation. Suppositories of belladonna may be used in the vagina, but no tampons. A hot bran or moist hot hop-bag on the hypogastrium, will be sometimes of some service. In cases of septic infection, the hot douche should consist of a 1:4000 solution of corrosive sublimate.

The indications for the following remedies are so well known, it is not considered necessary to repeat them in detail. The reader is also referred to the chapters on Chronic Metritis and Pelvic Cellulitis and Peritonitis.

THERAPEUTICS.

Acon., arn., *ars.*, BELL., bry., canth., china, crocus, gels., *merc. cor.*, *nux vom.*,[1] phos., puls., rhus tox.,[2] *veratr. vir.*

[1] Hartmann praises this remedy highly for metritis after labor, especially when coffea has been drunk to excess. — *Therapie*, vol. i. p. 496.

[2] Dr. Hoyne says rhus tox. can be relied on for metritis following confinement with typhoid symptoms. — *Clinic Therap.*, vol. i. p. 131.

CHAPTER XIX.

CHRONIC METRITIS.[1]

Synonymes: Areolar Hyperplasia, Parenchymatous Metritis, Sub-Involution, Congestive Hypertrophy of the Uterus.

THE name "chronic metritis" is chosen as being the one in more common use, though it does not always correspond to the exact pathological changes in the uterus.

The disease consists essentially in an increased development of connective tissue, accompanied by passive congestion, with hypertrophy of the uterus. It is not necessarily associated with, nor does it follow, the usual course of inflammation. Sub-involution,[2] i.e., failure of the uterus to undergo complete involution after parturition, may be regarded as one of the first stages of chronic metritis. It is usually called a cause;

[1] For a detailed description of the pathology of this disease, and the views of different authors, the reader is referred to an exhaustive article on Sub-involution and Chronic Metritis, by Dr. Mary Putnam Jacobi, in the American Journal of Obstetrics, p. 802, 1885.

[2] *Super-involution*, or atrophy of the uterus after parturition, the opposite condition to sub-involution, is comparatively rare, and seldom susceptible to treatment, unless the ovaries are in good condition. The uterus is small, perhaps an inch and a half deep, and the prominent symptom is amenorrhœa. Post-partum hemorrhage and protracted lactation, especially in scrofulous subjects, seem to be the most important predisposing causes.

The treatment consists in restoring the patient to her best physical health, by nutritious food, exercise, fresh air, etc. The galvanic stem pessary has been thought useful as a local stimulant. The Faradic current is also well spoken of, in preference to the galvanic.

but, practically, it is impossible to tell just when sub-involution merges into chronic metritis, and ceases to be sub-involution. Chronic metritis is generally associated with endometritis, which frequently antedates it; and, like endometritis, may be confined to either the body or cervix uteri, the latter being the more common form.

Although chronic metritis is seldom found in nulliparæ, and in the great majority of cases begins with sub-involution, the latter is not the only form of the disease. A uterus may undergo complete involution, and in consequence of some predisposing cause, as a scrofulous diathesis, debility, or too frequent parturition, chronic metritis develop afterward from one of the following exciting causes: chronic congestion of the uterus from obstruction to the portal circulation, uterine displacement, neoplasms, the practice of incomplete sexual intercourse, intentional or otherwise; also, the exciting causes of sub-involution, laceration of the cervix, puerperal pelvic inflammation, getting up too soon after delivery, or coition before the sexual organs have undergone complete involution.

The Symptoms vary in different cases, and can hardly be separated from those of the complications which are usually present, such as laceration of the cervix, endometritis, etc.

In most cases there are backache and bearing-down sensations in the pelvis, worse on walking; vesical tenesmus, and painful or difficult defecation from pressure on the bladder or rectum; dyspareunia; leucorrhœa; dysmenorrhœa; headache; and not infrequently, dyspepsia.

On bi-manual examination, the uterus is found enlarged, and often, though not always, sensitive. It sags down in the pelvis, so that the cervix often rests on the pelvic floor, while the fundus tips in some abnormal

direction. The sound shows an abnormal depth of the cavity. Where the disease is limited to the cervix, however, both the cavity and fundus are of the normal depth.

The diagnosis of sub-involution is made by the menorrhagia following parturition, and the increased size and depth of the uterus.

The Prognosis in hyperplasia, affecting the body of the uterus, is unfavorable as regards perfect and permanent cure, but the patient can be relieved of her symptoms to such an extent that she will suffer little, if any, except as the result of some imprudence, when they will return. In hyperplasia of the cervix, the prognosis is favorable, as the complications are fewer and less serious.

The Treatment of this disease must be persistent and continuous for months if necessary. No permanent benefit will be derived from occasional prescriptions or applications. As it is so often associated with the puerperal state, it may not be out of place to call attention to its management. The patient should have plenty of pure fresh air, and be fed freely as she can bear it, instead of dieted on thin gruel, toast-tea, and other non-nutritious delicacies so popular in the lying-in room. Sleep is essential. It is a good plan to take the child into another room, so that the mother can rest undisturbed. From the beginning, the child can nurse at midnight, and not again till four in the morning. This interval can be soon lengthened gradually, and the mother have six or eight hours sleep without the baby's remonstrance.

It is of paramount importance for the physician to be absolutely sure of firm and permanent contractions of the uterus before leaving the patient. A binder properly applied, so as to support the relaxed abdom-

inal walls for the first three days after delivery, is a comfort to the mother; but a very tight bandage, particularly if there is a pad under it, is very injurious. Besides a careful watch for any inflammatory symptoms, the obstetrician should not allow the patient to sit up before the fundus uteri has receded to the pelvic brim,[1] and should emphatically forbid any sexual intercourse during the three months following delivery.

It is of great importance to ascertain and remove all causes of the disease, or complications which tend to keep it up, such as endometritis, vaginitis, laceration of the cervix, or displacement of the uterus. Neglect to do this is the reason why so many women fail to receive any benefit from treatment.

Not infrequently there is a fungoid or polypoid degeneration of the endometrium, characterized by profuse menorrhagia; unless internal remedies relieve, it will be necessary to use the blunt wire curette to remove the minute growths.

Any displacement must be corrected, so that the circulation will be free and unimpeded. The clothing ought to be loose about the waist, and the skirts suspended from the shoulders. If an abdominal bandage can be smoothly fitted so as to take off the weight of the intestines from the pelvic organs, it will add much to the comfort of the patient.

Perfect sexual rest is necessary. The patient should keep her bed during the menstrual periods, and take a limited amount of exercise in the open air every day. Housework, going up and down stairs, using a sewing-machine, and long walks, must be prohibited. A plain nutritious diet is advisable to maintain the patient's

[1] This is readily ascertained by the hand on the hypogastrium. It varies from eight to fourteen days after delivery. See Rest after Delivery, by Dr. Garrigues, American Journal of Obstetrics, October, 1880, p. 861.

health and strength. The mineral waters of Kreuznach, Germany, have a considerable reputation in the treatment of this disease.

Local depletion by puncture or scarification of the cervix, so as to allow about a tablespoonful of blood to escape, will temporarily relieve the patient; but it is difficult to see how any permanent good will result. Too much importance cannot be attached to the systematic use of copious hot-water vaginal douches, which may be combined with hot sitz-baths.[1]

Great benefit[2] is sometimes derived from a mild galvanic current applied every second or third day for three, or even four, months if necessary; the negative pole being placed on or within the uterus, and the positive over the hypogastrium. I have so far used a current of eight to twelve milliamperes for this purpose.

Many physicians prefer the compound tincture of iodine for an application to the cervical canal or uterine cavity, according to the site of the hyperplasia. Other good authorities speak highly of the use of iodized phenol twice a week. When the latter is used for the first time, it is well to tell the patient that a bloody discharge will probably follow, and that it is no cause for alarm. A mixture of glycerine and iodine, applied on tampons, has often a beneficial effect. Powerful caustics, such as chemically pure nitric acid, the acid nitrate of mercury, the solid nitrate of silver, etc., are apt to do far more harm than good, and should never be employed. In marked cervical hyperplasia, amputation by removal of wedge-shaped pieces from the anterior and

[1] See chapter on Minor Surgical Gynæcology, p. 9.

[2] Dr. Mundé has an excellent article on Electricity in Gynæcology, in the American Journal of Obstetrics, p. 1233, 1885.

[2] Dr. Rockwell has written a detailed account of Electricity in Gynæcology, in the American System of Gynæcology, vol. i. p. 383.

posterior lips by Marckwald's method,[1] has often a decided alterative action, and is followed by diminution in the size of the uterus. When chronic metritis is associated with laceration of the cervix, an operation on the latter will materially reduce the size of the uterus by its alterative effect.[2] Any successful treatment must be persistent and long continued. Too much must not be expected from the remedy selected without allowing sufficient time for it to act. Some cases are very difficult to relieve, while in others the favorable effect of the remedy is very soon apparent.

THERAPEUTICS.

Arsenicum. The iodide is preferred by some. It is adapted to both acute and chronic cases; *burning*, throbbing, lancinating pains in the uterus; similar pains extending from the abdomen, or ovaries, more especially the right, into the uterus, vagina, or thighs, which feel numb or lame, worse from motion or sitting bent over; leucorrhœa profuse, thick, yellowish (Hydrastis, kali bi.), corrosive (*Alumina*, kali carb., kreosote, *merc.*, *puls.*); great restlessness, prostration, thirst, but worse from drinking cold water; aggravation of symptoms about midnight, if the symptoms are of a typhoid type; threatened putrefaction or gangrene (Secale cor., lach.).

Aurum. Chronic cases of long standing. The uterus sags low down in the pelvis, and is indurated; suicidal melancholia, scrofulous, syphilitic, or mercurialized subjects. Dr. E. C. Price[3] finds aur. mur. nat. 2x[4] (chloride of gold), next to ars. iod., the best remedy for cervical enlargement.

[1] Arch. f. Gyn., Bd. viii. S. 48.

[2] Compare chapter on Laceration of the Cervix.

[3] He also speaks well of ferr. iod. for the chronic form, with tenesmus of the rectum and bladder, with bearing-down. — *Am. Hom. Observer*, p. 114, March, 1881.

[4] Dr. Tritschler very warmly praises the chloride of gold 3x. for indurations or hypertrophy of the uterus, and quotes a number of interesting cases, associated with extreme displacement of the uterus, generally posterior, also with sterility, cured by this remedy. He states the effect cannot be seen before four weeks, and that many women notice a remarkable increase in the appetite during the use of gold.

Belladonna.[1] Acute cases. Arterial congestion of the uterus (Sabina, lil. tig.); on vaginal examination, there is marked pulsation in the pelvic organs, *a sensation of heat, and great sensitiveness;* there is much *bearing-down*, backache, throbbing headache, face flushed, and even delirium; the lochia feels hot to the patient; menorrhagia with profuse, hot, red flow; menses too early (Amm. carb., calc. carb., nux vom.).

Calc. carb. or **iodide.** Strumous diathesis, chronic cases, sub-involution; menses *too early*, too long, and too profuse (Aloe, ambr., amm. carb., *bell.*, brom., cyclamen, coccus cac., *nux vom.*); *milky leucorrhœa* (Coni., lyc., *puls.*, *sepia*, sulph. ac.); profuse perspiration from the least exertion, chiefly about the head; feet feel cold and damp; acidity of the stomach. The patient feels worse during and after coition.

Iodine is mentioned by Hempel[2] on clinical evidence; induration and swelling of uterus and ovaries (Coni.); metrorrhagia, worse after every stool; acrid, corrosive leucorrhœa, worse at time of menses; the breasts dwindle away, and become flabby; local or general emaciation. In a case where there was intense pain in the region of the uterus, the abdomen very sensitive with continual urging to urinate, heat and dryness of the vagina, and suppression of the lochia, iodine removed the pain at once, restored the lochial discharge, and freed the patient from danger. Hering states that this drug should not be given during the lying-in period, except in high potencies.

Lilium tigrinum. Recommended by Dr. Hughes, where there is arterial congestion of the uterus (Sabina, bell.); much general nervous irritability; local pain and sensitiveness, with tendency to diarrhœa; there is also continuous pressure on the bladder; constant desire to urinate during the day, with scanty discharge, followed by burning and smarting in the urethra; marked "bearing-down" sensation in the pelvis; sharp pains in the ovarian region.

(Compare Hahn. Monthly, 1877; also Hom. Recorder, p. 102, May 15, 1877, quoted from the Allgemeine Hom. Zeitung, Bd. 94, Nos. 17, 18, 19.)

[1] This remedy is very highly commended for acute metritis by Dr. Matheson. Compare his four lectures on the Diseases of Women, metritis.

[2] Comprehensive System of Mat. Med. and Therap., 1st ed. p. 548.

Pulsatilla. Sensation of weight in the abdomen and lumbar region, especially during menses; menses suppressed from wetting the feet, or delayed; leucorrhœa thick, like cream or milk, painless, acrid, thin, burning, with swollen vulva (Ars.); patient suffers from dyspepsia, has a tendency to diarrhœa, and feels much better in the open air.

| Sabina. Arterial congestion of the uterus (Bell., lil. tig.); hemorrhage, rectal or vesical irritation, or both at the same time. *Hemorrhage from the uterus, in paroxysms, worse from motion; blood dark* (*Crocus, cyclamen, kali nit.*) *and clotted* (*Amm. carb., cycla.*, ign., plat.), *from loss of tone in the uterus* (Caul.), after *abortion or parturition, with pain in back to pubis; menses too profuse, too early, and last too long* (*Bell.*, calc. carb., kali carb., *nux vom.*). Metritis after parturition, or abortion at about the third month; sexual desire almost insatiable. It is especially suitable to what might be termed sub-acute metritis.

|| Secale is the great remedy for sub-involution, both for the ordinary cases characterized by an atonic condition of the uterus, and the severe ones where gangrene threatens (*Ars., lach.*, rhus), with a general adynamic condition of the system; uterine hemorrhage, worse from the least motion (Erig., *sabina*); discharge black, fluid, and very fetid. After an abortion, the uterus does not contract; thin, black, offensive discharge; *suppressed lochia followed by metritis* (*Acon., bell.*); *extreme debility, prostration, and restlessness* (Ars.). The lower dilutions of a *fresh* preparation are more often used for sub-involution.

|| Sepia. *Venous congestion* of the uterus and pelvic tissues (Murex purpurea); prolapsus uteri; pain in the uterus, and such *severe bearing-down*, the patient feels as if she must cross the limbs to prevent protrusion of the parts; *leucorrhœa yellow, milky* (Calc. carb., coni., lyc., *puls.*, sulph. ac.), *excoriating* (*Alum.*, ars., kreos., merc.), *worse before the menses.* Dr. Leadam states that sepia is suitable to the chronic, indurated condition of the uterus, its cervix and os, whether benign or malignant. The general symptoms of the patient indicating this remedy are to be borne in mind.

Sulphur. An excellent authority recommends the use of this remedy intercurrently in different dilutions, during the treatment of chronic cases, no matter what other medicines are given. Should the well-known general symptoms of sulphur be present in addition to the local ones, this would be all the more important; *menses too late, too profuse, but of too short duration;* blood thick, dark, sour-smelling, and excoriating; profuse, yellowish, corrosive leucorrhœa; burning in the vagina, and itching of the genitals.

Ustilago maidis.[1] Metritis and ovarian irritation, when there is acute pain, especially in the left ovary, with swelling; menses too soon and too profuse; hemorrhage with clots, bearing-down, as if every thing would come through. A *fresh* preparation is important.

The following remedies may be consulted for further information:—

Sub-involution. — China, calc. phos., cauloph., crocus, helonias, ipecac., merc. iod., nat. mur.,[2] rhus tox., trillium.

Chronic metritis. — Baryta carb., carbo veg. or an., cocculus, collinsonia, coloc., *conium*, ferrum, gels., hepar sulph., hyosc., ignatia, iris, *kali iod.*, kali bi., *kreosote*, lach., lyc., magnesia mur.,[3] merc. iod., murex purpurea,[4] nux vom., phos., phytolacca, plat., puls., sodæ chlor.,[5] verat. alb.[6]

[1] Raue, Record of Hom. Lit., 1873, p. 36.

[2] Dr. H. H. Read writes me that "Natr. mur. did wonders in a case of sub-involution following puerperal inflammation, probably traumatic." I prescribed it from the symptom, "Dreams of robbers in the house."

[3] Dr. Hughes speaks favorably of it in venous congestion of the uterus where the liver is at fault. Dr. Jahr also used it with success.

[4] If the symptoms are similar to those of sepia and the menses are free, while with sepia the flow is rather scanty.

[5] Dr. Cooper: Brit. Jour. of Hom., No. cxxvi.

[6] Mrs. ——. Been sick three months before coming under my care; great weakness; face pale; eyes sunken, with dull expression; extremities cool. She complained of violent uterine pains, with a feeling of heaviness, which was attended

by stitching pains, particularly on the posterior wall of the uterus. She could not rise because of the pain; entire loss of appetite; slimy diarrhœic stools; constantly cold, especially the extremities. Physical examination showed the volume of the uterus increased, hard and sensitive to the touch, congestion of the neck of the uterus, and the least touch of it made her scream. Bell., nux vom., and bry. did little. Veratr. alb. 6 cured her in two weeks. — Dr. Sentin, in *Hoyne's Clinical Therapeutics*, vol. i. p. 322.

CHAPTER XX.

BENIGN GROWTHS OF THE UTERUS.

Fibroid Tumors (Myoma, Fibro-Myoma), Fibro-Cystic Tumors, Fibrous Polypi, Fungoid Endometritis, Glandular Polypi, Cellular Polypi (the last three are varieties of Adenoma).

THESE growths are considered in one chapter because their subjective symptoms are similar, differing only in degree, according to the size and situation of the tumor, and the same general principles of treatment apply to all.

The fibroid tumor, also known as a myoma or fibro-myoma, may be single or multiple, the size of a pea, or large enough to fully distend the abdominal cavity, and usually has a distinct capsule, especially if it be of long duration. It is most common near the fundus uteri, on the posterior wall, and is seldom found in the cervix. The surface is smooth, as a rule, rarely a little irregular. The stony hardness of a circumscribed mass within or in connection with the uterus is characteristic of a uterine fibroid. Microscopically, it consists of hypertrophied connective and muscular tissue, and the degree of hardness depends largely on the density of the fibrous elements. Though generally very hard, fibroids are sometimes found which have a moderate amount of elasticity, and are therefore called soft or œdematous fibroids. In the latter, the connective tissue fibres are not as compact; are separated by a jelly-like substance,

and the tumor is composed almost entirely of muscular elements. The soft fibroids grow more rapidly than the hard, and occur in younger women (Virchow). They are often observed to vary in size, being larger just before the menstrual periods.

Endometritis is generally induced by the presence of a fibroid tumor, especially if it be of the sub-mucous variety. In examining numerous preparations, Dr. Wyder[1] found glandular endometritis accompanying interstitial and sub-serous fibroids. This glandular endometritis was more marked in proportion to the thickness of the muscular wall between the tumor and the uterine cavity. The thinner the wall, as in sub-mucous fibroids, the greater the growth of connective tissue (interstitial endometritis). The glandular endometritis shows no predisposition to malignant degeneration of the mucous membrane, and in the pure form Dr. Wyder believes it does not cause bleeding. Bleeding is in consequence of the development of connective tissue and blood-vessels (endometritis fungosa); or if one portion grows very much faster than another, it may compress the veins, and cause the blood to stagnate or back up in them, and thus produce hemorrhage.

Apart from the inflammatory disorders of the pelvic tissues, and anomalies of menstruation, this affection is one of the more common, if not the most frequent, of the diseases peculiar to women. Fibrous tumors are also found in various parts of the body, less often in the male than female. They are almost unknown before or at puberty, but from this time gradually increase in frequency, and in the majority of cases develop between thirty and forty years of age. Their growth is very slow, usually ceasing after the climacteric, and life is

[1] Wyder: Die Mucosa Uteri bei Myomen. Archiv. für Gynäkologie, Bd. xxix. Hft. i.

endangered only in consequence of mechanical pressure or profuse menorrhagia. When small, and situated beneath the peritoneal investment of the uterus, there are seldom any symptoms, and the patient may never be aware of their presence.

The negro race is peculiarly liable to their development, much more so than the white. It seems to be true, also, that of the large pelvic tumors, fibroids predominate in the African, and ovarian in the white races.

The relation of the etiology of fibroid tumors to single, fruitful, and sterile women, has been carefully studied, and nearly all observers find that they are much more common in married than single women.[1] Gusserow[2] collected the records of nine hundred and fifty-nine women affected with these growths. Six hundred and seventy-two were married, and two hundred and eighty-seven unmarried. Of the married ones four hundred and sixty-four had borne children, and the remainder were sterile. He believed, from the recorded experience of physicians, that the sterility was a result rather than a cause of the development of the tumor. Both Schroeder[3] and Winckel[4] agree with him in this opinion.

In five hundred and fifty-five women having uterine fibroids, Winckel found one hundred and forty (24.2 per cent) were childless and single; four hundred and fifteen were married (75.8 per cent), and of these one hundred and thirty-four (24.3 per cent) were sterile. According to the population of Saxony, the proportion of middle-aged married women to single women was as 9 to 7.3, and the prevalence of fibroid tumors among

[1] The statistics of Routh show that this is true of women in England.—*Schmidt's Jahrbücher*, p. 236, vol. 129, 1866.

[2] Die Neubildungen des Uterus, chap. iii.; Deutsche Chirurgie, 1885.

[3] Krankheiten der weibl. Geschlectsorgane, s. 210, 1881.

[4] Winckel: Diseases of Women, American ed., p. 409, 1887.

the unmarried to that among the married as 3 to 9; in other words, tumors of this nature occur nearly twice as often among the married as in the unmarried.

Gusserow and Schroeder believe that sexual gratification rather favors the development of uterine fibroids.

While these opinions concerning the etiology of uterine fibroids have obtained general acceptance, there are some physicians who differ from them. In a very carefully written essay based on great experience and the personal study of over two hundred cases, Dr. Emmet [1] thinks those women who have not had children, i.e., the unmarried and sterile classed together, are more liable to fibroids than those who have borne children. According to him, the fruitful are more liable than either the unmarried or sterile considered separately, while the last two classes are nearly equal in liability before thirty years of age. He believes their development is held in check by marriage, even though conception does not take place; also, that "between the ages of thirty and forty the unmarried woman is fully twice as subject to large fibroid tumors as the sterile or fruitful," and that sterile women are more subject to small fibroid growths than either unmarried or fruitful women; he is also of the opinion that sexual gratification diminishes the liability to fibroid tumors.

The complications and symptoms are those arising from pressure of the tumor on the neighboring structures, and increased determination of blood to the uterus. They vary somewhat according to the situation of the tumors, which, for convenience of description, are divided into,—

Interstitial fibroids, when situated in the parenchyma of the uterus (65%).[2]

[1] Principles and Practice of Gynæcology, p. 548, 1884.

[2] Winckel, Diseases of Women, Am. ed., p. 408, 1877.

Sub-peritoneal fibroids, when situated beneath the peritoneal covering of the uterus (25%).[1]

Sub-mucous fibroids, when situated beneath the endometrium, and projecting into the uterine cavity (10%).[1]

If a sub-mucous fibroid projects far enough to have a distinct pedicle, it is then termed a fibroid polypus. It is probable that many fibroids begin as interstitial tumors near the endometrium or peritoneal surfaces. As their size increases, they tend to grow in the direction of the least resistance, and with the help of muscular contraction of the uterine parenchyma, become eventually sub-serous or sub-mucous fibroids.

The Symptoms are most pronounced, and constantly produced, by sub-mucous fibroids and fibrous polypi; less frequently by interstitial; and are often few or entirely absent in the sub-peritoneal variety. Profuse menorrhagia or metrorrhagia is one of the most constant symptoms; and in the interval between the flowing, there is a watery or leucorrhœal discharge from the uterus. The flowing first appears as an increase of the monthly flow, and gradually becomes excessive with later periods, instead of a sudden and profuse hemorrhage as in carcinoma. There is also more or less weight and bearing-down in the pelvis, pelvic pain, irritability of rectum and bladder, and pain along the course of the crural nerves, all of which result from pressure. Dysmenorrhœa is sometimes present. Though these symptoms may be marked, the diagnosis of uterine fibroids cannot be made without —

The Physical Examination. — Large fibroid tumors, extending into the abdominal cavity above the brim of the pelvis, are readily diagnosed in the great majority of cases by abdominal palpation. They are more often

[1] Winckel, Diseases of Women, Am. ed., p. 408, 1877.

sub-peritoneal than sub-mucous, uniformly hard, and may be situated at the centre or on one side of the abdomen. The surface is generally irregular, from the presence of one or more smaller fibroids, all of which form a single mass, held together by a framework of connective tissue; or, less frequently, the surface is smooth when a single tumor is present. Like all fibroid tumors, they develop slowly.

Sometimes the fibroid may project far enough from the uterus to have a short thick pedicle; but the uterus will always move with the tumor, as shown by the introduction of the sound within the uterine cavity, and motion given to the tumor will be communicated to the sound.

While the presence of a large fibroid can almost always be ascertained by the means just indicated, it is well to follow the method of examination given below for a small fibroid, which is sometimes difficult to detect with absolute certainty.

The best time to make an examination is very soon after the monthly has ceased, though this is by no means necessary or advisable if the flowing is almost continuous. The tissues are then more relaxed, the cervical canal open, and the cervix soft, allowing a certain amount of dilatation with the finger as the uterus is crowded down upon it by the external hand. The tumor, therefore, can be felt better at this time.

In all cases it is a good rule to have the patient in a position in which she can be examined to the best advantage. Although a fair idea of her condition may be obtained while she lies on her back on a firm mattress or sofa, it is much better to place her on a table or gynæcological chair. All constricting bands about the waist, and corsets, must be removed, and the thighs flexed on the abdomen to relax the muscles as much as

possible. In all doubtful cases, ether anæsthesia will be of great assistance in making a thorough examination. A hot (110°) mercurial douche (1 : 4000) before and after the latter is also advisable.

It is hardly necessary to state that the bi-manual method of examining must be an invariable rule, and the cultivation of a gentle touch without prying and prodding about in the pelvis is very desirable.

The cervix is quite commonly found displaced. If the tumor be large, extending above the pelvic brim, the cervix is often drawn up, and sometimes out of reach. When the tumor is in the anterior or posterior wall of the uterus, that organ is displaced in the corresponding direction, particularly if it be of the sub-peritoneal variety. This is readily ascertained by careful bi-manual palpation, and the relation of the growth to the uterus. In exceptional cases when the fibroid is sub-mucous, less often if it lies in the posterior uterine wall, the cervix is low down in the pelvis. The stony hardness of the tumor, which is seldom sensitive to pressure, its slow development, associated as a rule with menorrhagia in a woman about forty years old, are very characteristic symptoms of a uterine fibroid.

It is not always as easy to distinguish the class of fibroids to which it belongs. The sub-peritoneal may be felt like a hard lump attached to the uterus, having a sort of ring or constriction at that place; while the intra-mural (interstitial) feels more like a hard bunch bulging out from that organ, with a perfectly smooth sloping surface, and no constriction around the base of the tumor. A rectal examination will often be of great service when the tumor is in the posterior part of the pelvic cavity. If the fibroid be sub-mucous, the fundus is more symmetrically enlarged than in either of the preceding varieties. Sometimes the tumor is readily

felt presenting at the external os; or by crowding the finger firmly up in the cervical canal, and pressing down on the uterus externally, it is distinguished near the internal os.

It is always desirable to ascertain, approximately at least, the extent of the attachment of a sub-mucous fibroid to the uterus. The first step in making this estimate is to find the depth of the uterine cavity, which is generally the distance from the external os to the upper border of the base of the tumor. A whalebone probe, the best instrument for this purpose, is passed up to the fundus uteri, taking care that it will go no farther by introducing it once or twice in a little different direction, as the point is liable to catch in some fold of tissue; the forefinger is then placed on the probe, close to the cervix, and the instrument is withdrawn. Making a little allowance for the curve of the probe over the tumor, the instrument is laid on a piece of paper, on which are marked the points corresponding to the tip of the probe and the external os. It is then re-introduced along the opposite surface till it reaches the tumor, the finger placed on the probe next to the cervix, and again withdrawn. It is marked along the same line on the paper, and the distance between the two points corresponding to the tip of the probe gives a fair idea of the thickness of the base of the tumor; while the freedom with which the instrument will move laterally over the growth shows the breadth of its attachment.

When the base of the tumor extends low down in the uterus, it often encroaches on the upper part of the cervical canal, making it difficult to introduce any instrument, and giving rise to the impression that there is a stricture of the internal os; but the hard margin of the growth will dispel any such illusion.

Having faithfully tried the means of diagnosis just described, and in the order given, i.e., abdominal palpation, careful bi-manual examination both vaginal and rectal, and the whalebone probe, the physician may be still in doubt as to whether the fibroid projects into the uterine cavity sufficiently to warrant operative interference through the vaginal orifice, when the tumor cannot be felt presenting in the cervical canal. Under these circumstances, it is necessary to dilate the cervix with tents,[1] or a steel dilator;[1] press the uterus down from above, steady it below with volsellum forceps fixed in the cervix, and make a thorough digital examination of the uterine cavity, noting the attachment and projection of the fibroid, the thickness of the endometrium over it, as well as pulsating arteries, if any, in the latter, which would be divided by incising the capsule.

On introducing the finger, what seemed to be a large fibroid may prove to be a polypus which is readily removed.

Considerable hemorrhage may follow so much manipulation; but irrigation with hot water, the application of iodine, and the vaginal plug will control it. The patient must be put to bed, and kept perfectly quiet till all soreness has subsided.

It is hardly necessary to add that when there is considerable pelvic inflammation present with a fibroid tumor, the former must be cured before it is safe to attempt any operation or examination which the patient cannot readily endure without ether.

The following table may be of assistance in diagnosing the variety of uterine fibroid.[2]

[1] See chapter on Minor Surgical Gynæcology.

[2] See also, The Differential Diagnosis of the Various Forms of Fibroid Tumors of the Uterus, by Alfred Meadows, M.D., F.R.C.P., British Medical Journal, p. 716, vol. ii., 1883.

In Sub-Mucous Fibroids.	*Interstitial Fibroids.*	*Sub-Peritoneal Fibroids.*
The hemorrhage from the uterus is quite profuse, the more so in proportion to its projection into the uterine cavity.	There is some hemorrhage, but, as a rule, not so much as in sub-mucous fibroids.	There may be slight hemorrhage, but more often none, especially if the tumor is pedunculated.
Pain is slight.	Pain is more severe than in the former case.[1]	Pain is often a very marked though not an invariable symptom.
If there is a hard, firm, well-defined tumor, uniform and *symmetrical* in shape, which has been slowly growing for three years or longer, it is probably a fibrous polypus, or sub-mucous fibroid.	The growth, in about half the cases, is on the posterior wall of the uterus, which is not symmetrically developed, but bulges a little on one side at the site of the tumor.	Marked asymmetry between uterus and tumor. If there are several developing under the peritoneum, the uterus has a knobby outline. If the tumor be pedunculated, it is movable in proportion to the length of the pedicle, unless there are adhesions.
The uterine cavity is enlarged, filled, and distended by the tumor, which is felt by the finger after dilatation of the cervix. Its attachments can also be ascertained by the whalebone probe.	The uterine cavity is deeper, and more or less tortuous from the bulging of the tumor into the cavity.	The uterine cavity seldom has a greater depth than three inches, and is not proportionate to the size of the tumor unless the latter drags the uterus high up, and so lengthens the cavity.
The sub-mucous growths have more cellular, and less fibrous tissue; they grow more rapidly than the other forms.	There is a larger proportion of fibrous tissue, and the tumor grows more slowly.	The fibrous tissue is most marked in the sub-peritoneal. The tumor develops slowly, and is hard, having almost a cartilaginous feeling.

[1] Hewitt, Diseases of Women, vol. ii. p. 225.

THE DIFFERENTIAL DIAGNOSIS OF FIBROID TUMORS FROM PREGNANCY, EXUDATION IN CELLULAR TISSUE, HÆMATOCELE, COLLECTION OF FÆCES.

In all these the history of the case, its duration, and present symptoms, are directly opposite to those common to uterine fibroids.

Pregnancy.	*Fibroid Tumor.*
"Tumor" of short duration.	Of long duration.
"Tumor" elastic to touch.	Tumor very hard.
Amenorrhœa.	Uterine hemorrhage.
Usual symptoms of pregnancy.	Symptoms of pregnancy wanting.

Cellulitic Exudation.	*Fibroid Tumor.*
History of pelvic inflammation.	No history of pelvic inflammation.
Exudation sensitive and immovable.	Tumor not sensitive, and movable.
Exudation of short duration, and distinct from the uterus.	Tumor of long duration, and intimately connected with the uterus.

Hæmatocele.	*Fibroid Tumor.*
Formation rapid, and attended by symptoms of collapse.	Formation slow, without symptoms of collapse.
Fluctuation and immobility of tumor.	No fluctuation, and tumor movable.

Collection of Fæces.	*Fibroid Tumor.*
It is left-sided.	Not limited to any side.
Short duration.	Long duration.
Can be indented by the finger.	Cannot be indented.
Does not move with the uterus.	Moves with the uterus.
Symptoms of intestinal obstruction.	No symptoms of intestinal obstruction.
Functions of uterus not affected.	Marked disturbance of the uterine functions.

THE DIFFERENTIAL DIAGNOSIS OF FIBROID TUMORS FROM —

Uterine Flexions.	*Cancer.*	*Ovarian Tumors.*
The sound enters the uterine cavity in the centre of the supposed tumor. If a fibroid is present, the sound passes by it into the uterine cavity, which does not correspond to the centre of the tumor, but lies in a different direction.	Cancer of the fundus uteri is very rare. Its progress is much more rapid than a fibroid. The discharges from the uterus are extremely offensive. Pain in the pelvis, and fixation of the uterus, are quite constant symptoms.	Are seldom connected with the uterus. There is a wave of fluctuation on palpation, and their development is unilateral, and more rapid than fibroids. Puncture with a fine needle of the aspirator draws off a fluid showing the characteristic granular cells. Where an ovarian tumor is firmly attached to the uterus, differentiation is often impossible, especially if the tumor be solid.

The Prognosis is fortunately favorable, so far as life is concerned. Very few women die in consequence, though they may be bedridden for a long time. After the menopause, the tumor often gradually diminishes to a remarkable degree, and ceases to be a source of danger, though its presence may be annoying. Fibroid tumors scarcely ever threaten life, except from the loss of blood occasioned by them.

The Diet is important, and should be so regulated as to nourish the system in spite of the constant drain. Milk, eggs, beef-juice, or raw meat extracts, mutton-chop, etc., are important articles of food. Great success in the treatment of uterine fibroids has been claimed by Dr. Salisbury's method.[1] It consists essen-

[1] See article by Dr. Ephraim Cutter, American Journal of Obstetrics, vol. x. p. 562.

tially in drinking a pint of hot water very slowly an hour or two before meals, and half an hour before retiring. The object of this is to cleanse the stomach before eating and sleeping. The muscle pulp of steak cut from the centre of the round, is broiled, seasoned to taste, and made an exclusive article of diet. All the connective tissue is removed by chopping the beef without stirring it. The fibrous tissue is driven down on the board, while the muscle pulp is occasionally scraped off the surface with a spoon during the chopping, and prepared for eating as above. This treatment must be rigidly adhered to for one to three years to be successful. It has received much commendation from good authorities, such as Drs. Graily Hewitt, and Marion Sims, while others have never seen any benefit result from it. If it is to be supposed that these tumors develop in consequence of a weak, atonic condition of the uterus, it would appear reasonable that a good healthy diet without fibrous tissue would nourish the uterus, and enable it to discharge its functions better with a minimum supply of those elements entering into the formation of these tumors. Some physicians believe they have seen benefit from wearing an earth-poultice, or from the application of myro-petroleum to the abdomen, over the tumor, for a number of continuous months.

The Treatment of fibroid tumors of the uterus is too often unsatisfactory. Except where life is in actual danger, or the tumor easy of access, as in sub-mucous fibroids and fibrous polypi, it is the better plan to adopt a palliative course, rather than surgical interference, in the hope that the patient will tide over the menopause. It is of great importance to correct a retroversion or prolapse of the uterus, as this favors congestion, and a much more rapid growth of the tumor.

Uterine hemorrhage is the symptom which is the most dangerous to the patient, the most difficult and most important to control. This can be accomplished in many cases by a carefully selected remedy, the hot-water douche, the local application of the tincture of iodine or the perchloride of iron to the uterine cavity, the vaginal plug, or a combination of these measures. On the least appearance of a show, the patient should lie down with the hips raised a little, and remain in that position till the flow ceases. In the interval between the periods, moderate exercise in the open air, sun-baths, and bathing followed by vigorous friction of the skin, are excellent to maintain the general health. There should be no constriction of the waist, or pressure on the abdominal organs by the clothing, as it interferes with free venous circulation, and thus promotes hemorrhage. The tendency to constipation can be obviated by regulating the diet; and an occasional collection of fæces removed by enemas given to the patient, if necessary, in the knee-chest position. The mineral waters of Kreutznach, in Rhenish Prussia, are quite celebrated for the treatment of uterine fibroids.[1]

Electrolysis[2] has had its advocates from time to time, but has not been generally accepted as a reliable method of treatment. Dr. Apostoli,[3] of Paris, is enthusiastic in its favor. He employs a strong current (100 milli-

[1] In an excellent article on Carlsbad: Its Springs, their Physiological Action and Indications, Dr. Th. Kafka states that fibroid tumors often disappear as an apparent result of taking the water. — *Monthly Hom. Review*, p. 274, May 1, 1885.

[2] An interesting article on Electricity in Gynæcology, and a report of three fibroid tumors successfully treated by it, will be found in the Journal of the American Medical Association, July 17 and 24, 1886. See also Electrolysis in the Treatment of Uterine Fibroids, by Dr. Franklin H. Martin, in the same journal, p. 78, Jan. 15, 1887.

[3] Du Traitement Électrique des Tumeurs de l'Utérus, 1884.

amperes) without puncturing any tissue.[1] The positive pole, made of platinum, is applied within the uterus when there is uterine hemorrhage. Dr. Engleman[2] combines this method with puncture of the tumor through the uterine cavity. Great success is claimed for both these methods. Dr. Freeman[3] of Brooklyn also speaks highly of electricity. He uses a strong current. The needle of one pole is thrust well into the tumor, through the abdominal wall, while the other is introduced within the uterine cavity. As the vitality of fibroid tumors is easily destroyed by slight injuries, Dr. John Butler produced a slough on the mucous surface by electrolysis, which caused the subsequent death and disorganization of the growth. Plausible as this method may seem, it is open to the grave objection of the liability of the patient to septic infection from the decomposing and purulent material in the uterine cavity.

When the tumor is sub-mucous, or has a distinct pedicle, and especially if it presents in the cervical canal or projects from it, there is little danger in removing it, which ought to be done without waiting till there is extreme anæmia from loss of blood.[4] This can be accomplished by the *écraseur* or persistent traction, and the use of scissors or Thomas' spoon saw.[5] A drainage tube should be inserted in the uterine cavity afterward to insure a free escape of decomposing fluids, and prevent septicæmia.

[1] Dr. Carlet has reported ninety-four fibroids treated in this way; published by Octave Doin, Paris, 1884.

[2] Transactions of the American Gynæcological Society, 1886; and American System of Gynæcology, vol. i. p. 398.

[3] Discussion on Electricity in Gynæcology, in the New-York Academy of Medicine. — *The Medical Record*, vol. ii. p. 554, 1885.

[4] See Enucleation of Fibroid Tumors. Doran, Gynæcological Operations, p. 307, 1887.

[5] Emmet's Principles and Practice of Gynæcology, p. 566, 1884.

The hypodermic injection of ergot[1] has been much used to check the hemorrhage, and is said to be very useful in some cases, particularly for those tumors projecting well into the uterine cavity after *the cervical canal has been and is kept dilated.* Dr. Winckel[2] joins many physicians in commending this drug, but warns the profession against its use in large doses, especially in anæmic patients. The use of ergot has also been combined with incision of the capsule, in hopes that the tumor might become pedunculated, and more accessible for removal. This, however, is often impracticable in interstitial fibroids.

Next to ergot, Dr. Winckel[3] recommends hydrastis canadensis in twenty-five-drop doses of the fluid extract three or four times a day; and if gastric disorder ensue, to use thirty-seven and a half grains of the dry extract in pill form instead of the fluid extract. These may be considered large doses. Fellner believed it caused uterine contractions, and increased the blood pressure. Schatz,[4] who introduced the remedy, thinks it causes contraction of the capillary vessels instead of the uterus, and differs from ergot in this respect.

[1] Hildebrandt, American Journal of Obstetrics, November, 1872; and Byford, Transactions of the American Gynæcological Society, vol. i. p. 168.

[1] E. Evetzky collected the records of 223 fibroid tumors treated by the hypodermic injection of ergot.

In 42 cases the tumors were absorbed.

In 9 cases the tumors were expelled.

In 71 cases the tumors diminished in size, and the symptoms were relieved.

In 51 cases no impression was made in size or density, but the symptoms improved.

In 49 cases no benefit.

1 case died in consequence.

— *New York Medical Journal*, March, 1882, p. 231.

Though the results may appear favorable, the author must assert that ergot often fails to benefit patients suffering from fibroid tumors.

[2] Diseases of Women, Am. ed., p. 427, 1887.

[3] Ibid., p. 428.

[4] Centralblatt für Gynäkologie, No. 46, 1883.

Both Wilcox[1] and Jermans[2] have found it very useful for uterine hemorrhage from other causes than the presence of fibroids.

In 1872, Professor Hegar[3] in Germany, and Dr. Battey[4] of Georgia, advocated removal of the ovaries for the relief of various affections, among them being uterine fibroids accompanied by profuse hemorrhage. As this is one of the conservative surgical measures, it has found some favor. Dr. Wiedow[5] has collected the records of one hundred and forty-nine operations of castration for uterine fibroids. Fifteen of them ended fatally. In seventy-six cases, the final results were as follows: —

Atrophy of the tumors and menopause . .	54 cases.
Occurrence of the menopause only . . .	7 "
Atrophy of tumors only	2 "
Diminution of bleeding and atrophy . . .	6 "
Menopause for three months, followed by expulsion of the tumor	1 case.
Irregular, slight hemorrhages	2 cases.
Irregular, severe hemorrhages	1 case.
Immediate good results followed by severe bleeding and growth of the tumors . . .	3 cases.
Mortality of the one hundred and forty-nine operations	10 per cent.

Many cases continue to have the same pains and other symptoms due to uterine fibroids after the operation as before. Dr. Gusserow believes castration "leads with great certainty to an arrest of hemorrhage,

[1] New York Medical Journal, p. 199, Feb. 19, 1887.

[2] Centralblatt für Gynäkologie, No. 35, 1887.

[3] Compare Hegar and Kaltenbach, Operative Gynäkologie, p. 334, 1881, for a careful history and description of the operation.

[4] American Journal of Obstetrics, January, 1880.

[5] Archiv für Gynäkologie, bd. xxv.

provided the uterine tumors are not too large, and not in a condition of cystic degeneration;" besides, it is a much safer operation than extirpation of the tumor. Dr. Homans of Boston has found that the bleeding may continue just as severe after castration; and Dr. Winckel[1] still considers this operation *sub judice* for unoperative myomata with a mortality of fifteen per cent, and a failure for the desired result in twenty per cent of the cases which recover.

The operation should not be performed when the hemorrhages do not correspond to menstrual periods, or if the menopause has arrived. It is better adapted to small and rapidly growing tumors accompanied by profuse hemorrhages, than to large fibroids. In the latter, the ovaries are sometimes found and removed only with great difficulty.

Prochownik[2] has had better results. He reports twenty-two cases of castration without a death. Twelve of these were for fibroid tumors, and in these the results were remarkable. The tumors diminished in size; pain and bleeding ceased. All of these growths would have otherwise required supra-vaginal amputation, or enucleation from the uterine walls or pelvic connective tissue. It is interesting to note that the results of castration for neuroses complicating sexual disorders were not so good when healthy ovaries were removed. Dr. Tait[3] advocates removal of the Fallopian tubes with the ovaries, and has met with remarkable success. His unusually low rate of mortality must be largely attributed to his remarkable skill as a sur-

[1] Diseases of Women, Am. ed., p. 437, 1887.

[2] Beiträge zur Kastrationsfraga, Archiv. für Gynäkologie, Bd. xxix. Heft 2.

[3] The Modern Treatment of Uterine Myomata, British Medical Journal, vol. ii. p. 287, 1885. In fifty-eight consecutive cases, all recovered from the operation. In the fifty cases reported in this article, all were very much relieved or cured by the operation excepting one, who was afterwards cured by removal of the tumor.

geon. Unfortunately, it will not always arrest the hemorrhage, nor can the ovaries always be found.

The removal of sub-peritoneal fibroids by abdominal section is a formidable operation,[1] but has been performed with considerable success by Drs. [2] Schroeder [3] and Martin [4] in Berlin, and Bantock [5] in London. Dr. Sänger [6] has recently modified the operation for supra-vaginal amputation of the uterus.[7] Removal of the entire uterus for fibrous tumors has been attended with so high a rate of mortality, that the operation has not met with much favor.[8]

Baker Brown introduced the operation of incising the cervical canal and the os internum, as well as the capsule of the fibroid, when it is accessible. This relieves the hemorrhage in some cases, when the tumor is well down in the os internum, and is practised by many gynæcologists.

The medical treatment is considered at the close of this chapter.

[1] Dr. H. R. Bigelow has made an elaborate study of gastrotomy for uterine fibroids, with complete statistical tables, in the American Journal of Obstetrics, 1883–84.

[2] For a description of their operations, see Myomotomy, by Dr. Carl Schroeder, British Medical Journal, p. 714, vol. ii. 1883.

[3] Dr. Hofmeyer, first assistant to Dr. Schroeder, has made an excellent study of this operation as performed in Berlin, in Die Myomotomie, 1884, which is reviewed by Dr. Wiener in the Centralblatt für Gynäkologie, No. 11, 1886.

[4] Martin, Pathologie und Therapie der Frauen-krankheiten, 1887.

[5] A good description of Bantock's method of supra-vaginal hysterectomy can be found in Doran's Gynæcological Operations, p. 287, 1887.

[6] Zur Technik der Amputation Uteri myomatosi supra-vaginalis (Intraperitoneale Abkapselung, elastische Dauerligatur des Uterusstumpfes). Dr. M. Sänger: *Centralblatt für Gynäkologie*, No. 44, p. 718, 1886.

[7] Compare Hysterectomy for Myoma. Greig Smith, Abdominal Surgery, p. 211, 1887.

[8] The opinion of so high an authority as Dr. Thomas Keith is of importance. He considers the operation a very hazardous one, which should be considered the last resort. Compare his Contributions to the Surgical Treatment of Tumors of the Abdomen, Part I., 1885.

FIBRO-CYSTIC TUMORS.

These are quite rare, and chiefly interesting for their close resemblance to ovarian tumors. It is quite probable that very many of those growths described as fibro-cystic tumors of the ovary really originated from muscular fibres in or near the uterus, and not from the ovary. True cysts of the uterus are extremely rare, and all fibro-cystic growths are the result of a cystic transformation in fibroid tumors, which may take place in various ways, but chiefly from separation between muscular fibres, the collection of serum in the space thus formed, and the fusion of many cavities into one. This is most common in sub-peritoneal varieties, and less frequent in the interstitial ones.

Their symptoms are the same as those accompanying fibroids of the same size.

The differential diagnosis is extremely difficult, and often impossible. The most distinctive feature is a localized obscure sensation of fluctuation without the hardness of a fibroid tumor. If an aspirator be used, a variable amount of fluid is drawn off, which leaves solid portions of the tumor in the abdomen ; this fluid coagulates spontaneously, and closely resembles the liquor sanguinis ; under the microscope[1] it shows a few epithelial cells, oil globules, and fibre cells, characteristic of the structure in which the cyst originated. The granular ovarian cell, or Drysdale's corpuscles, peculiar to ovarian tumors, are not present. The microscopic appearance of the fluid is the best guide in cases of doubtful diagnosis. Emptying the cyst by trocar or aspirator has not been attended with much success as a method of treatment. As an almost invariable rule, they must be treated in the same way as uterine fibroids.

[1] Atlee, Ovarian Tumors, p. 263.

Uterine Polypi (adenoma) are divided into three classes: cellular, glandular, and that known as fungoid endometritis. The first is the most frequent, and it is covered with mucous membrane, which gives to it the common name of mucous polypus. It is generally situated near the internal os, and seventy per cent of the cases occur between fifty and seventy years of age. Its texture is soft and vascular like a nasal polypus.

The glandular polypus consists in a hypertrophy of the cervical follicles or Nabothian glands, and is commonly associated with laceration of the cervix. The various enlarged follicles are united to one another, so that the polypus may resemble an hydatiform mole.

Fungoid (polypoid) endometritis[1] has been mentioned in a previous chapter, but further consideration of it is necessary. It may be merely a hypertrophy of the membrane lining the uterine cavity with moderate dilatation of the utricular glands, and affect the entire membrane; or it may occur in localized spongy patches like soft, flat, wart-like excrescences, which are attached by a broad base to the walls of the uterine cavity. In more rare cases, the utricular glands of the uterus participate more actively in the new formation, leading to diffuse glandular development in the mucous membrane. This is known as diffuse adenoma of the uterus.

Polypi are liable to develop from any condition causing a passive congestion of the lining membrane of the uterine cavity, and especially from chronic endometritis. They vary in size from a pea to a hen's egg; and all three forms have symptoms common to one another and to uterine fibroids, such as uterine hemorrhage, watery discharges from the uterus, leucorrhœa, pelvic pain, etc. Pain, however, is generally absent in pediculated polypi, which lie in the external os or protrude

[1] Olshausen: Archiv für Gynäkologie, Bd. viii. p. 97.

from it. It is often a matter of surprise that so much trouble can come from such a small growth. The presence of a polypus no larger than a pea may excite profuse menorrhagia, leucorrhœa, etc., which only ceases when the growth is removed. One of these little tumors has been known to act like a little ball valve in the cervical canal, causing both dysmenorrhœa and sterility.

The Diagnosis is easy when the growth can be seen or felt presenting in the external os uteri; but when it lies within the uterine cavity, it is a difficult matter, and the presence of a polypus can only be ascertained by dilating the cervical canal, and exploring the uterine cavity with the finger.

Prognosis. — The proneness of all forms of uterine polypi to recur after removal, and the enfeeblement of the system, due to the hemorrhage, leucorrhœa, and pain caused by these growths, have led some observers to believe them to be of a malignant character. This applies more especially to endometritis fungosa with diffuse development of the utricular glands. Indeed, specimens of this growth removed by the curette have been examined by expert microscopists, and pronounced, without hesitation, to be malignant, which the subsequent history of the case proved to be an incorrect diagnosis.

Adenoma and carcinoma are sometimes found in the same specimen, which Ziegler terms adeno-carcinoma. This has led some writers quite recently to believe that an adenoma may develop into a carcinoma. At all events, adenoma may be considered as on the boundary-line between benign and malignant disease,[1] which can be determined only by the subsequent history of the case, as the microscope does not give us sufficient light

[1] Winckel: Diseases of Women, p. 358, 1887.

on the subject.[1] While circumscribed pediculated polypi may recur frequently, they are not at all likely to assume a malignant character. The same cannot be said, however, concerning the endometritis fungosa, i.e., general or local hyperplasia of the mucous membrane of the uterine cavity, involving the utricular glands as described above. The frequency of recurrence, the extent of the disease, and the depth it penetrates into the uterine wall, indicate malignancy in proportion to the prominence of these symptoms; while Dr. Goodell[2] adds an important clinical observation, that "malignant diseases of the endometrium are usually found in old maids and in sterile women, while malignant diseases of the cervix almost always occur in women who have borne children."

The Treatment is obvious. When one of these little growths is seen in the cervical canal, seize the pedicle with dressing forceps, and twist it off. In rare instances it may be so large that an *écraseur* must be used. Nearly all the small intra-uterine polypi can be crushed down and removed by the dull wire curette which will do no harm; and if a small polypus be suspected, this curette had better be used instead of dilating the canal. If both this and Recamiér's curette fail, the cervix must be dilated, and the noose of an *écraseur* passed over the pedicle of the tumor to remove it. This latter operation is subject to the same risks as the removal of a sub-mucous fibroid, and is not to be performed without due consideration. It is a cardinal rule, that all manipulations of any kind in the pelvis must be carefully avoided when there are any symptoms of pelvic inflammation. These growths do not cease to develop after the climacteric, and are liable to return after removal.

[1] Gusserow: New Growths of the Uterus, p. 350, 1887.

[2] Goodell: Lessons in Gynæcology, p. 316, 1887.

Only a short time ago the writer removed a glandular polypus from an old lady who said she was seventy-two years old.

In endometritis fungosa, the cervix must be dilated, unless it is sufficiently relaxed from the frequent hemorrhages, and all the diseased tissue be thoroughly removed with Récamier's curette. The uterine cavity should then be injected with iodine or the undiluted per-chloride of iron, taking great care that the cervical canal is sufficiently patulous to allow a free escape of the fluid injected. In cases of frequent recurrence, when the above treatment has failed, fuming nitric acid, or the solid nitrate of silver, has been used. This very severe treatment should not be employed until all other remedies have failed, except removal of the uterus. The latter is best done by the operation known as vaginal hysterectomy,[1] and is indicated if, in spite of all other measures, the growth becomes of a malignant character, and nests of epithelial cells and atypical formations are observed under the microscope.

The Medical Treatment of uterine fibroids, fibro-cystic tumors, and uterine polypi, is considered under one heading, as the same remedies apply to any one of them if indicated by the symptoms. Unfortunately, it is doubtful whether any remedies have any power of directly causing the tumor to be absorbed, or expelled from the uterus. The growth and the attending hemorrhage are sometimes checked or arrested, so that the patient passes safely through the climacteric, and suffers little inconvenience afterward. Cases are reported where the tumors diminished in size under treatment; but as many of these are at the menopause, it is a question to which the result was due. Even if there be

[1] Compare A. Martin, Frauenkrankheiten, 1887; and Greig Smith, Abdominal Surgery, p. 185, 1887.

no perceptible improvement in the actual size of the tumor, if the pain and hemorrhage can be sufficiently controlled by remedies till after the climacteric, it is a far better course to pursue than to submit the patient to a dangerous operation. Consult also the chapter on Menorrhagia and Metrorrhagia.

THERAPEUTICS.

Belladonna. Plethoric patients. *Much bearing-down in the pelvis* (Lil. tig., natr. mur., plat., *sepia*). Menses too early and too profuse; bright red blood; or thick, decomposed, dark red blood. *The blood feels hot to the parts; throbbing and sensitiveness* to the touch in the pelvic organs.

|| Calcarea iodide.[1] *Patients having a strumous diathesis.* Menses too early, too long, and too profuse; milky leucorrhœa, with itching and burning; acidity of the stomach; profuse perspiration in the morning (Quiniæ sulph., *nitric ac.*, phos., rhus tox.) and on slight exertion. It must be prepared fresh, and kept in a blue glass bottle, out of the light. The writer has had two cases in which calcarea carb., 3x. trit., seemed to diminish the size of the tumor to a marked degree. One was about the size of a cocoanut, in the left side of the pelvis, and seemed to partake of the characteristics of both fibroid and ovarian tumors, though the symptoms pointed to the former rather than the latter. The second one was a distinct sub-

[1] The indications for this remedy in the treatment of uterine fibroids are not well understood. It seems to be more often effectual in causing a gradual diminution of the tumor than any other remedy, and in doses too small to act on the theory of calcification of the growth and interference with its nutrition. It is significant that the most celebrated mineral waters for the cure of fibroids contain a large amount of lime salts. Good results have been reported from the third decimal trituration. It has also been recommended in the shape of ten grains to a pint of water, a teaspoonful to be taken after each meal, gradually increasing to a tablespoonful. This may act very similar to the chloride of calcium in possibly causing a calcareous degeneration in the tumor; but as it has been found that the coats of the arteries are also likely to undergo the same degeneration, the remedy may become a dangerous one. It seems quite probable that it can influence the nutrition or development of these tumors in a certain number of cases, without being given in sufficient quantity to produce the degeneration alluded to.

peritoneal fibroid, about the size of a man's fist, on the anterior wall of the uterus. In less than two years the growth had so decreased in size, it could hardly be found by the most careful bi-manual examination.

It is by no means claimed that calcarea is the sovereign remedy for fibroids. Only, it seems one of the most promising ones, if its use is persisted in long enough, but there are very many cases in which it will be of no service.

China. Is excellent for the prostration accompanying the loss of blood; also, for uterine hemorrhage of dark blood and clots, fainting, and muscular twitching.

| Ferrum. Anæmia from loss of blood; stinging headache and ringing in the ears before the menses; flow too profuse, passive and dark, accompanied by labor-like pains in the abdomen, and a glowing red face.

Platina. *Menses too early, and too profuse;* flow dark and clotted, with much bearing-down and pinching pains in the abdomen; nymphomania; painful sensitiveness, and constant pressure in the hypogastric region; the body feels cold, excepting the face.

Sabina. Menses too early, too profuse, and last too long; hemorrhage from the uterus in paroxysms; worse from motion; blood dark and clotted, and sometimes offensive; with pain from back to pubis.

|| Secale. This should be freshly prepared, and will be found to act best in the tincture, or lower dilutions. Menses too profuse, and last too long; uterine hemorrhage, worse from least motion; discharge thin and black; black, lumpy, or brown fluid, and very fœtid; pains in the uterus of an expulsive character.

| Trilline. Metrorrhagia, especially at the climacteric, flow returns every two weeks. It may be active or passive, and is accompanied by pain in the back, and cold limbs. Dr. Ludlam speaks highly of this remedy, for the hemorrhages resulting from fibroid tumors, and thinks it most useful in those cases where the muscular fibres of the uterus have been decidedly developed by pregnancy or otherwise.

The following remedies may be consulted for further reference: —

Ars., *aurum*,[1] carb. veg., *cinnamon*, *conium*, *crocus*, cyclamen, gossypium,[2] erigeron, hamamelis, iodine, lach., lycop., *mag. mur.*, mercurius sol., nitric ac., phos., sepia, silicea, sulph., thuja, *ustilago*, vinca major.[3]

[1] Dr. Schwabe considers this the chief remedy, especially the aur. mur. natr., to promote resorption. Like other remedies it must be used perseveringly. — *Lehrbuch der Hom. Therapie*, 3d ed., vol. ii. p. 992.

[2] Dr. Garrigues recommends the cotton root for the treatment of the hemorrhage. — *Medical Record*, vol. ii. p. 554, 1885.

[3] Recommended by Dr. Meadows for the hemorrhage of fibroid tumors. — *Lancet*, July 12, 1873.

CHAPTER XXI.

MALIGNANT DISEASE OF THE SEXUAL ORGANS.

BY the term malignant disease is meant a neoplasm which returns after extirpation, and tends with more or less rapidity to a fatal termination. Extensive destruction of tissue characterizes them all. They may be classified as follows: —

- Malignant growths.
  - Non-cancerous
    - Sarcoma, or recurrent fibroid.
    - Corroding ulcer.
  - Cancer[1]
    - Epithelioma, papilloma, or cauliflower excrescences.
    - Scirrhous or hard.
    - Medullary, encephaloid, or soft.
    - Colloid.

The question of local or constitutional origin of the disease will not be discussed here, nor the details of its pathology, as both lie outside the scope of this work, and can be found in more voluminous treatises. Malignant disease of the sexual organs presents the same characteristics, and is subject to the same pathological changes, as in any other part of the body. Women are much more subject to it than men, the married more than the single, and the uterus more than any other locality.

Unfortunately most of these cases are not seen by the physician till the disease has made marked progress.

[1] The comparative freedom of the Jewish race from cancer is quite remarkable. Why this should be, the author is unable to explain any more than he can the liability of the negress to fibroid rather than ovarian tumors.

Subjective symptoms are almost always wanting in the earlier stages; and the patient does not apply for relief till there has been a hemorrhage from some comparatively slight cause, such as coition. This has been preceded usually by an acrid, profuse, and very offensive watery discharge, sometimes tinged with blood. The latter is one of the earliest symptoms, and calls for a very careful examination of the patient, especially if there have been unusual losses of blood.

Sarcoma grows much more slowly than cancer, but its fatal termination is equally sure. Its symptoms are very similar to those of fibroid tumors, and sometimes the macroscopical appearances are so much alike that only a microscopic examination will reveal the true character of the growth. Many authorities speak of a hard sarcoma as a recurrent fibroid. Fibroid tumors very rarely become the seat of sarcomatous degeneration. This disease is almost invariably situated at or near the fundus, and does not tend to infiltrate the lymphatics and neighboring structures as does carcinoma. It does not always occur in the shape of a well-defined tumor simulating a fibroid, but quite as often as a diffuse infiltration of the mucous membrane forming soft granular masses, or knotty villous projections growing toward the uterine cavity and down to the internal os. If it originates in the muscle of the uterus, it may be seen in the shape of scattered nodules which penetrate the veins, and which are carried to adjacent organs or even to remote parts of the system. The chief points in making a differential diagnosis from a fibroid tumor are given in the table at the end of the description of carcinoma (p. 315).

Corroding Ulcer is a very rare affection, and, in the great majority of cases, occurs toward the close of the climacteric. It is found extending from the cervix to the

vagina, and is probably a form of epithelioma, though its progress appears to be slower. As it develops, a vesico- or recto-vaginal fistula may form, and all the subjective signs of cancerous infection of the system be present.

Cancer. — Epithelioma is by far the most common form, while the others are very rare, scirrhus especially so. Epithelial cancer is almost invariably an affection of the cervix uteri, from which it may spread up into the body of the uterus or down on the vagina. Medullary cancer almost always attacks the uterine cavity above the cervix.

The Etiology of this dread disease is not well understood, though there are some well-known predisposing causes. Like all forms of malignant disease, cancer develops most frequently at or near the climacteric. Heredity and frequent parturition play an important part. The black race is less subject to it than the white. Of late years great importance has been attached to laceration of the cervix as a predisposing cause. It is not difficult to see how the constant irritation from the friction of the abraded surfaces would tend to develop local disease, especially in those having hereditary tendencies. The writer believes it should be an invariable rule to close every abraded laceration of the cervix in cases where there is any hereditary taint.

Symptoms. — There are none characteristic of the inception of this disease. Considerable progress is often made before the patient notices any thing unusual. The earliest symptom in most cases is a watery, excoriating vaginal discharge, which is occasionally bloody, and in a short time becomes offensive. The hemorrhage soon increases, and is easily caused by coition or the careless use of the vaginal douche. There is also a varying amount of pelvic pain on moving about. By this time there is a cauliflower-like growth projecting

into the vagina from the cervix, and extending up a little into the uterus. Nature apparently tries to prevent systemic infection by occlusion of the lymphatics, which become engorged, and the throwing-out of an exudation in the cellular tissue, i.e., cellulitis, in which the uterus is more or less fixed at an early stage of the disease. As molecular death of the tissues advances, there is increased hemorrhage from excoriation or sloughing of the blood-vessels, and a dark, grumous, or gruel-like, vaginal discharge, of an extremely offensive odor. The sallow cancerous cachexia is developed, and septic symptoms gradually appear later as the patient fails in strength and becomes exhausted by hemorrhage and by pain. The latter is not complained of, as a rule, till the disease is well advanced with a large amount of exudation surrounding the uterus. Death generally takes place in sixteen or eighteen months from the beginning of the disease, except where life may be prolonged by treatment.

The Diagnosis is not difficult if the disease has made any advance. Besides the foregoing symptoms, the friable cauliflower-like growth attached to the cervix, its bleeding on the slightest touch, and the fixation of the uterus, are quite enough for a diagnosis. Whenever malignant disease is suspected, the vaginal examination must be conducted with the greatest care, lest the delicate and friable walls of the blood-vessels be injured, and profuse hemorrhage result. By gently passing the finger well back along the recto-vaginal wall, the cervix can be felt, and the surface of the growth touched without injury.

Epithelioma is the only growth having a rough friable surface; excepting the stony hardness of scirrhus, all others are softer, and do not have the crumbling sensation to the touch of epithelioma.

The odor left on the examining hand is extremely offensive, and difficult to remove. The writer has found Platt's chlorides, full strength (which is immediately washed off), very useful for this purpose. An excellent authority recommends a solution of thymol, prepared in the following way : Heat three drachms of alcohol, and dissolve fifteen grains of thymol in it ; then add half an ounce of glycerine and thirty-four ounces of water.

The Diagnosis of Cancer at an Early Period, before any marked symptoms, growth, or ulceration have appeared, is exceedingly difficult, a problem in most cases which only time can solve. Laceration and hyperplasia of the cervix, with hypertrophy of connective and fibrous tissues, produce a sclerosis very closely resembling cancerous infiltration. A dark red or yellowish red nodule, which bleeds very easily and projects on the cervix, is always of a suspicious character. Their differences are contrasted in the following table, which will serve also for the diagnosis of probable cancer in an early stage of development : —

Benign Sclerosis.	*Malignant Sclerosis.*
Does not change in a few months.	Begins to change in a short time. Cervical sclerosis lasting twelve months without changing is almost certainly benign.
Uniform throughout the cervix.	One part of cervix hard, the rest of a normal consistency.
The fissured lobes of the cervix are smooth, or a little rough from the enlarged Nabothian glands.	One lobe larger than the others, with a nodulated surface, or there is a dark red nodule which bleeds very easily.
The erosion about the os, if present, is of a bright red color.	The mucous membrane on the summit of the nodules may be a little eroded, and has a violet or livid blue color.

Benign Sclerosis.	*Malignant Sclerosis.*
If granulations appear about the os, they grow slowly.	Granulations exuberant, and grow rapidly.
The hardened tissue is expanded by a sponge tent.	Is not expanded by a sponge tent.[1]
Is not liable a few months after its discovery to be followed by watery or bloody discharges.	Is soon followed by offensive watery or bloody discharges.
Section of a minute piece under the microscope shows an excess of connective and fibrous tissue.	Sections show nests of round or epithelial cells in stroma of connective tissue.

Cancer of the External Genitals does not differ from its general characteristics in other parts of the body. It usually takes the form of the corroding ulcer extending from the vagina, or of an epithelioma.

All forms of malignant disease end fatally, and with similar symptoms, but differ widely in their duration. The following table may be useful in distinguishing them from uterine fibroids, and from one another: —

Uterine Fibroids.	*Sarcoma.*	*Corroding Ulcer.*	*Cancer.*
Comparatively common.	Very rare.	Very rare.	Epithelioma common; other forms very rare.
Grows slowly.	Slowly, but more rapidly than fibroids.	Slowly.	Most rapidly of all.
Very hard.	A little softer than a fibroid.	No tumor, but loss of substance from the beginning.	Soft and friable, excepting the scirrhous, which is very hard.
Most common on the posterior wall, but not limited to any part of the uterus. On dilating cervix, the tumor is found hard and firm.	Scarcely ever seen except at or near the fundus uteri. On dilating cervix, the tumor is found rounded, and a little soft, more often small, soft, and granular.	Is on the cervix and vaginal walls.	Is almost invariably in the cervix, and scarcely ever found primarily in the fundus uteri.

[1] Spiegelberg's test, see page 49.

Uterine Fibroids.	*Sarcoma.*	*Corroding Ulcer.*	*Cancer.*
Hemorrhage marked, and predominates over the watery discharges.	There is hemorrhage, but watery discharges like washings of meat predominate. They do not become offensive so early in this disease as in cancer.	Hemorrhage is a marked symptom.	Very offensive ichorous, watery, or grumous discharges, and hemorrhage more or less profuse.
Lymphatics are not invaded.	Invasion of the lymphatics does not occur till quite late in the disease.	Invasion is very late, and no infiltration in the neighboring tissues.	Invasion is very early.
Uterus movable if not prevented by adhesions, or size of tumor.	Uterus movable except in the last stage.	Uterus movable except in the very last stage.	Uterus is fixed and immovable early in the disease.
Does not recur after removal.	Recurs.	Recurs.	Recurs.

As the encephaloid and colloid varieties of cancer attack the ovaries, and scarcely ever the uterus, the reader is referred to the chapter on ovarian tumors for a description of them.

The Treatment may be radical or palliative ; the former when all the diseased tissue can be safely removed ; the latter when surgical interference is impracticable. If the patient is strong enough for an operation, it should be done without delay.

Many distinguished surgeons think the axillary glands should be removed in every case of mammary cancer which is operated on ; otherwise, the operation fails in its object, and the cancer is sure to return in the axilla at an early period. Should experience prove that the neighboring lymphatic glands must always be removed to insure a new lease of life to the patient, it will greatly limit operating for uterine cancer, as here the lymphatics are involved at a very early stage, and all of them cannot be removed.

At present, experience shows that early removal of all the diseased tissue prolongs life, while, if it is only partially done, the remainder of the cancerous tissue grows much more rapidly than if left alone. Even in the latter case an operation has been thought beneficial by some, as there would be less sloughing of the diseased mass, and less danger of septicæmia and hemorrhage. Experienced operators, however, seldom interfere with the intention of performing an incomplete operation. After the removal of a malignant growth, the patient should not fail to report every month or two for a careful examination, and if the least nodule is found indicating a return, it should be removed at once.

The practical questions for a physician are: Is the operation feasible, and likely to benefit the patient, i.e., the limit to radical treatment; and, second, what operation to select. It may be laid down as a rule, that where there is invasion of the tissues outside of the uterus or vagina, or secondary deposits elsewhere, an operation should never be undertaken. It is needless to add that the patient's health must be fairly good, as there is often profuse hemorrhage during the operation.

For sarcoma especially, and also cancer of the body of the uterus, which cannot be removed with certainty by other means, extirpation of the uterus offers the most hope, though it is attended by a high rate of mortality.[1] Freund's method of operating by opening the abdominal cavity, and ligating the lower portions of the broad ligaments through the vagina, is exceedingly difficult to perform, and much more dangerous[2] than

[1] For a history and description of the methods of hysterectomy up to 1881, the reader is referred to essays by Dr. J. Mikulicz, in the *Wien. Med. Wochenschrift*, Nov. 20, 27, Dec. 25, 1880; Jan. 1, 8, 22, Feb. 5, 12, 19, 26, 1881.

[2] B. S. Schultze, Über Totalextirpation des carcinomatösen Uterus, Deutsche Med. Zeitung, 1886, Nos. 2–4.

extirpation of the uterus through the vagina without opening the abdominal wall.[1] It is essential for the uterus to have a certain amount of mobility for the performance of the latter operation.

The operation of vaginal extirpation of the uterus has been ably discussed by Drs. Martin and Jackson;[2] the former reporting three hundred and eleven cases, with a mortality of only 15.1 per cent. This is less than the mortality of amputation of the cancerous breast, which was 15.6 per cent in seven hundred and seventy-eight cases reported by Küster. Dr. Jackson, who opposes this operation, truly says that the mortality of a series of cases operated on by expert surgeons is not a correct indication of the mortality among those under the care of less experienced operators. Dr. Post[3] compiled the statistics of three hundred and forty-one

[1] Hegar and Kaltenbach, Operative Gynäkologie, 1886. See also Cyclopædia of Obstetrics and Gynæcology, vol. vii. pp. 17, 22.

[1] Dr. Hofmeyer states that in Schroeder's clinic at Berlin, there have been twenty-four cases of total vaginal extirpation of the uterus without a single death, and expresses his opinion that in malignant diseases of the uterus removal of the entire organ is more correct than amputation of the body only. — *American Journal of Obstetrics*, October, p. 1042, 1886.

[1] Dr. Leopold of Dresden has removed the cancerous uterus *per vaginam* thirty-eight times, with only two deaths. — *American Journal of Obstetrics*, p. 918, September, 1886.

Since then he has reported forty-eight cases of total extirpation of the uterus for carcinoma, procidentia, and severe neuroses, with only three fatal cases, two of which were from sepsis. This gives him the low mortality of 6.2 per cent for this operation. 69.2 per cent have remained free from a return for one to three and a quarter years. The earlier the operation is performed, the longer the period before the return of the disease. — LEOPOLD: 48 *Totalextirpationen des Uterus wegen Carcinom, Totalprolaps, und schwerer Neurosen*, *Archiv für Gynäkologie*, Bd. xxx. Hft. 3.

[2] Transactions of the Ninth International Medical Congress, Gynæcological Section, 1887. A good report of this, with the papers of Drs. Jackson and Martin, a translation of Martin's method of vaginal extirpation of the uterus from his Handbuch der Frauenkrankheiten, 1887, and other interesting information concerning cancer of the uterus, will be found in the Annals of Gynæcology, November, 1887.

[3] Dr. Sarah E. Post, American Journal of the Medical Sciences, January, 1885.

cases, in which the mortality was 27 per cent. Dr. A. P. Palmer[1] has reported a list of sixty-six cases in which twenty-three died within a week, a mortality of 34.8 per cent. These are the results of thirty-three operators, many of whom performed the operation for the first and only time, and in some of the cases the operation was performed as a last resort, so that this mortality represents the other extreme to Dr. Martin's report.

Schauta warmly recommends vaginal extirpation of the uterus for cancer, and well says that the success of the operation lies largely in the hands of the general practitioner, as many cases are not brought to the operator till late in the progress of the disease. The earlier the operation is performed, the more likely is the patient to recover from it, and the longer the period before the disease returns. Every dark-red or yellowish nodule which bleeds very easily, and projects from an erosion on the cervix, should be excised. Fritsch[2] has reported sixty total extirpations of the uterus with seven deaths. His method differs somewhat from that of Martin, and is similar to that described by Greig Smith.[3]

Prognosis. — As to recurrence of the disease, the balance of testimony from the most experienced operators points to vaginal extirpation of the uterus at an early stage as the operation followed by the longest immunity from the disease. If the patient has no return of the disease at the end of a year from the operation, it is possible that the cancer will not recur; if she remains free from it for two years, it may be stated in general terms that the chances of non-recurrence are nearly even; and if she remains free for four years, the disease is not likely to return.

[1] New York Medical Journal, July 9 and 16, 1887.

[2] Archiv für Gynäkologie, Bd. xxix. Hft. 3.

[3] Abdominal Surgery, Vaginal Hysterectomy, p. 185, 1887.

For epithelioma of the cervix, or corroding ulcer, the methods of Sims,[1] Schroeder,[2] or Baker,[3] aided by the thermo-cautery if necessary, are the most efficient.

Palliative Treatment consists in relieving pain, controlling hemorrhage, and neutralizing the offensive odor. When remedies fail in the former, opium in some form must be used. An application of chloral hydrate, one drachm to an ounce of glycerine, or stronger if necessary, is warmly praised for this purpose. Iodoform in powder has disinfecting and slight narcotic properties; or, both iodoform and chloral hydrate may be combined in the form of a vaginal suppository containing ten grains of each. When these will serve the purpose of allaying the pain, opium should not be employed, as the latter causes more or less derangement of the system.

It is a good plan for the patient to keep a saturated solution of alum at hand to use as an injection in case of unexpected hemorrhage. The application of Churchill's tincture of iodine to the entire surface of the cancer seems to check the progress of the disease to a limited extent, and also to control the loss of blood. Bleeding spots may be touched with diluted perchloride of iron, or the dry sub-sulphate of iron can be locally applied. It is well to bear this in mind in case of unexpected and severe hemorrhage from a vaginal examination.

Fritsch[4] highly recommends packing the vagina with a strip of iodoform gauze for carcinoma of the uterus. The iodoform is combined with an equal amount of tannin on account of its astringent effect, and for the

[1] The Treatment of Epithelioma of the Cervix Uteri. — *American Journal of Obstetrics*, vol. xii. No. 3, July, 1879.

[2] Krankheiten der weibl. Geschlechtsorgane, 1881, p. 288. Compare ed. of 1887.

[3] American Journal of Obstetrics, April, 1882, and February, 1886, p. 184.

[4] Volkmann's Sammlung, No. 288.

purpose of disguising the odor of the iodoform. This is also used for a dressing after the palliative surgical treatment. Here the raw surface is covered with iodoform and tannin in powder, and the gauze packed against it. He claims the carcinomatous odor is entirely controlled by this treatment.

The offensive odor can also be corrected by douches of from two to five per cent solutions of carbolic acid, creosote, permanganate of potash, or thymol. The nozzle of the syringe must be introduced, and the water injected very carefully lest hemorrhage be caused. The tip can be shielded by a piece of rubber tubing drawn over it, with holes in the sides, and projecting about an inch from the end.

The Diet must be generous, and the system well nourished so as to counteract as long as possible the poisonous influence of the cancer.

The Medical Treatment has but little encouragement to offer, except as it can relieve pain, and check the progress of the disease, or systemic infection. The physician has yet to discover the remedy which has any decided curative effect on cancer. The discovery of the bacillus of cancer, while of great interest, is not any more likely to lead to a cure of this disease than the discovery of the tubercle bacillus has to the cure of pulmonary phthisis.

THERAPEUTICS.

| Arsenicum has been the favorite remedy for cancer, some physicians preferring Fowler's solution, but more, the iodide of arsenic. It corresponds best to the later stages of the disease when the cachexia begins to develop. Great exhaustion; restlessness; much thirst; hemorrhage with lancinating burning pains in pelvis; acrid, watery, corrosive leucorrhœa, sometimes offensive.

Calcarea carb. This would seem a possible remedy for cancer, judging by the two cases cured by it in the shape of powdered oyster-shells, which were reported by Dr. Peter Hood, in the "Lancet" for 1868. His observations were authenticated by Mr. Spencer Wells.

Graphites was recommended by Wahle, but has not met the expectations of some other physicians. It seems best adapted to epithelioma; menses only once in six weeks, the flow being black, clotted, and offensive; constipation.

| Creosote.[1] Epithelioma, much burning and pain in the pelvis. The discharges are acrid, excoriating, and offensive; pruritus vulvæ; external os open. Coition painful, accompanied by burning, and followed by a bloody discharge. Menses too early, too profuse, and protracted; flow dark, lumpy, and offensive.

Lachesis is more useful at the climacteric period. Dr. Ludlam mentions it for a tendency to passive hemorrhages, alternating with a profuse discharge of blood, sharp lancinating pains in the pelvis.

Nitric acid. Epithelioma of the cervix. Irregular menstruation, with intercurrent, profuse, brown, offensive discharges. Hemorrhoids with burning, sticking pains in the rectum. Baehr states that this drug is only suitable as an intercurrent remedy at the commencement of the disease, and is of no use when ichorous dissolution has commenced.

Tarrentula. Dr. Nuñez recommends it for a cancerous ulcer of the os, induration of the neck and fundus of the uterus, chronic vaginitis with granulations. It would therefore seem to be especially useful for corroding ulcer.

The following remedies have been recommended for cancer, and are worthy of study: —

Alveoloz,[2] argentum met., aurum, carbo an., carbo veg., cedron, *conium*, cundurango (?), iodine, juglans cin.,

[1] See Rückert's Klinische Erfahrungen, vol. ii. p. 353.

[2] Alveoloz. The fresh juice of the plant is applied locally. See paper by Dr. I. A. Velloso, British Journal of Hom., p. 201, 1884.

ham.,[1] hydrocot. asiat.,[2] hydrastis, lapis alba,[3] phytolacca, platina,[1] sabina,[1] sang.[2] (to prevent return after excision), secale,[1] *sepia*, silicea, thuja[2] (epithelioma).[4]

[1] These remedies are more useful to control the loss of blood than for any specific influence on the disease.

[2] Ruddock, Text-book Prac. Med. and Surg., p. 453.

[3] Dr. V. Grauvogl states that five cases of uterine cancer, pronounced to be such and incurable by these old-school physicians, were completely and permanently cured by this remedy. It must be used before the tissues break down. He has never seen any benefit from it in open cancer. — *Allgemeine Hom. Zeitung*, June 15, 1874.

[4] Dr. Schwabe found it very beneficial in a case of cancroid, though recovery did not take place. — *Lehrbuch der hom. Therapie*, 3d ed., 1882, vol. ii. p. 995.

CHAPTER XXII.

PELVIC CELLULITIS (PARAMETRITIS),[1] PELVIC PERITONITIS (PERIMETRITIS), AND PELVIC ABSCESS.

THESE diseases are the most common of those peculiar to women, and there are few affections which have given rise to so much dispute, — the advocates of one almost ignoring the existence of the other. Unfortunately, morbid anatomy has not been able to settle definitely the disputed question, as there are comparatively few opportunities for necropsies in the various stages of either disease, and the false membranes of pelvic peritonitis sometimes so closely resemble the peritoneum as to cause error in determining the origin of the disease by its *post-mortem* appearance.

Theoretically, they are separate and distinct from each other; but from the practical, clinical standpoint of the practitioner, the writer believes these affections co-exist, though one may largely predominate over the other; just as, in pneumonia, the lung symptoms are the most prominent, though in all marked cases the pleura is more or less involved. A no less distinguished writer

[1] Dr. W. A. Freund has given a very thorough description of *chronic atrophic parametritis* in his *Gynäkologische Klinik*, vol. i. p. 203, published by Trübner in Strasburg. A review of it will be found in the Centralblatt für Gynäkologie, p. 447, 1886. It is characterized by chronic inflammation of the fascia, and aponeurosis of the fatless connective tissue, with subsequent contraction as in cirrhosis of the liver; uterine displacements, etc., follow. Pessaries are useless in this disease, so far as a cure is concerned. The author can add no treatment for it differing from that given for pelvic cellulitis. The action of morphia in causing atrophy of the female genital organs, especially of the ovaries, suggests a possible remedy for it. An interesting report of such a case, by Dr. Levinstein, can be found in the *Centralblatt für Gynäkologie*, No. 40, p. 633, Oct. 1, 1887.

than Dr. Emmet declares his inability to distinguish between them, and employs the term "cellulitis" as the most common pelvic inflammation of the non-puerperal state, reserving "pelvic peritonitis," not for a distinct and separate lesion, but for a much graver complication of the cellulitis. This is directly contrary to the views of Drs. Schroeder, Thomas, and others, and the last condition applies to what the latter would call pelvic peritonitis in the great majority of cases.

These subjects will be treated, therefore, not as absolutely distinct from each other, but as co-existing to a certain extent, the one or the other predominating sufficiently to warrant the corresponding name, while in rare cases both may be present to an alarming extent, and seriously threaten or destroy the life of the patient.

Pelvic Cellulitis, or parametritis, as Professor Virchow styled it in contra-distinction to perimetritis for pelvic peritonitis, means a local or general inflammation of the areolar tissue of the pelvis, without including periproctitis, psoas, or iliac abscess.

It is often associated with the puerperal state, and is excited by exposure to cold, traumatism, and rarely extension of inflammation from neighboring structures. A similar condition is seen in the cellulitis appearing early in the development of malignant disease of the uterus, and fixing that organ. The great majority of cases follow abortion, or labor at full term, and, according to Professor Schroeder, are due to septic infection. The writer has seen a number of cases diagnosed as uncomplicated puerperal fever, without a suspicion that an extensive cellulitis was present.

As causes of traumatism, may be cited, coition too soon after confinement (a physician neglects his whole duty if he fails to warn his patients against sexual intercourse before three months after delivery); surgical

operations, especially on the cervix; ill-fitting pessaries; and harsh applications or examinations when the uterus or neighboring tissues are unduly sensitive. It is most likely to follow surgical operations when the patient is in an enfeebled condition, when chronic cellulitis is already present, and from septic infection.

In very exceptional cases, all the cellular tissue about the uterus is involved in the inflammation; but as a rule it is limited to one side of the uterus or a broad ligament, and most often in the left side of the pelvis. Not infrequently the exudation extends up and out of the pelvis, so that it can be palpated externally, especially in puerperal cases.

The Clinical History of pelvic cellulitis comprises three stages: congestion, exudation, and resolution, or, less often, suppuration. In nearly all cases there are marked symptoms in the beginning of the disease, which is ushered in with a chill followed by fever, and a variable amount of pain in proportion to the extent to which the peritoneum is involved.

On examination, the vagina is hot and sensitive, particularly at some spot, and an expert may be able to distinguish a localized puffiness or œdematous condition of the tissues. This stage is succeeded in a few hours by the stage of exudation or effusion at the site of the inflammation. The symptoms of fever continue, the temperature being a little higher toward evening; dysuria and menorrhagia or metrorrhagia are not uncommon. A thin leucorrhœal discharge from the uterus may give rise to the diagnosis of endometritis; but this is secondary to the cellulitis, and any application to the endometrium might be followed by a fatal increase of the inflammation. There is more or less pelvic pain from the pressure of the exudation on the nerves, and the drawn-up adducted position of the thigh

is characteristic. Not infrequently, the patient limps on the side corresponding to the exudation. Induration in the inflamed areolar tissue progresses in proportion to the amount of the effusion in it of the liquor sanguinis. It is apparent, therefore, that while the tumor thus formed will vary in location, size, and consistence, it will have a peculiar feature, that of immobility, — an important fact in differential diagnosis.

The tumor is most often found near the angle of a lacerated cervix, or in the left broad ligament; from here it may extend up and out of the true pelvis, so as to be easily felt externally. This is especially true of puerperal cellulitis. On examination, its consistence will be found to vary at different periods of the second stage. In the beginning, only a diffuse resistance is felt, without sharply defined borders. In exceptional cases, the uterus may rest in a bed of cellulitic exudation; here, the pelvic peritonitis is an important complication, and, as a rule, the predominant disease. In a short time, the exudation grows harder, with well-defined borders, till it seems as if molten lead had been run into the tissues and hardened in them. While it is quite sensitive in the beginning in proportion to the extent of inflammation of the peritoneum accompanying the cellulitis, it gradually diminishes till it can be freely handled without causing much pain.

In the third stage of absorption, the former symptoms of fever and local inflammation gradually subside; the tumor slowly dimishes in size and sensitiveness, but becomes harder. The absorption of large exudations is usually accompanied by a variable amount of hectic fever. In some cases the tumor remains stationary for an indefinite period.

Fortunately, most cases undergo absorption, and few suppuration. If the latter takes place, the symptoms of

fever and inflammation do not subside, the tumor remains soft and very sensitive; the temperature increases, being higher at night than in the morning. Chills may attend the formation of pus, but do not always. The further consideration of suppuration will be found under the head of Pelvic Abscess, in the chapter on Pelvic Peritonitis.

It is not to be supposed that *all* cases of cellulitis have marked symptoms, and run a perfectly typical course as described above. There are some exceptions to the rule. A woman does not seem to do well for some weeks after confinement. She suffers no acute pain, but has a sense of soreness, loss of appetite, some fever, is weak and listless, and a careful examination often reveals extensive cellulitis.

The Diagnosis is easy in nearly all cases when the exudation is large; but if very small, it is more difficult. Though the symptoms may point to the disease, an examination is necessary for a positive diagnosis, and to determine the extent of the affection. The patient must occupy the dorsal position, with all the clothing loosened, and the thighs drawn up to relax the abdominal muscles. The physician then carefully palpates with the palmar surfaces of the fingers over the hypogastric region and sides of the pelvis, to ascertain if the exudation has extended up out of the true pelvis. He next thoroughly anoints the forefinger, and gently and slowly introduces it along the posterior wall of the vagina, taking note at the same time of the heat and dryness of the canal. The cul-de-sac of Douglas is examined with a very gentle touch; also the region all around the cervix; and, finally, the broad ligaments, with the careful help of the other hand outside over the corresponding regions. If there is not much sensitiveness, considerable pressure of the opposed fingers may be necessary to distinguish and accurately map out a small exudation. A rectal examina-

tion will often disclose an exudation in the utero-sacral ligaments which would otherwise escape notice.

In regard to a differential diagnosis between an exudation in the cellular tissue and one in the peritoneum, it is said that the uterus is immovable, and often connected with the cellulitic tumor, but is much more free and movable in peritonitis; in cellulitis the exudation is lower in the pelvis than in pelvic peritonitis.

The character of the cellulitic tumor has been described above. When it is very large, it crowds the uterus one side or out of place, and may press hard enough upon some nerve to cause severe neuralgic pain in the pelvis or leg. With the stage of absorption, the uterus not only resumes its former position, but with the continued contraction of the tissues is also permanently drawn out of place. Lateral version or flexion is the most common form of displacement from this cause; i.e., cellulitis in one of the broad ligaments. Sterility sometimes follows from destruction of the Graafian follicles or ovaries by suppurative action or atrophy, also from adhesions binding the Fallopian tubes down, and rendering them impervious. Uterine displacement and sterility are far more frequently the result of peritonic complications. Secondary to these may be mentioned salpingitis, amenorrhœa, menorrhagia, and dysmenorrhœa.

The Prognosis depends largely on the violence of the symptoms and the extent of the exudation. Life is seldom in danger. A small abscess may form, break, and heal up in a few days, or the effused mass become absorbed in a fortnight; but this is exceedingly rare, and no amount of skill will always predict the time of recovery. When the tumor is sharply defined and not very sensitive, the prospect of complete cure is very good if the patient be willing to follow her instructions

for a sufficient length of time. It is better to qualify the prognosis to her, and state that if she recovers in six weeks she will do well, though sometimes such cases get well sooner.

The general principles of local treatment are so similar to those of pelvic peritonitis, they will be considered together. The reader is therefore referred to the following section, both for treatment and the differential diagnosis (pp. 340, 343).

Pelvic Peritonitis (perimetritis) is very common in the non-puerperal state, and less frequently seen after delivery than cellulitis, which is rarely independent of delivery or traumatism. In other words, the pelvic inflammation, often called cellulitis, is really of peritoneal origin. It is a local peritonitis; and bearing this in mind will aid in studying the etiology and pathology, as well as the treatment. The causes of pelvic peritonitis may be classified as follows: —

Extension of inflammation	Pelvic cellulitis. Endometritis. Salpingitis. Ovaritis.
Escape of fluids into the peritoneal cavity	Products of catarrhal or purulent inflammation (gonorrhœa) from the Fallopian tubes. Hemorrhage into peritoneal cavity. Rupture of cysts. Intra-uterine injections.
Traumatism	Parturition or abortion. Surgical operations. Blows or falls. Excessive venery.

Sudden suppression of the menstrual flow.

Uterine displacement.

Ovarian or sub-peritoneal tumors.

The presence of malignant or tubercular disease.

The relation of most of these causes to pelvic peritonitis is too evident to need further explanation. The effect of gonorrhœa extending successively from the vagina, uterine cavity, and through the Fallopian tubes to the peritoneum, is seen among immoral women, who are especially subject to this form of peritonitis. Some physicians believe that a woman who has had gonorrhœa cannot conceive. The condition of the system, and the retrogressive changes following delivery, powerfully predispose the patient to either peritonitis or cellulitis from slight causes, and make her susceptible to septic infection. The importance of the lymphatic system in connection with these diseases has not received sufficient attention. When the lymphatics become clogged, as in malignant disease, tuberculosis, or septic infection, inflammation in the surrounding tissue seems pretty sure to follow.

The irritation caused by the presence of a tumor results in the adhesions which are so common.

Surgical operations, even of the most trivial character, or, indeed, any mechanical interference with the uterus, a sound, pessary, etc., must never be performed or used when there is either general or local painful sensitiveness of the pelvic organs, the ovaries excepted. Furthermore, the precautions taken in operations on other parts of the body should be observed more rigidly, if possible, in those involving the generative system.

The pathological appearances may be summed up in thickening of the peritoneum and adhesions to the uterus, ovaries, intestines, omentum, etc., varying from fine delicate threads to firm bands or sheets of tissue, encapsuling serous or purulent exudations.

Like its neighbor, pelvic cellulitis, pelvic peritonitis may develop insidiously or with marked symptoms, which is the rule; may run an acute or chronic course;

and, for convenience of description, is divided into three similar stages, — congestion, effusion, and resolution or suppuration.

The Clinical History of acute pelvic peritonitis during the first stage is very characteristic. The patient feels chilly, though this is sometimes absent; then follows increase of pulse and temperature, tenderness over the hypogastrium, and pain, which may be intense. There may even be tympanitic distension of the abdomen and vomiting. The peculiar anxious, drawn expression of the face is an important symptom.

Though these are the more common phenomena marking the commencement of this disease, there are two other forms, as in general peritonitis, where nearly all of them may be wanting. In one, the characteristic expression of the face is present; the patient passes into a weak or collapsed state within some hours, or two or three days, suffers no pain, and the pulse and temperature are not in proportion to each other or the serious condition of the patient, — i.e., the pulse goes up, while the temperature remains near or below normal. Very few of these cases recover. The other form may be termed chronic, and invades the pelvis to a great extent, without other symptoms than a poor appetite, perhaps slight fever, painful coition, and some indefinite pain or soreness in the uterine region after unusual exercise. The chronic form results from the presence of malignant or tubercular disease, gonorrhœal infection, displacements of the uterus, and pelvic tumors. If the patient does not succumb to the acute form, it is much more likely to terminate in suppuration than if it develops more slowly and insidiously.

Most of the symptoms of the first stage are continued into the second, that of effusion, which may consist of coagulable lymph on the surface of the

membrane in mild cases, a collection of serum, or it may even be sero-purulent in severe forms of a septic origin. The effusion usually becomes encapsuled by adhesions and the formation of false membranes, slowly shrinks, and hardens as the watery portion is absorbed. It may form a localized tumor at one side of the uterus, or settle in the cul-de-sac of Douglas, and rise up around the uterus; as it hardens, the entire vault of the vagina becomes hard, and feels as if plaster-of-Paris had been run into the pelvis and hardened there and all about the uterus, which is fixed by it in severe cases. The disease has now become chronic; the fever, temperature, and extreme sensitiveness abate, but the patient complains of a variable amount of pelvic pain aggravated by walking and unusual exercise; dysuria is common when the utero-sacral ligaments are involved, and the symptoms are often worse at the menstrual periods.

Excepting by the previous history of the case, it is generally impossible to distinguish between pelvic cellulitis and pelvic peritonitis in the second stage after the acute symptoms have subsided. The fact that cellulitis in this stage, independent of traumatism and parturition, has scarcely ever been found at an autopsy by any observer, and that the cases diagnosed as cellulitis have proved to be peritonitis, make it highly probable that cellulitis is not nearly so common as has been supposed. Besides, the long duration, and the susceptibility of exacerbations from exceedingly slight and apparently unimportant causes, point to the sensitive peritoneum as the source of the disease. The peritoneal exudation is less likely to suppurate, is higher in the pelvis, and, as a rule, allows more mobility to the uterus, than the cellulitic tumor.

As the symptoms slowly disappear with the third stage, of resolution, the patient's general health im-

proves in proportion; but for months she will have to guard against cold, traumatism in any form, etc., or the peritonitis will re-appear in all, if not more than, its former intensity.

The Diagnosis of acute cases is very easy when the symptoms are marked, or in the second stage with the pelvis filled with exudation, and the tissues surrounding the uterus very hard. It is remarkable, however, how many cases of small exudations are overlooked, particularly when situated in the utero-sacral ligaments or on the posterior upper surface of the broad ligaments, which are common sites of this disease. In the acute stage, with high fever and extreme local sensitiveness, the local examination with finger or instruments had better be deferred, as no good and much harm may come from it. When the more severe symptoms have subsided, a careful examination is necessary to confirm the diagnosis, and adopt proper methods of treatment.

In nearly all cases of disease, it is well to have the patient in bed, where there are no obstacles to a thorough examination, and the physician can freely use his hands or stethoscope as he sees fit. Here, too, there must be no obstacles. The clothing should be freely loosened, the patient lie on her back, with the thighs moderately flexed on the abdomen. The bi-manual method must be carefully employed; for gentleness, not force, and the power of concentrating the attention on the touch of the examining finger, are requisites for a skilful examiner. The ability to detect small adhesions which only partially fix the uterus, or effusions, will depend largely on these conditions.

Not only must the vaginal vault be systematically explored, first the cul-de-sac of Douglas, then at the sides of the cervix, the anterior fornix of the vagina, and the broad ligaments, but also the utero-sacral liga-

ments, and the posterior and upper surface of the broad ligaments through the rectum. In some instances, when the patient cannot resist the impulse to contract the abdominal walls, or if the latter are very fat, it will be necessary to give ether; but this has the great disadvantage that spots of local inflammation or tenderness may remain undetected, as she is no longer sensitive to pain.

The exudation varies in size from a walnut to a large mass filling the pelvis. In the early stage, before adhesions or false membranes have formed to shut off the fluid from the peritoneal cavity, the effusion is not likely to be felt, as the fluid at once yields to the touch of the finger. Later, however, when it is encapsuled, and becomes somewhat hard, it is easily detected. In the beginning it is exquisitely sensitive, and slowly grows less so, till it can be readily handled without causing much pain. Adhesions can sometimes be felt like fine strings extending from the uterus into the adjoining tissue, especially at the angle of a lacerated cervix. The immobility of the uterus is another indication that these are present.

In rare instances, the exudation may extend well up above the true pelvis into the abdominal cavity, and give rise to the suspicion of a fibroid or ovarian tumor with the presence of sub-acute peritonitis; but the history of the case, and the variations in the size of the tumor in the course of a few days will distinguish it. It enlarges with increase of pain from slight causes, and diminishes rapidly, to a certain extent, as the serum is absorbed.

DIFFERENTIAL DIAGNOSIS.

Pelvic Peritonitis.	*Pelvic Cellulitis.*	*Pelvic Abscess.*	*Fibroid or Ovarian Tumor.*	*Hæmatocele.*
Develops with severe pain, extreme sensitiveness, and symptoms similar to general peritonitis.	Development not so violent; chill followed by fever, but no vomiting; less pain and sensitiveness.	May result from either cellulitis or peritonitis.	Development very slow, without symptoms of inflammation.	Develops suddenly, with symptoms of collapse and internal hemorrhage, and without rise of temperature.
Occurs independent of the puerperal state.	Very rare, independent of the puerperal state or surgical operations.		More common at or near the climacteric.	
Exudation immovable, and very sensitive, unless far advanced in chronic form.	Exudation immovable, sensitive, but less so than the preceding disease.	Immovable; not always sensitive.	Freely movable, and not sensitive.	Immovable, and sensitiveness varies according to its duration.
Tumor formed by exudation very hard; gradually shrinks.	Same as in peritonitis.	Tumor is low down in the pelvis, and fluctuates.	Tumor higher up in the pelvis; hard if a fibroid, elastic if ovarian.	Tumor elastic and fluctuating in the beginning; gradually shrinks and hardens.
Tumor extends up, from lowest point of the cul-de-sac of Douglas, uniformly around the uterus, like set plaster-of-Paris, or in utero-sacral ligaments; less often, at the sides of the uterus. Frequently the exudation is felt only in roof of the pelvis.	Tumor most often at sides of cervix, or in broad ligament; feels separate from the uterus, and as if attached to the walls of the pelvis; generally extends lower in the pelvis, and more at the side, than the former.	Occupies the site of exudation in either cellulitis or peritonitis.	Tumor higher in pelvis, and, if fibroid, attached to the uterus.	Tumor begins in lowest point of the cul-de-sac of Douglas, and extends up in the pelvis on an approximate level.
Suppuration rare.	Suppuration more common.			
Uterus at first crowded to one side by the exudation, and drawn back again and out of place as the latter is absorbed.	Uterus displaced as in peritonitis, but no adhesions unless complicated by peritonitis.	Uterus displaced.	Displacement of uterus not so marked.	Uterus crowded forward toward the pubis, instead of lateral displacement.

DIFFERENTIAL DIAGNOSIS. — *Concluded.*

Pelvic Peritonitis.	*Pelvic Cellulitis.*	*Pelvic Abscess.*	*Fibroid or Ovarian Tumor.*	*Hæmatocele.*
Adhesions are common. Often worse at the menstrual epochs.	Less movable than in former affection. Not aggravated by the menstrual epochs.		Menorrhagia is a prominent symptom of uterine fibroids.	

The duration of pelvic peritonitis is variable; and, from the great tendency to relapses, it is likely to continue for an indefinite period without proper treatment.

As sequelæ may be mentioned, displacement and fixation of the uterus by adhesions, sterility, atrophy of the ovaries, occlusion of the Fallopian tubes, amenorrhœa, and dysmenorrhœa.

The Prognosis depends, of course, on the extent of the disease and the severity of the symptoms. Fortunately, few cases die; but complete recovery from this affection requires great care, patience, and faithfulness in treatment on the part of both the patient and her physician. In the acute stage, it is a good sign if the pulse and temperature diminish in proportion to each other, and if the pulse becomes fuller, stronger, and less rapid, as the pain subsides. It is a bad sign if the pulse becomes quicker and weaker as the pain ceases, and there is very little chance for life if the pain stops suddenly, the pulse flickers, and the features collapse. Death is at hand when the pulse and temperature become disproportionate to each other and the extent of the disease; i.e., the temperature falls to or below normal, perhaps to 96°, and the pulse growing rapid and weak, 140 to 150 or more per minute, even though the condition of the patient may be good in other respects.

The exudation of pelvic peritonitis or pelvic cellulitis sometimes undergoes suppuration instead of absorption. While these are far the most common causes of *pelvic abscess*, there are others, such as periproctitis, suppuration of an ovarian cyst, and caries of any of the pelvic bones. It follows pelvic cellulitis more often than pelvic peritonitis, and is more common in the puerperal state than out of it. The syphilitic, scrofulous, and tuberculous diatheses are marked predisposing causes, as well as a general depression of the vital forces or physical vigor of a woman. Pelvic abscess is also more apt to follow when the exudation is of septic origin. If, under the above conditions, the fever continues moderately high, and the exudation remains exquisitely sensitive and does not harden, there is good reason to expect the formation of an abscess.

Though it may develop insidiously, with scarcely any or no symptoms, the formation of pus is generally characterized by chills, fever, profuse perspiration, prostration of the patient, throbbing pain in the pelvis, disturbances of micturition or defecation, or even neuralgic or sciatic pains in the limb from the pressure of the abscess on the surrounding structures ; persistent pain or aching in the heel is sometimes observed in connection with a large pelvic abscess. In rare instances the fever symptoms have subsided, and the pus has been retained for months or even years. Generally the hectic fever continues, the abscess increases in size, and breaks either into the vagina, rectum, bladder, or groin, and, least frequently of all, into the peritoneal cavity, which almost invariably causes a fatal attack of peritonitis.

The diagnosis is made by the history of the case and the presence of a fluctuating tumor in the pelvis, ascertained by bi-manual examination, through both the vagina and rectum.

The Prognosis is favorable when the abscess has a free opening into the vagina and rectum, so that the cavity is thoroughly drained, if the fever and purulent discharge diminish, and also if the odor be not very offensive. The prognosis is unfavorable where there is a marked hereditary taint of tuberculosis or scrofula, and a feeble state of health, if the abscess be deep-seated, and opens into both bladder and rectum, or by a long sinus which does not permit a free discharge from the cavity; unless surgical interference can change these conditions.

There are few diseases which test a patient's constitution and vigor more than the constant drain of a large abscess. It is of great importance, therefore, for her to eat the most nutritious food in abundance, — meat-soups and all the meat she can digest, with milk, eggs, and fresh vegetables, aided if necessary by some malt liquor.

Treatment. — Notwithstanding the assertions of eminent men to the contrary, the writer feels positive from results in his own experience, that carefully selected remedies are very beneficial. The same principles of surgery for the treatment of abscesses in other portions of the body apply equally here. The collection of pus must be evacuated by as free an incision as is consistent with safety.[1] Mr. Lawson Tait prefers to reach the abscess through the abdominal wall, and to use a drainage-tube afterwards. The more usual method of opening, however, is to expose the lowest point of the abscess with a Sims' speculum, insert the needle of an aspirator, and, when pus is found, run a narrow-bladed bistoury along the needle as a guide. This opening is very cautiously enlarged enough to allow a free discharge of the pus, which is generally very offensive,

[1] American Journal of Obstetrics, P. F. Mundé. Report of Ten Cases, p. 113, February, 1886.

and the cavity is thoroughly cleansed with a weak solution of carbolic acid, or bi-chloride of mercury (1 : 3000), without allowing the water to flow with any force from the syringe. A drainage-tube is then inserted, and a little iodoform or sublimate gauze packed in the vagina. Irrigation of the cavity with one of the above solutions will be necessary once or twice a day, or less often, according to the quality and quantity of the discharge. There are few places in the body where it is more hazardous to plunge a knife than here, so that it behooves a physician to guard against all possible mistakes and the wounding of large blood-vessels. If the abscess opens through a long sinus, and has become chronic, it will be necessary to dissect the sinus out and make an opening, which permits the free flow of pus, and the irrigation of the cavity of the abscess.

The Treatment of pelvic cellulitis does not differ from that of pelvic peritonitis in the stage of effusion and induration. In the very commencement of the stage of congestion, with the initial chill, cellulitis can often be abated by the immediate and continuous use of the hot-water douche. The patient must be warmly blanketed, with a hot-water bottle or heated bricks at her feet, and the injection continued till re-action is established, the fever subsided, and free perspiration has commenced. The hot-water spinal bag applied to the lumbo-dorsal region is worthy of trial, in the hope that it will contract the pelvic blood-vessels and diminish the congestion.

This same treatment can be adopted for slight attacks of pelvic peritonitis, but in the acute stage of the severe forms there would be danger of aggravation. In both these diseases, especially the latter, absolute rest, while acute symptoms are present, cannot be over-estimated. The patient must be waited on like an infant, without

the least voluntary motion of any kind on her part. In peritonitis, opium in some form is the sheet-anchor of the old school, both to allay pain and secure additional quiet; but it has the disadvantage of causing constipation and fæcal impaction, which interferes with free portal circulation, and in consequence materially hinders recovery. The removal of a collection of fæces, if present, is one of the first things to be attended to by the practitioner.

As long as there are symptoms of local inflammation, rest is essential, particularly at the menstrual period. A hammock is one of the most comfortable things for the patient to lie in. Coition is a positive injury. The sewing-machine, and walking, riding, or any exercise which aggravates the pain, are to be positively forbidden, and high-heeled shoes in particular. Hot-water injections[1] are invaluable so long as any exudation is present, to stimulate the pelvic circulation, and thus promote absorption. The writer has obtained excellent results in some cases by medicating the last pint of the injection with glycerine, iodine, or hamamelis.

In case the uterus is out of place, and drags on the ligaments, much good can be done by inserting every other day an antiseptic wool tampon, so as to raise that organ up, and thus remove a source of irritation; taking care, however, that the tampon does not press against the sensitive effusion and cause pain. This same tampon can be impregnated with iodine and glycerine, which is the best application the writer has so far used for these cases when of long duration. In the early stages, belladonna cerate or extract is superior, and iodol or iodoform has a more soothing effect than either. When there is much active inflammation, tampons cannot be endured, and the belladona, iodoform, or any other

[1] See chapter on Minor Surgical Gynæcology.

cerate can be applied with an ointment injector, or the medicament can be used in a suppository. Where there is much congestion, and but little inflammation, with a great deal of dragging on the uterine ligaments, Hofman's pessary will give much relief, and is easier to wear than a hard rubber instrument. Like all soft rubber pessaries, it will absorb secretions, and requires constant attention, or it will become very offensive. Some of these pessaries have a rubber cup attached to hold a cerate for application, but the writer finds it difficult to make much practical use of it.

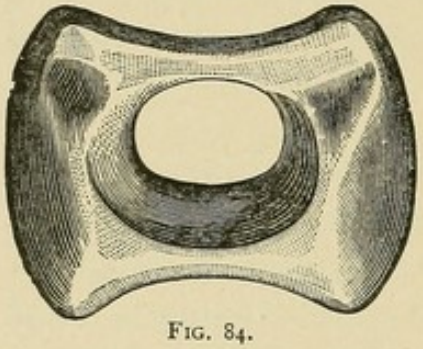


FIG. 84.

In connection with these pessaries, a carefully fitted abdominal supporter will give great relief in taking off a certain amount of pressure from above. The diet must be the most nutritious possible, and so regulated as to secure a daily movement from the bowels. In cases of exudation in the utero-sacral ligaments and much irritation at the neck of the bladder, Dr. Emmet has found it necessary to prolong the incision in the button-hole operation for prolapse of the urethra, so as to free the fascia at the neck of the bladder, and thus relieve the constant inclination to urinate.

The galvanic current has met with some favor in the treatment of these diseases, to promote the absorption of both exudations and adhesions. The negative pole is used in the vagina for this purpose,[1] and the positive pole in the same place, instead of the negative, if a palliative or soothing effect is desired; but it is always counter-indicated when acute inflammatory symptoms are present.

[1] Dr. A. D. Rockwell, The Medical Record, p. 627, vol. ii. 1885.

THERAPEUTICS OF PELVIC CELLULITIS, PELVIC PERITONITIS, AND PELVIC ABSCESS.

| Aconite.[1] A valuable remedy in the stage of congestion (Veratr. vir.), especially when it results from cold; high fever; hot, dry skin; great thirst; much anxiety and restlessness. Vomiting is sometimes present, and cutting pains in the abdomen. It should be given in the lower potencies, in severe cases (1x. or 2x.) as often as once in fifteen or twenty minutes, till the fever begins to subside, and perspiration commences. It is most useful at the time when the hot-water douche is indicated. Dr. Jousset[2] recommends twenty to thirty drops of the mother tincture to be taken in twenty-four hours, for very acute and severe cases of pelvic peritonitis.

| Apis 3x. trit. will sometimes abort suppuration. It is good for relapsing abscesses, and is one of the most useful remedies to stimulate the absorption of exudation. Apis is to effusion in the cellular tissue, what bryonia is to effusion of serum in the peritoneum. Burning, stinging pain in region of the uterus or ovaries, especially the right; great tenderness over the uterine region, with bearing-down pain; leucorrhœa and painful urination; menses diminished or suppressed; tendency to anasarca.

Arnica. Dr. Ludlam[3] writes that for traumatic cellulitis there is no treatment to compare with the avoidance of the exciting cause, and the internal use of arnica. When the patient is of the hemorrhoidal or hemorrhagic diathesis, hamamelis is equally good.

| Arsenicum.[4] In pelvic peritonitis, when the effusion is copious, and the amount varies somewhat at intervals of a few days; the patient asthenic and much prostrated, suffers from great thirst; burning pains in the abdomen, worse in the latter part of the afternoon, and after midnight.

[1] Dr. Bailey: Aconite in Pelvic Cellulitis, Clinique, vol. v. p. 301.

[2] Lectures on Clinical Medicine, pp. 265–299. Chicago, 1880.

[3] Clinique, July, 1881.

[4] Dr. Cl. Müller cured a very interesting case reported as scirrhus uteri, but it is quite as likely that it was one of chronic inflammation and induration. — *Hom. Vierteljahrschrift*, vol. iii. p. 246.

Belladonna is a good remedy for both pelvic peritonitis and cellulitis, particularly the latter. It is most suitable to the acute stage, and may arrest the inflammation if given early and often. The fever is less violent than that calling for aconite, and is useful in the puerperal state, when the lochia are suppressed; the vagina hot, dry, and sensitive; throbbing of the blood-vessels in the pelvis; throbbing headache; flushed face; eyes brilliant; abdomen painfully distended, with much heat, burning and cutting pains. In the "Clinique" for July, 1881, Dr. Ludlam says he has had excellent results in sub-acute cases of cellulitis with belladonna 3 and apis 3 in alternation.

Bryonia follows aconite or belladonna well in pelvic peritonitis, to absorb the effusion of serum (Scilla mar.). As Baehr says. the remedy must be used consistently. We cannot expect to obtain results in a day that can only be obtained in ten days or a fortnight. It may also be useful in cases of pelvic inflammation, which appear to be connected with metastasis of rheumatism (Macrotin, rhus). It is indicated by stitching, lancinating pains in the hypogastrium, worse by the least motion; motion sometimes causes vomiting; great thirst for large quantities of water; very dry mouth, lips, and tongue which is thickly coated white; obstinate constipation.

Calcarea carb., Calcarea iod., and **Calcarea fluor.** are important remedies, when the exudation has taken place in scrofulous or tuberculous women, and an abscess is threatening, or has already formed. Calcarea iod. has more power in promoting resolution than calcarea carb., but both are sometimes indispensable for their constitutional effects. Too early and profuse menstruation is one of the many keynotes in selecting this remedy. The most important general indication is the scrofulous diathesis (Lach., merc. iod., silicea, sulphur). Calcarea fluor. is an invaluable remedy for pelvic abscess proceeding from caries of some bone.

Cantharis is mentioned by Dr. Jousset as one of the medicines particularly adapted to the acute stage of pelvic peritonitis (Acon., coloc.). Great sensitiveness and distension of the abdomen, with violent burning and cutting pains; hard tume-

faction above the symphysis pubis, with burning pains in the loins; tenesmus of the bladder, strangury, great anguish and restlessness.

China. Chronic pelvic abscess, where the patient has become debilitated from the long-continued discharge of pus; fever of an intermittent or remittent type.

Colocynth. In the acute stage of pelvic peritonitis, with little effusion, especially in the left ovarian region. Violent, cutting, tearing pains, relieved somewhat by pressure; frequent tenesmus of the bladder, with scanty urine; diarrhœa, and tenesmus of the rectum. It is highly recommended by Drs. Jousset and Hughes.

Conium. Tympany of the abdomen, especially at the menstrual epochs; severe pain in the abdomen, with chilliness; *violent cutting pains in the abdomen;* aching and bearing-down pain in the hypogastrium; leucorrhœa of white, acrid mucus, causing a burning sensation, and preceded by colic-like pains; frequent urination at night; burning or smarting in the urethra during and after micturition; induration of uterus, ovaries, or breasts; *swelling and soreness of the mammæ before the menses.* Dr. Ludlam [1] praises it warmly in the 2x. dil., and thinks it is equally adapted to both the chronic and puerperal forms of pelvic peritonitis. Bernutz [2] found it very useful.

Hepar sulphur is the best remedy to hasten suppuration when it is inevitable, but it must not be used during suppuration unless we wish to increase it.

| Macrotin. Cases of sub-acute pelvic peritonitis in rheumatic women, subject to pleurodynia, intercostal rheumatism, etc. Painful condition of the spinal muscles. If the patient is in an anxious, nervous, irritable condition; takes no interest in any thing; despondent, sleepless; suffers from pain and distress in the pelvis; and the menses are scanty or irregular, with increased nervousness at the time of their appearance.

| Mercurius.[3] Formerly the solubilis was the favorite prep-

[1] Note in Jousset's Clinical Med., Am. ed., p. 285.

[2] Bernutz and Goupil, Clin. Memoirs on Dis. of Women, vol. ii. p. 165.

[3] Dr. Clotar Müller cured an interesting case with merc. sol., 3x. trit., in which the following symptoms were prominent. A young woman, aged twenty-eight, had

aration; but on account of its instability this has given way to the corrosivus, vivus, or iodide. It is a good remedy for the exudation of either cellulitis or peritonitis with the tendency to the formation of pus, or in the beginning of pelvic abscess. It has also been serviceable to promote the absorption of exudations appearing after confinement. The indications for it are, creeping chills; much perspiration without relief; great weakness and prostration; pale, earthy complexion; bad odor from the mouth; abdomen hard, distended, and painful; mucous stools, with burning and tenesmus; œdema of the feet; and frequent desire to urinate, with scanty discharge. It is not likely that all these symptoms will be found in one case; but there will be a combination of them, with other characteristics of the drug, which will point to the remedy.

Opium is useful for the obstinate constipation depending on the paralytic condition of the intestines during or after the disappearance of the exudation. It is well to ascertain first if it had been given previously, in physiological doses, and thus caused the constipation; in which case nux vom., plumbum, or sulphur would be more suitable.

Salicylate of soda IX. Dr. Ludlam has found this useful, where there is an apparent metastasis of rheumatic inflammation to the peritoneum. "It is indicated for the relief of the intra-pelvic pain and distress, especially when it is of a neuralgic or rheumatic character; but the more acute the case, and the more decided the diminution in the quantity of the urine

been delivered six months previous to his visit. In a few days after her confinement the present attack of pelvic peritonitis, cellulitus, and ovaritis developed, rather more in the left than in the right side. Violent pressing, shooting pain in the hypogastrium, especially the left side; worse at night, on motion, defecation, and micturition. Had to lie on her back with thighs drawn up; obstinate constipation; almost constant desire to urinate, with scanty, reddish urine; great thirst, coated tongue, foul taste, and no appetite; fœtid perspiration; slight œdema of the feet; small frequent pulse; extreme weakness and emaciation. Improvement began at once after taking merc. sol.; and the patient was sitting up some hours at a time in less than four weeks, and continued to gain rapidly. She had no other remedy than merc. sol., except nux vom. for three days. — *Hom. Vierteljahrschrift*, vol. iii. p. 246. The period of convalescence may seem long, but those who have had experience in treating *bad* cases will consider it unusually good progress.

secreted, and the absolute increase in the proportion of uric acid contained in the urine, the better the indication."

Silicea. Chronic pelvic abscess with fistulous opening (Phos.), and large amount of thin pus. Constant chilliness; fever, with violent heat in the head, worse at night; profuse, sour or offensive perspiration at night; much weakness and prostration; great constipation, constant but ineffectual desire for stool; stool expelled with difficulty, or when partially expelled slips back; headache and nervous symptoms, which seem to depend on the drain from suppuration.

Sulphur is sometimes used after bryonia, to hasten absorption of the effusion. It is excellent in chronic cases, especially in scrofulous persons, to promote absorption for abscesses, and, intercurrently, to aid the action of other remedies. Chilliness, flushes of heat, profuse night-sweat, great prostration, constipation, and a hemorrhoidal tendency, are prominent characteristics of this remedy.

Tartar emetic has proved so useful in hyperplasia of the cervix, it has been tried and found useful for removing small indurations, which are not very hard, in women who enjoy good health in other respects.

| Terebinthina 2x. is another remedy in which Dr. Ludlam has great confidence for puerperal and post-puerperal pelvic peritonitis. When there is great weakness and prostration, excessive distension of the abdomen, and a disposition to hemorrhage, which makes it useful in peritonitis, associated with pelvic hæmatocele. The violent drawing, burning pains in the region of the kidneys; scanty and bloody, or even suppressed urine, with distressing strangury, — are excellent additional indications, should they be present.

Veratrum viride 2x. has been warmly recommended for the acute stage of pelvic cellulitis or peritonitis in lying-in women, with symptoms similar to those calling for aconite. Great cerebral congestion; pupils dilated; face flushed; violent nausea and vomiting, with cold sweat; severe pain and soreness just above the pelvis; heart-beats loud and strong, with great arterial excitement, but the respirations are very slow. The

doses must be frequently repeated, till there is some amelioration of the symptoms.

Remedies for Pelvic Cellulitis. — *Acon.*, *apis*, arnica, ars., *bell.*, bry., calc. carb. and iod., canth., colch., dig., hellebore, *kali iod.*, *merc. viv.*, rhus tox., sulphur, tartar emetic, veratr. vir.

Remedies for Pelvic Peritonitis. — *Acon.*, *apis*, *ars.*, bell., *bry.*, canth., carbo veg., *coloc.*, lach., lil. tig.,[1] *macrotin*, *merc. cor.* or *iod.*, nitric ac., nux vom., rhus tox., scilla mar., salicylate of soda, *terebinthina*, *veratr. vir.*

Remedies for Pelvic Abscess. — Calc. carb., *calc. fluorata*, carbo an., china, *hepar sulph.*, *merc. viv.*, phos., *silicea*, sulphur.

[1] Various observers report differently concerning this remedy, some praising it warmly. I have been very often disappointed by it; but Dr. H. H. Read, as well as others, has had good results from it.

CHAPTER XXIII.

PELVIC HÆMATOCELE.

AS the name implies, it is a collection of blood in the pelvic cavity. It is so rare, that comparatively few practitioners ever meet with this affection; but when it does occur, it is most often at the menstrual period in women from twenty-five to thirty-five years of age. The effusion of blood may be within the peritoneal cavity, intra-peritoneal; or extra-peritoneal, without the peritoneum, in the cellular tissue. The former is the more common, and the latter is pretty sure to break into the peritoneum if that membrane is put on the stretch by a large exudation in the cellular tissue. The causes are numerous, but may be classified as predisposing and exciting.

Predisposing causes		Lowered vitality of the system.
		Frequent childbearing.
		Hemorrhagic or hemorrhoidal diathesis.
Exciting causes	Rupture of blood-vessels	Arterial aneurism.
		Varicose veins in the pelvis.
		Extra-uterine pregnancy.
		Phosphorus poisoning.[1]
		Pelvic peritonitis.
		Hemorrhagic peritonitis.
		Reflux of blood from uterus in consequence of obstruction to the menstrual flow.
		Traumatism.

[1] The walls of the blood-vessels undergo fatty degeneration, which leads to rupture and hemorrhage. — WEGNER: *Virchow's Arch.*, vol. lv. p. 12, 1872.

The more common causes are hemorrhagic pelvic peritonitis, extra-uterine pregnancy, and varicose veins in the broad ligaments; all others are exceedingly rare in comparison. It may be worth while to note that hemorrhoids would be very likely to attend varicosis of the pelvic veins.

The effusion of blood naturally gravitates downward, undergoes partial coagulation, and, if intra-peritoneal, at the same time causes sub-acute pelvic peritonitis. A false membrane soon forms, shutting off the blood from the upper part of the peritoneal cavity, and encapsuling the fluid. If bleeding takes place inside the tumor thus formed, it becomes tense in proportion, displacing the uterus and the surrounding organs. Large hæmatoceles very often suppurate, and usually discharge into the rectum; otherwise, the fluid portion is soon absorbed, leaving a solid tumor, which only disappears after a long period. While it is a fact that hæmatoceles, or, as they have been sometimes called, hæmatoma, are posterior to the uterus in the very great majority of cases, yet instances have been recorded of ante-uterine hæmatocele; and the physician must be wary how he decides adversely, because there is no retro-uterine tumor when the symptoms of this affection are present.

It is evident that the symptoms will be those attending the loss of blood from any portion of the body, and also those accompanying a mild attack of peritonitis. The severity of the former will depend on the rapidity and amount of the hemorrhage. The pain of the latter may be very slight if the blood oozes slowly into the peritoneal cavity, exciting little inflammation; or amount to the most intense agony conceivable, which no amount of morphine can relieve, when the effusion of blood takes place rapidly outside the peritoneum, dissecting that membrane up from the underlying tissues.

The formation of a very small hæmatocele is, no doubt, often overlooked; but *the clinical history* of an average case can be briefly stated as follows: The attack is sometimes, but not always, preceded by a sense of fulness and weight in the pelvis; the patient feels faint and exhausted; grows paler, the features becoming pinched, and the extremities cold in collapse; the pulse grows weak and more rapid with much pain in the pelvis; nausea and vomiting; the temperature is at or below normal; and there is severe rectal and vesical tenesmus from the pressure on the rectum and bladder. At the same time, she has a sense of something in the pelvis; bears down, and tries to expel it, as in the second stage of labor. This may be termed the acute or formative period, and varies from minutes to hours, or even days.

Re-action from the prostration commences, as a rule, within forty-eight hours. There is a rise of pulse and temperature, symptoms of sub-acute peritonitis, and constipation. The tumor at once begins to diminish in size as the serum is absorbed, unless repeated hemorrhage take place, and from an obscurely fluctuating or tense mass, it soon becomes hard and defined, extending up into the pelvis from the lowest point of the cul-de-sac of Douglas. On vaginal examination, a tumor is found almost always posterior to the uterus, and pressing that organ forward against the bladder. It varies in size and consistence according to the amount of blood lost and its duration. It may be no larger than a pullet's egg, or extend up to the navel. At first soft and resisting, it gradually hardens, and in time disappears as above stated. The posterior vaginal wall is crowded forward, and the rectum more or less occluded by the mass. The vaginal touch in connection with the symptoms just described will be sufficient for a

diagnosis. In doubtful cases an aspirator can be used, taking care to push the cannula beyond the clots into the serum. For differential diagnosis, compare the chapter on pelvic cellulitis and peritonitis.

The Prognosis is good for most cases when they are treated on the expectant plan. It depends on the amount of shock, and the extent of the inflammatory re-action which follows.

The Treatment. — If there is reason to think hemorrhage is still going on, an attempt to arrest it can be made by placing pounded ice or ice-water compresses over the hypogastrium, and giving cold-water enemas. The bodily warmth must be maintained, and prostration combated, by applying hot bricks, hot-water bottles, or hot flannels to the extremities, and by frequently repeated doses of brandy and milk. If it cannot be retained, and collapse is imminent, give brandy hypodermically in two-drachm doses; and if no re-action follows, ether in half-drachm doses in the same way. When the pain is intense, it may become necessary to give morphine; but this should be avoided so far as possible, and the pain mitigated by a few whiffs of ether or chloroform. The constant attention necessary for the latter may prove very irksome; but the constipation following the use of morphine interferes with free portal circulation, and the varicosed veins, if present, are more liable to become distended, and again cause hemorrhage. When the pain is excessive from the extreme distension and pressure on the neighboring organs, the tumor can be aspirated by pushing the cannula in through the clots till the serum is reached.

It is hardly necessary to add that absolute rest, as far as possible, is essential both at this period and till the acute symptoms have subsided. Plenty of water to allay the thirst and supply the system with fluid, besides

small quantities of milk and beef-juice at short intervals, are of prime importance. Coitus must be absolutely prohibited for several months afterward. If suppuration commences, which is generally marked by chills, hectic fever, profuse perspiration, and softening of the tumor, it must be opened and treated the same as a pelvic abscess. Otherwise, it is better not to meddle by surgical measures, but trust to nature.

Medical Treatment. — As the accident must have occurred before the physician is called upon to treat it, there is little for medicine to do more than to promote absorption, sustain the patient, control the complications so far as possible, and, lastly, to prevent recurrence. The reader is referred to the chapter on Pelvic Peritonitis for its treatment, — as this is the most common complication, — and for the promotion of absorption. The following remedies are suggested, though the writer has not been able to find recorded cases in which all have been used: —

If the hemorrhage is still going on. — Acon., *arnica*, *dig*, *ham.*, phos., millefol., secale, *terebinthina*, thlaspi bursa pastoris.

To promote absorption. — Apis, ars., kali iod., merc.

Anæmia from loss of blood. — Ars., *china*, ferrum.

To prevent recurrence, especially in women subject to pelvic congestion and hemorrhoids. — Æsculus hippo., bell., collinsonia, *ham.*, nux vom., sepia, sulph.

CHAPTER XXIV.

DISEASES OF THE FALLOPIAN TUBES.

MALFORMATIONS, displacements, strictures, and abnormal patency of these tubes rarely occur, but do not admit of diagnosis except possibly by abdominal incision, or of treatment unless by the radical method of removal. A few instances have been recorded where the uterine sound has passed from the uterine cavity into the Fallopian tube. These conditions, therefore, have no practical value in relation to our present methods of diagnosis and treatment, and will not be considered further.

Salpingitis — inflammation of the Fallopian tubes — occurs in the form of acute or chronic catarrh of the mucous membrane lining their cavities. When the fimbriated extremity is closed either by the catarrh, or more often by the accompanying peritoneal inflammation and the formation of adhesions, the secretion cannot always escape into the uterus as fast as it is formed, and dilatation of the tube results. Sometimes both the uterine and fimbriated extremities are closed. The name of the tumor thus formed varies with its contents: dropsy of the tube, or hydrosalpinx, when the contents are serum, mucus, or a mixture of both; hæmatosalpinx, when there is a large admixture of blood; and pyosalpinx, if the contents are purulent. A differential diagnosis between these forms on the living, laparotomy

excepted, is impossible, as the use of the aspirator and a microscopic examination of the contents are rarely practicable.

Salpingitis seldom if ever occurs as a primary affection. Both tubes are usually involved. It is the result of the extension of inflammation from the surrounding structures, and is chiefly caused by gonorrhœa, endometritis (especially the puerperal form), and pelvic peritonitis. The pathological changes in the mucous membrane are similar to those of catarrh in other portions of the body. When the tube becomes dilated, the folds of mucous membrane are lost; the membrane is sometimes thickened; its inner surface may have an appearance somewhat like serous membrane covered with granular or calcareous concretions. The muscular walls undergo partial atrophy, and occasionally are ecchymosed.

Acute salpingitis is not susceptible of diagnosis as such, apart from pelvic peritonitis and cellulitis, and therefore will not be considered. The symptoms of chronic salpingitis and dilatation of the tube are the same as those of inflammation of the adjoining structures. A history of chronic pelvic peritonitis or cellulitis with intermissions of comparative health for a few weeks or months, and the occasional outbursts of inflammation without any apparent or definite cause, point to the presence of chronic salpingitis.

The Diagnosis is difficult. In favorable cases, when the abdominal walls are thin and relaxed, the distended tube may be felt by careful bi-manual examination; but the most experienced examiner cannot always detect the enlarged tube without an abdominal incision, even when the patient is under the influence of ether to secure greater muscular relaxation. Schatz's chair is very useful in examining the tubes and ovaries,

as the patient is compelled to take a position which thoroughly relaxes the abdominal wall, and makes a bi-manual examination very much easier. The tumor extends from either horn of the uterus, and is felt as a thickening along the broad ligament, or as a sausage-shaped mass about the size of the finger. When removed, it is about three inches long with numerous constrictions, and similar in appearance to a small section of distended intestine. Sterility commonly attends this disease when both tubes are affected.

The Treatment is the same as for pelvic peritonitis and cellulitis. If the case continues obstinate after a faithful trial of some months, it may become necessary to remove the tubes and ovaries (Tait's operation). The writer feels that this operation, so popular with some gynæcologists, is not entirely devoid of danger, unsexes the woman, and is not infrequently performed when a careful study of the materia medica and faithful treatment of the case would have cured it.

I am not acquainted with remedies having a specific relation to this disease apart from endometritis, pelvic cellulitis, and peritonitis. The reader is therefore referred to the chapters on those subjects. Dr. C. Hennig has recorded a cases of phosphorus poisoning which seemed to cause catarrhal salpingitis. Acting on this hint, phosphorus may prove a useful remedy.

CHAPTER XXV.

OVARIAN NEURALGIA.

THIS very painful affection is due to the same causes which produce neuralgia in other parts of the body. Dr. F. E. Anstie, in his well-known work on Neuralgia, makes this remark in regard to uterine and ovarian neuralgias: "In one aspect, the affections possess a special interest; namely, this, that they are more frequently dependent on peripheral irritation for their immediate causation than any other group of neuralgias." The causes are numerous, and may be described as follows: —

The neuralgic, rheumatic, or hysterical diathesis.
Poor state of health.
Ascarides in the rectum.
Profuse and intractable leucorrhœa.
Calculus in the kidney or ureter.
Prolapsus uteri.
Presence of tumors, cancerous or fibroids.
Severe erosion and laceration of the cervix uteri.
Impaction of fæces.
Reflex irritation from distant parts of the body.
Excessive or incomplete sexual intercourse.
Ungratified sexual desire.

This is a formidable list, the first two and the last three of which are by far the most important.

The attack comes suddenly without any warning; the pain, while more severe than in ovaritis, varies in intensity and locality in different subjects, not infrequently remits, and gradually passes away. It is usually in one ovary, extending down the thigh, fixed in one spot, or radiating from it up into the abdomen. It is of an intense lancinating or cramp-like character, and not infrequently attended with vomiting, fainting, hysterical spasms, and doubling-up of the body on the affected side, which is exceedingly sensitive to the slightest touch.

It is distinguished from *abdominal colic*, *ovaritis*, and *peritonitis*, by its location in the ovarian region, the history of previous attacks, the sudden occurrence, severity of the pain, absence of chill or rise in temperature, and its proneness to affect neuralgic or hysterical women.

Prognosis. — No one ever dies as the direct result of ovarian neuralgia. On the other hand, it is a difficult affection to cure, unless the exciting cause can be removed.

General Treatment. — The first object is to build the patient up to the maximum of health. Out-door air, exercise, good food and plenty of it, pleasant surroundings, mental rest, freedom from care, and regulation of sexual matters, are all important. Marriage and child-bearing are often beneficial. It is hardly necessary to say that the cause must be carefully sought out and removed if possible. Flannel underwear should be worn; and, in addition, a pad of uncarded wool, basted to the underclothing over the hypogastrium, will act as a preventive in protecting that region from cold. Closed drawers are better than open ones for the same reason; and the feet must be kept warm and dry by thick shoes and stockings.

At the time of the attack, heat, in the shape of hot

flannels, a hot hop or bran bag, may palliate the pain. Counter-irritation, in the form of a mild mustard-plaster, or camphor and turpentine, applied over the seat of pain, sometimes relieves. Besides this, a vaginal injection can be used of hot water, glycerine, and the watery extract of hamamelis, in equal parts; or, instead of the latter, the strong tincture of aconite, — preferably the aconitum uncinatum, — in the proportion of about ten per cent. Some prefer to apply the aconite, either alone or mixed with an equal quantity of chloroform, on the skin over the site of pain. If the rectum be loaded with fæcal matter, no time should be lost in giving an enema, and removing a possible cause of the pain.

Medical Treatment. — In the intervals between the attacks, constitutional remedies are necessary to dispel the tendency to recurrence. It is of little use to give them unless the physician's directions will be strictly and perseveringly observed. Chronic cases may require months of faithful treatment.

THERAPEUTICS.

Ammonium mur. Suited to fleshy women and mild cases; cutting, stitching pains from pubes to small of back, with urging to urinate; griping pain about the navel; constipation; hard, crumbling stools.

Arsenicum. *Violent burning* pain in the abdomen, with great anguish, rolling and tossing about; abdomen distended and painful; drawing, stitching, burning, or tensive pain in the ovaries, the right rather than the left.

Atropine.[1] The same symptoms as those which would

[1] Mrs. W. W., confined three months ago; *lochial discharge ceased suddenly* a fortnight after confinement; since that time suffered intense agony, with intermittent neuralgia of the *right ovary;* violent clawing, griping pains, causing constant exclamations, for twenty-four hours at a time without interruption; at length the pains ceased entirely, but invariably returned with new vigor; *much*

call for belladonna ; intense clawing, clutching, pain in the uterine region, with great sensitiveness to touch, and bearing-down sensations ; face flushed, pupils dilated, sometimes delirious.

| **Colocynth.** Intense pain in the inguinal region ; boring, tensive pain in the ovary, more especially the left one ; patient is doubled up with pain, and seeks relief by pressing the abdomen against something hard, as a table, chair, or bedpost ; pain may concentrate in the pit of the stomach, with eructations, nausea, or vomiting. Attacks caused by vexation, or eating potatoes.

Macrotin. A good remedy when the attack seems due to a metastasis of rheumatism in nervous women at the climacteric. The patient is irritable, melancholic, and subject to inframammary pains in the left side.

Naja has proved very serviceable for violent, cramp-like pain in the region of the left ovary, with violent palpitation of the heart. Dr. Hughes states that "it has become my own favorite medicine for obscure ovarian pain, not frankly inflammatory."

Xanthoxylon. Violent pains in the loins and lower part of the abdomen, and especially in the left side, which *extend through the internal abdominal ring, and down on the inner anterior surface of the thigh.* The writer knows of one case, characterized by these symptoms, which was promptly cured by this remedy. Her agony was so great that she could hardly be held on the bed, making it necessary to keep her partially under the influence of ether for some hours, till this remedy was given with remarkable effect.

|| **Valerianate of Zinc.** *Chronic ovaralgia in hysterical women.* It is also useful as a constitutional remedy to break up the tendency to the attacks. Useful as this remedy is for various kinds of neuralgias, the indications for it have not yet been precisely defined.

thirst and vomiting during the pain, which occurred day or night ; for two months and a half took much laxative and other medicine, *as well as opium* in abundance. Prescribed *bell.* 2c. in water, a teaspoonful every two hours ; cured in about one week ; has remained well since, now two years. — Dr. C. Wesselhoeft : *Am. J. of Hom. Mat. Med.*, p. 22, vol. iv., 1870.

For further consultation see aconite,[1] ammon. mur.,[2] cham., chin., sulph., coffea, cuprum, gels., hyosc., ignatia,[3] *mag. phos.*, merc. cor.

For constitutional remedies consult arg. nit., ars., calc. carb., ferr. et strych., graphites, nat. mur., sulphur, zinc.

[1] The aconitum uncinatum has been found very useful for neuralgias.

[2] Dr. Searle says it is almost a specific in the crude form.

[3] This cured a case of almost daily ovaralgia with great nervousness during pregnancy.

CHAPTER XXVI.

DISEASES OF THE OVARIES.

UNDER very favorable conditions, such as thin, relaxed abdominal walls, elastic perineum, and flexion of the thighs on the body with outward rotation of the knees, the normal ovaries can sometimes be felt by an experienced examiner. The psoas muscles are made tense, so that their inner margins are more easily palpable, by rotating the knees outward. According to Schultze, these form a guide to the normal position of the ovaries, which is about on a level with the brim of the pelvis, midway between the psoas muscles and the insertion of the Fallopian tubes into the uterus. The ovaries enlarge at the menstrual epochs, but in a general way can be described as two oval-shaped bodies, each somewhat larger than a chestnut, and possessing great mobility. The larger the ovary and the lower it is down in the pelvis, the more easily it is felt. In examining them, the patient must occupy the dorsal position, with the thighs flexed, and knees well rotated outward. If the physician desires to examine the right ovary, he must use his right forefinger, and if that is not enough, the middle one also; if the left ovary, his left hand; and always the other hand over the abdomen as in a bi-manual examination.

In order to reach well up in the pelvis, he will materially help himself by supporting his elbow against his hips or body, and crowding firmly backward and up-

ward on the perineum with the side and base of his finger, while at the same time he presses down from above, and engages the patient in conversation to prevent her from stiffening the abdominal muscles if ether be not used.

Another method of examining the ovaries is to give an anæsthetic, draw down the uterus with volsellum forceps, and make an examination of the ovaries per rectum. This should never be attempted where there are adhesions in the pelvis; inflammation of the uterus, cellular tissue, or ligaments, however slight; varicose veins or long-standing hemorrhoids: the presence of the first two would be liable to cause severe inflammation of the pelvic organs, and of the latter, pelvic hæmatocele.

The affections of the ovaries can be enumerated as apoplexy or hæmatoma, presence of a third ovary, absence, imperfect development, displacement,[1] inflammation or ovaritis, and tumors of the ovary.

The symptoms of ovarian apoplexy or hæmatoma are those of pelvic hæmatocele; and the diagnosis is made by the presence of a sudden enlargement of the ovary with such symptoms. It is very rare, treated by letting it alone, and of little if any practical importance. The presence of a third ovary is extremely rare, and only interesting as possibly serving to explain the occurrence of menstruation after the removal of two ovaries.

The positive diagnosis of the absence of the ovaries or their imperfect development is impracticable. The most characteristic symptom is amenorrhœa with little or only partial growth of the sexual organs, flat breasts, hairy face, coarse voice, masculine appearance, and, instead of developing from girlhood into womanhood, she remains physically a girl. The occasional use of a

[1] See chapter on Displacements of the Sexual Organs.

tent in the cervical canal and the galvanic stem pessary have been used with benefit in a few cases. Not much encouragement, however, can be given to such patients.

Inflammation of the ovary, ovaritis, sometimes called oöphoritis, may affect the parenchyma (follicular portion) of the ovary or the interstitial (medullary) part, and be either acute or chronic. Both the parenchymatous and interstitial forms are limited to the menstrual life of a woman, and neither can be diagnosed from the other in the living; both are usually present at the same time, though the one may preponderate over the other. In parenchymatous ovaritis, the Graafian follicles are involved, and often destroyed. In interstitial ovaritis there is a proliferation of connective-tissue cells, some enlargement of the ovary, with subsequent contraction and atrophy, which also destroys the follicles. This process is not unlike cirrhosis of the liver. The left ovary is much more often affected than the right, both from the presence of a loaded rectum on that side, and from the greater frequency of laceration of the cervix uteri on the same side, which is a constant source of irritation. When both ovaries become chronically inflamed, sterility is liable to follow in consequence of ovarian atrophy, of destruction of the Graafian follicles, of the thickening of the outer surface of the ovary, or of the adhesions which bind the uterus down or constrict the Fallopian tubes.

A more practical division of ovaritis, from a clinical point of view, is into the acute and chronic forms.

Acute Ovaritis as an idiopathic uncomplicated affection is very uncommon. The causes are: puerperal septicæmia, sudden suppression of the menses, extension of inflammation from the uterus or peritoneum, gonorrhœa, cold-water or astringent injections, excessive venery, the production of abortion, acute exanthematic

diseases, and the improper use of the sound or other instruments.

It may seem strange to speak of uncomplicated ovaritis as a very uncommon affection with such an array of causes; but these also produce inflammation of the structures surrounding the ovary, and the symptoms of ovaritis are so often kept in the background or masked by the accompanying pelvic peritonitis, that a differentiation of the symptoms is practically impossible in most cases. In other words, the symptoms of acute ovaritis are those of pelvic peritonitis localized in the ovarian region, with pains radiating to the side and back, sometimes tumefaction, and flexion of the thigh to relieve the tension on this exquisitely sensitive region.

On bi-manual examination, the ovaries are found slightly enlarged; tender and slight pressure causes a sickening pain similar to that caused by pressure on the testis.

The interstitial variety has been known to terminate in abscess of the ovary; but this is extremely rare outside of puerperal septicæmia, and is seldom observed in it. The symptoms and treatment are the same as for pelvic abscess, but there is more danger from its greater liability to break into the peritoneal cavity.

Chronic Ovaritis, besides resulting from the acute form and its causes, has been produced by phosphorus and arsenic poisoning, displacement of the pelvic organs causing irregular circulation, cauterization of the cervix with nitrate of silver, and apparently by the metastasis of rheumatism. The latter should warn us to be careful in using local applications for the treatment of rheumatism in women subject to ovarian disorder. Chronic ovaritis is a common affection, sometimes bi-lateral, but most frequent on the left side for reasons previously stated.

The Symptoms vary much in different cases. One of the most marked is the presence of pain in the ovarian region, of a dull aching or burning character, aggravated by walking. This, however, does not prove that ovarian inflammation is present, as the same pain is very characteristic of disease of the neck of the uterus independent of any ovaritis. Neither does tenderness on pressure in the lateral hypogastric or supra-inguinal region necessarily mean ovaritis, though it often accompanies it. Dr. Graily Hewitt holds that this tenderness is most often due to anteversion of the uterus. Menstrual irregularities are quite frequent, especially dysmenorrhœa and menorrhagia. There are sometimes hysterical manifestations; infra-mammary pain at the menstrual epochs, more often in the left side; painful defecation; dyspareunia; and a very intractable form of uterine catarrh due to the long-continued irritation. One great characteristic of all the symptoms is their aggravation at the menstrual epoch.

The Diagnosis is made by the preceding symptoms and finding, by bi-manual examination through the vagina or rectum, the extremely sensitive ovaries, which are often a little enlarged or prolapsed.

The Prognosis is uncertain, but usually unfavorable if absolute sexual continence, and rest during the menstrual period, be not faithfully observed. The physician should also be wary in promising a cure when the ovaritis has been caused by cauterizing the cervix with nitrate of silver. In some instances, the writer has been surprised at the favorable results obtained in cases of long standing. Treatment must be persevering to be effectual, and almost every thing depends on the correct selection of the remedy.

General and Local Treatment. — Four things are essential in the treatment of ovaritis, — a generous diet

of nutritious food to maintain a high standard of health; avoidance of all exercise which increases the pain; rest in bed during the menstrual period; and, most important of all, there must be no sexual indulgence or excitation. Chronic constipation must be removed if possible, as this favors sluggish portal circulation, which increases the venous congestion of the pelvic organs.

The use of a hot hop-bag, dry hot bran-bag, compresses of hamamelis, wormwood, and alcohol, or camphor and turpentine, and the inunction of belladonna cerate externally have been recommended for the pain in acute attacks; also, small mustard-plasters, painting with iodine, and the application of leeches. Some relief may be obtained by these measures, but their chief use is apparently to make a show of doing something for the patient. On the other hand, much relief has been given by copious hot vaginal douches, to the last half-pint of which have been added three tablespoonfuls of a strong extract of hamamelis (Pond's extract of witch-hazel), and the same amount of glycerine. It should be given for at least twenty minutes, night and morning, till all signs of inflammation have disappeared. Iodine is of little use here, except for the complications of pelvic peritonitis and cellulitis. Rectal injections have been favorably mentioned for left-sided ovaritis, but the author sees little, if any, advantage in them over the vaginal douche. The use of opium in any form is to be scrupulously avoided if possible. It is only palliative at best, and the mental condition of the patient is such that she is peculiarly prone to acquire the opium-habit.

In very severe cases which are not amenable to long-continued and faithful treatment, the ovaries can be removed by Battey's, Hegar's, or Tait's operation.

This operation, known as castration,[1] has also been recommended for the relief of nervous and mental diseases. Schroeder[2] believed it was best to remove even perfectly healthy ovaries for the relief of neuroses, and reports some severe cases cured by the operation. According to his experience, the best results are obtained in those cases in which the menses appeared at a very early age, — in two cases in the ninth year, — and when sexual conditions play a great role in the etiology of the neuroses. Most observers, however, agree that healthy ovaries should not be removed for disorders of the nervous system.[3] Prochownik[4] of Hamburg found the results were not so good when healthy ovaries or those but little diseased were removed for neuroses complicating sexual disorders.

Medical Treatment. — In selecting a remedy, the symptoms of the menstrual flow must be considered with the ovarian pains. In chronic cases, a carefully chosen remedy ought to be given at least a fortnight or longer without changing it, as immediate effects are seldom seen. Some cases recover much sooner; but, as a rule, the acute ones require from six weeks to two months, and the chronic, six to eight months.

[1] The definition of castration was discussed at the meeting of the Gesellschaft für Geburtshülfe und Gynäkologie in Berlin, June 11 and 24, 1887. Many believe castration should apply to the removal of healthy ovaries only, and ovariotomy to the removal of diseased ovaries. Hegar has given an excellent *résumé* of the subject, shown the fallacies of the above definitions, and advocates its application to the removal of both diseased and healthy ovaries. His article will be found in the Centralblatt für Gynäkologie, No. 44, Oct. 29, 1887.

[2] Ueber die Kastration bei Neurosen. Zeitschrift für Geburtshülfe und Gynäkologie, Bd. xiii. Hft. 2.

[3] The opinions of Spencer Wells, Alfred Hegar, and Robert Battey can be found in the American Journal of the Medical Sciences, p. 455, October, 1886.

[4] Beiträge zur Kastrationsfrage. Archiv für Gynäkologie, Bd. xxix. Heft. 2.

THERAPEUTICS.

Aconite has been considered a good remedy for puerperal ovaritis in alternation with arnica, if there has been much traumatism. It is useful for acute ovaritis with painful urging to urinate, high fever, and when it follows sudden suppression of the menstrual flow (Apis, bell., cimicif., puls.). Some physicians alternate it with bryonia. Generally speaking, aconite is inferior to belladonna, which has a more specific action on the ovaries, and should be used if aconite does not soon relieve the pain and fever.

|| Apis. Either acute or chronic ovaritis, especially in the *right side*, and when it is associated with an exudation into the peritoneum or cellular tissue. The symptoms calling for it are: enlargement of the *right* ovary (Bell.), with pain in the left side of the chest, and cough; burning, stinging pains in the ovaries, worse at time of menses; tenderness of hypogastrium; urging to urinate; ovaritis with suppression of the menses (Acon., bell., cimicif., puls.).

Arsenicum. Burning, tensive, stitching, pressive pains in the ovaries, especially the right, sometimes extending into the thigh, making it feel numb and lame, worse from motion and sitting bent; corrosive leucorrhœa; backache; the pain is relieved by the application of heat; the patient is thirsty, very irritable, and restless.

|| Belladonna. The chief remedy for the treatment of acute ovaritis, and also useful for the chronic form; but immediate results in the latter will not be obtained. It is very valuable when the peritoneum is involved (Bry., coloc., merc. cor.), either with the puerperal state or independent of it. The symptoms appear suddenly with marked signs of local congestion; severe pain of a clutching, clawing, stabbing, or throbbing character in the ovarian region, especially the right, with great local sensitiveness; cannot bear the least jar; painful bearing-down; high fever; thirst; flushed face, and even delirium in post-partum cases; lochia feels hot to the patient. It is also useful for mild cases, worse during the menstrual periods.

| **Bryonia** was a favorite remedy with Drs. Jahr and Leadam; but Dr. Ludlam does not express a favorable opinion of it, except where the ovaritis seems to be rheumatic in origin (Macrotin, rhododendron, rhus tox.). It seems to be best suited to cases of moderate severity, with stitching pains, worse on coughing, inspiration (Canth.), and motion; pain shooting or extending to the hips (Merc.).

Cantharis. Patient cannot breathe freely on account of the stitching, pinching pains in the ovarian region (Bry.); cutting, burning pains in the ovaries; bearing-down in the genitals; *violent pains in the bladder, with frequent urging and great tenesmus* (Terebinthina); excitement of the sexual instinct (Platina, sabina).

| **Colocynth.** Ovaritis, the left rather than the right side, complicated with peritonitis, especially when it follows an abortion; numbness in the limbs (Plat.); cramp-like or boring tensive pain in the ovaries, causing the patient to double up, with great restlessness; pain extends down the inner side of the thigh (Phos., staph., xanthox.). There is much pain in the abdomen, and sometimes diarrhœa and tenesmus of the bladder (Canth.). The ovaritis calling for colocynth is characterized by the severe colicky pains in the left ovary.

Conium. Chronic ovaritis; induration and enlargement of the ovaries, with lancinating pains; soreness and swelling of the breasts before the menses; menses feeble or absent; leucorrhœa thick, milky, with labor-like pain, or of white acrid mucus, causing burning; offensive eructations, vomiting, sour rising, or violent pain in the stomach.

Hamamelis. Gonorrhœal ovaritis; sub-acute ovaritis, or ovaritis without peritoneal complications (Puls.); ovaries are sore and painful, soreness over the abdomen; menses irregular or profuse, with dysmenorrhœa and varicose veins.

| **Lachesis.**[1] Drs. Hughes and Guernsey think that lachesis acts more on the right ovary than on the left, while Drs. Hering and Lippe give the left ovary the preference. Dr. Hughes thinks

[1] Amer. Journ. of Hom. Mat. Med., vol. i. p. 44; and U. S. Med. and Surg. Journ., vol. ii. p. 85.

naja, an analogous remedy, acts more on the left ovary. At Dr. Hering's suggestion, lachesis has been used with much benefit for chronic enlargement with abscess or induration of the ovaries; it is also excellent for chronic or sub-acute ovaritis, complicated by metritis, especially if it occurs at the climacteric. Menses feeble and scanty, but regular; labor-like pains before or during the flow (*Caul.*, cimicif., *puls.*); cutting uterine or ovarian pains relieved by flow of blood; copious, greenish leucorrhœa, which causes smarting; great sensitiveness of the hypogastrium; platina follows lachesis well.

Macrotin is preferred by some to cimicifuga in ovarian disorder; ovaritis which seems to be due to a *metastasis of rheumatism* (Bry., rhododendron, rhus). The pains shoot up to the side (Puls.); the hypogastrium is very sensitive to pressure, with a bearing-down sensation; the menses are *irregular, delayed, or suppressed; great nervousness or chorea at time of the menses;* infra-mammary pains, worse on the left side.

| Mercurius. Dr. Hughes prefers the corrosivus, and Dr. Ludlam the vivus. This is one of the most important remedies, to say the least, for ovaritis complicated with peritonitis, especially in the puerperal state, to avert the formation of an abscess. There is deep sore pain in the pelvis (Ustilago, podo.), dragging in the loins, sensation of weakness in the abdomen; or, the abdomen may be distended and painful, with a bruised sensation, or cutting, stinging pains, worse at night; frequent urging to urinate; perspiration without relief; ovarian pains shoot or extend toward the hips (Bry.).

| Platina.[1] Sexual desire excited (Sabina, canth.); ovaritis with burning pains in paroxysms; numbness in the limbs (Coloc.); menses too early and profuse (Puls. the reverse),

[1] Mrs. ——. Chronic ovaritis and sterility. Since marriage, twelve years previous, she has had pain in the region of the left ovary, and a feeling of internal soreness, increased by going up stairs or any sudden movement. She had had an erosion of the cervix which had been successfully treated by nitrate of silver without relief to the ovarian pain. Had never been pregnant. Platina 6x. was prescribed. The symptoms disappeared in six months, and in three months more she became pregnant. — J. HARMAR SMITH, M.R.C.S.: *British Journ. of Hom.*, p. 157, 1867, vol. xxv.

flow dark; leucorrhœa only in the daytime; hysteria and melancholia. Chronic cases when there is reason to suspect induration of the ovaries. If platina seems indicated, but mental symptoms do not correspond, and it fails to cure, Dr. Hering recommended palladium. The latter seems to act best on ovarian affections of the right side.

Podophyllum,[1] which is often overlooked, is an excellent remedy for ovaritis. It is best suited to cases of moderate severity; *pain in the region of the ovaries, especially the right;* bearing-down pain, particularly during stool; frequent, painless, watery diarrhœa is sometimes present; restless sleep, especially in the fore-part of the night (*Phos.*).

Sepia is a good remedy for chronic ovaritis, but the indications for it are scanty, and pertain to uterine rather than ovarian disease; dull, heavy pains in the ovaries with pain in the uterus, and sensation of much bearing-down in all the pelvic organs; yellow, milky, excoriating leucorrhœa, worse before the menses; urging to urinate, with turbid, clay-colored, or reddish sediment; constipation, and sense of goneness or emptiness in the stomach and abdomen.

Thuja is of great value for left-sided ovaritis, worse at each menstrual epoch; distressing pain, burning when walking or riding, obliging the patient to lie down. It is also good for chronic ovaritis, with a suspicion of venereal taint. There is a tendency to the formation of seedy pediculated warts on the

[1] I found this remedy very useful in the following case: A young woman had caught cold four months previous by wetting her feet. She had, nearly every day, excruciating attacks of pain in the right ovarian region. Examination showed a right-sided ovaritis, complicated by localized pelvic peritonitis and some cellulitis in the same side. Benefit was derived from hot-water douches, glycerine, and hamamelis locally, as well as bell., cimicif., and arsenicum at different times, internally. The paroxysms of pain subsided, leaving a deep-seated aching pain in the right ovarian region which ustilago relieved, but only for a short time. For a number of years she had not been able to go to sleep till nearly morning when her husband was away, but slept well if he was at home. At this time she caught more cold, and suffered agonizing pain for nearly twelve hours. This ceased, leaving the same deep-seated pain, only worse, and increased sensitiveness in the right ovarian region. Podophyllum 3x. gave marked relief in a few hours. The same remedy was continued for about a month till she entirely recovered, and could sleep sound all night independent of her husband's absence.

skin, persistent sleeplessness, morning diarrhœa, and severe headache.

Ustilago. The writer has found this remedy useful for *deep-seated, sore, aching pain* in the pelvis, more especially the left side; menses scanty, with ovarian irritation; bearing-down pain; burning distress in the ovaries; acute pain, worse in the left ovary, intermitting or shooting down the legs.

Zincum has a peculiar symptom not often found in ovaritis; boring pain in the left ovarian region, better from pressure, but entirely relieved only during the menstrual flow.

The following list of remedies is given for further consultation: —

Arg. met., arnica, *aurum mur.*, cactus, cauloph., china, clematis, ferrum phos.,[1] gelseminum,[2] *graphites*,[3] hepar sulph., ignatia, iodine,[2] lil. tig., *naja*, natrum mur.,[4] palladium, phosphorus,[2] phos. ac., *pulsatilla*,[2] rhus tox., sabadilla, sabina, secale, staphisagria,[2] sulphur, veratrum vir., xanthoxylon.

[1] Mrs. ——. Much left-sided sub-mammary and sacral pain, especially before the menses; the latter are worse on lying down; bloating of the lower part of the chest and stomach; much headache during the day; low-spirited; feels weak; acute pain in the lower part of the back, causing her to fall back when rising in the morning; *constant desire to pass water day and night, worse in the day-time, with pain over the left ovary, worse on pressure, increased by urination.* Ferrum phos. 1x. trit. promptly cured her. — Dr. Robert T. Cooper: On the Action of Iron, *Brit. J. of Hom.*, p. 412, 1874.

[2] Recommended by Dr. John Moore, Monthly Hom. Review, Nov. 1, p. 671, 1871.

[3] Mrs. ——, aged 51. In each iliac fossa I found a very hard round tumor, about the size of an orange, extending nearly to the median line, the right a little larger than the left. Both were slightly movable, sensitive to firm pressure, and the patient complained of their weight. These had been gradually growing for some time. Graphites 12c., night and morning, was given on account of the analogy of the swollen ovaries to enlarged testicles, which this remedy has cured. The medicine was only taken at intervals during the next seven months, on account of bronchitis and rheumatism, which required other remedies. The next four months the remedy was used continuously, and the tumors entirely disappeared and have not returned. — Dr. Dudgeon: *British J. of Hom.*, p. 183, vol. xxxi., 1873.

To be borne in mind for the treatment of ovaritis caused by the application of nitrate of silver.

The following digest may serve to suggest a remedy: —

Acute ovaritis. — Acon., apis, ars., *bell.*, bry., canth., coloc., guiac.,[1] *ham.*, macrotin, puls., sabina.

Chronic ovaritis. — *Apis*, ars., china, conium, graph., ham., ignatia, *lachesis*, *merc. cor.*, palladium, platina, podo., puls., sepia, sulph., staphisagria, *thuja.*

Right ovary. — *Apis*, ars., bell., bry., ferr., lach., palladium, podophyllum.

Left ovary. — *Arg. met.*, colocynth, *lach.*, lyc., *naja*, stram., phos., *thuja.*

Ovaritis due to abortion or puerperal septicæmia. — Acon., arn., ars., *bell.*, *coloc.*, ham., *lach.*, *merc. cor.*, secale, veratr. vir.

Ovaritis due to sexual excesses. — Bell., *china*, ham., ignatia, phos., *phos. acid*, plat., *staph.*, sulphur.

Ovaritis due to a venereal taint. — *Aur. mur.*, bell., canth., clematis, *merc. sol.* or *iod.*, kali iod., *nitric ac.*, *thuja.*

Chronic ovarian pains. — Apis, *bell.*, conium, *lach.*, merc., *naja*, *podo.*, plat., *puls.*, *thuja*, ustilago.

Ovaritis with menstrual derangement. — Apis, canth., cauloph., lach., macrotin, platina, pulsatilla, sabina, secale, sepia.

Atrophy and induration of the ovaries. — Baryta mur., conium, graphites, iodine, platina.

[1] An old remedy and a favorite prescription of Dr. Dewees, especially for rheumatic patients. Dr. M. O. Terry reports three cases of long standing, characterized by pain in the left ovary, irregular menstruation, and dysmenorrhœa, which were cured by guiac. in ten-grain suppositories. — *New York State Soc. Transac.*, 1883.

CHAPTER XXVII.

TUMORS OF THE OVARIES AND BROAD LIGAMENTS.

VOLUMES have been written on this subject alone, and in the small space available in the present work theoretical questions cannot be discussed. Great advances have been made in the treatment of these growths; indeed, it may be called the triumph of surgery; but there is very little known of their origin, and various authors differ materially in describing their pathological details. Neither of these, fortunately, is essential to their diagnosis and treatment. Interesting as it might be to the curious reader, etiology and the minute details of pathology must be omitted to give place to points of direct practical importance to the practitioner.[1]

It is interesting to note, however, that unmarried women are much more liable to ovarian tumors than the married, contrary to the rule for fibroid tumors. Among 1,686 patients, 661 were unmarried and 1,025 married. In a series reported by one German and one English surgeon, 737 women were married and 508 unmarried. The number of married women between twenty and fifty years of age is very much larger than the number of unmarried of the same age; in Prussia the proportion of married women is five times as great.

[1] For further study, the reader is referred, in order of preference, to the works of Sir Spencer Wells, Greig Smith, R. Olshausen, Drs. Peaslee, W. L. Atlee, and Lawson Tait. Dr. Goodell gives a fine description of ovariotomy in his Lessons in Gynæcology, p. 449, 1887.

This may be explained by the theories that either the cessation of ovulation during pregnancy and lactation acts as a safeguard against the growth of ovarian cysts, or that the sexual relations regulate the nervous forces and nutrition of the ovary, which otherwise might become perverted and lead to the growth of an ovarian tumor. While these tumors are most common between twenty and fifty years of age, i.e., during the greatest sexual vigor, they may occur at any period of life, in new born or in the very aged. In about eight per cent of the cases there is a tumor in each side of the pelvis.

Any classification of these tumors must be necessarily faulty, but it is hoped the following will be of assistance to the reader: —

- Ovarian tumors
  - Malignant[1]
    - Carcinoma
      - Solid.
      - Cystic, most common form of cancer.
    - Sarcoma — Combination of the above, and seldom seen.
  - Benign
    - Hydatid cysts — Very rare.
    - Dropsy of the Graafian follicle — Common, but rarely develops to any extent, or causes any symptoms.
    - Fibroma — Very rare, and hardly ever attains any size.
    - Dermoid cysts — Not common.
    - Ovarian cysts proper
      - Glandular, from proliferation of epithelium, and the constant formation of glandular follicles.
      - Papillary, from growth of connective tissue, and the formation of vascular papillæ.
      - Combination of these forms.
    - Parovarian cysts.

Malignant Tumors. — It may be laid down as a rule with few exceptions, that large solid tumors of the ovary

[1] It has been observed that malignant disease is more often seen in countries of an older settlement rather than in the new, as in the United States.

are malignant. The development of carcinoma or sarcoma may be primary and independent; but either not infrequently complicates cystic degeneration, particularly the papillary form, though the latter is not to be considered any form of cancer. Both the scirrhous and medullary varieties are found, the latter being the more frequent.

Cancer may develop as a hard, friable, nodular mass of a reddish hue, or as a mass of globular, cystic, or semi-solid cysts, which are often of a pale straw color with very friable walls. Adhesions are much more common than with benign tumors; and very early there is a tendency to invade the peritoneum, in the shape of nodules, and the pelvic cellular tissue through the pedicle of the tumor. Both ovaries are usually affected. The disease develops rapidly with symptoms of chronic peritonitis, a large effusion of ascitic fluid, and œdema of the feet without the presence of cardiac, hepatic, or renal disease to account for it. The well-known cachexia, loss of strength, local pain, and sensitiveness are also marked symptoms.

The researches of Drs. Thornton [1] and Foulis [2] on the microscopic character of the ascitic fluid are of great importance in the diagnosis of malignant disease. With a magnifying power of three hundred and fifty diameters and a No. 3 ocular, groups or masses of round or oval cells with large nuclei are seen; large spaces are present in the centre of many of these masses.[3] *Sarcoma* appears not unlike a fairly symmetrical hypertrophy of the ovary, similar to a fibroid, with the formation of numerous cysts, giving it a semi-solid consistency. There is no way of distinguishing between carcinoma

[1] British Medical Journal, Sept. 7, 1878.

[2] Ibid., July 20 and Nov. 2, 1878, pp. 91 and 658.

[3] Some fine illustrations of these are in Hart and Barbour's Manual of Gynæcology, 1886, pp. 210, 217, plates ix. and x.

and sarcoma with positive certainty while both are in the closed abdominal cavity. The absence of metastasis, and greater mobility are in favor of sarcoma.

Benign Tumors. — The first three forms of benign tumors may be passed by, as they are either pathological curiosities, or seldom cause any disturbance. *Dermoid cysts* are comparatively rare, and not limited to any age. They seem to be excited to activity, and peculiarly prone to suppuration, after the traumatism of labor.[1] They are not cured, however, by the discharge of pus ; this, with the escape of hair and, less frequently, teeth, may go on for an indefinite period. These cysts are believed to originate from a folding-in and enclosure of a portion of the epiblast during fœtal life. This accounts for the true skin lining the cavity, and the character of its contents which consist principally of fat (which is fluid in the body but which rapidly solidifies at a lower temperature than 98°F.), balls of hair, teeth, striped muscle, sarcomata,[2] and pieces of bone. Malignant degeneration,[3] more often sarcomatous, has been observed. Dermoid cysts vary in size, grow very slowly, or may remain dormant for years without giving rise to any symptoms so long as they do not degenerate.

Ovarian Cysts are more often of the glandular variety, multilocular ; and the larger they grow, the more likely they are to approach the unilocular form by the breaking-down and disappearance of septa, leaving one cavity where two or more previously existed. The contents of the cysts are of a complex character chemically,[4] and

[1] Barnes : Diseases of Women, p. 337, 1878 ; and P. Mundé, Amer. Journal of Obst., p. 578, vol. xi.

[2] Hart and Barbour's Manual of Gynæcology, p. 214, 1887.

[3] Centralblatt für Gynäkologie, No. 35, p. 569, 1886.

[4] For a description of the chemical properties of ovarian fluids, see a paper by Mr. J. Knowsley Thornton, Medical Times and Gazette, 1876 ; and Eichwald, Colloidentartung d. Eierstöcke, Würzb. Med., Med. Zeitschrift, Bd. v. p. 270, 1864. Comp. vol. x., Ziemssen's Encyclopædia, *sub* Ovarian Cysts.

vary much in consistency and color from being thin and grumous to thick and gelatinous. The corpuscular elements of the fluid are numerous, and various observers differ materially in their descriptions. Dr. Drysdale[1] of Philadelphia has described a corpuscle, which bears his name, and the presence of which he claims is proof that the fluid containing it is ovarian. "It is generally round, delicate, transparent, and contains a number of granules, but no nucleus;" acetic acid only makes the granules more evident. His experience, based on the examination of many hundred specimens, is worthy of careful examination. Dr. Garrigues[2] investigated the subject, and came to the conclusion that Drysdale's corpuscles are merely epithelial cells undergoing fatty degeneration, and not diagnostic of ovarian fluid, as they are found in other cysts and cavities. He attaches the most importance "to the presence of columnar epithelial cells seen in side view." The question is still uncertain, and may be considered *sub judice.*

The papillary form of ovarian cystic tumor develops from the hilum of the ovary. Not infrequently the cyst-wall ruptures, retracts, and leaves the sprouting papillary or cauliflower-like mass projecting into the peritoneal cavity, causing a chronic form of peritonitis. Dr. Emmet[3] and Dr. Foulis hold that a bloody ascitic fluid is diagnostic of this condition.

Parovarian Cysts (*cysts of the broad ligaments, ciliated epithelium cysts*) are not so rounded as those of the ovary; are covered by peritoneum; contain little more than salt and water; and are distinctly fluctuating. As a cyst grows, it may spread between the folds of the broad ligament, and consequently, in an operation,

[1] Transac. Amer. Med. Asso., 1873; and Transac. Amer. Gyn. Soc., 1882.

[2] American Journ. of Obstetrics, January, April, and July, 1882.

[3] Principles and Practice of Gynæcology, pp. 683 and 684, 1884.

require enucleation on account of the absence of a pedicle, which in ovarian tumors is formed by the Fallopian tube, ovarian and broad ligaments.

The Symptoms of benign tumors are those arising from pressure, and anæmia consequent on the inability of the system to nourish both itself and the growth. While the tumor remains small in the pelvis, no symptoms are likely to arise. The abdomen gradually enlarges; there is a feeling of weight and pressure, with neuralgic pains in the pelvis; irritability of the bladder, and constipation; later, venous distension in the skin, hemorrhoids, sometimes diminution of urine; ascites, dyspnœa, and cardiac palpitation; gradual failure of health; and a peculiar anxious, drawn expression of the face. Menstruation is seldom interfered with until the health of the patient has very much deteriorated. Not all these symptoms are likely to be found in the same case.

The physician is seldom called upon to diagnose an extra-uterine pelvic tumor till it has risen into the abdominal cavity.

The first thing to decide is, whether it is ovarian; the second, if it be benign or malignant; and, third, the treatment which offers the best chance of saving or prolonging the patient's life, without regard to swelling the number of laparotomies or the bank-account of the operator. An inexperienced person might think the diagnosis easy and simple, to judge by the elaborate descriptions and detailed points of differential diagnosis as given in various treatises on the subject; but those who are familiar with these growths in their varied conditions know too well, perhaps more here than in any other disease, how difficult is the diagnosis in some cases, and simple in others. It cannot always be determined, even by an exploratory incision; and what may

appear to be the simplest case before commencing an operation, may prove exceedingly difficult to complete.

These remarks are made before giving the points of differential diagnosis, not only to warn the examiner from being too hasty in his conclusions, but also to offer a grain of comfort if he has made a mistake. In very doubtful cases, the aspirator may be used to obtain fluid for chemical and microscopic examination; but unless there are urgent reasons, the operator had better refrain, as it is apt to cause a localized peritonitis and adhesions, while the results obtained are not likely to be of much practical value, except the examination of the ascitic fluid for the groups of cells characteristic of malignant disease.

The Examination. — In conducting an examination, the patient must lie on her back, on a hard table or mattress, with the knees drawn up, the abdomen freely exposed, with all constricting clothing removed. She should be assured that she will not be hurt, and encouraged to relax the abdominal muscles, so as to enable the physician to thoroughly examine the tumor. The patient should have previously free evacuations of the bowels by enemata or mild laxatives, an empty bladder, and in all doubtful cases anæsthesia is necessary. These precautions at once eliminate fæcal impaction, distended bladder, and phantom tumor.

On inspection, the abdomen is seen to be more or less distended, sometimes a little to one side of the median line, with blue veins coursing over the surface, and, not infrequently, protrusion of the navel and striæ on the skin. Fluctuation in fluid cysts is often readily perceived. As a rule, there is no fluctuation by external palpation in small tumors which do not extend to the umbilicus, but only a sense of elastic resistance to the examining fingers. If one finger, in either the

vagina or rectum, can be placed against the tumor, fluctuation is often felt with the aid of the hand outside. If the wave is extremely distinct and superficial, on external palpation, even visible to the eye, and produced by the slightest tap of the examining finger, the cyst is probably unilocular and parovarian. This probability is increased if the tumor is flaccid, of slow growth, and produces no symptoms causing the patient to complain.

Multilocular tumors are often recognized by their nodular shape, irregular resistance, fluctuation distinct in one place and indistinct or absent in another place. Large tumors extending above the umbilicus without distinct fluctuation are scarcely ever unilocular cysts.

The reverse of these conditions, i.e., uniform shape and resistance, and distinct fluctuation, does not hold true for the inference of a simple cyst. The main cyst may be large, and present all these features, while there may be many smaller ones within it, or deep in the abdominal cavity, which give the tumor all the characteristics of a proliferating cystoma.

The tumor lies in front of the intestines, so that there is a fixed area of dulness in front which does not change with the position of the patient, showing the tumor cannot be free fluid in the peritoneal cavity. There is evidently an abdominal tumor of some kind. If of pelvic origin, the history of the case is likely to show that it developed from below upward. If the tumor is of hepatic, splenic, or renal origin, continuous dulness on percussion from above downward, with the symptoms of disease of those structures, will be present.

In a tumor of the broad ligament, the uterus is elevated in proportion to the size of the tumor, and crowded toward the opposite side of the pelvis; such tumors also extend deep into the pelvis, are immovable when small, and admit of only limited motion when large. If

there be a tumor in each broad ligament, the uterus is forced up between them, and the vagina becomes cone-shaped, at the apex of which the cervix is reached with some difficulty. A rectal examination is very useful to confirm the diagnosis of a cyst of the broad ligament.

The diagnosis of a sub-serous tumor in other situations than the broad ligament is often difficult or impossible; but the deep descent of the tumor into the true pelvis behind the uterus, the immobility of the pelvic portion, the rapid growth, ascites, and the feeling of papillary excrescences, indicate a sub serous tumor.

The length of the pedicle is associated to a certain extent with the mobility of the tumor. The size and site of the pedicle can be often ascertained by a rectal examination with the aid of ether and drawing down the uterus, or by introducing the fore and middle fingers into the rectum, and the thumb of the same hand up the vagina so as to reach the cervix. The other hand on the hypogastrium depresses the uterus, while an assistant draws the tumor up from the pelvic brim or to one side of it.

The use of the sound to measure the cavity of the uterus, and to ascertain the amount of motion communicated to that organ by moving the tumor, while the sound is in the cavity, is an important aid in determining the relation between them, whether connected or independent of each other.

A history of slow development, absence of inflammation, and presence of the ordinary menstrual flow, distinguish an ovarian tumor from hæmatocele, the exudation of cellulitis or peritonitis, abscess, fibroids encroaching on the uterine cavity, and pregnancy.

By this simple process of elimination, there remain the following conditions with their diagnostic points: —

Distension of the Fallopian Tube.	*Fibro-Cystic Tumor of the Uterus.*	*Omental Tumors.*	*Ovarian Cyst.*	*Parovarian Cyst.*	*Solid Ovarian Tumor.*	*Dermoid Cyst.*	*Encysted Peritoneal Dropsy.*
Usually of long duration.	Tumor very slowly developed.	Develops slowly.	Develops rapidly; emaciation; and health fails in two years.	Develops slowly.	Develops slowly.	Often does not change till after labor.	History of inflammation.
High in the pelvis.	In connection with the uterus.	No connection with uterus.	Crowds uterus down, or to one side, but no connection.	Same as with ovarian cysts.	Independent of the uterus.	No connection with uterus.	No connection with uterus.
Symptoms of pelvic peritonitis.	Sometimes menorrhagia; increased depth of the uterus.	Neither menstruation nor uterine cavity affected.	Neither menstruation nor cavity of the uterus affected.	Same as with ovarian cysts.	Same as with ovarian cysts.	Same as preceding.	Same as ovarian cysts.
Fluctuation indistinct.	Fluctuation in portions of tumor.	If cystic, the fluctuation is often very distinct.	Fluctuation often distinct, but not always.	Fluctuation remarkably distinct.	No fluctuation.	Fluctuation usually obscure.	Fluctuation very distinct.
Moderately firm.	Some hard bunches, others softer.	Moderate resistance.	Amount of firmness varies, but the tumor is never felt to contract during manipulation.	As with ovarian cysts.	Hard.	Moderately firm.	As with ovarian cysts.
Sausage shape, extending from upper angle of uterus to the side of the pelvis.	Has an irregular outline.	Rounded, and generally a regular outline.	Rounded, with a symmetrical, smooth surface, except with some multilocular and malignant tumors.	More oval, and not so round as the ovarian cysts.	Small and symmetrical.	Smooth, symmetrical surface.	Not so prominent, and rounded: extends laterally to the iliac fossæ.
Contents, pus or serum, sometimes bloody.	Fluid drawn off by aspirator leaves bunches behind, and at once coagulates; contains muscle fibre cells (Drysdale).		Aspirator needle moves freely in the cyst, which collapses if contents will flow through the needle, but soon refills; contains Drysdale's corpuscles (Drysdale), paralbumin.	Contents clear, escape easily, chiefly salt and water; not likely to refill.		Fluid fat, solidifies, and clogs the cannula if the latter is not kept well warmed.	Ascitic fluid.

Having arrived at some conclusion as to the kind of tumor, it is equally important to ascertain whether it be benign or malignant. In this, the symptoms already given will be a guide, as well as the following table : —

Benign Tumors.	*Malignant Tumors.*
No history of heredity ; health not affected till late in the disease unless there is menorrhagia ; no cachexia.	History of heredity ; health early affected ; cancerous cachexia.
Growth slow, especially if fibro-cystic ; outline fairly smooth and regular. Large, solid, benign tumors of the ovary are scarcely ever seen. Not much pain or soreness in the abdomen ; ascites rare ; fluid does not show the cell groups.	Growth rapid ; outline knobby, irregular ; they are sometimes large and comparatively hard. A large amount of ascites develops early, containing the cell groups previously mentioned. Much local pain and soreness in the abdomen. Hardening of the tissue, and nodules, are felt in the fornix of the vagina and broad ligaments when the disease is well established.

The diagnosis of adhesions may be considered impracticable. The history of peritonitic pains, fixation of the uterus and base of the tumor, with a varying amount of immobility of the abdominal wall, which will not glide over the surface of the growth during respiration, would lead us to suspect adhesions.

The Prognosis of ovarian tumors, when allowed to run their course, is decidedly unfavorable. Some develop much more rapidly than others, and this must be considered in expressing an opinion as to their duration. Ovarian cystic tumors average about three years from their beginning to the death of the patient. She is not

likely to apply for relief before a year or eighteen months have elapsed, leaving about eighteen months more of life for the majority of cases. A few instances have been reported of spontaneous cure, chiefly by rupture. The strong probability is that these were par-ovarian cysts.

The Clinical History of ovarian tumors as they progress to a fatal termination cannot now be studied, but it may not be out of place to quote the eloquent description of it by Dr. West. "We have symptoms of the same kind as we see towards the close of every lingering disease, betokening the failure, first of one power, then of another; the flickering of the taper, which, as all can see, must soon go out. The appetite becomes more and more capricious, and at last no ingenuity of culinary skill can tempt it; while digestion fails even more rapidly, and the wasting body tells but too plainly how the little food nourishes still less and less. The pulse grows feebler, and the strength diminishes every day, and one by one each customary exertion is abandoned. At first the efforts made for the sake of the change which the sick so crave for are given up; then those for cleanliness; and, lastly, those for comfort, — till at length one position is maintained all day long in spite of the cracking of the tender skin, it sufficing for the patient that respiration can go on quietly, and she can suffer undisturbed. Weariness drives away sleep, or sleep brings no refreshing. The mind alone, amid the general decay, remains undisturbed; but it is not cheered by those illusory hopes which gild, though with a false brightness, the decline of the consumptive; for step by step death is felt to be advancing; the patient watches his approach as keenly as we, often with acuter perception of his nearness. We come to the sick-chamber day by day to be idle spectators of a sad cere-

mony, and leave it humbled by the consciousness of the narrow limits which circumscribe the resources of our art."

As every operation has its indications, it also has its counter-indications. In case of advanced kidney, heart, or malignant disease, and the presence of universal adhesions, ovariotomy should not be performed. The presence of such adhesions can only be determined by exploratory incision, which is always advisable in doubtful cases. In exceptional cases of malignant tumors, at a very early stage of the disease before it has spread from the pedicle or extended to other organs, ovariotomy may be performed, but even here the rate of mortality is very high.

It is a matter of regret that so many embryo surgeons with the ink scarcely dry on their diplomas, who have not seen more than one or two ovariotomies, are so ready to perform this operation. While it is true that it is often very easy, it may also tax the skill of the most experienced operator; and no one can tell which it will be before the abdominal cavity is opened. The fact that Dr. Keith has performed seventy-six consecutive ovariotomies without losing a patient, or that the mortality of a few surgeons is less than three per cent, is no criterion of the risk to the patient in the hands of an inexperienced operator.

Ovariotomy is described in so many text-books, it will not be given here, and it also lies outside the scope of this work, as it is an operation to be performed only by specialists. Nevertheless, the author desires to make a few important suggestions in regard to it.

I. *Cleanliness*, not antiseptic solutions, and the most careful attention to detail, is the secret of success in ovariotomy.

II. A short abdominal incision is preferable to a long

one. A very large cyst can be removed through an opening three inches long by turning the patient on her side, puncturing the cyst, and drawing the cyst out as it gradually collapses, tying adhesions as they come in view. It is better to divide large ones with the thermo-cautery, and to sear the pedicle.

III. The peritoneal toilet must be thorough, and not a drop of blood left in the abdominal cavity.

IV. Close the peritoneum with a continuous cat-gut suture;[1] then insert a couple of silver wires through the skin and muscles, *but not the peritoneum.* Now bring together *both* the fascia and muscular fibres of the recti by interrupted cat-gut[1] sutures, one-fourth inch apart. A third layer of cat-gut[1] sutures brings together the skin and adipose tissue; finally, the silver wires are twisted together. If the external sutures come out just at the edge of the skin and sub-cutaneous tissue, and the margins of the wound are closely brought together by strips of coarse muslin which are fastened down at either end with collodion, the patient does not suffer nearly so much pain as when the sutures include the skin (I believe this last modification originated with Professor Talbot).

V. Dress with iodoform gauze and borated cotton, and if there are no marked fluctuations of temperature do not disturb it for ten days. The highest temperature is more often seen on the third day, and in the most favorable cases varies from 100° to 102° F. The cat-gut sutures will take care of themselves. The silver wires can be removed in twelve or fourteen days.

The time to operate is whenever the tumor is found, no matter what its size is, if the patient be in a suitable condition. Cool, clear weather, with a westerly wind,

[1] The cat-gut must have been prepared in juniper oil, and not a drop of water allowed to touch it.

is the most favorable. Tapping the cyst, the injection of iodine, and electrolysis are not only attended by danger, but are far less efficacious than the radical treatment of removal.

It is a matter of regret that medicine cannot cope with surgery in the treatment of ovarian tumors. Now and then patients are seen who positively refuse to have an operation performed without trying other measures. In view of this, the following reports of cases cured by remedies are appended without comment, leaving the reader to form his own opinion : —

Apis. — Dr. E. M. Hale cured an ovarian tumor the size of a child's head at birth. It was so diagnosed by Professor Byford, who wished to remove it, and a time was appointed several months from that date. Dr. Hale was applied to, and prescribed apis in a peculiar manner. Ten or twelve living bees were thrown into a teacup of hot water. Of this infusion a tablespoonful was taken every four hours. In a week a perceptible decrease was observed ; and before the time for the operation had come, the tumor had nearly disappeared. — *Brit. Jour. of Hom.*, p. 428, 1871.

Dr. W. S. Craig believes that apis taken internally after tapping an ovarian tumor has considerable power in checking the re-accumulation of the fluid, and reports the two following cases : —

In 1856, Miss ——, æt. 24, observed a tumor in the abdomen gradually increasing in size for eighteen months. It was a firm swelling, lying towards the left side of the umbilicus. Various remedies were used unsuccessfully. I then tapped, and withdrew about eight quarts of straw-colored fluid ; the abdomen was carefully bound, and apis prescribed to be taken internally three times a day. There was no return of the

swelling for two years, when I again tapped, and withdrew six quarts of a similar fluid, after which she resumed the apis. After some years she married, and though she has had no children, she is well, and free from any signs of the disease.

Miss ——, æt. 72, had an ovarian tumor on her left side. Medicines had failed to relieve, and her physician requested me to tap. About five quarts of fluid were withdrawn, and the abdomen carefully supported with a bandage. Apis was given for a length of time. She died six years afterward of bronchitis. A post-mortem was permitted, and the cyst found shrivelled to the size of a walnut, attached by a pedicle to the ovary. — *Brit. Jour. of Hom.*, p. 309, 1874.

Auric Chloride. — Dr. Tritschler states that he has cured a swelling of the ovary extending to the umbilicus, with aurum nat. mur. (chloride of gold), and has very decidedly improved others of considerable size. He states that Martini has cured five extreme cases of ovarian dropsy with the same remedy. — *Hom. Recorder*, p. 102, May 15, 1887.

Bovista. — Girl, æt. 13½. Fluid tumor was found in the lower part of the abdomen, on the left side. It did not change its place in the different positions of the patient. Bovista 6x. was given for four weeks. In three weeks the patient was of normal size. The tumor was supposed to be a parovarian cyst, but its character is doubtful. — Dr. E. M. Madden: *Monthly Hom. Review*, p. 471, Aug. 1, 1881.

Dr. Hawkes reports a similar case cured with bovista, in the Organon for July, 1878.

Bovista seemed to have a beneficial effect in a case of parovarian cyst reported by Dr. S. H. Blake, Monthly Hom. Review, Sept. 1, 1883.

Bromide of Potash. — Mrs. ——, æt. 48. A small tumor was felt in the region of the left ovary, which speedily enlarged. Iodide of potassium was thought to have a good effect in retarding the growth of the tumor. Nevertheless, it grew rapidly, and in four months extended as far as the epigastrium with distinct fluctuation. Extreme dyspnœa was relieved by drawing off eight ounces of a dark-colored fluid, but very severe pain in the region of the tumor followed the operation. Sir James Simpson saw the case in consultation, and recommended bromide of potassium in small doses, — five grains three times a day. Hot poultices sprinkled with turpentine were applied to the seat of pain. The latter diminished, but the tumor began to increase. Two weeks later Sir James Simpson saw the case again, and recommended the dose to be doubled. The tumor began to diminish, the patient perspired very copiously, and passed a large quantity of dark-colored urine.

This continued for two months, when the medicine had to be omitted on account of an attack of acute gastritis. The tumor, which had been very much reduced, gradually increased so that in two months more it was nearly as large as at any time. Sir James Simpson recommended the bromide of potassium in fifteen-grain doses three times a day, with marked benefit and none of the sickening effects she had experienced with the smaller doses. Under the continuous use of bromide of potassium, the tumor gradually diminished in size ; and, wishing to mark the amount of the diminution, the patient was desired to measure the width of the abdomen on a level with the umbilicus ; within three weeks the decrease was from forty-eight to thirty-three inches. In six weeks from the last consultation the tumor had disappeared, and the patient continued to enjoy pretty

good health. — Dr. Miller: *Edin. Med. Journal*, p. 404, November, 1868.

Miss ——, æt. 32, with dark hair and healthy appearance. July 29, 1867, she complains of sharp cutting pains, which are sometimes most agonizing, felt principally in hypogastrium and towards right iliac region. The pains are much increased by walking; there is slight tenderness, pressure over right iliac region, and towards the groin. The abdomen is much distended by flatulence, but above pubis and to right side there is a suspicion of swelling, as if bladder were over-distended. Bowels costive, urine scanty and high-colored, no appetite, tongue furred, pulse normal. From July 29 to Aug. 10 the remedies given were bry., bell., merc. Frequently hot sitz-baths were taken, and hot poultices applied to the abdomen. The pains gradually subsided, recurring, however, in strong paroxysm from time to time; the flatulent distension disappeared, and then the suspicions of tumor were fully confirmed. A smooth tumor, of the size and shape of a cocoanut, can be felt low in the hypogastric and right iliac region. The tumor is now slightly tender when pressed, but palpation gives no evidence of liquid contents.

Aug. 14. — Pain and tenderness have now disappeared; the tumor is evident to the sight, and the patient states that since April, 1867, she has noticed an increased size of her bowels. Graph. 3, two grains every evening, was prescribed. *Aug. 19.* — The attempt to pack a trunk has caused a return of intense pains in the right iliac region, extending through the bowels and to the loins. Bell. 1 was first given, and this failing to relieve, conium in frequent doses was prescribed with good results.

Sept. 21. — The tumor has now attained a large size; it feels smooth and tense, is slightly tender when

pressed, and there is indistinct fluctuation. The abdomen, measured round in a line with iliac crests, is thirty-six inches. The urine is scanty, and there are frequent painful calls to pass it. Bromide of potassium, gr. xii.; aq. dest. ʒ vi; a dessert-spoonful to be taken three times a day in a wine-glassful of water. A tepid sitz-bath, in which is dissolved a teaspoonful of brom. pot., is to be used every forenoon, and during the day an abdominal compress soaked in a solution is to be worn.

This treatment was steadily followed, with from time to time a few days interruption, until the end of February, 1868, when it was discontinued. During October and November, 1867, there were now and then threatenings of attacks of ovarian pain, which were speedily relieved by conium. By the end of October there was evident diminution of the tumor; this diminution steadily continued, so that by the end of February, 1868, the swelling was scarcely to be discovered; and by April it had entirely disappeared. A careful examination on the 30th of May gave the same results; and another made in August afforded no trace whatever of tumor, the measurement of abdomen taken in line with crests of ilium being twenty-six inches, showing a diminution of ten inches.

It does not appear necessary to discuss the nature of this case; for though ovarian tumors do sometimes present great difficulties in determining their seat and character, yet in this instance all the circumstances facilitated the diagnosis. — *Ovarian Cystic Tumor*, by Francis Black, M.D., *Brit. J. of Hom.*, p. 54, 1869.

Calc. Carb. — Mrs. K., æt. 40, tall, slender, dark hair and eyes, and of dark complexion; married, but had no children. Menses regular, but rather scanty and painful. The patient had been suffering for two years or more with a dull, aching, uneasy sensation, and some

soreness in the right inguinal region, and was considerably emaciated. On examination discovered a hard, smooth tumor, about the size of a quart-bowl, quite prominent in the right iliac region, which I decided to be an ovarian tumor. As there seemed to be an acute inflammatory action, gave lachesis twice a week, and continued the treatment six months. I examined the tumor again, and found its size had not increased since the first examination, and that it presented about the same appearance in every way as at first. The patient then went back to allopathic treatment, and I lost sight of the case for two years, when to my surprise I was called to visit her again. An eminent surgeon had been consulted, and pronounced the disease ovarian tumor, and said the only remedy was to remove it by a surgical operation. I now examined the case again, it being two years and a half since I first met the patient, and found the tumor to be about three times as large as when I first examined it, appearing quite firm and hard. I expressed a desire to make one more trial with medicine, to which she readily assented, as she dreaded an operation with the knife. The remedy selected was calc. carb., one grain every evening, which was continued for three months. The tumor now appeared about the same size, but softer and more yielding. Calc. carb. was continued three months longer, once a week at night. The tumor had now diminished in size ; was quite soft and flabby. This gave courage to persevere, and the same remedy was continued six months longer, once a week, making one year that the patient was under treatment. There was now no hardness, and very little fulness. The patient seemed to be so nearly well that treatment was discontinued. It is now a year and a half since the last medicine was given. I saw the lady a few days ago ; remains perfectly well ;

menstruates regularly, and is now forty-five years of age. — CHARLES SUMNER: *N. Y. S. Trans.*, 1871, p. 312.

Colocynth. — Mrs. ——, æt. 38. Trousseau, and later an eminent gynæcologist in New York, diagnosed a small ovarian tumor on the right side. She had not been able to leave her room for a year, and was confined to the sofa. A firm elastic tumor occupied the space between the uterus and vagina anteriorly and the rectum posteriorly, completely occluding the vagina, and rendering defecation very difficult. It seemed not to be adherent to the walls of either passage. Attempts at walking induced paroxysms of acute pain across the hypogastrium, in the sacral region, and around the hip-joint; from here the pains extended down the groin and along the femoral nerve. The pain was relieved by flexing the thigh upon the pelvis, and always induced or aggravated by extending the thigh. Even without the provocation of motion, there were frequent and severe paroxysms of pain as above described. The appetite was not good, and digestion feeble; but the general condition of the patient was good. Nervous sensibility was very great. The pains had been ascribed to the pressure of the tumor upon the sacral nerves.

The patient had a dread of taking opiates, and had used them sparingly. I was requested to mitigate the pains if possible, no hope being entertained of a cure. With no definite expectations of accomplishing a radical cure, I prescribed colocynth 200, a few pellets to be taken whenever a paroxysm of pain came on, and to be repeated every hour during the paroxysm.

Three weeks later I learned that the paroxysms had been less frequent, much shorter, and milder, the remedy appearing to control them.

Four months later the patient walked half a mile to

my office, and reported that she had had no pain for a month. She could walk half a mile daily without fatigue or pain, and had resumed the charge of her household after an interval of nine years. She thought the tumor had become somewhat smaller. Being about to sail for Europe, she desired some more colocynth, that she might be provided in case the pain should return.

After four years, she came back from Europe. I found her perfectly well. There had been no return of pain. Six months after the visit made just before her trip to Europe, the tumor disappeared from its position between the vagina and rectum, and was plainly perceptible in the abdomen. It has since disappeared entirely, and nothing can now be discovered. — C. DUNHAM: *Homœopathy the Science of Therapeutics*, p. 484.

Miss ——, æt. 25, suffered for five years. Extreme weakness and lassitude; cannot walk much on account of the weakness and trembling of the legs, especially in the open air, — when, however, the other symptoms are better. Worse in every respect from heat and warm weather. Walks bent over, with the hand applied to the right side. Sallow complexion, expression of suffering in her face. Occasionally has a sharp pain like a stab in right pelvic region, obliging her to bend double and press strongly with her hand on the part. Appetite variable, mostly poor; sleeps badly, often wakes tired; catamenia too soon by one or two days, scanty, dark-colored, offensive, accompanied by almost constant, sharp, cutting pains, obliging her to bend double, screaming and tossing about in agony. Difficulty of breathing during menses. During the interval, thick, yellow, offensive leucorrhœa. Bowels constipated. A well-defined tumor in right iliac fossa, about the size of a cocoanut, feels elastic but hard, immovable, and

the seat of a cutting pain at intervals. Much bilious vomiting during the attacks of colic. Uterus prolapsed, inclined to left side, and immovable owing to pressure of the tumor. Under previous treatment, the tumor had been punctured by a trocar, once or twice developing fully its cystic character.

After four doses of colocynth (one a week), the suffering at the menstrual period was much increased, though there was no flow. Coloc. 1m., single dose, made some improvement. A month after, coloc. 100m., single dose, since which she has constantly improved in all respects; after five months the tumor could not be detected, and she feels well. — Dr. J. G. Gilchrist:[1] *Med. Investigator*, vol. x. p. 632, 1873.

Graphites. — A painful swelling of the breast about the size of a walnut, was cured in a fortnight with conium 2x. Subsequently a hard round tumor, the size of a large orange, was discovered in the right iliac fossa. It reached to the median line of the abdomen, and was nearly joined by a similar hard round tumor growing up from the left iliac fossa. These tumors were hard, round, and slightly movable; hard pressure caused a little pain; the little inconvenience from them was from their weight, which seemed out of all proportion to their size. The patient took graphites 12 for several months, and the tumors disappeared.

Iodine Water. — Dr. Hirsch of Prague reports a case of ovarian cyst which had increased so much as to injure the health of the patient. He at first gave can. sat. with relief to the dyspnœa, cough, and scanty urine, etc., but no marked diminution of the tumor was apparent. He then prescribed the iodine mineral waters of

[1] In the September number of the American Observer for 1877, Dr. Gilchrist has collected a number of cases of tumors cured by remedies. Consult also an article by Dr. Guernsey in the Hahn. Monthly, p. 279, 1877.

Hall in doses which he estimated to contain the forty-eighth of a grain of iodine. In fourteen days the tumor was less, and in four weeks it had entirely disappeared. A short residence in the country completed the cure, and four years had elapsed without any return of the tumor. — *Brit. J. of Hom.*, vol. xx., 1862; extracted from *Meyer's Allgemeine Homöopathische Zeitung*, May, 1862.

Lycopodium. — Polycystic ovarian tumor on the left side. Diagnosis was made both by careful palpation, and also by Simon's method of exploration per rectum. Patient, æt. 47, married, sterile, and has passed the climacteric. For two years she has had a dull, aching, uneasy sensation in the left inguinal region, constantly growing larger on that side. She had been tapped, but the fluid re-accumulated. The tumor was the size of a child's head. Apis was tried for three months with no effect. Lycopodium 6x. was used for two months, and the tumor slowly diminished; then lyc. 12x. In four months the tumor was one-half its former size. Lyc. 30 was then prescribed, and in eighteen months there was no trace of a tumor. She has remained well for the four years since then. — Dr. J. R. Kippax: *Hom. World*, Dec. 1, p. 541, 1881.

Thuja and Cantharis. — A writer in the Allgemeine Hom. Zeit., vol. xcv. No. 20, states that with cantharis 30 in alternation with thuja, he has completely cured two cases of ovarian cysts of considerable size. — *Hom. Recorder*, p. 112, May 15, 1877.

ADDENDUM.

LACERATION OF THE CERVIX.

SINCE writing the chapter on this subject, and describing the operation for this lesion, I have modified my method of operating on some cases in the following manner. The position of the patient, assistants, and instruments are the same, with the exception of Hagedorn's needle forceps, his strong cervix needles, and the No. 3 catgut hardened by chromic acid or juniper oil.

The cervix is freshened in the usual manner; the raw surfaces carefully cleansed with hot water, every particle of clot being sponged away. The anterior and posterior lips of the cervix are brought in contact so that the freshened surfaces meet each other accurately. Both lips are then seized on their outer surfaces, near the external os, between the short sharp points of a pair of gynæcological bullet forceps. Beginning at the upper angle of the laceration, the Hagedorn cervix needle is thrust deeply through the cervix, which is sewn with a continuous catgut suture, the stitches being taken near together; when one side is sewn, the needle is at once carried, without cutting the catgut, to the upper angle of the opposite side if the laceration be bilateral, which is sewn up in the same way, i.e., one continuous piece of catgut is used for both sides.

The bullet forceps are then removed, and an ordinary silver suture inserted at the same place so as to hold the lips in contact should the catgut loosen prema-

turely. The catgut must not be touched with water or a wet sponge.

After the sutures are all in, the cervix is carefully dried, and powdered with a little iodoform. A strip of iodoform gauze is packed loosely in the vagina. The patient is put to bed, and the urine is drawn with a catheter once in six hours. If there is no bad odor or discharge from the vagina, no vaginal douche is used, and perfect quiet enjoined. A little discharge and some odor is not uncommon about the fifth or sixth day after the operation. The gauze is then removed from the vagina, and a small carbolized douche with a little calendula is administered.

The use of douches from the beginning is not advisable when catgut sutures are used, as the water softens the suture; nor must these sutures be drawn tight when put in, but only just snug enough to hold the parts in contact with as little traction and depression of the surface as possible.

The advantages of this method are: increased rapidity of operating on account of time saved in not twisting wires or tying knots, only one suture to be removed, and a saving of pain to the patient, besides equally good results.

The author does not claim this modification of this operation as his own, though he has not known or seen others operating in this way.

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MEMORANDA.

THESE pages are designed for the recording of cases, verified symptoms of remedies, or other information which the reader may wish to preserve. The author earnestly recommends such records, and hopes the reader will kindly send him a copy of all such, or else publish the same. It is only by accurately and repeatedly recording cases cured, and verified symptoms, that the art of prescribing remedies can be perfected.

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