Practical gynaecology / by Heywood Smith.

PRACTICAL GYNÆCOLOGY.

PRACTICAL GYNÆCOLOGY.

A HANDBOOK

OF THE

DISEASES OF WOMEN.

BY

HEYWOOD SMITH, M.A., M.D., Oxon.

SECOND EDITION,

Revised and Enlarged.

London:
HENRY J. GLAISHER,
57, Wigmore Street, Cavendish Square, W.
—
1900.

TO THE MEMORY OF

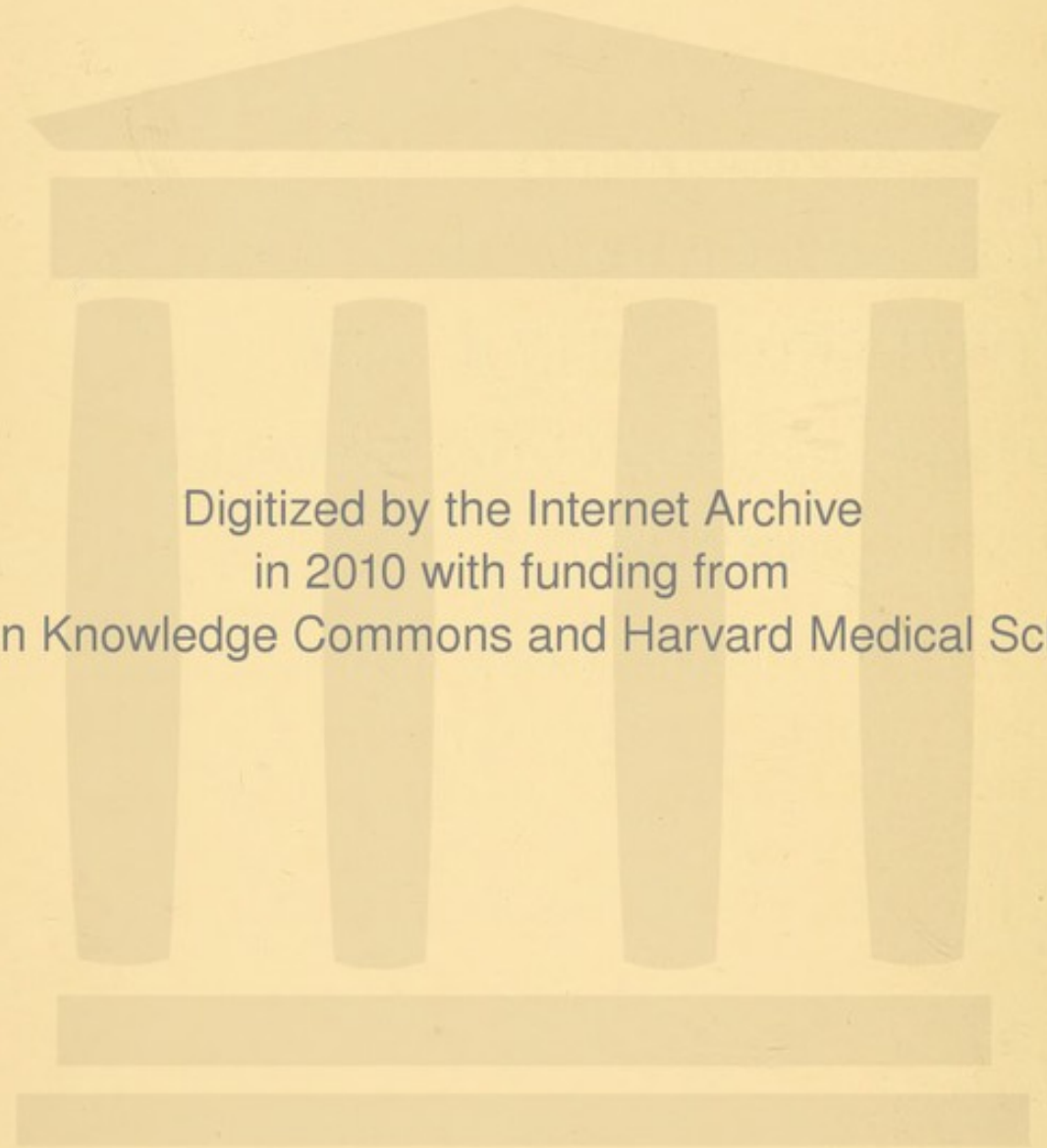
MY FATHER,

PROTHEROE SMITH, M.D.,

THE FOUNDER OF THE FIRST HOSPITAL FOR WOMEN,

This Work

IS MOST AFFECTIONATELY DEDICATED.



PREFACE.

THE First Edition having been out of print for some years, the great advance in Gynæcology necessitated a thorough supervision of the text. This Edition is therefore sent forth with the hope that it may prove useful, not so much as a "cram" for advanced students, but as a refresher for the busy general practitioner, who needs something in a condensed form for easy and rapid reference. It is too often that a handbook grows in subsequent editions, so that it loses its original intention; but I have striven to keep this handbook as such within practical limits. I may here state, which is not merely my own observation, that the advance which British Gynæcology has made during the past twenty years has been in a great measure due to the work done by the British Gynæcological Society.

H. S.

HARLEY STREET, W.
April, 1900.

PREFACE TO THE FIRST EDITION.

OF big books on Diseases of Women there is no end. They are for the most part valuable in their way, and are necessary for the complete elucidation of this most important subject, both as to its literature and as putting the student in possession of the various teachings of many different schools. Their very size, however, and a certain want of system in their arrangement, often preclude their being largely used as books of immediate reference.

My object in the present work has been to present the busy practitioner with a book systematically arranged, burdened with no discussions on vexed questions of pathology, and giving at a glance the salient points of diagnosis and treatment with clearness and brevity.

The contents are arranged on the basis of the nomenclature of the Royal College of Physicians, rendering reference to any particular disease easy, while there are added a list of Remedies and a comprehensive Index, which, it is hoped, may be found useful.

. . . . . .

If I shall have rendered the subject of Gynæcology more easily understood, and placed in the hands of general practitioners a means of helping them to a more accurate diagnosis and treatment of diseases that form an increasingly important branch of their practice, my labor will be amply repaid.

H. S.

PORTUGAL STREET, MAYFAIR,
October, 1877.

CONTENTS.

ON SIGHT.

ON HEARING.

CHAPTER II.

CHAPTER III.

Diseases of the Ovary.

CHAPTER IV.

Diseases of the Oviduct.

CHAPTER V.

Diseases of the Broad Ligament.

CHAPTER VI.

Diseases of the Uterus (unimpregnated).

CHAPTER VII.

Diseases of the Vagina.

CHAPTER VIII.

Diseases of the Vulva.

CHAPTER IX.

Diseases of the Mamma.

CHAPTER X.

Functional Diseases.

CHAPTER XI.

Diseases connected with Pregnancy.

CHAPTER XII.

Diseases connected with Parturition.

CHAPTER XIII.

Diseases consequent on Parturition.

LIST OF ILLUSTRATIONS.

INTRODUCTION.

THE organs of reproduction are the centre round which the whole cosmogony of the female revolves, and as such regulate the life and machinery of her being.

In the animal world the male is formed not only to govern, but also to win sustenance for himself and his dependents, and is gifted with superiority, whether of strength or of intelligence, to enable him to accomplish his mission in the economy of creation. His organs of reproduction are mere accessories of his being, for the most part external to the trunk, and the deprivation of which would in no way interfere with the perfect symmetry of his form; whereas in the female, as in the vegetable kingdom, the organs of reproduction constitute the whole essence of the creature, and the body is, as it were, built up around them, and modified by the necessities which their existence demands.

As in the vegetable kingdom, so also in the animal kingdom, the female is formed specially for fruit-bearing. To the male truly belongs the faculty of fertilising the ovum; but, that being accomplished, to the female the work is assigned of nourishing and of developing the ovum into its mature state, and of ultimately casting it forth as a perfect and separate

being, itself in its turn to fulfil the duties of its existence and to propagate its species.

The diseases of the male are, for the most part, common also to the female (with a few obvious exceptions); but in the female there are superadded not only grave organic diseases of the organs of reproduction, but their functional disorders influence her whole body in a manner that has no parallel in maladies of the male.

There arises, therefore, naturally, the existence of a special necessity for the consideration of the diseases of the female, and this has, chiefly within the last fifty years, grown into a science, that of Gynæcology (γυναικός, λόγος); and, despite all that their opponents may say to the contrary, Gynæcologists possess a standpoint from which it is idle to attempt to dislodge them.

It is with regret that we so constantly see this special construction for reproduction in the female ignored by those who decry the separation of Gynæcology into a distinct department of medicine; for where many practitioners, in eliciting the history of a case, make enquiries concerning the function of menstruation as being of equal importance to that of *e.g.* defæcation, they should rather, did they bear in mind that *propter 'ovarium' est mulier*, consider the reproductive organs as the mainspring of her life.

The existence, therefore, of Gynæcology being an established fact, we should set ourselves to the task of considering the diseases of the organs of reproduction in the female as playing a part of the first importance in her whole organism.

PRACTICAL GYNÆCOLOGY.

CHAPTER I.

ON THE MEANS OF DIAGNOSIS.

THE methods by which we arrive at a correct diagnosis are (1) the **History** of the case, by which we elicit the knowledge of subjective symptoms, and (2) the **Physical Examination** by which we become possessed of objective signs of disease.

(**1.**) **The History of the Case.**—In order to obtain a history that shall be useful for diagnosis, it should be elicited by a series of questions put after a regular method or order, not necessarily subserviently followed, but varied as each case requires; and, first, the patient's name and address, for future reference, should be written down, then her age and social state. In entering the latter item, put it thus: *e.g.*, "M$^{d.}$ 7 yrs."; or, if she has been married twice, then as follows: "M$^{d.}$ 3 yrs., wid. 2 yrs., 2$^{nd.}$ mar. 7 mos." Then the number of children, and the age of the youngest; the number of abortions and the date of the last, noting, if possible, the alleged cause of the abortions. Then the catamenial history should be noted; and it may be shortly done thus: "Cat$^{a.}$ æt. 15. Reg. 4-5 days $\bar{c}$ dol. 1 d. ante, ing. reg." Which means: the catamenia began æt. 15, are regular as to time, duration 4 to 5 days,

with pain (*cum dolore*) for one day before in the inguinal region. If there is pain during the flow or afterwards, "post" or "per" may be used. These details are given to enable the student to acquire a short, concise, and, at the same time, an accurate and easily interpreted method of recording his cases.

It is sometimes difficult to find out by merely one question whether a patient is "regular" or not. She may say she is "poorly" every three weeks, and on further questioning it will be found that she has three weeks of interval between the end of one period and the beginning of the next, and that the duration of the flow is seven days; so that the patient is really "regular," though her first answer might seem to imply that she was not. Then some cases are really regular, menstruating every three weeks. Enquiry should therefore be made as to the interval between the commencement of one period and the commencement of the next. The rest of the catamenial history should then be carefully noted in detail, viz., the character of the flow and its quantity; the presence or absence of clots; the presence or absence of dysmenorrhœa; and if dysmennorrhœa exists, the character, locality, severity and duration of the pain.

The patient should then be asked what she complains of—*i.e.*, as to pains, sensations, or any deviations from the normal standard of health that she may herself connect with that condition for which she seeks advice; then the history of the complaint should be inquired into, the method of its attack, the time in relation to the catamenia, the duration and general outline of its progress.

In making enquiry concerning pain, it is the better plan to ask, "Where do you suffer pain?" asking her at the same time to place her hand on the part, as giving a more accurate result than any mere description. For patients will often say the pain is in the "kidneys," when on asking them where the pain is, or where their kidneys are, they will place their hand low down on the sacrum.

Questions should then be put as to former illnesses or constitutional characteristics; and, where possible, the hereditary history and the cause of death or state of health of the parents, brothers and sisters, should be obtained. While this questioning is going on, we should attentively remark the aspect, expression, temperament and any peculiarities of the patient that may throw light on the investigation of the malady.

(**2.**) **The Physical Examination.**—The senses by which we explore disease are touch, sight, and hearing; and of these the sense of touch is the most valuable in this special department.

In order to impress the various methods of investigation by the senses more accurately upon the student, I have arranged them in tables under their respective heads:—

- Touch
  - Immediate
    - Simple touch
      - (*a*) of vagina.
      - (*b*) of rectum.
    - Double touch.
    - Bimanual examination.
    - Abdominal palpation.
  - Intermediate
    - The Sound
      - Uterine.
      - Bladder.
    - Thermometer.

Touch is here divided into Immediate and Intermediate. Under the head of immediate touch we place (1) **the simple touch** (the French *toucher*), whether (*a*) of the vagina or (*b*) of the rectum; (2) **the double touch,** or simultaneous recto-vaginal examination; (3) **the bimanual examination,** *i.e.*, by one hand placed externally on the abdomen, and the fingers of the other internally; and (4) **abdominal palpation,** which expression is to be understood to mean the feeling of the abdomen, as to its relative hardness or otherwise, as well as the production of that sensation which we term fluctuation.

Intermediate touch is that of the sound, whether uterine or vesical. In some cases immediate and intermediate touch may be combined, as *e.g.*, when a sound in the bladder is felt for *per vaginam* or *per rectum.* The thermometer is put down as an instrument of intermediate touch, for it conveys accurately a measure of the presence of caloric, which we should have but imperfectly rendered to us by means of immediate touch in the sensation of heat.

The sense of sight may be similarly tabulated, as follows:—

Sight
- Immediate
  - Inspection.
  - Per speculum.
  - Aspirator.
- Intermediate—Microscope.

Immediate inspection is that ordinarily used in the investigation of uterine disease, whether of the irregularities of the abdomen, or of the condition of the cervix uteri through the speculum, or of the contents of a swelling by means of the aspirator. The micro-

scope is the instrument of intermediate sight for the exploration of the nature of morbid growths.

Hearing
- Intermediate, of existing sounds
  - Circulation in pregnancy (maternal. / fœtal.)
  - ,, ,, fibroids
  - Crepitation
- Immediate, of produced sounds by
  - Immediate
  - Intermediate

(percussion.)

In obtaining information by the ear, we listen generally intermediately by means of a stethoscope for sounds in the uterus or the abdominal organs, or immediately for the sounds produced by either immediate or intermediate percussion.

I will now describe in detail the methods of using these various means of diagnosis, and if in the course of the description I seem to enter into too minute particulars, I will ask the student kindly to bear with me, for I am sure that much of the favor and esteem in which he hopes hereafter to be held, depends on the gentleness, adroitness, and tact with which he conducts his examinations.

ON TOUCH.

I.—Of Immediate Touch.

(**1.**) **The simple digital Touch of** (*a*) **the vagina.**—The index finger of the right hand (in some cases where there is much difference in the length of the two fingers, the middle finger should be used as well) is to be well oiled. There is a tidy and an untidy way of doing even this simple thing. Some dip their fingers in the oil and scatter it about heedlessly; the finger or fingers should be dipped in the oil, and

immediately folded up in the hand till they are about to be introduced into the vagina. Lard, glycerine, soap, cold cream, carbolized vaseline, vaseline with eucalyptus, sanitas, or Dr. Greenhalgh's composition (of soft soap 2 oz., glycerine ℥ij, and carbolic acid ℥j, with ℥iij of spirits of wine), or the following—half a cake of Price's solidified glycerine, melted at a *gentle* heat with six times its weight of cold glycerine stirred in, and a few drops of some fragrant essential oil, may be used; but olive oil carbolized (2 °/₀) is one of the best, as lubricating the finger more completely, and as being less sticky than glycerine, while lard requires more time to be thoroughly applied to the finger—a great consideration in hospital practice, where many examinations have to be undertaken. The lubrication is useful for two reasons: it is more comfortable to the patient, as it permits the finger to glide into the vagina without the painful dragging inwards of the delicate labia minora that would otherwise happen; and it is also of use to the examiner as protecting the finger somewhat from the discharges. In examining cases of cancer it is well to fill the space below the nail by scraping the finger across a piece of soap. The patient should lie on her left side covered with a sheet, with the knees well drawn up; the examiner should stand somewhat behind the patient, and his left hand should rest on the patient's right hip, as that gives a landmark by which the orifice of the vagina is at once found without inspection, which is unnecessary, and without that hesitation which is embarrassing both to the patient and the examiner. The finger should be passed over the posterior fourchette

in order to avoid, if possible, all contact with the clitoris and its adjacent sensitive parts ; it should then be passed more or less along the posterior vaginal wall, until the os uteri is reached. In examining a pregnant woman, when the os uteri is situated high up and is looking backwards, it is often more easy to reach it by using the fingers of the left hand ; it has also this advantage, that the palmar surface of the finger impinges on the os instead of the nail, which of course is less sensitive as an organ of touch.

And here let me urge upon the student the great advantage of accustoming himself to use either hand in examining a patient. Let him occasionally place a patient on her right side, and examine with the left hand. It requires some training for the mind to appreciate the sense of touch by the less "dextrous" touch, as in the use of the microscope to grasp equally objects seen with either eye ; nevertheless it can be done, and it is of immense importance in many operations that the operator should be ambidexter. For instance, should the sense of touch of the right hand be blunted by any accident, such as blood-poisoning—a risk which all of us may some time or other encounter—it is of the greatest advantage to be able at once to use the left hand ; or should we be called upon to examine a patient in a bed the right side of which is placed against a wall.

On the finger reaching the os uteri, the points to be determined are, the direction of the aspect, the size, shape, and relative patency of the os ; the position, size, shape, consistency, and surface feel of the cervix uteri ; the existence or non-existence of growths, as

polypi, &c. from the cervix ; as also of tenderness on pressure. The finger should then be passed along the anterior aspect of the cervix to detect if there be any sulcus indicating the probability of anteflexion, or any bulging of the anterior wall indicating pregnancy, or the presence of any intra- or extra-uterine swelling, or calculus in the bladder. The posterior cul-de-sac should then be explored to see if there is any swelling there the nature of which has to be determined by the other means presently to be described. The condition of the rectum may be partially determined at the same time. Swellings are occasionally felt *per vaginam* of fæces *in recto* which can be recognized as such by their pitting on pressure ; but masses of fæces may exist which may mislead by their very hardness.

The finger should not leave the vagina until the lateral cul-de-sacs have been felt, in order to find if either ovary or oviduct is within reach, or tender, or whether there exists any other abnormal swelling in those regions, as pelvic cellulitis, hæmatocele, exostoses, &c., or any swelling towards the orifice of the vagina.

If it is necessary to obtain more accurate information as to the relative position of the uterus in the pelvis, it is a good plan to change the position of the patient on to her back while the fingers are in the vagina, because it is easier (p. 10, 4) to reach higher up when the patient is on her side, and the advantage thus gained is better retained than if the finger is passed *per vaginam* when the patient is on her back : in this way it is easier to recognize the relation of the uterus to the pelvis, and also to any contiguous swellings.

(**2.**) **The simple digital Touch of** (*b*) **the rectum** is had recourse to as the means of exploring that viscus for internal hæmorrhoids, polypi, fissure, &c., and also to learn in some cases more accurately the position of the fundus uteri in retroflexion as well as the state of its posterior wall, the region of the ovaries, and the anterior aspect of the sacrum. By this means also the pelvis is best explored in virgins. Before oiling the finger it is well to scrape the nail along a piece of soap so as to fill the interspace between the nail and the top of the finger and prevent matter being lodged there which might prove deleterious both to the examiner and also to the next patient examined.

(**3.**) **The double Touch** is of great service in the examination of the recto-vaginal pouch in cases of retroflexion, post-uterine fibroids, retro-uterine hæmatocele, &c. Various methods are described by different writers : viz., the introduction of the index finger of one hand into the vagina, and that of the other hand into the rectum ; or that described by Dr. Tilt, where the index finger of one hand is introduced into the vagina, and the thumb of the same hand into the rectum ; and thirdly, where the index finger is introduced into the vagina, and the second finger of the same hand into the rectum. The first method is bad, as the hands interfere with each other, and moreover the mental apprehension of the relative position of the tips of the two fingers is difficult, because the length of the arms throws the nervous bifurcation very far back, even to the spinal cord, so that the mind cannot so quickly nor so accurately take cognizance of the size and position of a tumor situate between the two

opposing fingers of separate hands. The double touch of finger and thumb is better, for the nerve bifurcating in the palm of the hand has shorter radii, and the appreciation of relative position is more easy; but the disadvantage of this method lies in the shortness of the thumb. The *bi-digital* touch, on the other hand, has none of these objections, and moreover can be better relied on for accuracy; for the median nerve, when dividing in the palm of the hand into its digital branches, sends from that point of divarication its first two branches to the thumb, and its third along the radial side of the index finger; whereas one branch alone, viz., the fourth, passes on, and then dividing, supplies the proximate sides of the index and middle fingers, so that the nerve supply of the two fingers is in more intimate relation, and the brain taking cognizance of their touch more rapidly, its apprehension of any substance between them is the more accurate.

(**4.**) **The Bimanual Examination** is of the utmost value in determining the position and relation of the pelvic viscera to one another, or of pelvic or abdominal swellings to any or all of the pelvic viscera. The method of conducting it is to place the patient on her back with her knees well drawn up. The left hand is to be placed on the abdomen, usually on the hypogastric region, and then the fingers of the right hand are to be introduced into the vagina, or the method may be pursued mentioned above (p. 8, 1), or the hands may be reversed. The examining finger will in this position detect more readily any deviation laterally of the uterus, and will be able to appreciate the relative height of the uterus: if now pressure is

applied to the hypogastric region, any abnormal enlargement of the uterus is easily perceived, and the connection with or effect of any abdominal or pelvic tumor on the uterus is made out, and in many cases the size of such tumor approximately measured by its being grasped between the two hands. In this way it can often be decided whether a tumor is connected with or is a part of the uterus itself, or whether such is disconnected with it, as in ovarian tumors.

(**5.**) The fifth division of immediate touch is **abdominal palpation.** This should be practised also with the patient on her back, the knees well drawn up, and the abdomen uncovered. For although a rough examination may be conducted with the intervention of a thin garment, yet the touch of the uncovered abdomen itself can alone be relied upon to determine with exactness the configuration, consistency, size, and mobility of any tumor, as also the existence or non-existence of the presence of fluid. The abdomen should be first carefully felt with both hands working systematically from below upwards, and the shape and size of any tumor presenting itself be accurately made out; the tumor also being

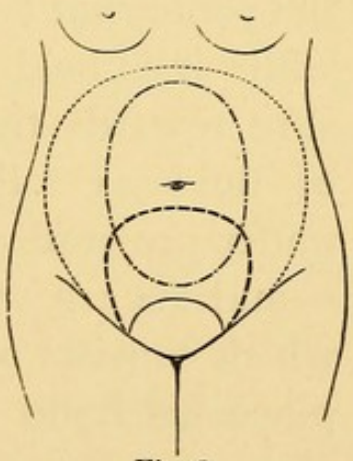


Fig. 1.
Chart of the Abdomen.*

* Fig. 1. Chart of the Abdomen—
——— Distended bladder, or pregnant uterus, 4—5 mo.
- - - - - - - Uterine fibroid, or pregnant uterus, 5—6 mo.
..... Ovarian tumor, or pregnant uterus, 8—9 mo.
·—·—· Area of resonance in ascites.

grasped, its relative mobility or fixidity can usually be determined. Percussion should then be practised, of which more under the head of "hearing," and the presence of fluid should be sought for. If the fluid is not very thick, it is easily detectable by one hand being laid flat on one side or aspect of the swelling, and an impulse given on its opposite side by a short and distinct blow, which is best obtained by placing the index finger over the middle finger and letting it slip suddenly off on to the surface of the abdomen, when a wave will be propagated and impinge on the other hand. If, however, the fluid is somewhat thick, or is contained in small cysts with a certain degree of tension, then the presence of fluid may be recognised by placing the tips of the fingers of either hand on each side of the swelling to be examined. On a steady but somewhat sudden pressure being given to the cyst while it is held firmly, the sensation of outward pressure towards the other hand will give the indication of fluid as following the hydrostatic law of fluids under pressure. Should the wave of fluid be indistinct —and such a wave may almost be given by a tumor which consists of fat,—it is well to get an assistant to place his hand edgewise with some pressure on the abdomen between the two hands of the operator. This will generally exclude the possibility of a fallacious result, and in the case of a solid tumor will prevent a mistaken sensation being conveyed; whereas it will in no way hinder the propagation of a true wave where fluid exists in a large single cyst. But it must be remembered that where several cysts coëxist the wave in one cyst is not necessarily

propagated to another contiguous to it; and so in multilocular cysts of the ovary it may not be possible to get a distinct wave by any means of percussion.

NOTE.—It may here be remarked that as a rule the sensation of touch, especially by internal examination, is such as to convey to our minds the idea of a body larger than really exists. The following explanation is offered as not wholly improbable. The sensation to the mind in comparing the size of objects stands in relation to brain-work as given out in nervous energy. Now the ordinary measurement of an object by the sight needs but little movement of the eyes; also on calling in touch to our aid with regard to an external object, such object is grasped by several fingers at once, necessitating but little motion; but in an internal examination the finger has to journey as it were round a tumor in order to comprehend it, and the mind, taking cognizance of the size by the amount of motion required, builds up an idea of comparative greatness so much larger in proportion to the nervous energy expended in acquiring the information.

Examination of the Interior of the Uterus.

Occasionally it is necessary to explore the interior of the uterus in order to discover the presence of some morbid growth or foreign body as in cases of intra-uterine fibroids, villous growths, cancer of the fundus, retained pieces of placenta, &c.

For such exploration the canal of the uterus must be dilated. This should be done gradually and steadily by means of tents. When the os uteri is

small a laminaria tent should first be introduced, and after about six hours two or three more may be inserted, or a thin sponge tent, and so on by increasing sizes until the cervix is sufficiently patent to admit the finger. It is the better plan not to allow a sponge tent to remain in the uterus more than six or eight hours; it should then be removed, and the vagina, and perhaps the cervical canal, well syringed out with Condy's fluid or carbolic acid, or perchloride of mercury and water before the next tent is introduced. If a tent is left in too long it may give rise to an elevation of temperature which is greatly to be avoided, for should such happen it would be necessary to stop the tenting until all pyrexia had subsided. When the cervical canal is sufficiently patent, then, the fundus uteri being steadied with one hand, the finger is to be passed into the uterus as far as necessary, and the cavity at once explored, for if any delay occurs the uterus will rapidly contract and the examination prove difficult.

Hegar's dilators may be used either alone or after commencing the dilatation with tents to dilate the uterine cavity, but they should be inserted slowly and with care lest the tissue should be split. Their shortness is a disadvantage, necessitating the use of a duckbill speculum and the drawing down of the uterus towards the vulva.

II.—Of Intermediate Touch.

(**1.**) **Of the Uterine Sound.**—The sound is an instrument by which we prolong our sense of touch into a cavity into which our fingers are unable to reach.

The uterine sound should be made of pure silver or of copper plated, which will probably bend before it injures the uterus by undue pressure ; and the softness of which will allow of the sound being bent into any

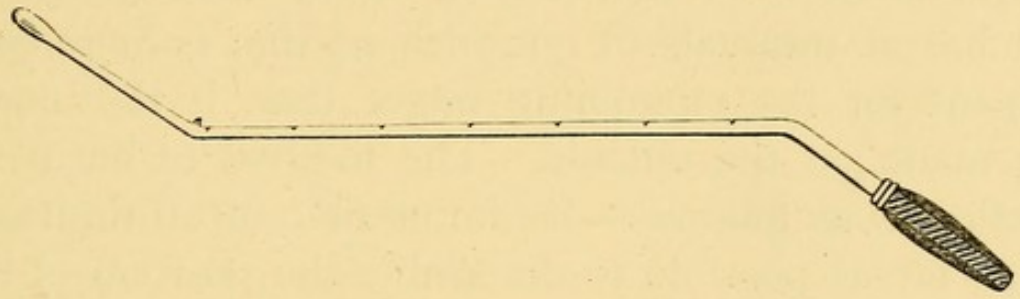


Fig. 2.
Dr. Protheroe Smith's Parallel Uterine Sound.

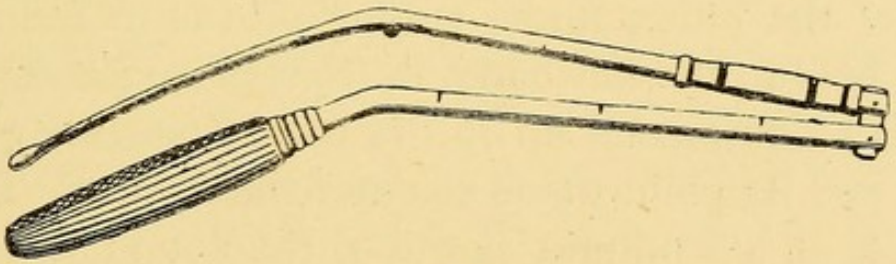


Fig. 3.
Ditto folded, for the pocket.

curve that may be found necessary. It should be about ten inches long, with a small handle to prevent its being held too firmly ; it should be of small calibre, with a conical olive-shaped probe point. It consists of a uterine portion two and a-half inches long, bent at an angle of 45° on the straight portion, and having the last two inches (the handle end) bent at a similar angle, so that the handle is parallel to the uterine portion ; this will at all times show the exact position of the portion *in utero*. The sound thus formed was originally suggested by Dr. Protheroe Smith.

There should be a small pin at the *inner* aspect of

the angle marking the extent of the uterine portion, or a slight ring-like projection round the whole circumference as suggested by Prof. Alexander Simpson, and which can easily be felt in all positions; and the sound should be marked off from that point by notches at intervals of one inch, as that is more convenient for the examining finger than if the marks are made on the outside. The method of its introduction is as follows:—Examine first of all digitally, so as far as possible to determine the position of the uterus as indicating the direction in which the sound is to be passed. The patient being on her left side, the operator should stand well behind her, and the point of the index finger resting on the os uteri, the sound, held in the left hand, in front of and above the right, is to be passed up to the palmar surface of the finger, and its point made to enter the os uteri. If the uterus is in its natural position, the sound is to be passed gently onwards, without the employment of any force, until the point marking the end of the uterine portion reaches the os; then if no impediment is felt, it may be cautiously passed on until the end is arrested by impinging on the fundus uteri, or until its arrival there is made evident by the expression of umbilical pain on the part of the patient.

If, however, from the previous examination it is thought that the uterus is retroverted, the sound is to be passed with the point directed backwards; and if the uterus is of normal length, the sound will be arrested at the 2½-inch point: then in order to replace the uterus into its normal position, the handle is to be revolved through half a circle, so as to make the

uterine portion rotate without any alteration of its plane; for if the handle only is rotated the uterine

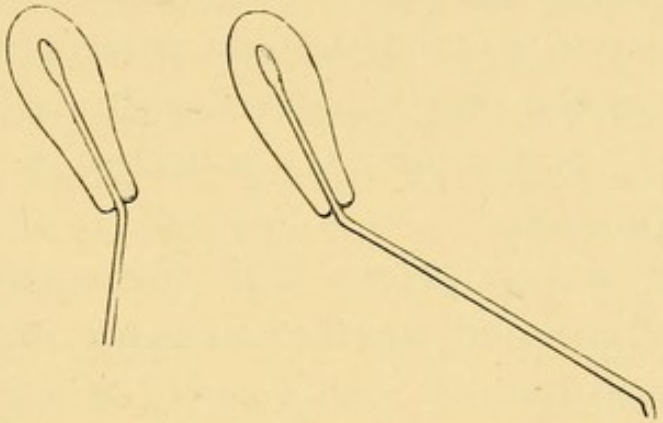


Fig. 4.
The Turn of the Sound.

portion will revolve, carrying the uterus through half a cone, and so producing pain, and often mischief. The *handle* should describe the semi-cone, and not the uterus. The sound may then be moved backwards, as will be more particularly described in the chapter on malpositions of the uterus.

The intermediate touch of the uterine sound is had recourse to to determine the length of cavity of the uterus, whether normal or abnormal, its position as regards deviation from its natural angle, to distinguish the flexed fundus from swellings either in front of or behind the uterus, and to detect if there be any obstruction or growth in any portion of the uterine cavity. It must ever be borne in mind that the sound is to be used with the utmost gentleness, and be allowed almost to find its own way into the uterus.

(**2.**) **Of the Bladder Sound.**—This is used simply to explore the bladder for calculus or any morbid growth that is recognizable by the touch, and in order,

in certain cases, as in vaginal hysterectomy, to determine how far the bladder extends downwards on to the anterior aspect of the cervix uteri.

The conjoined immediate and intermediate touch is either (*a*) of the uterine sound with abdominal palpation, or (*b*) of the bladder sound with vaginal or rectal examination.

By abdominal palpation with the sound *in utero* it can be determined whether pressure on any abdominal tumor moves the sound easily or not ; when the sound is in the bladder, vaginal or abdominal examination will discover the position of its point, and rectal examination will help to show the absence of the uterus.

(**3.**) **Of the Thermometer.**—The thermometer is purely an instrument of intermediate touch. It is used in order to gain accurately information with regard to the temperature of the body, which can only be otherwise imperfectly obtained immediately by the touch of a hand that may vary in its own temperature, and therefore be liable to constant error. It is to be observed that the faculty of recognizing variations of temperature should be classified as one of the special senses ; if so, then there are seven senses—(1) sight, (2) hearing, (3) touch, (4) taste, (5) smell, (6) the muscular sense or weighing sense, and (7) the temperature sense. A thermometer should be used which possesses an index to register maximum temperature. The temperature may be taken in (*a*) the mouth, (*b*) the axilla, (*c*) the vagina, (*d*) the rectum, or (*e*) the uterus. To take the temperature *in the mouth*, place the bulb of the thermometer under the tongue on one side, and let

the lips be closed over it, in order to prevent a current of air giving a fallacious result. It should remain *in situ* fully three minutes to obtain an accurate reading, unless it is specially made to register in, say, half a minute. To take the temperature *in the axilla*, the instrument should be placed with the bulb well up into the axilla, its length lying along the body between it and the arm. Care should be taken that no portion of dress intervene between the thermometer and the body, but that it is in apposition with the skin on all sides. The arm should then be held close to the body, but without force, and the forearm flexed across the chest. To take the temperature *in the vagina* or *rectum*, the instrument should be passed into either cavity as far as convenient. And to take the temperature of *the uterus*, an ordinary thermometer may be passed into the cervix uteri, or a thermometer made like a uterine sound is to be passed as a sound into the uterus.

ON SIGHT.

I.—Of Immediate Sight.

(**1.**) **Inspection,** or the simple viewing of a part, can be had recourse to in examining the abdomen for any peculiarity of shape as in cases of ascites or of uterine, ovarian or other tumor, or the vulva and external lips for growths or swellings ; in the examination of the orifice of the urethra for vascular growth, &c. ; in ascertaining the tint of the vagina ; and in cases of partial or complete prolapsus uteri, we are able to obtain a sight of the uterus itself.

(**2.**) **Per speculum.**—Though examination by the sight is here aided by a mechanical appliance, such appliance is only a means of opening out the channel of vision ; it is in no way intermediate in its relationship to the thing seen. The speculum is an instrument by which the walls of the vagina are held apart so as to permit the vaginal portion of the cervix uteri to be seen. Specula are of infinite variety, from simple cylinders to instruments with expanding valves up to six blades. The simplest and most useful is the ordinary Fergusson's speculum—a glass cylinder, with bevelled edge and bell-shaped mouth, silvered and covered externally with a composition for protection. Marion Sims' duck-bill speculum is valuable for operations on the uterus and vagina, but requires an assistant to hold it. The author has devised a modification of Marion Sims' speculum, which has several advantages, especially when used for operations. It consists of three blades, separable for convenience, any two of which may be fixed by means of pins and slots, so as to form the speculum and its handle. One of the blades is short, which is found of great service in cases where it is necessary to draw down the uterus to the vulval orifice, for the shortness of the blade allows of the vagina being invaginated, a procedure which the ordinary long blade somewhat hinders. The two long blades may also be introduced one within the other after the manner of Neugebauer's speculum, which brings the cervix well into view, and allows it to be examined at the same time by touch. The ends of the blades are not curved upward like a spoon as in that of Marion Sims, but are straight ; this

form of construction is of great use when the vagina has to be plugged, for as the plugging proceeds, and the speculum is drawn down, there is no end to catch the plugs and displace them.

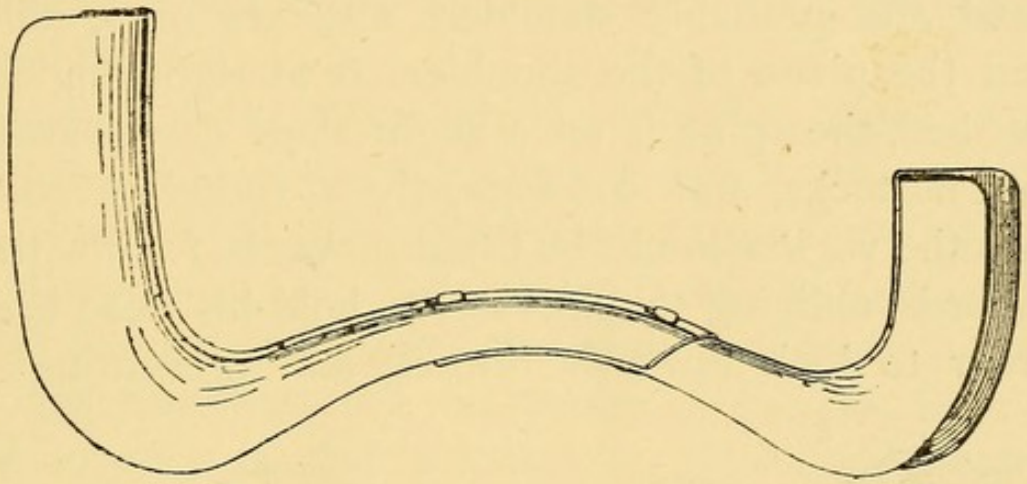


Fig. 5.

Dr. Meadows' speculum exposes the vagina well. There are several other forms of specula easy of introduction, which expand and show the cervix uteri, as *e.g.*, Neugebauer's. One of the best specula for the verification of sight by touch is Dr. Protheroe Smith's fenestrated speculum, by the use of which touch is possible simultaneously with sight, so that the finger can be instructed as to the feel of any condition, as *e.g.* granular inflammation, that is evident to inspection.

As, when speaking of the uterine sound, I explained the method of its introduction, so now I will give the student some minute directions as to the passage of the speculum, as considerable pain is often given to the patient by its unskilful introduction.

And, first, as to the position of the patient. As in this country the side posture is preferred, I will not allude to the supine position, except to say that, in some cases, it is of very great service, and in that

position we obtain an excellent view of the cervix uteri.

Ordinarily a patient is told to lie on her left side with her knees drawn up, but as in this position her head and probably shoulders also are on a pillow, and the plane of the shoulders is at right angles to the bed, the spine is on a slight slope downwards to the buttocks, and consequently a speculum passed into the vagina would be tilted upwards, from without inwards, obliging the operator to hold his head low in order to look upwards into it, and preventing the

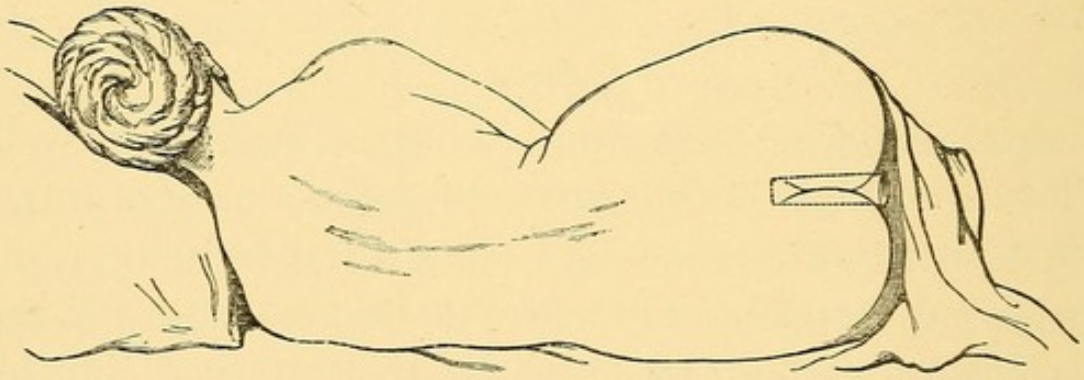


Fig. 6*a*. The ordinary position.

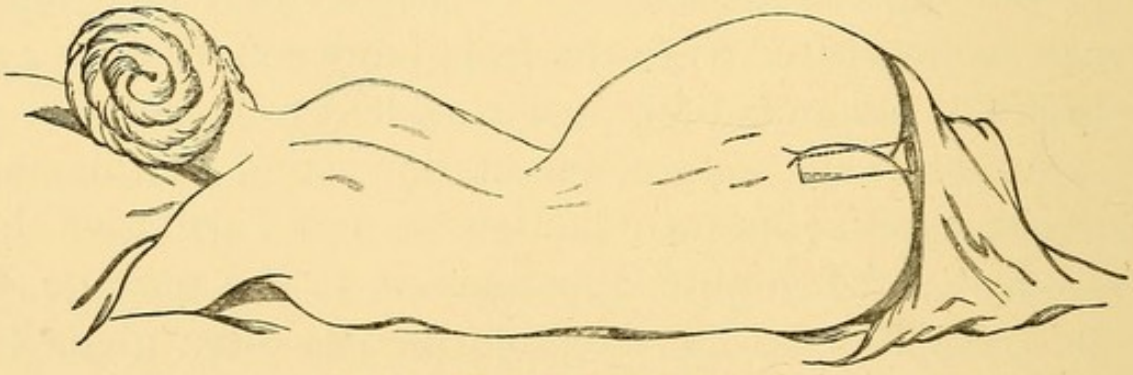


Fig. 6*b*. The semi-prone position.

NOTE. (*a*) represents a patient in the ordinary position where the position of the pelvis maintains the vagina (with speculum in situ) level : in (*b*) the patient is in Marion Sims' semi-prone position, which so tilts the pelvis that a speculum slopes downwards from without inwards. A pond of fluid is shown at the bottom of the speculum, to illustrate the method of its retention where it is necessary to introduce some neutralising fluid.

retention of fluid in the speculum—a condition which is occasionally desired, and will be referred to more particularly hereafter (p. 98).

The best posture for the patient to be examined in is decidedly that of Marion Sims, and called the semi-prone (Fig. 6 *b*).

She should lie on her left side on a flat, hard couch with no pillow, except perhaps a small one for the face; the left shoulder should be thrown well back and the left arm folded across the back, the right arm should hang forward over the edge of the couch; in this way the chest will be nearly prone, our object being to get it as flat as possible. The hips should lie at right angles to the bed; this will elevate the buttocks, and the spine should as much as possible be arched inwards; this will throw the vagina into an inclined plane from without, inwards and downwards. In this posture the abdominal viscera gravitate downwards towards the bed and are supported by it, and the uterus relieved of any superincumbent pressure can be more readily examined.

To introduce Fergusson's speculum with facility and without pain, it should never be done by placing the bevelled edge against the lips of the vulva and forcing it in, as that method causes the patient needless suffering. The speculum should be well oiled, the index finger of the right hand should be passed into the vagina at the posterior fourchette, and the middle finger introduced in front of it; the fingers should then make a quarter of a turn to the right, bringing them at right angles with the longitudinal orifice of the vulva; the perineum should be gradually pressed

backwards and the fingers somewhat separated; the speculum held in the left hand is then to be passed over the right hip and introduced over and rather between the separated fingers. It can thus be done, without, as a rule, any pain to the patient, as by this means all pressure on the clitoris and urethra is avoided. After it has entered about two inches it is to be directed backwards, and so passed along the posterior wall of the vagina, with its bevelled orifice looking forwards, when it will be found that the cervix will naturally fall into the opening with facility. The posture of the patient giving the speculum a downward slope, the head of the operator is not necessarily placed inconveniently low. If from any malposition of the uterus the cervix does not readily come into view, a slight rotation of the instrument will generally suffice for its adjustment; but if not, a straight sound may be passed just within the os uteri, and the cervix brought into the centre of the speculum.

I have entered thus minutely into the description of this ordinary operation, as the bungling introduction of the speculum disturbs the confidence of the patient, and may render any subsequent manipulation inconvenient.

The speculum is an instrument for the confirmation of the evidence of touch. It is rarely that the gynæcologist obtains more information than his *tactus eruditus* has already given him, but it is chiefly of use as a channel whereby remedies are applied which will be referred to severally in their places.

The Endoscope is here alluded to as an instrument for the inspection of the interior of the bladder, or

even of the uterus. An instrument has also been devised by Lazarovitch, whereby electric light is passed into the pelvis in a darkened room, with the view of obtaining evidence by means of transmitted light as to the fluid or solid contents of any pelvic tumor.

(**3.**) **The Aspirator** is an instrument for immediate sight; for by it we are enabled to draw out the fluid contents of a swelling, and so confirm or reverse our diagnosis.

And here I may once for all refer to the fact that to my father is due the credit of the introduction of the aspirator to the notice of English practitioners.

It was in the year 1868 that he took over to Paris his instrument (made by Mayer and Meltzer) and showed it to Robert, the instrument maker in Paris, and it was subsequent to this that Robert made for Dieulafoy the instrument that the latter claims as his own.

II.—Of Intermediate Sight.

Of the Microscope.

The microscope is the instrument of intermediate sight; for by it we examine into the nature of morbid growths removed from the uterus, &c., or of fluid drawn off by the aspirator or by the trocar, or of vaginal or uterine secretions.

ON HEARING.

I.—INTERMEDIATE.

Of Existing Sounds.

(**1.**) **Of Circulation.**—The instrument of intermediate hearing is the stethoscope. It is applied to the abdomen to listen for the circulation of the fœtal heart, the uterine circulation, and the placental circulation in cases of supposed pregnancy ; for the bruit of the circulation through fibrous tumors, and for the absence of indications of circulation in ovarian cysts. A peculiar form of stethoscope is made for the direct auscultation of the uterus *per vaginam.*

(**2.**) **Of Crepitation.**—Occasionally adhesions of abdominal tumors and the presence of peritonitis may be detected by the sound of crepitation on the application of the stethoscope to the abdominal wall.

II.—IMMEDIATE.

Of Produced Sounds.

Sounds are produced by immediate or intermediate percussion. The latter is the more ordinary method of their production. For their better production the middle finger of the left hand should be laid at one time lightly, at another firmly flat on the surface of the abdomen, and the second phalanx struck sharply, distinctly, and evenly with the tip of the middle finger of the right hand ; and the sound elicited will indicate whether there is lying beneath the finger, near the surface or deeper, air or some solid material or fluid.

On Combined Auscultation and Percussion.

This method of examination of an abdominal tumor is thus performed. A stethoscope is placed on the tumor, and being held there with the ear in apposition, a contiguous portion of the tumor is percussed ; if the tumor is solid the sound of the percussion is conveyed to the ear more distinctly than when the tumor contains fluid.

CHAPTER II.

GENERAL DISEASES.

BEFORE we consider the diseases of the various constituent parts of the organs of reproduction in the female, it will be well to glance at three general diseases which, though they possess local manifestations, yet each in some degree exerts its influence on her functional life, and stamps with its own character many of her maladies.

Such of these diseases and their manifestations as have a local origin will be noticed in their proper order hereafter, but they are referred to here more in their constitutional aspect.

I.—SYPHILIS.

This disease, when once it has taken root in the body and tainted the blood, is probably wholly ineradicable. It may by careful treatment be made to keep itself within bounds and be prevented from further tormenting its victim; but sooner or later, sometimes after upwards of thirty years, it may manifest itself through the process of reproduction.

The ovum containing the new life, the offspring of

an uncontaminated mother, may be impregnated by a father whose attack of syphilis may have been "*cured*" years before, yet that one element of mischief, minute as it is, suffices to mark the fœtus with some evidence of its lurking venom. In such a case, though the mother may never have contracted syphilis primarily from her husband, yet the infected fœtus may communicate to her a sufficient dose of poison to influence, if not her own body, yet the constitutions of succeeding ova.

Again, though the mother may have been free for years from any appreciable symptom of syphilis, and may have been impregnated by a healthy man, yet the disease may not the less surely be marked in her offspring.

Moreover, even if the seeds of the disease should have been so far destroyed as not to manifest themselves by any definite so-called syphilitic mark, yet various constitutional cachexiæ are doubtless the outcomes of syphilitic poison sown, it may be, generations back.

1. Syphilis may be suspected in some cases where *sterility* is persistent, when such sterility cannot be traced to any impotence on the part of the male, nor to any malformation, nor ovarian nor uterine disease on the part of the female.

In such cases, where the system fails to answer to the stimulus of tonics, change of air, &c., it is well to try a mild but persistent course of mercury as giving a chance of success.

2. Where a woman aborts several times successively without any apparent cause from the existence of

uterine disease or over-exertion, or the many causes that ordinarily lead to miscarriage, a similar course of treatment may reveal the cause of the mischief, and at the same time prove its remedy.

3. Syphilis, otherwise obscure, may also produce death of the fœtus late in the intra-uterine life, and a careful necropsy with microscopical examination of the various organs of the fœtus, specially of the liver, may reveal a state of disease that, other causes being excluded, must lead to the suspicion of the existence of latent syphilitic poison.

4. Or the fœtus may be born alive and apparently healthy, but after a time, shorter or longer, unmistakeable symptoms of the disease may show themselves. These are to be treated in the ordinary way, and the father or mother or both put under treatment, and kept separate for a time, in order, if possible, to avert a recurrence of such a deplorable result.

5. Syphilis may also leave behind it chronic disease of the cervix uteri in the shape of induration, or obstinate ulceration. Such cases should be treated not only constitutionally, but by the application locally of the pernitrate of mercury.

6. Indurations of the vulva and of the orifice of the vagina, and also of the urethra, producing stricture of its orifice, are often syphilitic. Stricture of the female urethra is rare. It should be treated by forcible but gradual dilatation, followed by a slight incision through the constriction, and a fair-sized catheter or bougie passed daily until the part is healed.

II.—CANCER.

Cancer will be more particularly considered under the heads of the various organs it primarily invades. The practitioner should, however, bear in mind its main characteristics, lest he overlook its early manifestations, and be led, without proper investigation, to treat them as of merely functional origin.

Irregular hæmorrhage occurring after the menopause should never be allowed to pass without thorough investigation as to its cause. For often months of valuable time which can never be recalled are wasted, and remedies which might prove available at an early stage become useless.

The marked cachexia of carcinoma should ever be borne in mind, and the disease carefully searched for in every case.

In cancer there is often remarkable dryness and apparent thinness of the cuticle, especially of the abdomen, which seems to be characteristic. Also in many cases the superficial capillaries of the cheeks become permanently evident in fine red ramifying lines.

The existence of cancer of the cervix uteri, even in an advanced state, is often no bar to pregnancy; therefore, the existence of this condition should not put the practitioner off his guard in his investigation as to the source of pain or discharge that may be the subject of complaint on the part of the patient.

In taking the history specially of a case of cancer, enquiry should always be made as to the existence of heredity of cancer or phthisis. For, as was pointed

out by Charles H. Moore in his "Antecedents of Cancer," published in 1865, there is no doubt but that phthisical parents often produce offspring that afterwards develope cancer, and cancerous parents not only produce children liable to cancer, but the children of such parents are liable to develope phthisis. So that cancer and phthisis may be alternately hereditary. There is also a liability in the offspring of cancerous or phthisical parents to insanity or some brain mischief.

III.—Phthisis.

This insidious disease has, as one of its early manifestations, a disturbance of the menstrual function. Where, therefore, spammenorrhea (scantiness of the menstrual flow—from σπανός, scanty, μήν, a month, and ῥέω, to flow) exists, a careful inquiry should be instituted lest the source of the malady should hastily be put down to mere structural abnormality, or temporary functional derangement.

The treatment in such cases should be directed to calming the system as regards the menstrual molimen by digitalis, bromide of potassium and quinine; to stimulating the flow by blisters, leeches, where admissible, and baths. General stimulants should be administered as alcohol and acetate of ammonia; and local stimulants as aloes, savin, ergot, borax, strychnine and quinine. The administration of malt and cod-liver oil may also prove of great service.

CHAPTER III.

LOCAL DISEASES.

DISEASES OF THE OVARY.

1. INFLAMMATION OF THE OVARY.

Definition.—Ovaritis—single or double, acute or chronic—whether primarily of its parenchyma, or of its investing membrane.

Causes.—Cold, especially just before or during the catamenia ; convection of inflammation from pelvic peritonitis ; tents ; sudden suppression of catamenia ; gonorrhea, masturbation, and other causes of recurrent congestion.

Symptoms.—Constant pain in one or both inguinal regions, occasionally extending down the leg to the foot, and to the mamma on the affected side ; increase of the pain during the catamenia, often with menorrhagia ; tenderness on pressure ; defæcation also produces pain ; distress ; nausea ; fever.

Signs.—The ovary can be felt to the side and rather posterior to the uterus on examination by the simple touch and also by the conjoined examination, as an irregularly slightly nodulated moveable body. The

ovary thus touched and pressed upon is very tender, giving rise to pain that shoots upwards to the mamma.

Diagnosis.—Difficult where either pelvic peritonitis or pelvic cellulitis also exists; but the exquisite tenderness of the organ itself, its shape and the non-existence of fixidity of the uterus, would facilitate the diagnosis.

Prognosis.—Usually favorable, though the duration of the malady may be tedious.

Treatment.—Absolute rest on the "tilted bed" (p. 208); leeches to the anus, the inguinal region, or the cervix uteri (p. 205). Poultices, opium, blisters or iodine to the inguinal region; sedative pessaries (p. 209); bromide of potassium, hot hip-bath (p. 214), or the hot douche. Utero-gestation in chronic cases gives the ovaries rest for many months. Should every other method for relief fail, and the patient's life becomes unbearable from the pain, the uterine appendages should be removed.

2. Abscess of the Ovary.

Definition.—Disintegration of the products of inflammation, resulting in the formation of pus.

Causes.—Acute ovaritis, pelvic peritonitis, pelvic cellulitis, tubercle, inflammation of ovarian cyst.

Symptoms.—Rigors, severe throbbing pain in the inguinal region.

Signs.—Elevation of temperature at night; tenderness; probable fluctuation.

Diagnosis.—By the above signs. From pelvic abscess very difficult.

Prognosis.—Doubtful. It might burst into the cavity of the peritoneum and prove fatal, or favorably into vagina, rectum or oviduct; or the abscess may burst and a pelvic abscess result, the abscess being circumscribed by adhesions to the bowels, such abscess usually being situate in the recto-vaginal pouch, or toward one side.

Treatment.—Poultices. If it point towards abdomen, rectum, or vagina, open with trocar, bistoury or aspirator. Opium and quinine, nourishment, and, if necessary, alcohol. As the prognosis is so serious if abscess of the ovary is diagnosed, it is safer to operate early and remove the offending organs.

3. Hæmorrhage from the Ovary.

Definition.—Hæmorrhage takes place from rupture of the ovary, or distended or varicose ovarian vessels.

Symptoms, &c.—*See* Hæmatocele (p. 61).

4. Atrophy of the Ovary.

Definition.—Congenital, rare. Physiological, at the menopause. Morbid.

Causes.—Menopause, pelvic inflammation, acute ovaritis.

Symptoms.—Diminution or absence of sexual desire; diminution or absence of catamenia.

Signs.—Progress towards male type in voice, aspect, tendency to growth of hair on face.

Diagnosis.—From above symptoms and signs.

Treatment.—By stimulus to uterus to incite ovulation by galvanic intra-uterine stem, by ice-bag to sacrum (p. 214), by emmenagogues (p. 215).

5. Hypertrophy of the Ovary.

Definition.—Enlargement of the parenchyma, rare. Enlargement may exist from increase of the vascular system, the sequela of persistent hyperæmia, and often the precursor of cirrhosis. (Vide infra.)

Causes.—Hyperæmia, or perhaps a remote result of inflammation or of excessive coïtus.

Symptoms.—Sensation of weight in iliac regions, and dysmenorrhea.

Signs.—Swelling in the inguinal region; dysuria. The enlarged organ felt on examination. Experience alone will help to differentiate it from abscess, cyst, or malignant disease.

Diagnosis.—Difficult; turgescence during catamenia, and subsidence afterwards.

Prognosis.—Favorable.

Treatment.—Iodine over inguinal region and in vagina; iodides or bromides; leeches and purgatives before catamenia; rest during catamenia.

6. Cirrhosis of the Ovary.

Definition.—A retrogression from the condition of hypertrophy. Where such hypertrophy is the result of vascular enlargement, the stroma becomes denser and shrinks, puckering the surface of the ovary in a manner similar to cirrhosis of the liver.*

Causes.—Degeneration after the condition of vascular hypertrophy.

Symptoms.—Dysmenorrhea of a tense aching

* Dysmenorrhea. By the author—Churchill, p. 20.

character, the result of blood tension in vessels bound by the contracting stroma.

Signs.—The ovary can often be felt somewhat corrugated, small and moveable.

Diagnosis.—Not difficult if the ovary has been before recognized in the above condition of hypertrophy. And if not, its pecular feel, differentiated by other symptoms and signs from malignant disease and ordinary atrophy.

Prognosis.—If left alone unfavorable as to relief from the dysmenorrhea.

Treatment.—Oöphorectomy.*

NOTE.—I have removed ovaries in all the three stages of cirrhosis. (1) In the large vascular stage, (2) in the stage where the stroma is greatly hypertrophied and the whole organ is thick and hard, and (3) in the final stage when the stroma has shrunk producing the small corrugated ovary.

The operation of oöphorectomy, or the removal of the ovaries not being of abnormal size from cystic or other disease, together with the oviducts, is now an acknowledged procedure, and practised by the majority of gynæcologists for the permanent cure of such cases of ovarian disease, not necessarily associated with increase of size, when the resulting dysmenorrhea renders the patient's life well nigh intolerable.

It is an operation often more difficult than a simple ovariotomy; so it is thought advisable to draw attention to some of its special features as a guide to intending operators. The abdominal operation is to

* Dysmenorrhea. By the author—Churchill, p. 23.

be preferred to the vaginal, as, should any special difficulty or hæmorrhage arise, it is thereby the more easily dealt with. The patient having been placed in the Trendelenberg position, the incision, if there are no adhesions, need only be of sufficient length to allow of two fingers being introduced into the pelvis; and care must be taken not to wound the omentum nor the intestines which lie in immediate apposition to the peritoneum. The ligation of the pedicles requires more care as the ovaries cannot usually be dragged up much higher than the lower angle of the wound without some risk from tearing. As much of the oviducts as possible should be included in the ligature, and removed with the ovaries. If any adhesions should exist great care is necessary to provide against oozing of blood, and to avoid injuring the intestines which fill the pelvis. Should there be any oozing, a glass drainage tube or an iodoform gauze drain should be inserted. In the after treatment it has to be borne in mind that the peritoneum not having been subject to any pressure or friction from any underlying tumor seems more inclined to take on inflammation. In other respects the operation is to be performed as ovariotomy. Both ovaries should be removed. In uncomplicated cases the operation need not occupy more than twenty minutes. It is not true that the operation necessarily lessens the sexual appetite.

7. Cancer of the Ovary.

Definition.—Malignant deposit, primary or secondary; scirrhus; medullary, or colloid.

Causes.—Unknown ; predisposing ; hereditary cancer or phthisis (p. 31).

Symptoms.—Lancinating pains *in loco.* Malignant cachexia ; if colloid, often pyrexia.

Signs.—Ovary felt to be hard, nodulated, enlarged, and after a time fixed ; if colloid, giving sensation akin to fluctuation or to a placenta.

Diagnosis.—By character of pain, constitutional effect, sensation to the touch, and the history.

Prognosis.—Unfavorable.

Treatment.—Sedatives (p. 209) ; if free and seen early, removal. *See* Ovariotomy (p. 42).

8. Fibrous Tumor of the Ovary.

Definition.—Fibrous tissue deposit, rare. Adenoma pure, also rare ; associated more often with some form of malignant disease.

Symptoms, &c.—Similar to ovarian cysts, which *see below ;* the tumor, however, presenting hardness as its chief characteristic, together with comparative slowness of growth. A case has recently come under the care of the author where fibrous tumor of the uterus was diagnosed more than twenty years ago by no less an authority than Sir James Simpson, and where a cyst began to develope itself. The diagnosis was made of fibrous tumor of the ovary with cystic growth. Ovariotomy was performed, and a very dense fibrous tumor of the ovary was discovered and removed, the cyst growing from its upper portion. The patient made a good recovery.

With great care a correct diagnosis may be arrived

at in such cases by observing the relative mobility of the uterus and the tumor, as to whether the one can be moved independently of the other.

Treatment.—*See* Ovariotomy (p. 42).

9. Cyst of the Ovary.

Definition.—Ovarian Dropsy. Simple or unilocular, compound or multilocular, and dermoid. Cysts may form in the stroma of the ovary, or may be formed by dropsy of one or more Graafian follicles. In many cases it seems as if the cyst was the result of an attempt at unimpregnated ovum development, as the formation may take place in cases where (1) there is absence or deprivation of the sexual act in the unmarried or widows; or (2) where the sexual act is not followed by impregnation; or (3) where the sexual act has taken place for the first time after the menopause, lighting up, as it were, a tendency to ovarian activity not resulting in impregnation.

Causes.—Obscure, often ovaritis; some referred to under *Definition.*

Symptoms.—Dull pain over ovarian region, occasionally absence of pain. Gradual spammenorrhea; dragging pains in various positions, especially when the patient lies on the side opposite to that from which the tumor springs, dysuria, frequency of micturition, difficulty in defæcation, fatigue. Symptoms at first often slight, afterwards loss of flesh; dyspnea; pain occasionally from peritonitis.

Signs.—Abdominal swelling; differentiated from flatus by resonance of the latter; from fæcal accumu-

lation by touch and catharsis ; from pregnancy by the absence of the proper signs, and by reasonable delay ; from tumor of the uterus by absence of menorrhagia and metrorrhagia ; by natural size of uterus unless traction for some time has elongated that organ ; by mass being usually separable from the uterus ; by absence of leucorrhea ; by fluctuation and its character ; from abdominal dropsy by definiteness of tumor at commencement ; by resonance in the flanks when the patient is supine ; by change of posture not greatly altering the area of dulness ; by absence of bulging in the recto-vaginal pouch, unless the tumor is small and has gravitated there ; by absence of cardiac, renal, or hepatic disease, by absence of anasarca of extremities ; from hydatids by aspiration ; from hydronephrosis or pyonephrosis, by history of origin of tumor ; from splenic enlargement by characteristic feel of that organ ; from exostoses from the pelvis by careful examination. A malignant ovarian tumor is characterized by the rapidity of its growth, pain, its consistency, its effect on the constitution, the frequency of associated peritonitis, and often by its apparent adhesion to the abdominal parietes. The suppuration of a cyst is indicated by rigors, hectic flush, and nocturnal exacerbation of temperature.

Diagnosis.—Ordinarily not difficult, if attention is paid to the above symptoms and signs ; difficult when associated with pregnancy, fibrocystic or fibroid disease of the uterus, or with malignant deposit.

Prognosis.—If left alone, unfavorable ; duration about four years.

Treatment.—By tapping, not recommended, or by removal by ovariotomy (or more correctly, *ovariectomy*).

Tapping may be had recourse to as a means of diagnosis, or of temporary relief; but as a rule the cyst speedily refills, rendering a repetition of the operation necessary. Tapping is not without risk. If the cyst contains pus or colloid substance, or cells in a state of active growth, the escape of the contents into the cavity of the peritoneum is very apt to set up dangerous peritonitis. When, therefore, ovariotomy can be had recourse to the tumor should not be previously tapped.

The only radical cure is ovariotomy; and when we consider that in the hands of skilled operators the mortality has been reduced to 2 per cent. or less, the operation is comparatively a safe one, and at all events holds out a good prospect of saving life. The question is not between ovariotomy and some other less risky method of procedure, but between ovariotomy and death.

Operation.—The patient should be prepared by rest for a few days or weeks, by leeches and poulticing if there is any abdominal tenderness, or by venesection if there be any incompressibility of the pulse.

In a paper read before the British Medical Association in 1876 my father said: "As a rule, advanced cystic and other diseases of the ovary, requiring operative treatment, are accompanied more or less with inflammation, partial or general, of the peritoneum proper to the cyst itself, or covering adjacent organs. The pathognomonic signs of this condition are often indistinct; but where, in addition to abdominal pain, there exist crimson lips, and a hard though small and very *incompressible* pulse, so that no

pressure above by an assistant obliterates the radial pulsation, venesection will generally relieve this state, and show by the buffed and cupped character of the blood, if drawn *pleno rivo*, and by the excessive proportion of firm crassamentum in comparison with the serum, an element of mischief which, in the prospect of ovariotomy, it is most desirable to remove. It has been, therefore, my custom of late to employ phlebotomy before operating; either to take a small quantity for the purpose of testing the quality of the blood, or the existence of inflammatory action; or, when the pulse and other symptoms demand it, a larger quantity (from eight to ten ounces or more), occasionally repeating it, or otherwise applying leeches to the seat of pain, to the anus, or to the uterus. By reducing the patient in this way, as well as dietetically, to the condition opposed to that which predisposes to inflammation, hæmorrhage, and serous exudation, she is so prepared that she is more likely to escape from any unfavorable consequences after operation; and the result of such practice has justified the means employed."

At the same time we must be careful not to take more blood than is absolutely necessary, as, from some accident, a considerable amount of blood may be lost during the operation which might jeopardize the patient's life.

For the operation the patient should be placed on a firm table in Trendelenberg's position, her water having been previously drawn off, and a mackintosh with a hole in it fixed by adhesive plaster to the abdomen to guard against wetting the clothes may, if thought

necessary, be applied. The incision to be in the median line or through one of the recti muscles about four inches long, reaching to within one inch of the pubes.*

As the incision is made through the abdominal walls, should bleeding points appear they should be secured with Spencer Wells' artery pressure-forceps, when, after they have remained on for a short time, the bleeding will be found to be arrested.

A long incision may be unnecessary if there are no adhesions: an incision too short may embarrass the operator should hæmorrhage occur in the breaking down of adhesions. Should the tumor be adherent to the abdominal parietes, and the separation of the parietal and cystic layers of peritoneum not be evident, it is better to continue the incision upwards to where the curve of the tumor naturally separates the layers, and then to follow the separation downwards. If this precaution be not taken the peritoneum may be stripped off from the abdominal parietes. The hand should then be introduced to feel if adhesions exist, and if so, they should be gently but steadily broken down; a large trocar is then thrust into the cyst and the fluid drawn off, taking care that none escapes into the abdomen. Should the contents not flow readily,

* NOTE.—I wish here to protest against the use of the word *laparotomy* to designate central abdominal section; it properly means incision of the *flank; gastrotomy* is now used in reference to the stomach; *ventrotomy* is a hybrid word. Mr. Reeves has proposed *ventro-section*, but the best word yet proposed is that by Dr. Harris, of Philadelphia, *cœliotomy* (belly section), which has the advantage of being correct, concise and explanatory.

or if there exist other secondary cysts, the trocar should be withdrawn, the opening into the cyst enlarged, and the secondary cysts tapped or broken down with the hand. During this procedure the assistant should hold up the divided edges of the cyst in order to prevent any of the contents escaping into the cavity of the peritoneum. As the cyst empties it is to be steadily drawn out of the wound, any adhesions that come into view to the omentum or bowel peeled off or tied with fine silk, and cut off or divided with the cautery; the tumor should then be supported by an assistant while the pedicle is secured. There are two methods of securing the pedicle—the extra-peritoneal and the intra-peritoneal. As the intra-peritoneal is by far the best, it is unnecessary to describe any of the extra-peritoneal methods. The two best methods of treating the pedicle are by the actual cautery or the ligature. The best results in the hands of the most experienced ovariotomists have been obtained by means of the actual cautery, so ably advocated and practised by Baker Brown, and followed so advantageously by Keith; this method has now, however, been almost universally abandoned.

To tie the pedicle, it should be transfixed by a stout double sterilized silk ligature, and each half tightly tied; a fresh ligature should then be passed round the whole pedicle and also securely tied, or the Staffordshire knot, as used by Lawson Tait, may be employed. The pedicle is transfixed by a double silk ligature; the two ends are then brought round and passed through the loop in opposite directions, the ends are drawn tight, bringing the loop close

to or even into the pedicle at the puncture, and tied securely; this method, however, is not so secure as the ordinary way just described. The tumor may then be cut away.

Cases often arise when from the wideness or thickness of the pedicle it cannot safely be tied in halves; the pedicle must then be ligatured in sections—technically called "lacing"—a method which is better learned by observation than by description, each section being securely tied, and if possible one ligature carried round the whole pedicle. It is not a good plan to hold up the stump of the pedicle by means of the ligatures while the abdomen is being sponged out, as thereby the ligatures may be loosened by the strain put upon them; it is better to cut the ligatures at once, and let the pedicle drop in.

The abdomen should be very carefully sponged out both with small hand sponges and by sponges on holders which can reach down to the bottom of the pelvis, as leaving any fluid in the peritoneal cavity exposes the patient to extra risk. Swabs of butter-cloth or some such gauze sterilized are now by most operators preferred to sponges. A good plan in some cases is to wash out the abdomen from a can-douche suspended above the operating table with water, or water carbolized 3 % temp. 100° F.

Before the wound is closed the abdominal parietes should be examined, if adhesions have been separated, in order to stop any bleeding; the bleeding points should be touched lightly with the hot iron or the petroleum cautery, or a swab wrung out of tincture of matico may be packed tightly into the pelvis, and left

there for a short time; the author has found this preparation a most efficient styptic. If the bleeding is not thereby stopped, tie with gut or silk ligature. If there is still the least oozing, insert a glass drainage tube, or drain with a strip of several folds of iodoform gauze.

To close the wound.—Formerly the method most commonly employed was as follows—Have ready at hand a sufficient number of carbolized silk, or, better still, silkworm gut sutures threaded with a needle at either end, pass the first suture from within the abdomen through the peritoneum and abdominal walls about half an inch from its cut surface, first on one side and then on the other, first of all placing a thin flat sponge over the intestines to guard them from being wounded by the needles, and to prevent any bleeding from the wound escaping into the peritoneal cavity; the sutures should be placed about half or three quarters of an inch apart. By far, however, the best method of inserting the sutures is to use Reverdun's needle. It is a handled needle carrying a notch at one side near the point. Mr. Lawson Tait introduced a similar one some time ago, but it had this disadvantage, that the sharp edge of the notch in drawing the needle back often tore the tissues, whereas in Reverdun's needle a slide closes the notch after the suture is slipped into it, and the needle is withdrawn with a perfectly smooth edge. The use of this needle saves at least ten minutes in putting in the sutures. Then the ends of all sutures being held on either side, the flat sponge is to be removed and the sutures tied, care being taken that they do not

slip. N.B.—The silkworm sutures should be tied three times. They are the best sutures to use, as they are very strong, are as smooth as wire, they do not irritate the wound, nor do they absorb any deleterious matter, and they are easily removed.

Now, however, to obviate the possibility of ventral hernia, it is usual to close the abdominal wound in three stages. 1st, close the peritoneum with a continuous suture of fine sterilized silk; this can be done rapidly with a small straight needle without a needle holder, as the tissue is thin, and offers no resistance; the assistant should follow the suture down, holding each stitch lightly as it is passed. 2nd, the muscles and fascia should then be brought together with interrupted sutures of thoroughly prepared catgut or silkworm gut; these should be passed either with Reverdun's needle or a handled curved needle with an eye near the point, and the suture threaded after the needle has been passed. It is best that these sutures should be interrupted, as should any mischief arise in the wound it will probably be in this layer, and any stitch can then be easily removed. 3rd, a continuous suture of fine silk through the skin. The wound should then be dusted with iodoform, dressed with some iodoform gauze, then one or two pads of Gamgee tissue, or wood wool, and over all strapping about 2½ inches wide, after which a flannel binder should be firmly secured with safety pins. If the wound has been closed in three stages the strapping may be omitted. The best anæsthetic is gas and ether.

After the operation is over, should there be much pain, twenty minims of tincture of opium in 1 oz. of

tepid water may be thrown into the bowel, or gr. ½ of morphia injected hypodermically, and the patient placed in bed. It is better, however, not to give any opium.

The after treatment consists in keeping the viscera at absolute rest for 48 hours. The water should be drawn off as required. No food should, as a rule, be given ; occasional teaspoonfuls of tepid water may be administered by the mouth, or if sickness ensues small pieces of ice may be sparingly given. If the sickness is obstinate it may be relieved by hypodermic injections of morphia, or ℥j doses of vin. ipecac., oxalate of cerium gr. 5, or ingluvin gr. 10. Afterwards, should no unfavorable symptoms arise, beef-tea may be given from time to time by spoonfuls. But if the stomach will not bear it then nutrient enemata of ℥ij of strong beef-tea, with ℥ ss. of glycerine, and ℥v of tinct. opii should be administered every 6 or 8 hours. Before the injection is thrown up, a tube should be passed *per rectum*, and left in for 5 or 10 minutes in order to allow of the passage of any flatus. Should it be necessary, gr. 10 of salicylate of soda, or quinine may be added to the injection.

If the bowel should be intolerant of enemata nutrient suppositories should be employed. These may be made of Brand's concentrated beef-tea, to which is added gr. 1 quinine, and ℥v of tinct. opii poured into a conical medicine glass, as a mould, previously moistened with glycerine to prevent its adhering to the glass. In recent years the after treatment of cases of cœliotomy has been greatly modified, especially where there is distension of the intestines.

Formerly opium was largely given which, by paralyzing the muscular tissue, aggravated the distress. Now, whenever there is any distension of the abdomen with a rise in temperature, it is better to give a mild aperient as seidlitz-powder or a copious enema, which in many cases gives instant relief. If the tongue is furred we may safely give 8 or 10 grains of calomel, dry on the tongue; such a dose, as a rule, does not purge, and the temperature is lowered.

The wound should not be disturbed for a week, if all is going on well, when the stitches may be removed, and if the wound, which is generally the case, be found healed, but little further dressing is required save occasionally restrapping. After a week, if all is going on well, the patient may, with great advantage, be carefully lifted on to another bed, and this process may be repeated every two days or so. If the case does well, the patient is usually convalescent in three or four weeks. Formerly all subjects of cœliotomy were provided with an abdominal belt before they were allowed to sit up, now, however, with the wound closed in three stages, it is found unnecessary.

Should, however, symptoms of peritonitis (*vide in loco* p. 56) arise, and the state of the pulse warrants it, rapid and free venesection holds out the best chance for recovery, together with, if necessary, calomel and opium in large doses (p. 218, 17, *c*), followed by quinine (p. 218, 17, *d*), or the patient should be kept deeply narcotised.

Should symptoms of septic poisoning supervene, it is best to reopen the wound and carefully remove by syringe or sponges the fluid which will be sure to be

present in the abdomen, and wash out the abdominal cavity with a douche of warm sterilized or saline water; or if the fluid is present in sufficient quantity to distend the recto-vaginal pouch, puncture with a trocar may greatly relieve the symptoms. In some cases it is advisable to place a glass drainage tube in the lower angle of the wound, reaching down to Douglas' pouch: this forms a small well, out of which any accumulating fluid can easily be removed with a syringe, or a strip of iodoform gauze which acts as an efficient drain.

Such cases give rise to great anxiety, and should be most assiduously watched and nursed.

10. Dislocation of the Ovary.

Definition.—One or both ovaries may be dislocated into the recto-vaginal pouch, or, more rarely, they may pass into the inguinal canals, or into the labia majora, or, more rarely still, descend as a femoral hernia. It is thought by some that where ovary-like bodies are found in the labia majora they are really testes.

Causes.—By strain, sudden jerks, inflammation, hypertrophy, extra-uterine fœtation, or by retroflexion of the uterus.

Symptoms.—Pain, dull aching, and of a sickening character, often produced into one or both mammæ.

Signs.—Examination detects them as slightly irregular mobile tender bodies.

Diagnosis.—From other swellings by the peculiar pain and tenderness, especially at the catamenial nisus, and the recognition by the touch as above.

Treatment.—Replacement where possible, and

sustentation by truss, pessary, or bandage. Should this be impossible from adhesions, or severe symptoms arise, they should be removed.

11. Hernia of the Ovary.

This is extremely rare, and is generally associated with intestinal hernia.

Treatment.—The ovary must be replaced with the intestine, and retained by proper appliances.

12. Absence of the Ovaries.

Congenital, rare, and associated with absence of development of the other organs of reproduction.

Symptoms.—The girl remains undeveloped; catamenia absent.

Treatment is, of course, worse than useless.

CHAPTER IV.

DISEASES OF THE OVIDUCT.

1. INFLAMMATION OF THE OVIDUCT.

Definition.—Salpingitis. Inflammation affecting the lining membrane.

Causes.—Puerperal or other endometritis, or gonorrhea.

Symptoms.—Difficult to localize, as acute inflammation passing into peritonitis is masked thereby.

Signs.—Local tenderness, separable with difficulty from ovaritis or local peritonitis. Occasionally the tube may be felt as an elongated body. Patency may be rendered evident, though very rarely, by the sound entering the duct.

Prognosis.—Unfavorable from the tendency to peritonitis from contiguity, or from the products of the inflammation passing into the cavity of the abdomen.

Treatment.—Rest, leeches to the groin or uterus (p. 205), opium, avoidance of coïtus. If the disease resists all other treatment, then removal of the appendages.

2. Abscess of the Oviduct.

Inflammation may pass into abscess (pyosalpinx), when great danger arises from the probability of rupture into the peritoneal cavity.

Treatment.—When diagnosed, aspiration, or better still removal.

3. Dropsy of the Oviduct.

Definition.—Tubal dropsy (hydrosalpinx); distension of the tube by fluid.

Causes.—Distension by pus (pyosalpinx *see* above); mucus, or menstrual fluid (hæmatosalpinx).

Symptoms.—Similar to those of a small ovarian cyst.

Signs.—The swelling is felt to be of a peculiar worm-like form, and for its size is not so moveable as an ovarian cyst. There may be intermittent discharge of the fluid *per vaginam.*

Diagnosis.—Very difficult. The shape may be a guide, as it is long, tense and wavy.

Treatment.—Aspiration or removal.

4. Stricture of the Oviduct.

Definition.—Narrowing of some portion of the duct.

Causes.—Salpingitis, pelvic peritonitis, mechanical pressure from fibrous or other tumors, atrophy.

Symptoms.—Sterility, if both tubes are affected.

Treatment.—None.

5. Cancer of the Oviduct.

So similar to and masked by cancer in neighbouring organs, that differential diagnosis is impossible. But where the history is clear, or the disease is limited to the tube, it may be felt as a distinct tumor; then removal of the appendages.

CHAPTER V.

DISEASES OF THE BROAD LIGAMENT.

1. Inflammation of the Broad Ligament.

(a) Pelvic Peritonitis.

Definition.—Inflammation of the peritoneum covering the pelvic viscera.

Causes.—Pelvic cellulitis, parturition or abortion; gonorrhea, metritis, ovaritis, salpingitis; cold during the catamenia; tubercle, cancer, operations.

Symptoms.—A rigor, fever, anxious countenance; pelvic pain, nausea and vomiting.

Signs.—Tenderness on deep pressure *supra pubem*, sometimes very acute; pulse small, wiry, about 120; tenderness on pressure on the vaginal cul-de-sacs and on the uterus; vaginal roof feels hard; subsequently tumefaction around the uterus, often displacing it.

Diagnosis.—Difficult to differentiate, especially from pelvic cellulitis and pelvic hæmatocele. Cellulitis more common after parturition or operations on the pelvic viscera. In cellulitis tumor easily reached, tends to suppurate, tenderness more often on one side, pain continuous, countenance not anxious, nausea not very

severe, uterus not entirely fixed. In pelvic peritonitis tumor not always felt, and if so, high; suppuration rarer, tenderness over whole hypogastrium; pain severe and paroxysmal, countenance very anxious, uterus entirely fixed. Differentiation from pelvic hæmatocele—the latter sudden in its attack, rare, with absence of fever, symptoms of loss of blood.

Prognosis.—If after parturition, grave; in the non-puerperal state, more favorable. If the effusion is purulent, more grave than when serous.

Treatment.—If seen quite early, venesection or ice to the hypogastrium; subsequently a large number (two dozen) of leeches over the hypogastrium, followed by hot poultices; opium pushed to narcotism, which should be kept up; perfect rest, milk, beef-tea, &c. Thornton's ice cap (p. 217) will be found of great service. Internally calomel gr. 8-10. After the first stage blisters above the groin. In chronic cases, fresh air without exertion, nutritious diet, perhaps stimulants, tonics with iron (as the old tinct. Ferri Muriatis, Ph. Ed.) If effusion persists, aspirate, and wash out the sac with carbolic acid (p. 210, 8, *a*) or iodine (210, 8, *b*.)

(*b*) *Pelvic Cellulitis.*

Definition.—Inflammation of the connective tissue behind, in front of, or at the sides of the uterus, or between the layers of the broad ligament. Called also parametritis, peri-uterine inflammation, &c. It has three stages: (1) congestion, (2) effusion, (3) suppuration.

Causes.—Parturition or abortion, inflammation of

uterus or ovaries, injury from coïtus, caustics, pessaries, tents, operations, or blows. Exciting, cold and fatigue.

Symptoms.—Recurring rigors, pain, fever, painful micturition and defæcation, tendency to menorrhagia or metrorrhagia. Occasionally fever is absent or transient, or symptoms only of weight and fulness in pelvis, with nocturnal fever.

Signs.—Feeling of puffiness on one side of the uterus, usually on the left, with great sensitiveness; subsequently induration, and the detection by the bimanual examination of a swelling of variable size. Additional light gained by rectal examination. If the disease is farther advanced, the uterus is pushed laterally by the swelling, and is often verted or flexed, and generally more or less fixed. Not rarely the mass is somewhat moveable together with the uterus.

Diagnosis.—From fibrous tumors, hæmatocele, and pelvic peritonitis. The former are not tender, are moveable, are unaccompanied by fever, and are attached to the uterus. Hæmatocele sudden in its onset, soft at first, then hard, whereas pelvic cellulitis is hard first, then soft from suppuration. In pelvic peritonitis the swelling is higher, the uterus less moveable.

Prognosis.—Guarded, as, though serious effusion may be absorbed, purulent collections may be evacuated into the peritoneal cavity and destroy life. More usually favorable, though there is danger from peritonitis. The consequences may be sterility from disintegration of ovaries, permanent displacement of uterus, dysmenorrhea, or menorrhagia.

Treatment.—In acute stages, venesection or leeches, continuous poultices, sedatives, and absolute rest,

Afterwards blisters, mercury, followed by iodide of potassium, gentle purging, warm douche, change of air, tonics.

2. Pelvic Abscess.

Definition.—Collection of pus consequent on suppuration taking place after inflammation in the connective tissue, ovaries, pelvic peritoneum, or uterus; or in the sac of a hæmatocele or ovarian cyst; or in the breaking down of tuberculous deposit.

Causes.—Any cause producing cellulitis, hæmatocele, or pelvic peritonitis may continue into abscess; the puerperal state, impure air, pyæmia; and remote, the strumous or syphilitic diatheses.

Symptoms.—Violent rigors, fever, nocturnal exacerbation of temperature, throbbing pain in the pelvis, pressure on rectum and bladder, and often pain down the thigh.

Signs.—Vaginal examination, and the bimanual examination reveal a fluctuating swelling, to be differentiated from ovarian cyst by the history, and by its greater fixidity.

Diagnosis.—Not difficult by means of the symptoms and signs.

Prognosis.—Pelvic abscesses may evacuate themselves *per vaginam*, *per rectum*, *per vesicam*, or by the abdominal walls. If into the peritoneal cavity usually fatal, unless the abdomen is opened at once, and freed from the pus (*vide infra*). After rupture the orifice may be too small for the free evacuation of the pus, and it may still accumulate.

Treatment.—Stimulant and nutritious diet, tonics

with iron. If patient's constitution is suffering, free evacuation. Delay for a time till fluctuation is marked, then open by (1) vagina, or (2) abdomen. Opening to be by aspiration, followed, should it recur, perhaps by injection of the cyst with iodine (p. 212, 10, *c*); or by trocar, and if the cyst is large the finger may be passed in to allow of the opening being made free. To close the cavity, use injections of iodine.

For the radical cure of a large pelvic abscess, Lawson Tait suggested, and successfully carried out, the following operation—Open the abdomen in the median line, aspirate the abscess so as to remove all its contents, make an incision into the walls of the abscess, stitch the edges of the opening into the abscess to the edges of the abdominal wound, carefully closing the peritoneal cavity, and leaving the opening into the abscess, now brought to the opening into the abdominal wall patent for draining and irrigation with iodine and water, sulphurous acid and water, or carbolic acid lotion.

3. Cyst of the Broad Ligament.

Definition.—Cysts varying in size from a small pea with a long pedicle (as seen in some necropsies) to that of a large ovarian cyst, taking their origin from the broad ligament, and sometimes so closely adherent to the ovary as to necessitate its removal with the cyst.

Causes.—Unknown.

Symptoms.—Scarcely any.

Signs.—If large enough, similar to ovarian cysts, but with less disturbance of the system.

Diagnosis.—By examination of the contained fluid, which is clear, nearly colorless with a slight bluish tinge, non-albuminous, and of low specific gravity.

Prognosis.—Favorable.

Treatment.—Tapping or removal as in ovariotomy.

4. Extra-Peritoneal Hæmatocele.

Definition.—A symptom of disease which consists in the outpouring of blood into the extra-peritoneal connective tissue.

Causes.—The period of the catamenial nisus; plethora, with rupture of some pelvic vessel; chronic uterine or ovarian disease; hæmorrhagic diathesis; strain or blow; excessive coïtus.

Symptoms.—Sudden severe pain in the pelvis, sense of weight and fulness, faintness, nausea, vomiting, metrorrhagia(?), tympanites, interference with functions of bladder and rectum, fever.

Signs.—A tumor low in the pelvis, usually behind the uterus; not much constitutional disturbance; no peritonitis; uterus pushed upwards; vaginal mucous membrane dusky.

Diagnosis.—From pelvic cellulitis by more rapid development, and primary softness of tumour; from retroversion by presence of signs of hæmorrhage, and absence of alteration of position of the uterus on passage of uterine sound; from extra-uterine pregnancy by absence of signs of pregnancy and rapid development; from fibrous tumor by rapidity of growth, and immobility with the uterus; from dislocated ovary by absence of tenderness; from cancer by absence of the characteristic pain and cachexia.

Prognosis.—Usually favorable, as the hæmorrhage is circumscribed. Complications may arise, as peritonitis, pelvic cellulitis, or abscess; the uterus may be displaced and fixed.

Treatment.—Check further loss of blood, relieve pain and prevent death. Perfect rest, ice over the hypogastrium (p. 214, 15, *a*), then alcohol (?) and opium. If there is no danger of rupture of the blood sac into the peritoneal cavity, do not puncture, and the tumor will probably be absorbed. Leeches may be applied to the hypogastrium, and afterwards a blister. Iodide of potassium (gr. 5) and quinine with iron.

5. Intra-Peritoneal Hæmatocele.

Definition.—A symptom of disease which results in the outpouring of blood into the cavity of the peritoneum.

Causes.—The menstrual molimen with regurgitation through the orifice of the oviduct; rupture of extra-uterine pregnancy, tubal abortion, and otherwise as in the extra-peritoneal variety.

Symptoms.—Suddenness and otherwise as in the former disease, extra-peritoneal hæmatocele.

Signs.—As in former case, but in the intra-peritoneal kind the tumor is higher in the pelvis, constitutional disturbance great; bladder and rectum may be interfered with; peritonitis, uterus misplaced, vagina not altogether pressed upon, vaginal mucous membrane not discolored. The tumor is, as in the other form, evident to the bi-manual examination.

Diagnosis.—From the extra-peritoneal variety by signs, as above.

Prognosis.—On the whole favorable, if peritonitis does not supervene.

Treatment.—As above. Should the mass suppurate and symptoms of septicæmia supervene, the tumor should be incised *per vaginam*, the contents evacuated, and the cavity washed out with iodine or carbolic acid and water, and kept drained, or the operation may be by cœliotomy, and treatment, as above, under pelvic abscess (p. 59).

CHAPTER VI.

DISEASES OF THE UTERUS.

(UNIMPREGNATED).

1. CATARRH.

Definition.—A defluxion of a glairy nature from the cervix uteri, not necessarily associated with marked endocervicitis.

Causes.—Cold, hyperæmia of the cervix, excessive coïtus.

Symptoms.—A feeling of weakness, with slight backache.

Signs.—Leucorrhea (colorless).

Diagnosis.—From endocervicitis by the absence of a red granular condition of the canal or lips.

Prognosis.—Favorable.

Treatment.—Rest; tonics, iron, quinine and zinc (p. 219, 18, *b*); ergot (216, 10, *d*); intra-uterine injection of carbolic acid and glycerine (211, 9, *a*) or iodine (212, 9, *c*); the hot douche.

2. INFLAMMATION.

(*a*) *Metritis.*

Definition.—Inflammation of the parenchyma of the uterus; uncomplicated, rare.

Causes.—Mechanical injuries, as operations on the uterus; coïtus or chill at catamenial period; intra-uterine or other pessaries, tents, incautious use of the uterine sound.

Symptoms.—Violent pelvic pain, with general tenesmus, nausea, vomiting, and diarrhea. Pain increased by defæcation, and extending down the thighs.

Signs.—Great tenderness over the uterus. Examination *per vaginam* reveals the uterus lower than normal, swollen, os dilated, and the organ very tender; vagina hot and dry, unless there is also endometritis.

Diagnosis.—Differential diagnosis from pelvic peritonitis by mobility of uterus, tenderness confined to uterus; from cellulitis by absence of deposit; from endometritis by the uterus being more swollen and constitutional symptoms graver.

Prognosis.—Duration two or three weeks. Termination in resolution, or abscess, rare.

Treatment.—Absolute rest; leeches to the cervix uteri (p. 205), poultices, hot douche, opium in full doses, combined at the onset with full doses of calomel; mild diet.

(*b*) *Endometritis.*

Definition.—Inflammation of the mucous membrane of the body of the uterus. Rarer than endocervicitis.

Causes.—Scrofula, exhaustion, cold during menstruation, cervical endometritis, injury from the sound, tents, intra-uterine stems, &c., tumors of the uterus, gonorrhea, vaginitis.

Symptoms.—Leucorrhea glairy, and sometimes

blood-stained, or with small clots in the clear discharge; disorders of menstruation, with occasional membranous dysmenorrhea; pain in back, groins, and hypogastrium; headache, tympanites, nausea and vomiting, sterility.

Signs.—Uterus rather longer than natural, pain on the introduction of the sound, which is often followed by slight bleeding, tenderness on deep pressure, dilatation of internal os.

Diagnosis.—*See* Symptoms and Signs.

Prognosis.—Favorable if recent, if discharge is only mucus or blood, if there is no displacement, nor elongation of uterus nor constitutional nervous disorders, and the menopause is near. Unfavorable if chronic, discharge purulent, if dysmenorrhea is membranous, much displacement, cavity elongated, vaginitis, menstruation active.

Treatment.—Difficult of cure. General—Improve health, good diet, and fresh air. Tonics, iron, quinine, acids; avoidance of intercourse. Particular and local—Subdue the inflammation by leeches to the cervix (p. 205, 1) or puncturing (p. 205, 2), followed by glycerine plugs, and the hot douche night and morning for a week or longer, then, when all tenderness has passed away, recourse can be had to some of the following intra-uterine applications—Tents, or, more safe, rapid dilatation by means of graduated sounds (p. 206), followed by iodine, solution of chloride of zinc, the solid nitrate of silver, fuming nitric acid, or the pernitrate of mercury. The nitrate of silver should be applied with Lalemand's porte caustique or Dr. Protheroe Smith's. To apply the nitric acid or the pernitrate of mercury:—After the cavity has been

dilated it should be wiped out with Playfair's probe, covered with absorbent cotton-wool, and then another covered with ordinary wool, which, being less absorbent, parts with the acid more easily, should be soaked in the caustic, carried up into the cavity and retained a few seconds, care being taken to prevent any superfluous fluid running out on to the vagina by the use of a pond of neutralising fluid (See p. 22), or the fluid caustic can be applied with Duke's probe, which is used without cotton-wool, the fluid being retained in grooves. Intra-uterine injections are hazardous, unless in the hands of a skilled operator, but with due precautions for the ready escape of the fluid they may prove useful: such as iodine, carbolic acid, iodized phenol, nitrate of silver, sulphate of zinc and copper, or iron (?). The best treatment, however, and one that is likely to give more permanent results, is, after dilatation of the cavity to curette it freely (p. 206, 4); this will generally bring away shreds of hypertrophied mucous membrane, the product of the inflammation, after which the cavity may be swabbed out with iodized phenol, or packed lightly with a strip of iodoform gauze.

(*c*) *Endocervicitis.*

Definition.—Cervical endometritis. Inflammation of the mucous membrane of the lips of the uterus and the interior of the cervical canal.

Causes.—Impoverished blood, frequent pregnancies, subinvolution; displacements, excessive coïtus, intra-uterine pessaries, endometritis, vaginitis, obstructive dysmenorrhea, mucous polypi, masturbation.

Symptoms.—Pain in back and loins, increased by

exertion, opaque leucorrhea, menstrual disorders, "nervousness," loss of general health, dyspareunia, occasionally nausea and vomiting.

Signs.—Os rather patent, lips puffy, tenderness of cervix, tenacious glairy discharge, sometimes opaque.

Diagnosis.—See if disease is confined to the cervix, if uncomplicated with areolar hyperplasia; the uterine sound may be passed into the uterus without the pain and bleeding that follows its introduction in endometritis, or pain is only experienced on the sound passing through the cervical canal, and no further pain is produced as the sound is passed onwards.

Prognosis.—Favorable, but recovery slow.

Treatment.—Attend to general health, fresh air, light food; laxatives, tonics, injections of warm water with glycerine, or opium; dilatation of canal with tents or graduated sounds; application of nitrate of silver, iodine (liquor), carbolic acid (p. 212, 10, *a*), tannin, acetate of lead, chromic acid (p. 212, 10, *b*), nitrate of mercury, nitric acid, actual cautery, scarification, or scraping the inflamed mucous membrane with a curette (p. 206, 4).

(*d*) *Follicular Cervicitis.*

Definition.—Inflammation of the cervix and lips of the uterus, with distension of the cervical follicles.

Causes.—Parturition; subinvolution; chill; endocervicitis with leucorrhea; excessive coïtus.

Symptoms.—Feeling of weight and bearing down with pain, specially in the sacrum; leucorrhea (for there is generally accompanying endocervicitis).

Signs.—Cervix uteri full, puffy, with the distended follicles feeling like shot under the finger. *Per speculum* cervix looks red and smooth, with the follicles semi-transparent or yellow, according to their contents.

Diagnosis.—From symptoms and signs as above.

Prognosis.—Favorable.

Treatment.—Puncture the follicles and the cervix freely, then proceed as in chronic cervicitis (*infra*).

(*e*) *Chronic Cervicitis.*

Definition.—Inflammation of the cervix uncomplicated with follicular cervicitis (p. 68), or with areolar hyperplasia (p. 95).

Causes. — Endocervicitis, parturition with sub-involution, prolapsus, disordered menstruation, excessive coïtus.

Symptoms.—Backache (sacral), and bearing-down pain increased on walking, dyspereunia, languor or headache.

Signs.—Cervix tumid, congested, mucous membrane somewhat tense, red and tender.

Diagnosis.—By symptoms and signs as above, eliminating those cases where complicated with follicular cervicitis, granular inflammation, or areolar hyperplasia.

Prognosis.—Favorable.

Treatment.—Leeches to the cervix or free scarification. Afterwards glycerine plugs (p. 213, 13, *a*), and hot injections (115°—120°), or poultices to the cervix (p. 207, 5). Rest and tonics.

3. Granular Inlammation of the Lips of the Uterus.

Definition.—A granular condition of the mucous membrane covering one or both lips of the cervix uteri, usually associated with endocervicitis or subinvolution ; it is more commonly but erroneously called "ulceration" of the cervix, or abrasion.

Causes.—Endocervicitis ; areolar hyperplasia ; endometritis, fissure of the cervix ; prolapsus, as subjecting the cervix to friction, excessive coïtus, parturition.

Symptoms.—Profuse leucorrhea, feeling of weakness, aching round pelvis, sacral pain, rendered worse on exertion ; if uncomplicated, not grave.

Signs.—Surface of cervix felt to be velvety. *Per speculum* the cervix is seen to be more or less covered by a patch, or the os might be surrounded by a ring of red, not very coarse, granulations tending to bleed, covered with a viscid glairy or puriform secretion. The granular patch is not depressed as an ulcer, but more usually is elevated.

Diagnosis.—By symptoms and signs as above.

Prognosis.—Favorable, but often tedious, depending on the cure or removal of the cause.

Treatment.—If uncomplicated with areolar hyperplasia (p. 95), free scarification (p. 205, 2), repeated, if necessary, several times at intervals of about a week or ten days ; afterwards, the application of fuming nitric acid, or pernitrate of mercury, strong carbolic acid (p. 212, 10, *a*), iodine, potassa caustica lightly ; the

actual cautery, Richardson's styptic colloid (tannin dissolved in collodion), chromic acid (p. 212, 10, *b*), strong solution of iron, solid nitrate of silver (?), vaginal injections of glycerine and sulphate of zinc (p. 211, 8, *f*), acetate of lead or tannin (p 211, 8, *g*, *i*), pessaries of oxide of zinc, iodide of lead with belladonna (p. 210, B, *b*) or opium. Caustics should not be applied too frequently. If the lips of the cervix are split and widely divergent (everted), the sides of the fissure may be pared, and the edges brought together with sutures (p. 104).

4. Ulcer (true).

Definition.—A defined excavation, rare.

Causes.—Procidentia and friction from the wearing of a cloth.

Signs.—Seen on the surface of the cervix.

Treatment.—Reposition of the uterus, rest, stimulant applications, arg. nitr., "red" wash, or carbolic acid (p. 212, 10, *a*).

5. Ulcer (Follicular).

Definition.—Acne, herpes or aphthæ of uterus.

Causes.—Similar to those of granular inflammation, endocervicitis, or areolar hyperplasia.

Symptoms.—As of granular inflammation.

Signs.—The cervix is felt to be studded with (1) small defined elevations feeling like shot (p. 69), or (2) these may have ruptured and small ulcers occupy their place, or (3) these may have succeeded red hæmorrhagic tubercles.

Treatment.—(1) Puncture of the small cysts to

evacuate their contents (viscid), (2) cavities touched with solid nitrate of silver, or the pernitrate of mercury. Then proceed as in chronic cervicitis.

6. Ulcer (Syphilitic).

Very rare; treatment as of ordinary chancre.

7. Rodent Ulcer.

Definition.—A deep true ulcer of the cervix uteri ultimately fatal, but not so rapidly as true cancer. Lupus.

Causes.—Unknown; probably hereditary.

Symptoms.—Pain not severe; emaciation slow, discharge sanious, and subsequently offensive.

Signs.—More or less deep, dark red ulcer, with hard, thin, defined edges; uterus not fixed for some time, vagina not affected.

Diagnosis.—From other forms of malignant disease by the slowness of its extension, by the mobility of the uterus, by the defined smooth edges, by absence of proliferating marginal growth.

Prognosis.—Unfavorable.

Treatment.—Destruction of surface of ulcer by potassa caustica (p. 97) or actual cautery, vaginal injections of tannin, iodine or carbolic acid, rest, nourishing diet, subsequently opium, bromine, chian turpentine. If it spreads, vaginal hysterectomy.

8. Abscess.

Definition.—Suppuration in the walls of the uterus. A rare sequela of metritis.

Causes.—Change of inflammation to suppuration unknown.

Symptoms.—After those of metritis (p. 64), those of suppuration, rigors, nocturnal rise of temperature.

Signs.—Bulging of an elastic swelling in the uterine wall.

Diagnosis.—Difficult; differentiate swelling from that of cyst by the symptoms.

Prognosis.—If accessible, favorable.

Treatment.—Free incision and plugging with iodoform gauze.

9. Utero-Vesical Fistula.

Definition.—A fistulous opening from the bladder into the uterus above the vaginal attachment.

Causes.—Prolonged pressure during labor, injury, abscess, ulceration.

Symptoms.—Flow of urine from os uteri.

Signs.—Bladder sound can be passed into the uterus and felt there.

Diagnosis.—By symptoms and signs.

Prognosis.—Unfavorable as to remedy.

Treatment.—Closure of the os uteri after the menopause.

10. Stricture of the External Os Uteri.

Definition.—Small pinhole os uteri, not admitting a fine probe.

Causes.—Congenital, or the result of caustics or cicatrices.

Symptoms.—Obstructive dysmennorhœa; the pain

of a bearing-down character occurring during the catamenia, as expulsive pains ; sterility.

Treatment.—Incision, keeping the parts subsequently patent by frequent introduction of thick sound ; or by increasing the size of the os by a point of potassa caustica, and subsequently preventing the os uteri from contracting during the healing process. By tents unsatisfactory, as the canal, being thereby merely stretched, subsequently returns to its abnormal condition.

11. Stricture of the Internal Os Uteri.

Definition.—Narrowness of the inner os.

Causes.—Congenital, anteflexion, endometritis.

Symptoms.—Those of obstructive dysmenorrhœa (*vide supra*). Pain for one or two days before the catamenial flow of a forcing, bearing-down character ; often associated with anteflexion ; sterility.

Signs.—Sound passing through the cervix uteri is arrested at the inner os, and the passage by force through the os produces pain similar to that of the catamenia ; the sound grasped firmly by the stricture.

Diagnosis.—From stricture from malignant disease by the feel of the tissue as conveyed by the sound.

Prognosis.—Favorable.

Treatment.—By tents unsatisfactory, as the stricture being merely dilated tends to return to its abnormal condition. Incision slightly bilaterally by straight knife *per speculum*, that of Marion Sims, or the Author's modification (p. 21) is the best. Division of the cervix with scissors is bad, as it produces an artificial fissure and prevents the natural action of

imbibition by the lips of the uterus. Forcible dilatation should be carried out immediately on the incision being made, as then there is less risk of inflammation. Marion Sims' dilator has the advantage over other dilators of being able to be used by the hand alone, without the screw; by this means, the hand being more sensitive, the extent of the dilatation and laceration of the circular fibres can be regulated.

On no account should tents be used after the incision of the internal os uteri until the wound has quite healed, otherwise there is risk of septic poisoning. If tents are used at first, the canal should be thoroughly cleansed before the incision is made. In using the dilator, care should be taken to dilate gradually at first, till some of the cervical fibres are felt to rupture, and subsequently to separate the blades of the dilator more and more, until the requisite degree of patency is arrived at. After the dilatation is completed a sterilized glass stem may be introduced into the uterus, and retained there several days until the canal has healed. This operation should be performed under an anæsthetic.

12. Hypertrophy of the Uterus.

Definition.—True enlargement of the uterus not associated with morbid deposit.

Causes.—Congenital, rare; subinvolution.

Symptoms.—Sensation of weight and bearing-down, backache, leucorrhea.

Signs.—Uterine cavity longer than normal; tendency to prolapsus.

Diagnosis.—By absence of other signs of morbid growth; by ascertained length and weight of uterus.

Prognosis.—Recovery tedious.

Treatment.—If congenital, none should be attempted. If from subinvolution, scarification of cavity of uterus and cervix; nitric acid or carbolic acid by Playfair's or Duke's probe; tonics with ergot (p. 215, 15, *f*; 216, 16, *d*).

13. Hypertrophy of the Cervix (*elongation*).

Definition.—Elongation of the cervix not associated with morbid deposit.

Causes.—Congenital; continued exertion, as by sewing-machine with treadle.

Symptoms.—Backache; occasionally dysmenorrhea from associated stricture of either os; sterility; sometimes none.

Signs.—Cervix is found to be longer than normal, and conical; tendency to prolapsus, or the appearance of the elongated cervix at the vulval orifice without much prolapsus of the uterus.

Diagnosis.—By signs as above, and absence of history of disease of the part.

Prognosis.—Favorable.

Treatment.—Amputation, or an elastic ring.

14. Atrophy.

Definition.—Abnormal smallness of uterus.

Causes.—Congenital. Hyperinvolution.

Symptoms.—Spammenorrhea; (?) sterility.

Signs.—Sound reveals an abnormally short canal.

Diagnosis.—By sign as above.

Prognosis.—Unsatisfactory.

Treatment.—By stimulation of ovaries, marriage, galvanic stem.

15. Atony of the Uterus.

Definition.—Laxness of the uterine walls allowing the uterus to be easily flexed in any direction.

Causes.—General debility ; parturition.

Symptoms.—Feeling of weakness ; leucorrhea, sterility. If flexion exists, the corresponding symptoms.

Signs.—Uterine walls felt to be soft and thin, and the uterus easily flexed in any direction.

Prognosis.—Unfavorable as to remedy.

Treatment.—Tonics, rest, fresh air, astringent injections, hot douche.

16. Absence of the Uterus.

Definition.—Complete, very rare ; occasionally rudiments of the organ are to be detected.

Causes.—Congenital.

Symptoms.—Amenorrhea. If ovaries are present, sexual appetite may exist.

Signs.—Examination by touch, by sound in bladder and finger in rectum (or hand if necessary) failing to detect the organ.

Prognosis.—Unfavorable as to remedy.

Treatment.—None.

17. Cancer of the Uterus.

Malignant disease of the uterus manifesting itself in various forms. Factors—(1) Hereditary tendency ; (2) Local manifestation ; (3) Secondary affections.

(*a*) *Scirrhus.*

Definition.—Malignant disease of the uterus wherein the fibrous elements predominate, rare. It commences with hard deposit, with absence of symptoms that would lead to the diagnosis of interstitial hypertrophy or areolar hyperplasia. After the hard condition has existed for some little time, it breaks down and becomes converted into excavating carcinoma. Scirrhus of the body of the uterus may exist without at first involving the cervix, but it is the rarer manifestation of the disease. It can be diagnosed by the constitutional symptoms of cancer, and on the passage of the sound the point is felt, after passing the healthy cervix, to pass over a hard irregular and often friable tissue.

Causes.—Hereditary tendency, middle or advanced life, frequent pregnancies, mental depression, hard life.

Symptoms.—At first but slight, with leucorrhea and hæmorrhage; then pain through the pelvis, umbilicus or flank; tenderness on pressure, menorrhagia and metrorrhagia; watery and offensive discharge, debility, and afterwards the characteristic cachexia.

Signs.—Scarcely any of true scirrhus; cervix feels peculiarly hard and nodulated. The sensation to the touch differentiating scirrhus from non-malignant induration of the cervix is that in cancer the tissue is felt hard even on the very surface, like wet india-rubber, whereas in areolar hyperplasia the hardness is felt to be below the surface, submucous. By microscope stroma, alveoli, cells.

Diagnosis.—Often difficult, but having regard to

the history of the case, and with due care in the examination as to hardness (see above), a correct diagnosis should be arrived at.

Prognosis.—Unfavorable.

Treatment.—Amputation (?) if of cervix only; if operation declined, relieve pain, and sustain health.

If the cancer exist only in the body of the uterus, and the vagina is roomy, the cervix should be dilated, and the whole cavity of the uterus scraped out with curettes, and the cavity plugged with chloride of zinc wool (p. 212, 10, *d*), or strong carbolic acid (p. 212, 10, *a*), or bromine applied to the interior. Should the diagnosis of cancer of the body of the uterus be certain, and the uterus be still moveable, and the vagina sufficiently capacious, it should be removed by vaginal hysterectomy, otherwise by cœliotomy.

(*b*) *Excavating Carcinoma.*

Definition.—Destructive ulcerative stage of scirrhus.

Causes.—Final unknown.

Symptoms.—Often at first painless until considerable advance has been made, when the pain becomes stabbing and severe through hypogastrium. Discharge bloody, puriform, watery, and offensive. Cachexia marked by loss of flesh, yellowish tinge of skin with characteristic dryness, and depression of the vital powers. Progress rapid, affecting contiguous tissues.

Signs.—Uterus fixed; a more or less ragged excavation in the cervix uteri; the excavation characterized by defined, irregular, hard edges, with a cavity irregular, nodulated, hard, and occasionally friable.

Diagnosis.—From benign ulceration by fixity of uterus, by rapidity of extension, by the peculiar hardness of the ulcerative surface, and by the general symptoms.

Prognosis.—Unfavorable.

Treatment.—Scrape the cavity as clean as possible from the malignant surface growth, and apply the actual cautery freely from time to time; or potassa caustica, or bromine, with the view of producing a deep slough and so reaching more healthy tissue; or apply frequently plugs saturated with the glycerine of tannic acid, having the portion in apposition to the excavation previously dipped in strong carbolic acid (p. 212, 10, *a*.)

If the whole extent of the disease can be reached, scrape it all away with curettes till the surface is felt by the finger to be healthy, plug the excavated cavity tightly with chloride of zinc wool (p. 212), then plug about a third of the vagina with plugs of wool soaked in a saturated solution of carbonate of soda and wrung out nearly dry, and plug the rest of the vagina with carbolized oil plugs. The lower plugs and the carbonate of soda plugs should be removed the next day, and the chloride of zinc plug on the fourth day. A slough will form which will generally be thrown off whole, as the finger of a glove, and if the operation has been successful, the underlying tissue will remain healthy and heal up. If uterus moveable, hysterectomy.

(*c*) *Vegetating Carcinoma.*

Definition.—A friable, somewhat hard mass (resembling cauliflower more than the real cauliflower excrescence) growing from the cervix, and projecting more or less into the vagina. It may produce spots of similar growth on the vaginal wall by contiguity.

Causes.—Unknown; probably neglected epithelioma.

Symptoms.—More painful at first than the latter variety; discharge less bloody, more puriform, not so offensive at first.

Signs.—Uterus not so soon fixed. Mass felt isolated, occasionally growing from only one lip of the uterus; very friable, portions being easily separated by the finger.

Diagnosis.—From true cauliflower excrescence by presence of cachexia and pain, and discharge less watery.

Prognosis.—Unfavorable.

Treatment.—Complete amputation of the mass and free application of the actual cautery; subsequent treatment as in latter variety; should it recur, hysterectomy.

(*d*) *Epithelioma.*

Definition.—Malignant growth at first in the form of a patch on the lips of the womb, afterwards ulcerating.

Causes.—Not improbably developed in some cases from neglected extensive granular inflammation of the cervix uteri.

Symptoms.—Backache, bearing-down pain, metrorrhagia, discharge puriform and bloodstained.

Signs.—Uterus at first moveable; growth somewhat hard, coarsely granular, patch raised above surrounding tissue, red, easily made to bleed.

Diagnosis.—From granular inflammation of the cervix by more severe pain; occasionally more bleeding; cervix not necessarily much increased in bulk. Afterwards it may become a vegetating carcinoma.

Prognosis.—Not always unfavorable.

Treatment.—Amputation of the cervix through healthy tissue; this not unfrequently results in cure; if doubtful, hysterectomy.

(*c*) *Cauliflower Excrescence.*

Definition.—Not true cancer; cancroid, very rare; a growth not hard and friable as vegetating carcinoma or epithelioma, but consisting of a highly vascular tissue (papilloma), granular, shredy, not invading the vagina, growing from the os uteri, not composed of so-called cancer-cells.

Causes.—Unknown.

Symptoms.—Discharge of bloody water, afterwards bleeding; spanæmia, disorder of general health.

Signs.—Growth felt softish, lobulated like placenta without tenderness; bright flesh red color; no infiltration; uterus not fixed.

Diagnosis.—By microscopical examination not giving usual characteristics of cancer; from polypus by greater softness and ready bleeding when touched; from vegetating cancer by its mobility and softness, symptoms of spanæmia, and not the cachexia of cancer.

Prognosis.—If it arises from one portion of the lip of the uterus and has a narrow base, sometimes favorable; if advanced, unfavorable.

Treatment.—Removal, and actual cautery. In all cases of cancer of the uterus when the diagnosis is made before any surrounding tissue is invaded, the total removal of the uterus is indicated. From the observation of several distinguished operators, where the vagina is roomy the operation by the vagina is to be preferred. Nevertheless, having regard to the cramped space in the vaginal operation, and the advantage of free access to the pelvic cavity in difficult cases, or in the occurrence of hæmorrhage, the operation by abdominal section seems to be the more rational. The details of this operation are too lengthy for insertion in a mere handbook.

18. FIBROUS TUMOR.

A swelling of some portion of the uterus, consisting mainly of fibrous tissue; fibroma, myoma, or myofibroma.

(*a*) *Sub-peritoneal Fibroid.*

Definition.—A fibrous tumor projecting more or less from the external surface of the uterus, either sessile or pedunculated. Probably developed in the uterine wall, and subsequently extruded by the action of the contractile tissue.

Causes.—Unknown.

Symptoms.—Pain in pelvis, with sense of weight and bearing down; occasionally menorrhagia or none,

difficulty of defæcation, and symptoms as of retroversion when the tumor is tilted backwards; frequency of micturition when it presses forwards on to the bladder.

Signs.—Swelling felt by abdominal palpation and bi-manual examination; tumor, if pedunculated, felt to be partially moveable independently of the uterus. Uterine cavity not always increased.

Diagnosis.—From cellulitis by mobility; from hæmatocele by absence of sudden symptoms; from flexions by uterine sound; from ovarian tumors, difficult, by some mobility with the uterus, and also by the greater hardness of the fibrous uterus; difficult where there exists a fibrous tumor of the ovary; where ovarian tumor is adherent to uterus, often impossible; from fæces by indentation of latter.

Prognosis.—If of slow growth, not unfavorable.

Treatment.—Where so large as to threaten health, or the ability to earn a living, removal by abdominal section; otherwise they are best left alone.

(*b*) *Intra-mural or Interstitial Fibroid.*

Definition.—A fibrous tumour situate in the walls of the uterus.

Causes.—Unknown (subinvolution?); possibly suppression of sexual impressions.

Symptoms.—Menorrhagia, irritability of bladder and rectum, pain in pelvis, dysmenorrhea, leucorrhea.

Signs.—Uterus felt enlarged, cavity elongated, and curved by bulging of the wall in which the tumor is situated.

Diagnosis.—From sub-peritoneal (see above); from intra-uterine (see below).

Prognosis.—If of slow growth not unfavorable, but less so than the sub-peritoneal variety.

Treatment.—Dilatation of cervix kept up, and the administration of ergot with the view of projecting the tumor towards the inner surface of the uterus, when treat as below; chloride of calcium gr. 15. If symptoms persist, hysterectomy. Electricity has been tried in these cases, but the result is not very encouraging.

(*c*) *Intra-uterine Fibroid.*

Definition.—A fibrous tumor springing from the inner wall of the uterus, projecting more or less into its cavity; sessile or pedunculated.

Causes.—Unknown; possibly as above.

Symptoms.—Menorrhagia and metrorrhagia; according to size irritability of bladder and rectum, pain bearing-down intermittent as of labor, glairy leucorrhea, dysmenorrhea.

Signs.—Uterus enlarged and hard, cavity elongated, and more or less curved by the protruding tumor, that side of the uterus being bulged outwards opposite to that from which the tumor springs; os sometimes patent. To more thoroughly explore the uterus, the cervix must be dilated with tents or Hegar's dilators in order that the finger may be passed into the uterus to feel the tumor.

Definition.—From sub-peritoneal and interstitial tumors by the greater length of the cavity and by its tortuous direction; from simple flexions by the sound; from ovarian tumors by the length of the uterine

cavity; from pelvic hæmatocele and cellulitis by the history.

Prognosis.—If accessible favorable; if the cervix is long and narrow, guarded as to cure. In nulliparous women where the cervix is long, and the os uteri and vagina small, the attempt to enucleate is much more hazardous than in multipara.

Treatment.—Fibrous tumors may remain stationary, especially after the menopause; or they may retrograde; they may be spontaneously protruded from the os as polypi, or even become detached and expelled, or they may slough. Pregnancy may alter their growth, and the process of involution may lessen them. Where removal is contra-indicated, relieve expulsive pains by opium; relieve pressure by pessary or the tilted bed (p. 208); lessen metrorrhagia by acid tonics, Indian hemp, gallic acid, turpentine, astringent plugs, or intra-uterine injections of astringent fluids. Often the expulsive pains and metrorrhagia are greatly lessened by free division of the cervix.

For cure, removal—by (1) induced extrusion, (2) ecraseur, (3) enucleation, (4) produced sloughing or (5) hysterectomy.

(**1.**) **By Induced Extrusion.**—The os and cervix uteri must be dilated freely by tents. At first it is best to introduce a sufficiently long laminaria tent, and on its removal to introduce several others together, or sponge tents of increasing calibre. There is often considerable difficulty in introducing a straight laminaria tent, owing to the curved course of the uterine canal from the bulging of the tumor. In such cases it is a good plan to introduce first an ordinary sound,

then one a little thicker and straighter up to say No. 9 or 11, then remove it and again introduce a straight and thinner sound and pass a tent up alongside the sound as a guide, then remove the sound and pass another tent, and if possible a third. In twelve hours these are to be removed and a large sponge tent introduced. As sometimes the conical shape of a sponge tent leads to too little dilatation of the inner os, it is a good plan to introduce one tent butt end first, and then push up another point first alongside the former one.

If the cervix is thus kept patent, and the fundus uteri induced to contract by ergot (intra-uterine pessaries) or by the hypodermic injection of ergotine (gr. 2), the uterus may, by the induced pains, as in labor, gradually extrude the tumor through the os, when it is to be treated as a polypus (*vide infra*). And here some directions may be given for the safe employment of tents; for without due care their use may be followed by severe symptoms, and even death from septic peritonitis. No tent should be introduced soon after an incision of the cervix, nor until the wound has healed, the parts being in the meantime kept apart; for the wound affords a point of absorption for the pent-up fœtid discharge that accompanies the presence of a tent. For the same reason no incision of the cervix should be made immediately on the removal of a tent, nor until the parts have been thoroughly cleansed from all offensive discharge. No tent should be left in the uterus more than 12 hours, not so long should the temperature rise or other symptoms of mischief supervene. In many cases it is

better to change the tents every 6 hours, or even remove them, and not introduce another until after some hours. Severe pain on the introduction of a tent should put the operator on his guard as an indication that mischief is at hand. No tent should be introduced on the removal of the former one, before the parts are thoroughly syringed with Condy's fluid and water, or a solution of carbolic acid, 1 in 40. If these precautions are neglected, the use of tents becomes a most hazardous proceeding. If incision of the cervix is had recourse to, great care should be taken previously to ascertain the exact direction of the canal of the cervix and the relation of the tumor, lest the cavity of the peritoneum should be laid open.

(**2.**) **By the Ecraseur.**—After the cervix has been fully dilated and the tumor felt by the finger, it is to be seized with a pair of vulsellum forceps, dragged downwards with care, and the loop of a steel wire ecraseur, or the loop of the galvanic ecraseur guided over it and the tumor cut through ; by careful traction it may then be removed. In practice, however, it will be found that in many cases it is extremely difficult to guide the soft platinum wire over the tumor, and mechanical guides are difficult of manipulation, therefore the single steel wire is to be preferred, as it can be compressed, and on reaching the cavity of the uterus it springs open, and the tumor can by it be the more easily caught. It occasionally happens that the delivery of a tumor that has been cut loose becomes a matter of extreme difficulty. In such cases the employment of my shark's-toothed forceps will be found of great service. They are made with the blades separable like midwifery forceps.

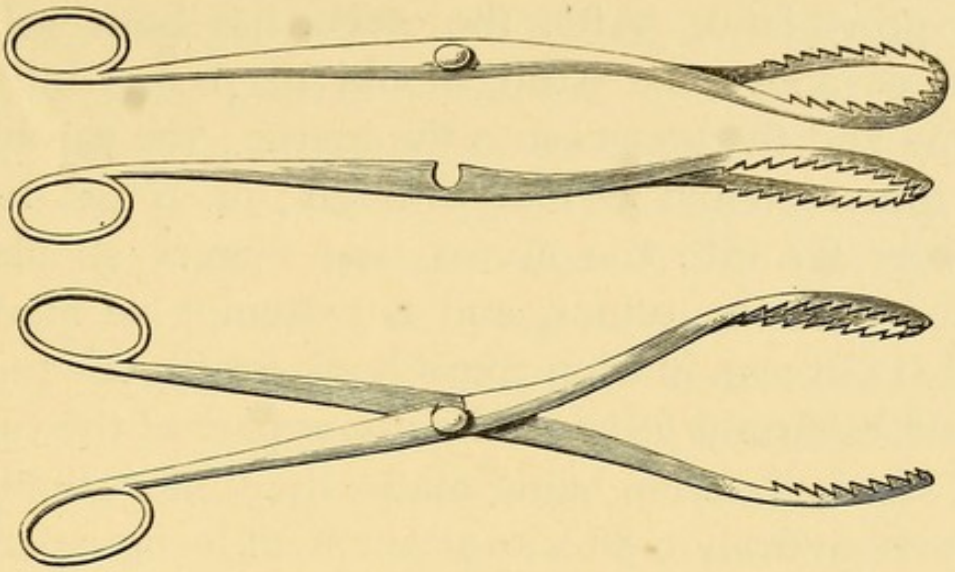


Fig. 7.
Heywood Smith's tumor forceps.

Each blade is to be introduced over the tumor as if over a fœtal head, and when in position they are to be locked; they then afford a means, with compression, of extraction of considerable power. It not unfrequently happens that the tumor is of too great a size to be removed even by the above method. The loop of the ecraseur should then again be applied and the tumor cut through, if necessary more than once, and the several pieces extracted, or the tumor may be cut up with a strong pair of scissors. Ergot should then be given, and the uterus syringed daily with some disinfecting fluid. Should there be much hæmorrhage, a plug of matico (gauze steeped in the tincture) should be inserted into the uterus for a few hours.

(**3.**) **By Enucleation.**—For enucleation to be safely performed, it must be accomplished at one operation. If this is neglected, the vitality of the tumor being greatly interfered with, a slough is produced which

may prove fatal. After the cervix has been well dilated as above, the hand should be passed into the vagina and the fingers into the uterus; the capsule of the tumor should be cut through; or, if the tumor projects far into the uterus, the fingers should be passed over the tumor, and an attempt be made to shell it out; or Marion Sims' hook for fibrous tumors should be firmly fixed in the upper part of the tumor, and, steady traction being made, the tumor should be shelled out from its site, its attachment being separated with the fingers; or, if this part cannot be reached, then Sims' enucleator may be used; but it should ever be borne in mind that in all intra-uterine operations it is better and safer where possible to use the fingers rather than an insensate instrument. The traction should be made gradually and altogether with the uterine contractions, which should be stimulated by ergot, external kneading or galvanism, the tumor gradually pulled downwards, and its final pedicle severed with scissors or the ecraseur. Proceed afterwards as above.

(**4.**) **By Produced Sloughing.**—There are two conditions of fibrous tumors of the uterus where this method of cure has been recommended as applicable:—one where the tumor is sessile and presents considerable difficulties to the process of enucleation; and the other where the uterus is so enlarged and misplaced by a tumor which may be mainly interstitial, as that the os uteri is tilted upwards and jammed against or above the os pubis. In the former case, it is suggested to bore a deep hole into the most depending portion of the tumor through the os uteri by either the actual cautery or by potassa fusa, opening

thereby the capsule of the tumor, in order that, the tumor being partially liberated and made to disintergrate, the uterus may by its contractions gradually enucleate it. In the latter, it is recommended, in fact, to bore a new os uteri, as it were, by the actual cautery through the most depending position (the posterior) of the uterus itself. It has been successfully carried out, the tumor sloughing and disintegrating has been expelled gradually through the artificial os, and as the tumor thus becomes lessened the uterus assumes its natural position, the os comes down from its former situation, and the hole through which the tumor has sloughed out eventually heals up. It is, perhaps, scarcely necessary to insist upon the great care and watchfulness that is required during the whole process by the frequent injections of solutions of carbolic acid, or of iodine, or of Condy's fluid and water, to guard against septic peritonitis.

(**5.**) **By Hysterectomy.**—Where a case of fibrous tumor of the uterus is not amenable to cure by any of the former methods, and where the presence of any or all of these three conditions—pain, hæmorrhage, and rapid growth—endanger the patient's life or render it unendurable, or prevent her from exercising her necessary avocations, the question arises as to the advisability of the total extirpation of the uterus and its morbid contents ; bearing in mind that the case is one that will allow of a more or less healthy cervix being left as a stump, as the removal of the cervix also increases the risk of the operation. It is beside the mark to argue that the operation is formidable perhaps the most formidable in uterine surgery,—for a

similar argument was brought forward on the introduction of ovariotomy. The duty of the medical man is to save life and relieve distress; and in fact the mortality after removal of the uterus is not greater than after the latter operation.

(*d*) *Fibro-cyst of the Uterus.*

Definition.—A fibrous tumor wherein a cyst or cysts have formed; cysto-fibroma, cysto-sarcoma.

Causes.—Unknown.

Symptoms.—Similar to those of fibrous tumor, but the tumor is rather more subject to alterations of size at the periods than in simple fibroids.

Signs.—In addition to the signs which are similar to those of fibrous tumor, there is a more or less distinct sensation of the presence of fluid. Aspiration reveals its presence in some parts of the tumor.

Diagnosis.—From pregnancy by the absence of mammary signs, by menorrhagia, and by time; from ovarian dropsy (*vide in loco*, p. 40); from fibrous tumors by fluctuation, and by, as a rule, increased size and rapidity of growth.

Prognosis.—Unfavorable.

Treatment.—Aspiration; removal of tumor.

There are several methods of performing hysterectomy depending partly on the size, situation or development of the tumor, and partly on the predilection of various operators; (1) the extra-peritoneal method, where the stump is fixed in the wound by a serre-nœud or otherwise, has now been abandoned by all the best operators: (2) sub-peritoneal hysterectomy where the cervix, if unaffected by the disease,

is left, is that which is most largely performed, leaves the vagina untouched and on the whole gives the best results and is upheld by the majority of gynæcologists ; (3) so-called Panhysterectomy is the removal of the entire uterus including the cervix : this of course opens up the vagina. It may be done in three ways (*a*) by a combined vaginal and abdominal operation—the cervix being first freed *per vaginam* and the operation completed by the abdominal route : this method is tedious and somewhat hazardous ; (*b*) by cœliotomy, the vagina being opened from above by incision upon a speculum or forceps passed *per vaginam* ; or by the method of Dr. Doyen, of Paris, who, standing on the left of the patient when in the Trendelenberg's position, which is *the* position now advocated for cœliotomies for pelvic disease, draws the uterus out of the wound forwards, opens the posterior *cul-de-sac*, seizes the cervix uteri and rapidly strips the whole uterus out of its bed and off the bladder, clamping the lateral attachments as he proceeds.

(*e*) *Polypus.*

Definition.—A tumor covered by the lining of the uterus, and attached to its interior by a pedicle. They are chiefly fibrous, fibro-cystic, cellular, &c.

Causes.—Unknown in their origin. Polypi are formed by fibrous tumors situated near the inner surface being acted upon by the contractile tissue of the uterus, and so gradually projected from the surface until they become pedunculated ; the uterus then continuing to act, may finally extrude the mass from the os uteri.

Symptoms.—Menorrhagia, metrorrhagia, leucorrhea, occasional dysmenorrhea, bearing-down pains (from uterus attempting to extrude the tumor); if tumor large and in the vagina, feeling of fulness there.

Signs.—If the os uteri is closed, the uterine sound reveals a cavity longer than normal, and curved in its direction from the bulging of the tumor. If the os uteri is open, the polypus may be felt protruding or presenting in the cervical canal; or it may be felt occupying the vagina, and its pedicle may be traced to within the os uteri. The polypus may be so large as to completely fill the vagina and render any attempt to reach the pedicle very difficult; or the polypus may protrude at the outlet. If the tumor is at all strangled, there may be a fœtid discharge. Examination produces bleeding.

Diagnosis.—From inversion of the uterus by the sound passing into the uterus to the normal length or more.

Prognosis.—Natural cure, rare, by strangulation, the polypus falling off at its pedicle; or by sloughing. Favorable by treatment.

Treatment.—When in the vagina, removal by scissors, ecraseur, or galvano-caustic ecraseur. Should a difficulty arise in placing the wire of the galvanic ecraseur round the polypus owing to the softness of the wire, I would suggest that the tubes of the instrument be made removable, and that the wire be placed round the base of the tumor, as the ligature is carried in Gooch's canula. If intra-uterine, division of the cervix may enable the uterus to expel the tumor; if not, and the symptoms are urgent enough to warrant

interference, dilatation by tents, and subsequent removal by ecraseur. This procedure, as all others necessitating the use of tents, is not without risk. Palliative ; keep uterus in normal position ; rest during catamenia. Ergot, cannabis indica (p. 214, 14, *b*), gallic acid (p. 216, 16, *b*), opium ; keep bowels open ; tonics ; injections (p. 211, 8, *i*), and pessaries of tannic acid (p. 210, B, *a*).

19. Areolar Hyperplasia of the Cervix.

Definition.—A non-malignant induration of the cervix, general or partial ; commonly called induration after chronic cervicitis. It consists of a thickening and hardening of the cervical portion of the uterus by the proliferation of the connective and fibrous tissues.

Causes.—Parturition followed by subinvolution, consequent on too early "getting up" after delivery, puerperal metritis or cervicitis, constitutional weakness, prolapsus, excessive coïtus, cold or exertion during menstruation. Coïtus with sterility and its consequent tendency to hyperæmia. In virgins, flexions rare.

Symptoms.—Pain in the back (sacrum), with special characteristic pain through one or both hip joints ; disordered menstruation ; increase of pain on exertion ; dyspareunia, with occasional bleeding ; languor, headache, leucorrhea from consequent endocervicitis or granular inflammation. These symptoms also are increased by exertion.

Signs.—Uterus low, cervix swollen, tender, hard, and often nodulated. If the induration is limited to

the anterior lip, it will be found bulging backwards into the cervical canal, which is somewhat patent, and having the posterior lip stretched over it in a crescentic form, the concavity being of course forwards.

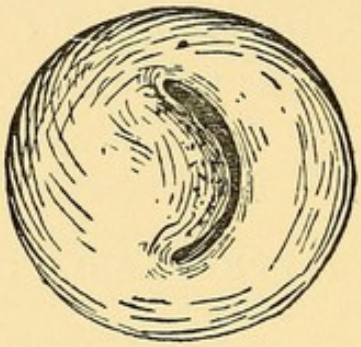


Fig. 8.

Should the posterior lip be only affected, these conditions are reversed (Fig. 8); the anterior and posterior lips are found, as a rule, indurated in cases of anteflexion and retroflexion respectively. When both lips are the seat of areolar hyperplasia their bulkiness tends to make them become everted. Both lips are seen to be swollen and hard, and there is often the appearance of a deep fissure dividing them on each side (*vide infra*, p. 103).

Diagnosis.—From malignant induration of the cervix by the history of the case, by the mobility of the uterus, and by the sensation to the touch. The feel of a cervix affected with scirrhus is somewhat that of wet india-rubber, the hardness extending to the very surface; whereas in areolar hyperplasia the sensation is of a hardness beneath a healthy or at all events a distinguishable mucous membrane; absence of cachexia. From cervical hyperæmia by the somewhat softer condition of the latter. If the hyperplasia

affects the body of the uterus, there exist as distinguishing it tympanites, nausea, dysmenorrhea, more grave constitutional symptoms, painful mammæ; uterine sound in the uterus produces pain; bi-manual examination produces pain.

Prognosis.—Favorable.

Treatment.—This condition may be modified by general treatment, as by perchloride of mercury ℥j, followed by iodide of potassium gr. 5; but a cure cannot as a rule be obtained otherwise than by local means. The three best methods of treatment are: (1) by potassa caustica; (2) the actual cautery; (3) excision. Prior to the employment of either of the two former means, the hyperæmic or congested condition should be relieved by leeches applied to the cervix uteri once or oftener, as required. Puncturation is of little use, as the tissue being so hard the blood does not flow so freely as in hyperæmia where the cervix is soft. When the cervix has been relieved by the leeches and by glycerine plugs and hot douches for several days, potassa caustica should be applied as follows. It would be well here to remark that the potassa caustica is to be preferred to potassa cum calce; for the latter being a milder preparation, its action is less energetic and effectual, and moreover some recommend that a piece should be packed up against the cervix and left *in situ* for a time. This procedure is however not without danger, as the potassa may in melting trickle down on to the vaginal wall and produce a slough where it is not wanted. In using the pure potassa we see exactly the effect produced, and can stop its action at once.

The patient should be placed in the semi-prone (Sims') position (*see* p. 22), so that the speculum, which should be as large as can be conveniently borne, may incline inwards and downwards; a piece of cotton-wool soaked in vinegar, so as to neutralise any potassa that may run down, should be packed into the bottom of the speculum up to the portion of the cervix to be operated upon, and a small quantity of vinegar introduced so as to make a pond at the bottom of the speculum underneath the cervix. The potassa held in a firm porte-caustique (that of Dr. Protheroe Smith being the safest and most convenient, Fig. 9) should then be rubbed over the mucous membrane covering the

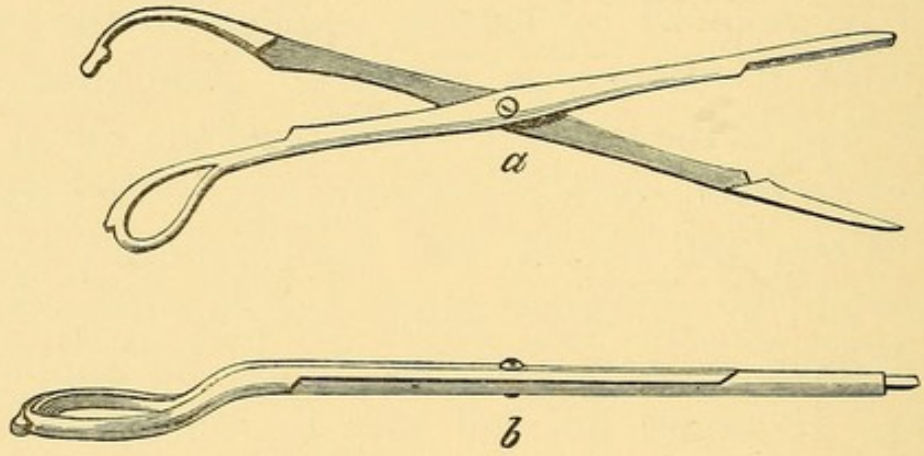


Fig. 9.

Dr. Protheroe Smith's Porte-Caustique.

indurated portion so as to completely destroy it; this is sufficient for the first operation. The speculum should be held steadily so as not to shift, and a stream of cold vinegar and water should be thrown up the speculum until all the superfluous potassa has been neutralized. The loose cotton-wool should then be removed, and a plug of wool soaked in vinegar should be placed against the cervix, and removed in the

evening. The vagina should be syringed daily with Condy's fluid and water. In about a week the slough thus formed will be thrown off, when the potassa is to be again applied, but more freely, so as to make a deep excavation into the indurated tissue. The bottom of the excavation then usually presents the appearance of a cup eaten into a hard yellowish white substance. In some cases, where the induration is in the form of a nodule, the healthy tissue round it is seen charred black by the potassa, and the white tissue as a separate deposit in the middle. While using the potassa the distinction to the touch of the healthy and morbid tissues is quite evident. The slough from this free application is often very deep, and comes away sometimes in one piece as a tough piece of wash-leather. The contraction of the uterine tissue acting on the indurated nodule, no longer held back by any limiting membrane, gradually extrudes it, and such effort of extrusion may be aided by the exhibition of ergot in doses of ♏ xx to ♏ xxx of the liquid extract, until that which was left as a cup-like excavation is found after a week or ten days to have been protruded into an eminence ; this protrusion is to be again rubbed down freely at successive operations, until it is seen that there is no more hard tissue left, but only healthy tissue which becomes charred by the potassa. As the treatment progresses and there is less indurated tissue to be operated upon, the application of the potassa becomes more painful, because of the greater sensitiveness of the healthy tissue. The chemical action of the deliquescent potassa produces considerable heat of the part destroyed, so that the syringing

at the end of the operation should be with *cold* vinegar and water. When the destruction of the morbid tissue is complete, the part presents a deep excavation, which heals up by granulation and does not leave any cicatrix ; in fact, in cases where this treatment has been successfully carried out, the cervix presents a perfectly healthy appearance, with no trace of the work of the caustic. This method of treatment was first advocated by Dr. Henry Bennet and my father, and was successfully employed at The Hospital for Women for more than 30 years. As the process of healing may take many weeks, the patient should be carefully watched, and even for several weeks afterward, lest there should be too great contraction of the cervical canal, or even total exclusion of the os uteri. To obviate this, the uterine sound should be passed every four or five days, and subsequently every week or ten days for about an inch up the cervical canal. This should be done with the greatest care lest inflammation should be set up, which usually takes the form of pelvic cellulitis. For the same reason the patient should be kept in bed or on the sofa, for the least exposure to cold during the use of the potassa may induce an attack of cellulitis. As the healing proceeds, the parts may be touched from time to time with strong carbolic acid, which tends to make the granulations put on a more healthy appearance. Should the os uteri become, by the neglect of the uterine sound, occluded, the best way of opening it is—taking the same precautions as before as to the neutralising pond—to apply a pointed piece of potassa to the os uteri, and by the frequent use of the sound to keep the os patent.

(2.) When the induration is not deep, or when the cervix is more generally affected, the actual cautery proves of great service. The same precaution has to be taken first to deplete the uterus and also to guard against cold and other sources of inflammation. The application is less painful than that of potassa, there is no danger of any extension of the slough on to the vaginal wall, and the slough itself is not so deep. In slight cases it is sufficient to excite action by the application of a dull red heat, but in others the cautery may be heated to nearly whiteness, and a considerable portion of the indurated cervix destroyed, or a pointed cautery may be used, and number of deep punctures burnt into the cervix. As these points slough out the cervix contracts down to its normal size. This process is called igni-puncture.

(3.) In some cases where the cervix is very large and the lips everted, in order to save the time that would be necessary for the destruction of so large a mass by potassa, excision may be had recourse to. The cervix uteri should be seized with a vulsellum, and a considerable portion of the proximal surfaces of the lips of the cervix cut off with a pair of strong curved scissors, or with a narrow-bladed knife; the bleeding, if profuse, can be arrested by the actual cautery or a plug soaked in tincture of matico. After this operation the parts will heal by granulation, the os uteri being kept patent by the uterine sound. If the portion excised is considerable, the two flaps of the cervix may be brought together with wire or silk-worm sutures (*vide infra*, p. 104), care still being taken that the cervical canal is kept patent.

20. Fissure of the Cervix.

Definition.—A fissure or split of the cervix uteri, either unilateral or bilateral; occasionally trifid, or multifid.

Note.—It is of the greatest importance to be able to recognize this lesion and to differentiate it clearly from the condition of areolar hyperplasia, treated of above. For cases arise where, there being no marked fissure, not more than usually takes place bilaterally at every first act of parturition, subinvolution supervenes, followed by chronic cervicitis and indurated deposit from proliferation of the connective tissue of the cervix on its proximal surface; this taking place in one or both lips, as the lip increases and presses on the opposite lip it naturally bulges and leads to a sort of ectropion of the lip or lips, and this increase of size, and elongation of the lips of the cervix, gives the appearance of a fissure existing on the dividing line between the lips. But this is not true fissure of the cervix. When this latter exists it is easily recognized, as there is a deep split sometimes extending nearly to the vaginal insertion. Of course this condition, inasmuch as the lesion to the vessels and lymphatics of the cervix interferes with the process of involution, leads to subinvolution and chronic cervicitis; and so we generally get areolar hyperplasia associated with the cervical fissure, and the probability is that the symptoms that accompany fissure of the cervix are mainly due to the state of cervicitis and induration; and the reason why the operation of Emmet relieves

these cases is that the morbid tissue is removed, as in the case of areolar hyperplasia, and so the disease is cured.

Causes.—Parturition ; rapid labor ; the use of the forceps ; rigidity of the os uteri ; malignant disease.

Symptoms.—Sacral pain, with bearing down dragging pain ; pain through one or both hips, all pain increased on exertion, leucorrhea yellow and occasionally blood-stained, menorrhagia, with increase of pain at the periods ; sterility.

Signs.—On one or both sides of the cervix is felt and seen a deep cleft or fissure, varying in extent and

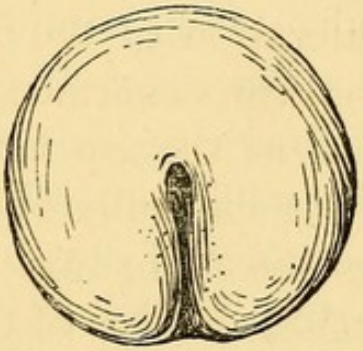


Fig. 10.

accompanied by a bulging of one or both lips, which are hard, everted, and covered with red granulations. The fissure may be on both sides, when there is generally induration of both lips. If Sims' speculum is used, or the author's modification, and the lips, if they are not too much hypertrophied, brought together by means of two hooks, the cervix will put on a more natural appearance, and the condition be proved to be caused by the existence of fissure.

Diagnosis.—From mere areolar hyperplasia by the existence of one or more deep clefts in the circumfer-

ence of the cervix, with a cicatrix at the angle, and by the possibility of drawing the lips into apposition as stated above.

Prognosis.—Favorable. If however the granular condition of the lips has existed for any length of time, it may pass into the state analogous to malignant papillary dermatitis of the nipple and areola, and so be the precursor of epithelioma. But, even should such a condition arise, it is quite possible that an operation may stave off further progress of the disease.

Treatment.—Emmet's operation. The edges of the fissure or fissures should be completely vivified, any hyperplastic tissue being at the same time cut away, care being also taken completely to excise the cicatrix that marks the apex of the fissure; should there be much hæmorrhage, free syringing with hot water will generally suffice to allay it; at the same time care should be taken, if possible, to avoid wounding the circular artery. The edges are then to be brought together by deep sutures of silver wire passed through the whole thickness of the cervical wall. This is the most difficult part of the operation owing to the toughness of the tissue of the cervix. It can either be done with a strong curved handled needle having its eye at the point, in which case it is to be threaded with the wire after it has traversed both sides of the fissure, and then drawn back; or it may be done with strong special needles (as made by Mayer and Meltzer) held in a needle holder made specially strong for the purpose. In using these needles, inasmuch as the wire tends to kink owing to the necessity of drawing the needle completely through one side of the cervix

before passing it through the opposite side, it is better to thread the needle with double fine silk, and, when the stitch is complete, draw the wire through hooked on to the silk loop. The sutures must then be firmly twisted, the sides of the fissure being held in apposition, the twisted ends cut off, and the remaining portion bent down on to the external surface of the cervix to prevent their pricking, or better still they may be secured by the coil and shot method. There is little after treatment required, save occasional syringing of the vagina, and the sutures should not be removed for ten days or a fortnight.

Where a fissure exists on each side of cervix, Emmet directs that in vivifying the sides of each fissure, care should be taken to leave a strip of undenuded tissue in the centre, which is to form the walls of the new portion of the cervical canal; but inasmuch as this lesion is generally accompanied with areolar hyperplasia of one or both lips, it may be necessary to excise the indurated portion, and so there is left a large conical cavity of entirely raw tissue. In such cases the sutures are to be placed on each side to within a proper distance of the centre, which is to be left to form the cervical canal. It will then be necessary every two or three days to pass a sound, say No. 7 or 8, dipped in carbolized oil or vaseline about one inch into the canal to keep it patent.

21. Mucous Polypus.

Definition.—Polypus usually small, from size of a pin's head to that of a walnut, growing from the edge of the lips of the cervix, covered with mucous membrane.

Causes.—Irritation of the lips of the uterus, chronic cervicitis.

Symptoms.—Although small, they give rise to aching pain in sacrum with sometimes bearing-down pain, occasionally dysmenorrhea, leucorrhea glairy, and some little bleeding.

Signs.—If very small they are with difficulty felt, owing to their softness, but a skilled touch will generally detect them, and they are at once seen *per speculum.*

Diagnosis.—By symptoms and signs as above.

Prognosis.—Favorable.

Treatment.—Removal by torsion or scissors.

22.—Dislocations of the Uterus.

The uterus is said to be dislocated or misplaced when, its normal shape being retained, it is diverted from its normal locality. If tilted too much forwards it is said to be anteverted; if tilted backwards it is retroverted; if lower than natural it is prolapsed. If it is protruded external to the vulva, that condition is usually termed procidentia; whereas "procidentia" should indicate the tendency to prolapsus in all stages, and "prolapsus" the condition of "having fallen."

(*a*) *Anteversion.*

Definition.—The condition of the uterus in the fœtus is normally slightly anteverted or even antecurved, so that the uterus must lie at an angle with the plane of the horizon less than the normal angle to be accounted anteverted.

Causes.—Areolar hyperplasia, fibroids in the anterior aspect of the fundus, violent efforts, tight lacing, relaxation of utero-sacral ligaments, cystocele, constipation.

Symptoms.—Dysuria and frequency of micturition, aching pain over the pubes, occasionally difficulty in defæcation from the pressure backwards of the cervix; exertion produces pain; inability to walk.

Signs.—The uterus is felt to be lying more horizontally than natural, the os uteri pointing backwards; the sound shows the direction of the cavity.

Diagnosis.—By signs as above.

Prognosis.—Favorable.

Treatment.—Rectification of position, where uncomplicated; if dependent upon areolar hyperplasia (p. 95) or endometritis (p. 66), the malady must be remedied before any attempt is made at replacement. Replacement is best performed by the fingers alone; if the version is of long-standing, and the uterus and the peri-uterine connective tissue are free from congestion or inflammation, the sound may be cautiously used. To retain the uterus in its normal position, the dorsal decubitus for several hours daily, prolonged retention of urine (?), removal of pressure of clothes; pessaries, as airball, Thomas' or Galabins' anteversion

pessary, Graily Hewitt's cradle pessary, Cutter's ditto (p. 121). Elytrorrhaphy. Sims' operation consists in denuding a portion of the vaginal wall just anterior to the cervix, and extending more or less forwards to within about three-quarters of an inch of the posterior margin of the urethra, and bringing the edges together by sutures introduced laterally. The operation recommended by Professor Stolz, and practised for the first time in England in 1875 by the author with success, consists in denuding a circular portion of the anterior wall of the vagina, and then passing a single suture of silk round the margin of the wound. The suture should be inserted near the urethra anteriorly, and passed in a running stitch rather deeply and about one-eighth of an inch from the margin of the wound, in the same way as the mouth of a bag has a string run round it with the view of closing it; the end of the suture is brought out near the point of insertion, and the suture is then drawn tight, which closes up the wound into a small puckered point; and if union should take place primarily, the anterior portion of the vagina is thereby considerably shortened, and the cervix being pulled forwards the uterus is made to assume a more normal position.

(*b*) *Retroversion.*

Definition.—The uterus maintaining its straight form is inclined more or less backwards, so that the os points forwards, in some extreme cases lying as high as the upper margin of the os pubis, and the fundus presses backwards into the hollow of the sacrum. The version may also deviate more or less to the right or left.

Causes.—General areolar hyperplasia, subinvolution, congestion, pregnancy, frequent parturition, adhesions from peritonitis or pelvic cellulitis; blows or falls with a distended bladder, lifting a weight, fibrous tumors, over-tight bandaging or lacing, rectocele, rupture of perineum.

Symptoms.—Rarely none. Pain in the back (sacrum) fixed, discomfort in walking, &c.; pain increased on defæcation, with a sensation of impediment; occasionally tenesmus of rectum or bladder from pressure of the fundus and cervix respectively; dysmenorrhea, occasionally sterility, cystitis. If the version happens suddenly, the pain is often severe and accompanied with constitutional symptoms.

Signs.—Examination detects the cervix lying forwards with the os looking towards the outlet or the os pubis; the fundus is felt behind, but without the intervening sulcus that is marked in cases of retroflexion. The uterine sound confirms the diagnosis.

Diagnosis.—A fibroid in the posterior wall may give to the touch the sensation of a retroverted or retroflexed uterus, but the passage of the uterine sound will demonstrate the real state of affairs.

Prognosis.—If the uterus is not bound down by adhesions, favorable to cure; tedious if so bound, unless freed by operation.

Treatment.—Local depletion by leeches (p. 205) or scarification; reposition of the uterus by means of the uterine sound. Although modifications of the sound have been devised with the view of rendering the reposition of the uterus more easy, yet in the hands of a skilled practitioner the ordinary sound, or which

is better, the parallel sound (p. 15), is the simpler instrument. The finger of the right hand should be introduced up to the os uteri, and the practitioner standing behind and above the patient, should then pass the sound up to the os uteri, and having by the touch recognised the malposition as one of probable retroversion, the sound should be passed gently into the uterus backwards. In passing the sound, as great care should be taken as in passing a male cather, to use no force, but to let the instrument find its way into the cavity of the uterus. The handle, not the uterine portion, should then be rotated through a semi-cone (Fig. 4, p. 17), the forefinger of the right hand should support the cervix, and the sound resting on the interspace between the knuckles of the first and middle fingers (not on the perineum), the handle should be gently and gradually depressed, *i. e.*, brought backwards until the uterus is restored to its normal angle; the forefinger of the right hand should then be shifted forwards so as to embrace the cervix between itself and the sound, and the whole uterus pulled gently downwards until the fundus rests more or less on the os pubis; then, while the finger presses the cervix backwards, the sound should be removed in a curve forwards, and the cervix pressed backwards towards the hollow of the sacrum and held there for a few seconds. The patient should be directed to lie on her face for some little time after the replacement. After reposition of the uterus, if the version has been of long-standing, it will tend to resume its abnormal position. If the version is due to congestion, or areolar hyperplasia, these conditions must be remedied (*vide in loco*)

before a permanent cure can be looked for. Should these conditions be absent or removed by treatment, then means may be taken for maintaining the uterus in its normal position by any of the various pessaries that have been devised for the purpose, or by plugs of cotton wool soaked in glycerine packed into the vagina so as to retain the uterus in its proper place. In the choice of a pessary, the practitioner must be guided by the success he has obtained with any one or more forms; but those that will be found to be of most service are Hodge's, Hodge's modified by an increase of the bend in both limbs, as usually practised by the author, and which is also recommended by Dr. Albert Smith of Philadelphia*; or the elastic pessary of Dr. Protheroe Smith, which consists of, as it were, a double Hodge, joined in front so as to give two loops having a tendency to separate posteriorly; both loops are passed behind the retroverted fundus, and the anterior loop tending to rise, or separate itself from the posterior, exerts a gentle ever-

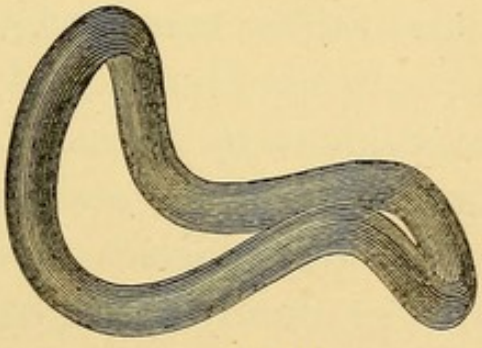


Fig. 11.
Hodge's Pessary, as modified by the Author (The Smith-Hodge).

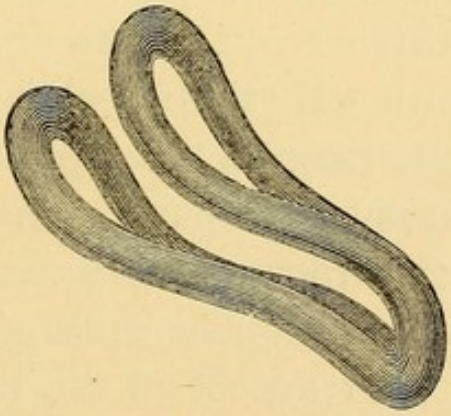


Fig. 12.
Protheroe Smith's Elastic Pessary.

* This modification was devised by the Author, independently of Dr. Albert Smith; so that its name, the Smith-Hodge, has two Smiths as its author.

lifting force on the fundus, and in many cases is efficacious in the restoration of the retroverted uterus.

In many obstinate cases it is necessary to fix the support externally either in front over the pubes, as in Simpson's intra-uterine stem or with Cutter's pessary which is fixed behind, a band passing upwards in the natal cleft and secured to a belt (p. 121). It would be foreign to a short practical treatise as the present to give a history and illustrations of all the various pessaries that have been suggested for the cure of retroversion of the uterus ; such an attempt would need a volume for its elucidation. Let it suffice to have indicated the methods that are most easily practicable. There is one method, however, of treating cases of retroversion, retroflexion, and prolapsus of the uterus, that has hitherto received but scant attention at the hands of the profession ; I refer to the postural treatment. By this is meant not the posture of the body merely, but the rectifying of the abnormal angle of the pelvis which is present in most of the cases of the malpositions above named. The instrument by which this method of cure is carried out is the Pelvic Band of Dr. Protheroe Smith. By it the pelvis, which in these cases is found too horizontal through a more or less obliteration of the lumbo-sacral curve, rendered evident by the advance of the trochanteric axes, prominence of the abdomen, and consequent enlargement of the muscles on the anterior aspect of the thigh, is gradually tilted backwards until its normal angle is attained, when the pressure of the superincumbent viscera being taken off, the uterus is able to be restored and maintained in its proper position. In many cases this postural

treatment of the pelvis is sufficient alone to effect a cure. The instrument is light, easily worn, does not show through the dress, improves the figure, and gives such support that patients are loath to leave it off.

(*c*) *Prolapsus.*

Definition.—Falling of the womb, caused by weight of the organ or relaxation of its supports, as of the vaginal walls or the uterine ligaments. Procidentia uteri, or the tendency of the uterus to be displaced downwards, varies in extent from a slight depression of the organ, either at its normal angle, retroverted, retroflexed or anteflexed, to the state of complete prolapsus, so that the whole organ is external to the vulva.

Causes.—Parturition, and too early assumption of the upright position; ruptured perineum, tumors, hypertrophy, hyperplasia, subinvolution, relaxation of vaginal walls, tight lacing, hæmatocele, violent efforts, falls, cystocele, rectocele, old age.

Symptoms.—Occasionally none; dragging pain in the sacrum, feeling of fulness in the vagina, rectal and vesical irritation, discomfort in walking, and on any exertion; leucorrhea, rarely dysmenorrhea; occasionally menorrhagia from the induced hyperæmia.

Signs.—Uterus felt to be low, or seen protruding more or less from the outlet. Cavity of uterus often elongated.

Diagnosis.—From polypus by the presence of the os uteri; from hypertrophy of the cervix by careful examination; from inversion by the use of the sound.

Prognosis.—If uncomplicated with hypertrophy, tumors, &c., favorable by treatment; if complicated, difficult.

Treatment.—If the prolapsus is simple, reposition, and retention with a suitable pessary will generally suffice. The pessaries most useful are Hodge's, the simple ring, the elastic ring, the ring curved (Fig. 13), the air-ball pessary, or Zwancke's pessary, as modified by Dr. Godson; care being taken in the use of pessaries that they are not too large, as the weight of the uterus tends to force them against the vaginal walls and so produce ulceration, leading to the embedding of the instrument in the tissue of the vagina, or even ulcerative perforation of the rectum or bladder.

Fig. 13. Graily Hewitt's Curved Ring Pessary.

If complications exist, they must be remedied; hypertrophied cervices should be amputated; areolar hyperplasia of the cervix should be cured; polypi, or intra-uterine fibroids, should be removed; vaginal astringents by pessaries or injections should be had recourse to, the recumbent posture maintained for several hours daily; ruptured perineum should be closed; and finally elytrorrhaphy, either by Sims' method or Stolz' (see p. 108).

23. Flexions of the Uterus.

The uterus is said to be flexed when it deviates to any extent from its normal (slightly antecurved) condition.

(*a*) *Anteflexion.*

Definition.—A flexion forwards of the body on the cervix, or the flexion may be higher up in the body of the uterus; the degree of flexion may vary from a slight curve, the persistence of the fœtal type, to such an acute flexion as may present even less than a right angle. In anteflexion the cervix may lie in its normal direction, or be retroverted so as to throw the os forwards towards the pubes. It is more frequent in the unmarried and sterile.

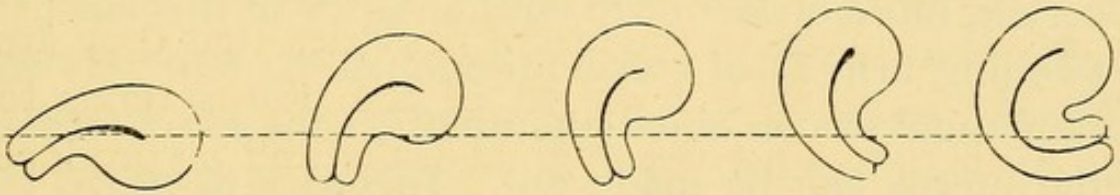


Fig. 14. Varieties of Position of the Anteflexed Uterus.

From these figures it will be seen how, in some cases, an imperfect examination may lead the practitioner to think he has a case of normal direction with a fibroid of the anterior wall, or a case even of retroversion.

Causes.—Congenital; sudden strains or falls, probably associated with a full rectum; loss of tone in the anterior wall of the uterus, endometritis, tumors in the anterior wall of the body or fundus, abdominal tumors, fæcal accumulation, tight lacing, pelvic cellulitis binding down the fundus, shortness of round ligaments. Where fæcal accumulation is the cause, it is more usually because the mass in the lower portion of the rectum presses upwards upon the cervix. It is next to impossible to get a woman to acknowledge that she laces too tightly.

Symptoms.—Frequent desire to micturate, described by patients as "irritability of the bladder;" obstructive dysmenorrhea. If the flexion is acute, the anterior lip suffers hyperæmia, and not unfrequently areolar hyperplasia, for the symptoms of which see *in loco* (p. 95), Sterility.

Signs.—The cervix may appear to the touch normal, or it may be found lying backwards with the os pointing forwards. If the finger be now carried upwards along the anterior aspect of the cervix, a sulcus will be felt at the junction of the body with the cervix, more or less deep, and anterior to this sulcus a swelling firm as of uterine tissue will be felt. By the bi-manual or conjoined examination the exact form of the uterus can be made out. In order to prove the swelling to be the fundus, the uterine sound must be passed. In order to do this, it is often necessary to bend the sound into a curve more or less marked, according to the shape of the uterus as detected by the finger. Usually there is some constriction at the internal os, occasionally not.

Diagnosis.—The swelling in front of the cervix may be due to a fibroid tumor projecting forwards; the passage of the sound will show whether the uterine canal is straight or otherwise. If the sound passes in the normal direction, the probability is that the swelling anterior to the point of the sound is a fibroid; if, however, the sound passes into the swelling, it is the fundus uteri. A fibroid may exist in the posterior aspect of the body, which will then be detected by the conjoined examination.

Prognosis.—In the unmarried and sterile, difficult

of cure; more easy in multiparæ. When the flexion is rigid, and the uterus on the withdrawal of the sound immediately returns to its abnormal curve, the cure is difficult. So also when the uterus lies high in the pelvis.

Treatment.—When the flexion is not very rigid and the uterus is not tender, replacement by means of the sound, every week or oftener, may effect a cure. To do this effectually the uterus should be depressed backwards so as to carry the fundus further back than its normal position, as this procedure will tend more to make the uterus resume its normal direction. If endometritis is the cause, the patient should lie supine until the endometritis is cured. The rectum should be kept empty, and perhaps the bladder more often full. With regard to the use of extra-uterine pessaries, I must run the risk of being in the minority when I state that they are rarely of much use in maintaining a strongly flexed uterus in the normal position. Undoubtedly there are cases that are cured by a judicious choice of some anteflexion pessary, as the cradle of Graily Hewitt properly formed*; but I unhesitatingly say that the results are by no means satisfactory: for, as a rule, the supporting part of such pessaries lies in the sulcus formed by the angle at the junction of the cervix with the body, and forms a sort of crutch over which the uterus leans, as it were, and remains in its bent condition. Cutter's pessary (p. 121) will be found of great service in many cases that cannot bear intra-uterine treatment. The only instrument that is of

* See Graily Hewitt Third Edition, and Obstetrical Society's Transactions. Dr Hewitt advises that this pessary should be used with the larger loop backwards.

real value in the treatment of anteflexion is an intra-uterine stem ; but it has often been employed without sufficient caution, so that consequent peritonitis or cellulitis has brought its use into disfavor. For the proper employment of the intra-uterine stem, the greatest care is requisite. The patient should be kept in bed, the uterus should be prepared by the application, several times if necessary, of leeches to the cervix, or by free puncturing of the cervix, followed by glycerine plugs for a week, until all tenderness is removed ; the sound should be passed from time to time until the uterus becomes tolerant of its presence; a stem should be chosen, of vulcanite, or glass, or Simpson's galvanic stem, about one-eighth of an inch shorter than the uterine canal, so that the point may not press on the fundus, and then when the stem is passed and the uterus thereby straightened, it is a good plan to insert a Hodge's pessary to keep the whole organ in its natural position. The stem and shield of Dr. Wynn Williams is a very good combination for the cure of these flexions, for thereby the stem is kept in position in the uterus, and the uterus itself maintained in its normal direction, and, moreover, the union of the stem and shield being flexible allows of some play, and so prevents dangerous and rigid restraint to the uterus. The stem should be removed just before a period until after a time it may be allowed to remain *in situ* during the catamenia, when in cases of obstructive dysmenorrhea it will be found, by its keeping the canal straight and patent, to relieve the pain so characteristic of that condition.

Should there exist considerable constriction of the

internal os, a speculum should be introduced, and the fibres of the inner os and part of the cervix slightly divided by Sims' straight knife. This operation may be supplemented in some cases by the use of the uterine dilator (*vide* p. 75). When, however, the flexion is stong and the uterine walls thick, the antero-posterior division of Marion Sims holds out the best prospect of straightening the canal. The posterior aspect of the cervical canal is first of all incised, and the incision kept patent by the passage of the sound (not a stem) until the wound is healed; then the finger is to be passed up outside the cervix in front until it rests on the sulcus, and the straight knife being then carried up through the internal os, a cut is to be made through some of its fibres directly forwards towards the tip of the finger, which will be the guide to prevent a too-deep incision, which might prove fatal; or this operation may be done at one sitting in cases where the uterus is quite free from inflammation. By this means an artificial straight canal is formed, and the subsequent wearing of an intra-uterine stem may complete the cure. All operations for the cure of anteflexion are contra-indicated in those cases where there exist the products of former inflammation.

(*b*) *Retroflexion.*

Definition.—A flexion backwards of the body of the uterus on the cervix, varying in degree from a slight angle to an acute one. In retroflexion the os and cervix may retain their normal direction, or the

whole uterus may be so dislocated that the os may point above the pubes.

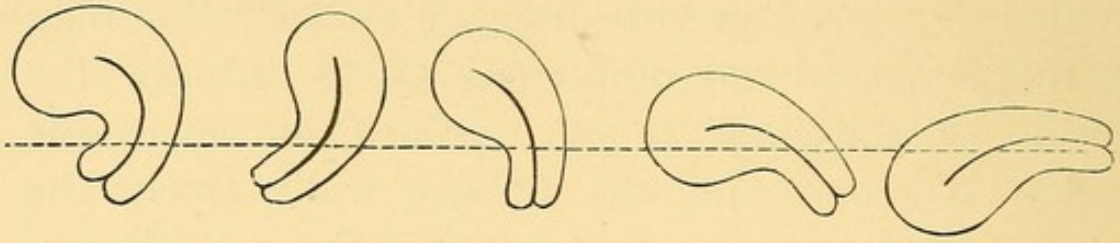


Fig. 15. Varieties of Position of the Retroflexed Uterus.

Causes.—Parturition, subinvolution, weakening of the walls of the uterus, sudden efforts or falls, fibrous tumors of the fundus, pregnancy, abdominal tumors, constant distension of the bladder, constipation, contraction after pelvic inflammation. Lessening of the lumbo-sacral curve, and so alteration of the plane of the pelvis (*vide* p. 112). Areolar hyperplasia is said to be a cause; it is more often an effect.

Symptoms.—Feeling of bearing down, especially backwards; mechanical difficulty in defæcation from pressure of the retroflexed fundus; if the angle of flexion is somewhat acute, uterine tenesmus, occasionally dysmenorrhea; rarely, from the flexion alone, sterility; leucorrhea, areolar hyperplasia of the posterior lip with consequent menorrhagia, piles.

Signs.—The os uteri is usually felt to be directed more or less forwards and downwards, the cervix lying more or less backwards; on carrying the fingers along the posterior aspect of the cervix, a sulcus is reached and a swelling is discovered behind the cervix; pressure by the bi-manual examination may show this to be probably the retroflexed body, but to determine the question the sound is to be used. It will be found usually to pass upwards and a little

backwards, and then more or less directly backwards, or even backwards and downwards according to the angle of flexion, into the swelling before noticed.

Diagnosis.—From a mass of fæces by the doughy feel of the latter; from fibrous tumors, pelvic cellulitis, hæmatocele, ovarian tumor, by the passage of the uterine sound.

Prognosis.—Generally favorable as to cure or alleviation; but where the fundus uteri is bound down by adhesions, the product of inflammation, the cure is very tedious, and patients should be warned that the treatment may extend over several months, unless cœliotomy to set free the adhesive bands is had recourse to.

Treatment.—In slight and recent cases the uterus may be easily and carefully replaced by the uterine sound (see under Retroversion, p. 109), or the patient being placed in the knee-shoulder position, two fingers may be introduced along the posterior vaginal wall and slightly separated so as to admit air into the vagina; the uterus may then often easily be lifted out of its abnormal position. A simple Hodge's pessary or one bent at a smaller angle, the Smith-Hodge (see p. 111), may then be introduced as in cases of retroversion, and this procedure may often effect a cure.

Dr. Cutter's pessary may often keep the uterus in position when others have failed. It consists of a support of vulcanite, which may be made to rest in either anterior or posterior cul-de-sac, or in cases of prolapsus to sustain the whole uterus. From the

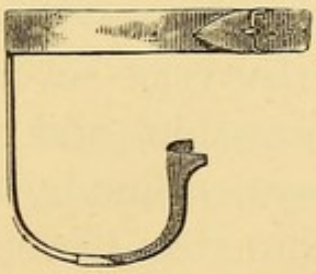


Fig. 16. Cutter's Pessary.

internal portion a curved stem passes downwards and backwards round the edge of the perineum but not touching it, and to the end of this is attached a piece of india-rubber tubing which passes up the natal cleft and is fastened to a waistband. In cases complicated with enlarged cervix or areolar hyperplasia, the diseased condition should first of all be remedied before any attempt is made at replacement; although in some cases where the congestion is not very great, reposition may, by removing the cause of the congestion, remove also the flexion. In all cases it is well first to deplete the uterus, in order to guard against inflammation which may arise from interference with a congested uterus. In very obstinate cases where the uterus on the withdrawal of the sound returns at once to its abnormal position, it may be necessary to use such an appliance as Simpson's stem, which being fixed outside over the pubes retains the uterus in one position. Such an instrument should, however, only be used in severe cases, as, the uterus being thereby fixed, and therefore not yielding to the movements of the body, nor to those of respiration, mischief may ensue. The pelvic band (*vide* p. 112). In some cases also it may be necessary to perform posterior vaginal elytrorrhaphy, an operation which however does not as a rule produce satisfactory results.

In very severe cases, where the uterus is quite moveable, and where the patient's life is rendered burdensome by the severity of the symptoms, and she is unable thereby to gain her livelihood, it may be advisable to open the abdomen, seize the fundus uteri, bring it up into position, and in closing the wound

pass two sutures through the fundus ; this will maintain the uterus in its normal position.

In some cases on replacing the uterus, and holding it firmly with the sound, it will be found that the utero-sacral ligaments (the folds of Douglas), being shortened are felt as rigid cords holding the body of the uterus back. In such cases, where every other plan has failed, it is possible, as has been done for the first time by the author, and with complete success, to divide with a slight nick one or both of the ligaments. The operation is best done *per vaginam*, and as near to the posterior aspect of the pelvis as possible ; as if done *per rectum* risk is incurred by the passage of fæces or flatus through the small wound. The after treatment needs the greatest possible care.

(*c*) *Lateroflexion.*

Definition.—A flexion of the body of the uterus on the cervix towards the right or left ; uncomplicated, rare. It is usually associated with anteflexion or retroflexion ; and then is better described as right or left anteflexion, or right or left retroflexion.

Causes.—Inflammation with subsequent contraction, rarely accidental.

Symptoms.—Are not well marked ; ovarian neuralgia may be produced by pressure on the ovary towards which the flexion inclines, in addition to the symptoms that may arise from any coexistent anteflexion or retroflexion.

Signs.—The passage of the uterine sound will alone determine whether a lateral swelling is the

fundus, or some other tumor, as the ovary or the deposit of pelvic cellulitis.

Diagnosis.—By signs as above.

Prognosis.—Unfavorable as to cure.

Treatment.—By methods as in anteflexion or retroflexion, *i. e.*, by persistently replacing the uterus, and should the uterus exhibit a marked tendency to revert to its abnormal position, then an intra-uterine stem will be indicated.

(*d*) *Inversion.*

Definition.—A flexion of the uterus in which the organ is more or less turned inside out. It may be partial or complete. In partial inversion the fundus may be inverted, but may not be protruded through the os uteri; or the fundus may pass through the os uteri, yet the cervix may not be completely inverted; or there may be complete inversion where the whole uterus and cervix are entirely inverted; in the latter case the inverted organ may protrude at the vulva.

Causes.—Relaxation of the walls of the uterus followed by effort, traction on the funis at delivery, tumors of the fundus uteri, polypus, or by sudden uterine contraction in parturition.

Symptoms. — Faintness, hæmorrhage, collapse; when chronic, periodic (catamenial) hæmorrhage, dragging pain in back and loins, difficulty in micturition.

Signs.—On examination the finger encounters a tumor in the vagina, encircled at its base by the os uteri in cases of partial inversion, but when the inver-

sion is complete no surrounding ring is felt save only the vaginal roof. In cases where the fundus does not come through the os the diagnosis can only be made out by a most careful examination. In such cases the shortness of the uterine canal all round the tumor, together with a depression in the situation of the fundus as revealed by the bi-manual examination, will help to a correct diagnosis. In the more frequent cases where the fundus passes through the os uteri the following signs are diagnostic. The inner surface of the inverted uterus feels smooth and differs in consistency from most morbid tumors; and *per speculum* the lining membrane of the uterus may be recognized. A sound passed into the bladder with its point directed backwards is felt by the finger in the rectum, which could not be done if the fundus intervened. Then the uterine sound should be inserted into the space between the encircling cervix and the fundus and carefully passed all round the tumor, when it will be found that there is only a short furrow existing where there should be the uterine canal.

Diagnosis.—From polypus by the signs as above. In cases of polypus the uterine sound, where the polypus is not too large, can be passed into the uterine canal by its side.

Prognosis.—If the inversion has not been followed by inflammation producing adhesion of the peritoneal surface, favorable.

Treatment.—Reversion. Various methods have been had recourse to, such as prolonged pressure by instruments, of which Aveling's Repositor is the best;

incision of the constricting cervix, or even by abdominal section combined with pressure from below, the object of opening the abdomen being to get at and dilate the cup-like depression at the seat of flexion. But in the majority of cases patience combined with skilled manipulation will suffice. The patient should be placed on her back and fully under the influence of chloroform, one hand introduced into the vagina, and by the other counter-pressure is to be made on the indented uterus through the abdominal walls over the pubes. It will be necessary, owing to the cramp from the constrained position, frequently to change hands during the operation. The fundus being grasped by the hand, the effort should first of all be made, by squeezing, to empty the fundus of blood, and so render it more flaccid ; after this has been persevered in for some time the attempt at reversion may be made. It is usually said that attempts should be made to push back first that portion that is last inverted, viz., that portion near the cervix ; but owing to the unequal length of the fingers this method of procedure is difficult. Then it has been recommended to keep up firm pressure in the middle of the fundus until a depression is made, and then to follow this up ; but this method often fails, as the pressure in the middle of the fundus necessarily causes it to bulge more laterally, and so prevents the fundus thus swollen passing through the cervix.

Undoubtedly the best plan is that of Dr. Noeggerath, of New York, but alluded to by scarcely any writer. Counter-pressure being kept up outside (or occasionally advantage may be taken of the promontory of

the sacrum and the uterus pressed against it), the insertion of one of the oviducts is to be felt for, and steady pressure made upon it with one finger or the thumb. As the uterine walls are thinner in this situation than at any other point, a depression is sooner or later obtained ; and if this advantage is gradually followed up, the uterus will usually soon be reverted. It is by far the most scientific method of procedure : for as the insertion of the oviduct is situated laterally, any gain of reversion is first made in that portion that intervenes between the insertion of the oviduct and the cervix ; and the reinvagination of the cervix once having been begun, steady pressure will soon carry the whole of the organ upwards in an oblique direction. If this method be carefully followed, there are few cases that will not ultimately yield.

When inversion happens during the third stage of parturition, the whole fundus, together with the placenta, should be firmly grasped and at once replaced, and the placenta subsequently removed by expression.

In cases where reposition is impossible in chronic inversion, it may be necessary to amputate the uterus.

Foreign Bodies in the Uterus.

Leeches.

Occasionally through carelessness on the part of the leecher a leech may escape up the cervical canal. A fine pair of uterine forceps should be passed up into the cavity of the uterus, the blades opened as far as possible, a quarter of a turn given to the instrument, when the errant animal will probably be caught, or, at

all events, after a few attempts. Should, however, this fail, a tent must be used to dilate the canal.

Tents.

It may happen that a tent, more usually a laminaria one, passes beyond the os uteri, the string attached to it may come off, and the os uteri may partially close over the end of the tent. Pass a strong pair of uterine forceps through the os uteri, and, opening the blades, dilate the canal, and at the same time try and seize the tent. If unsuccessful, pass another tent into the cervix alongside the former one, and after a time it will be possible to remove both.

CHAPTER VII.

DISEASES OF THE VAGINA.

1. Catarrh of the Vagina.

Definition.—A condition of the mucous membrane of the vagina characterised by the discharge of clear mucus, the result of relaxation of the capillaries of the mucus membrane, and consequent hyperæmia.

Causes.—Excessive coïtus, cold, foreign bodies in the vagina.

Symptoms.—Some heat about the vagina, with sense of weakness ; absence of symptoms of further complications.

Signs.—Profuse glairy leucorrhea devoid of pus.

Diagnosis.—From the discharge of endocervicitis by examination of the cervix.

Prognosis.—Favorable.

Treatment.—Hot injections of alum (p. 210, 8, *d*), carbolic acid (p. 210, 8, *a*), sulpho-carbolate of zinc (p. 211, 8, *h*), tannin (p. 211, 8, *i*), &c.

2. Inflammation of the Vagina.

Definition.—Simple inflammation of the mucous membrane of the vagina. Vaginitis.

Causes.—Cold, excessive coïtus, pessaries, fœtid discharges, caustics, pregnancy.

Symptoms.—Heat in vagina; aching pain in perineum; frequent micturition; leucorrhea puriform; soreness of vulva and thighs owing to the discharge.

Signs.—Labia minora swollen and red; vagina red, and covered with purulent secretion; dyspareunia; occasionally the inflammation extends to the Nabothian glands and produces thick discharge from them. There is a follicular variety where the vagina is studded with thick granulations, usually associated with pregnancy. Vaginitis may lead to other inflammations by convection.

Diagnosis.—From gonorrhea difficult, and sometimes impossible. (See Gonorrhea.)

Prognosis.—If acute, cure in about two weeks; if chronic, indefinite.

Treatment.—Perfect rest, opium suppositories, injection of warm water with starch and infusion of poppy heads; injections of zinc sulphate (p. 211, 8, *f*), zinc sulphocarbolate (p. 211, 8, *h*), alum (p. 210, 8, *d*), tannin (p. 211, 8, *i*); the application of a solution of silver nitrate, 60 grs. to ℥j.; alkaline medicines.

GONORRHEA.

Definition.—Inflammation of the vagina, vulva, and urethra, the result of a specific contagion in coïtus.

Causes.—Coïtus with one suffering from gonorrhea, or very rarely by contamination from the seat of a water-closet, towels, &c.

Symptoms.—Heat, frequent micturition, aching in

perineum and thighs, scalding pain during micturition, purulent leucorrhea, excoriation of parts round vulva.

Signs.—The vagina swollen, hot, red, and tender; dark ring round eyes. Pus may be expressed from the urethra. Presence of the gonococcus. Great care should be taken lest any of the secretion should be conveyed to the eye of the practitioner, as gonorrheal ophthalmia often causes the loss of the eye.

Diagnosis.—Great virulence of the disease; urethral complication marked; history.

Prognosis.—If taken in time, two or three weeks' duration; if unrelieved it may go on for months, or even years. The disease may be complicated by buboes, abscess of vulva, cystitis, endometritis, salpingitis, pyosalpinx, ovarian or periovarian abscess, pelvic peritonitis, and death.

Treatment.—Injections of lead acetate (p. 211, 8, *g*), zinc sulphocarbolate (p. 211, 8, *h*), and others mentioned above. Application of the strong solution of silver nitrate, gr. 30-60 to ℥j; plug (p. 213, 13, *a*), of glycerine of tannic acid with opium. Medicine: potassium acetate, potassium bicarbonate, hyoscyamus; abstention from alcohol, coffee, spices, pepper, &c. When pyosalpinx or abscess is present, removal of the appendages.

3. Abscess of the Vagina.

Definition.—An abscess forming beneath the vaginal walls, or in the vulvo-vaginal glands.

Causes.—Pregnancy, dirt, vaginitis.

Symptoms.—Heat of vagina, pain, throbbing.

Signs.—A tumefaction tender, red, hard, tense.

Diagnosis.—From cyst by presence of signs of inflammation.

Prognosis.—Favorable.

Treatment.—Rest, hot fomentations, or vaginal poultice, evacuation of pus by free incision—pack the cavity with iodoform gauze.

4. Cicatrix of the Vagina.

Definition.—A tough band passing across the vagina or from the cervix uteri to the vaginal wall, or in some cases so extensive as almost or entirely to close the vagina.

Causes.—Parturition, inflammation from prolonged pressure of the child's head, unskilful use of instruments, pessaries, other injuries to the vagina.

Symptoms.—If slight, scarcely any; or the bands may drag on the cervix, producing misplacement; or there may be an impediment to coïtus.

Signs.—The cicatrix is felt as a hard, unyielding band.

Diagnosis.—Easy, as not likely to be mistaken for any other morbid condition.

Prognosis.—If slight, favorable.

Treatment.—If it does not produce any important symptoms, a cicatrix is best left alone, for no cicatrix of the vagina can be divided without risk of cellulitis. If an operation is necessary, the division should be carefully and aseptically performed, the vagina frequently syringed out with disinfecting fluid, and a vaginal dilator (p. 143) worn at intervals for some weeks.

5. Vesico-Vaginal Fistula.

Definition.—A fistula from the bladder to the vagina, either (1) through the urethra (2) through the vaginal wall, (3) through the cervix uteri, or (4) directly into the uterus.

Causes.—Prolonged pressure in labor, injury, abscess, cancer.

Symptoms.—Constant discharge of urine, pruritus, excoriations, urinary deposits on vagina and vulva, ill-health.

Signs.—By touch the orifice may be felt, or a sound passed into the bladder may be made to protrude through the orifice. If the orifice is too small to be easily detected by these means, milk injected into the bladder will generally reveal it by finding its way through the fistula.

Diagnosis.—By signs as above.

Prognosis.—If not very extensive, favorable.

Treatment.—Several of the rarer forms of fistula require special operations, the description of which is beyond the limits of a small text book. Those more usually had recourse to are—(1) by suture, and (2) by occlusion of the vagina.

By Suture.—From among many methods, those of Sims and Simon are the best.

(*a*) Sims' method: the patient being placed in Sims' semi-prone position (p. 22), and his speculum introduced, the edges of the fistula are seized with a fine hook, and freely vivified with a small narrow knife or a pair of curved scissors, care being taken to denude a sufficiently wide portion round the orifice,

and, if possible, not to wound the mucous membrane of the bladder; sutures of silk are then passed by means of small round curved needles through the lips of the wound about one-third of an inch from its edge on the vaginal surface, but not piercing the vesical mucous membrane. These may then be tied, or by means of the silk threads doubled, so as to form a loop, fine silver-wire sutures may be drawn through; these are to be twisted by means of a pair of forceps and Sims' fulcrum, or by a figure of 8 twister, or Aveling's spiral tubes and shot may be clamped on to the ends of the sutures; these are then to be cut short. The bladder should be syringed out, to clear it from clots. It is better practice not to fasten a catheter into the bladder, as its presence might set up irritation, which would militate against primary union of the wound; a glass catheter should, however, be carefully passed every six hours, and after a day or two the patient should pass her water unaided. The sutures need not be removed for eight to fourteen days.

(*b*) Simon's method: the patient is placed in an exaggerated lithotomy position; threads are passed through the cervix uteri, by which the uterus is pulled forwards; the vagina is kept well open by specula and retractors; the edges of the fistula are deeply pared, even to and including the vesical mucous membrane; two rows of silk sutures are inserted, one deeply and widely, the others between them holding the edges; these are then tied. The after-treatment consists in allowing the patient any position that is most comfortable. She is allowed to pass water naturally; the

stitches may be removed the eighth day; defæcation is allowed with fluid motions, and the patient is permitted to get up in about a week.

(*c*) Lawson Tait has devised a method of vivifying the edges of the fistula without removal of tissue. The operation consists in splitting the edges of the fistula, and inserting sutures so that the vaginal flaps are brought into apposition, the vesical flaps at the same time being turned inwards.

By Closure of the Vagina.—Each case must be decided on its own merits, and such operation performed as its exigency requires. The labia majora may be made to unite by paring their proximal edges, great care being required to close the portion close to the urethra. Or the vaginal walls may be pared and brought together, a catheter being retained in the bladder till union has taken place.

NOTE.—When vesico-vaginal fistula arises in the course of cancer, any attempt at reparation is worse than useless.

6. RECTO-VAGINAL FISTULA.

Definition.—A fistula between the rectum and vagina.

Causes.—Prolonged pressure in labor, injury, abscess.

Symptoms.—Discharge of fæces or air per vaginam.

Signs.—By touch the orifice may be discovered, or a sound passed into the rectum may be made to protrude through the opening; or if the orifice is too small to be thus detected, milk injected into the rectum will find its way out by the fistula.

Diagnosis.—From symptoms and signs as above.

Prognosis.—Favorable.

Treatment.—The edges of the fistula are to be pared as in cases of vesico-vaginal fistula, and brought together with sutures. After the operation, the bowels should be kept at rest by opium for ten or twelve days. When the bowels are first opened, laxatives should be employed. And should any difficulty in defæcation then exist, an enema of gruel and castor oil should be carefully administered. Or the bowels may be opened daily with castor oil.

7. CYSTOCELE.

Definition.—The anterior wall of the vagina together with the bladder, descends so as to form a swelling bulging into the vagina, or even protruding from the vulva.

Causes.—Relaxation of the anterior vaginal wall, stone, ruptured perineum, procidentia uteri, though this condition is in many cases an effect.

Symptoms.—Difficulty of micturition ; the bladder being incompletely emptied, the remaining urine becoming decomposed and ammoniacal ; vesical catarrh, pain, heat, tenesmus.

Signs.—A sound passed into the bladder reveals the presence of that organ in the prolapsed swelling.

Diagnosis.—From enterocele (*vide infra*).

Prognosis.—Generally favorable.

Treatment.—Palliative measures are local astringents in slight cases ; support by pessaries. Cure is only effected by operation, by elytrorrhaphy (ἔλυτρον

vagina, ῥαφή suture), by episeiorrhaphy (ἔπίσειον labium, ῥαφή), or perineorrhaphy. The operation of elytrorrhaphy as recommended by Sims, consisting in denuding a sufficient portion of the anterior vaginal wall either by dissecting off an oval portion, extending from half an inch behind the urethral orifice to near the cervix uteri, and bringing the edges together by sutures from side to side or antero-posteriorly ; or the vaginal wall may be separated from the bladder by the method described by Thomas in his book (p. 354), and the fold being clamped, it is then cut off and sutures introduced.

Or the operation may be performed as recommended by Stolz (*vide* p. 108).

The results of episeiorrhaphy are not good. The operation of perineorrhaphy is usually required in cases both of cystocele and rectocele.

8. RECTOCELE.

Definition.—Recto-vaginal hernia, a bulging forwards of the posterior vaginal wall, carrying the rectum with it.

Causes.— Obstinate constipation, ruptured perineum, relaxation of posterior vaginal wall, procidentia uteri.

Symptoms.—The pouch gets filled with fæces, producing pain, tenesmus, irritation, with mucous discharge from the bowels.

Signs.—After an enema the rectum can be explored, and the state of the case made out.

Diagnosis.—From symptoms and signs as above.

Prognosis.—Unsatisfactory.

Treatment.—Palliative by the use of air-ball pessary ; cure where practicable by operation, as posterior elytrorrhaphy and perineorrhaphy.

9. Enterocele.

Definition.—Entero-vaginal hernia ; descent of a portion of the small intestines into the pelvis so as to cause a bulging in the vagina. This occurs usually in the recto-vaginal pouch.

Causes.—Straining during labor.

Symptoms.—Pain with sense of fulness in vagina.

Signs.—Swelling detected in vagina, tense, elastic, but not giving the sensation of fluid.

Diagnosis.—It is very important to exclude other forms of swelling, as hæmatocele, pelvic deposit, dislocated ovary, &c. The peculiar feeling of an air sac may be sufficient to the practised touch, but in cases of difficulty a fine aspirator will set the matter at rest.

Prognosis.—Unsatisfactory.

Treatment.—Reduction. The patient should be placed in the knee-shoulder position, and the hernia pressed up. After-treatment : perfect rest, opium, astringent vaginal injections, pessaries.

10. Cancer of the Vagina.

Definition.—The type of cancer that affects the vagina is usually epithelioma ; it arises either *de novo* from some portion usually near the orifice, beginning in some apparently warty growth, or it is propagated by contiguity from a vegetating or excavating cancer of the cervix uteri.

Causes.—Unknown ; favored by hereditary tendency, gonorrhea (?), dirt.

Symptoms.—Severe local pain, with watery and afterwards offensive discharge. Pain aggravated by coïtus, which may produce bleeding.

Signs.—The growth is felt as a roughened elevation above the vaginal mucous membrane ; surface somewhat friable ; bleeds on being interfered with. In more advanced cases the disease may cause a swelling that obstructs the vaginal canal.

Diagnosis.—From warts by the history, the pain and the illness that it produces.

Prognosis.—Unfavorable. The chief difficulty in eradicating epithelioma of the vagina lies in the fact that the mucous membrane is loosely applied to an extensive layer of connective tissue, whereby the disease is easily propagated to neighbouring parts and rapidly becomes too extensive to allow of beneficial treatment. For the same reason, if removed, it is extremely liable to recur.

Treatment.—If recent, the growth must be freely excised and the wound thoroughly cauterised with the actual cautery. Where the disease is extensive it should be removed as far as possible by gouges, and the actual cautery applied, or as much as possible of the vagina dissected out. Great care is needed afterwards by the frequent injection of carbolic acid (p. 210, 8, *a*) to prevent septic absorption.

11. Cyst of the Vagina.

Definition.—A moveable tense swelling of the vaginal wall, rarely hydatids.

Causes.—Unknown.

Symptoms.—None save inconvenience from its projection into the vaginal canal.

Signs.—From abscess by absence of heat and redness, by its mobility, and by its translucent shining appearance.

Diagnosis.—As above.

Prognosis.—Favorable.

Treatment.—Aspiration, cutting a piece out of the cyst wall, or by carefully dissecting out the cyst.

12. Polypus of the Vagina.

Definition.—Rare. A small tumor which may be fibrous or of connective tissue, sessile or pedunculated from the vaginal wall.

Causes.—Unknown, probably irritation.

Symptoms.—Sometimes dull aching pain, and inconvenience from obstruction.

Signs.—The tumor is felt moveable in the vaginal wall, and of a denser consistency than a cyst.

Diagnosis.—As above.

Prognosis.—Favorable.

Treatment.—Removal by dissection, scissors, or the ecraseur.

13. Rupture of the Vagina.

Vide infra Chap. xiii. 8, p. 198.

14. Stricture of the Vagina.

Definition.—A constriction by a cicatrix on one side, or as a circular band at any portion of the vaginal tract.

Causes.—Caustics, prolonged use of pessaries, injuries, parturition.

Symptoms.—Occasionally sterility, shortening of vagina.

Signs.—Examination may reveal a small opening which may at first be mistaken for a patent os uteri, through which if the finger is pressed the cervix uteri is discovered above the stricture.

Diagnosis.—As above.

Prognosis.—Guarded as to cure.

Treatment.—Slight incision and forcible rupture; the patient afterwards to wear for several hours daily a bougie, or one of Sims' vaginal dilators (p. 143). Great care is necessary in all operations on the vagina to guard against the possibility of septic infection.

15. Occlusion of the Vagina.

Definition.—Complete closure of the vagina in any portion of its canal.

Causes.—Congenital, rare; inflammation and subsequent closure, with cicatrix.

Symptoms.—Absence (retention) of catamenial flow, dyspareunia.

Signs.—On examination vagina found shortened, and no orifice discoverable in its roof; bulging from retained menses.

Diagnosis.—From signs as above.

Prognosis.—Guarded.

Treatment.—If there are indications of retained menses incise the bulging part, and keep the opening patent by means of vaginal dilators, or a strip of

iodoform gauze. If the abnormality is congenital, and examination reveals the presence of a uterus, an attempt should be made by careful dissection to complete the canal until the os uteri is reached ; if, however, there is no uterus, such cases are better left alone, unless there are urgent reasons for attempting to form a canal.

NOTE.—Pregnancy may exist with apparent complete occlusion of the vagina. A case is reported by the author (Obstetrical Transactions vol. xxiii. for 1881, p. 117), where delivery had to be effected through an imperforate vagina. In this case, although a small opening must have existed, it could not be detected, or possibly such an opening became closed during the progress of the pregnancy.

16. VAGINISMUS.

Definition.—Hyperæsthesia at the site of the hymen, producing spasmodic contraction of sphincter vaginæ and hindering coïtus.

Causes.—Hysteria, excoriation, vascular growth of the meatus, vaginitis, fissure of the anus, hyperæsthesia of the remains of the hymen, too large size of the penis.

Symptoms.—Severe pain at attempts at coïtus, consequent sterility, pain on walking or touching the part.

Signs.—Examination produces severe pain and spasmodic contraction of the sphincter vaginæ. Even the introduction of a small probe will produce pain.

Diagnosis.—Distinguish between hysteria and local mischief.

Treatment.—If hysterical, general treatment, tonics, exercise, injections of lead and opium (p. 211, 8, *g*) or pessaries of belladonna (p. 209, A, *c*) and the occasional use of the vaginal dilator, gradually increased in size;

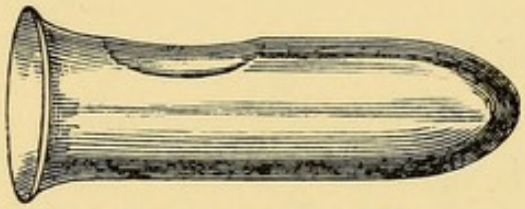


Fig. 17. Sims' Vaginal Dilator.

physiological rest. If the disease is due to constriction at the site of the hymen, forcible dilatation with finger, and afterwards the use of the dilator. If the disease is due to hyperæsthesia of the torn edge of the hymen, the whole remaining edge of the hymen should be dissected off with a pair of curved scissors; the vagina is then put on the stretch, and, if necessary, incisions may be made right and left on each side of the median line near the posterior fourchette; the glass dilator is then to be introduced and worn for two or three hours morning and evening. It should be retained *in situ* by a T bandage, and worn for several weeks. Pregnancy is the best cure.

17. Foreign Bodies in the Vagina.

The gynæcologist may occasionally be called upon to remove some foreign body from the vagina. His attention may be drawn to it by the patient herself, who may have made ineffectual attempts at its

removal, or he may discover the cause of mischief in his ordinary examination.

A patient may present herself with symptoms that point to malignant disease, as pain in the vagina, foul-smelling discharge, bleeding, &c.; in all such cases an examination must be insisted upon before an opinion is given.

Among bodies that have been found in the vagina are old fashioned wooden pessaries, metal pessaries, and others of various forms. In some cases these pessaries have produced ulceration, and have become embedded in the vaginal wall, the flesh having grown over part of them, necessitating the use of the knife for their liberation. Besides these may be enumerated a miscellaneous collection of articles, introduced for the most part for evil practices, such as candles, extinguisher (*vide* Museum of The Hospital for Women), hair-pins, bits of wood, the tubes of syringes, &c.

CHAPTER VIII.

DISEASES OF THE VULVA.

1. Inflammation and Abscess of the Labia Majora.

Definition.—Inflammation in the connective or adipose tissue of the labium majus.

Causes.—Poor state of blood, acrid secretions, vaginitis, injuries.

Symptoms.—Pain, swelling, throbbing.

Signs.—The swelling felt to be hot, hard, tender, or, if it have gone on to suppuration, fluctuation.

Diagnosis.—From hernia by the consistency of the swelling; from hernia of ovary by the peculiar pain of that organ when pressed; and from varicose veins of the labium by the peculiar aspect of the latter.

Prognosis.—Favorable.

Treatment.—In first stages rest, cold and sedative applications (lead and opium); in second stage poultices, then early and free incision.

2. Pruritus Vulvæ.

Definition.—Irritation and itching of vulva.

Causes.—Irritating discharges, diabetes, warmth, high living, menstruation, pregnancy, dirt, eruptions, pediculi, acarus scabiei, masturbation, syphilis.

Symptoms.—The intolerable itching leading to constant friction and often excoriation.

Signs.—Sometimes redness and dryness of parts; sometimes no appearance of irritation, or an abnormal pallor and smoothness of the skin.

Diagnosis.—As pruritus is only a symptom of some exciting cause, the cause must be diligently sought for. See Causes.

Prognosis.—Often intractable.

Treatment.—It is useless to treat merely the symptom. The cause being discovered, the treatment should be applied to its remedy. Occasionally soothing applications may be of service, as Goulard water and opium, lotions with hydrocyanic acid or tobacco (p. 211, 8, *k*, *m*), or a powder composed of equal parts of oxide of zinc and chalk, carbolic acid ointment, or strong carbolic acid; tinct. benzoini co.; mist. amygdalæ; or the lotions (p. 211, 11). Tonics, good food, fresh air, bathing, hot injections.

3. Œdema of the Vulva.

Definition.—Anasarca in the connective tissue of the labium majus.

Causes.—Pressure from pregnancy or pelvic tumors.

Symptoms.—Inconvenience in locomotion and sitting.

Signs.—Semi-translucent swelling of the labium.

Diagnosis.—From abscess by absence of heat and pain ; from hernia by consistency of swelling.

Prognosis.—Favorable on removal of cause.

Treatment.—Delivery. If from pelvic tumor, the horizontal position, or with elevation of the feet of the bed (p. 208).

4. Hypertrophy of the Labia Majora.

Definition.—Rare ; elephantiasis, hypertrophy of skin and connective tissue.

Causes.—Unknown.

Symptoms.—Great inconvenience according to size.

Signs.—The hard, irregular, large condition of the part.

Diagnosis.—Easy from any other condition.

Prognosis.—Guarded.

Treatment.—If severe, removal ; if slight, counter-irritation and astringents.

5. Hypertrophy of the Labia Minora.

Definition.—Elongated condition of labia minora.

Causes.—Masturbation, irritation, excessive coïtus.

Symptoms.—Sexual excitation on locomotion.

Signs.—The labia project far beyond the vulva.

Diagnosis.—As above.

Prognosis.—Varies.

Treatment.—Rest, cold applications, astringents, removal of the hypertrophied lips.

6. Hypertrophy of Clitoris.

Definition.—Enlargement of the clitoris, occasionally to a considerable length.

Causes.—Congenital, masturbation.

Symptoms.—Excessive sexual desire.

Signs.—The clitoris is seen to project more or less from the vulva.

Diagnosis.—From inflammation (rare) by absence of pain.

Prognosis.—Guarded.

Treatment.—Cold applications, physiological rest, clitoridectomy.

7. Occlusion of the Vulva.

Definition.—Absence of apparent orifice of vulva.

Causes.—Congenital, adhesion after injury.

Symptoms.—If in adult, retention of menses.

Signs.—A skin is seen to close the orifice.

Diagnosis.—As above.

Prognosis.—Favorable.

Treatment.—If in an infant, gentle separation of the labia will often tear open the thin skin covering the orifice of the vulva without bleeding. In the adult the skin is easily divided with a bistoury.

8. Imperforate Hymen.

Definition.—Closure of vaginal orifice by excessive development of the hymen.

Causes.—Congenital.

Symptoms.—If adult, retention of menses.

Signs.—The hymen is seen closing the vaginal orifice.

Diagnosis.—As above.

Prognosis.—Generally favorable.

Treatment.—Occasionally the hymen may seem to close the vagina, when on examination of the patient

on her back the anterior free edge of the hymen may be found embracing the posterior wall of the urethra. Such cases do not need treatment, unless offering an impediment to coïtus, when it may be stretched or slightly incised. If, however, the hymen is really imperforate, great care has to be taken in incising it, as the evacuation of the retained menses may give rise to decomposition before the fluid has all passed away, which may lead to fatal septicæmia. A free opening should be made, and the thick viscid fluid allowed to drain away gradually, frequent use being made of antiseptic injection (210, 8, *a*, *b*).

9. Varicose Veins of the Vulva.

Definition.—A varicose condition of the veins of the labia majora and minora, extending at times into the vagina.

Causes.—Pregnancy, or pressure from some pelvic tumor.

Symptoms.—Pain and fulness of the part, and discomfort on sitting.

Signs.—Full, knotty, irregular swelling of the parts, with dark discoloration.

Diagnosis.—When examined, not to be confounded with any other morbid condition. If ruptured during parturition, it is often difficult at once to discover the source of the hæmorrhage; but when the uterus is excluded as the source, the vulva and vagina should be carefully inspected in order to discover it.

Prognosis.—If unarrested, unfavorable.

Treatment.—Cold applications and pressure by a

pad and T bandage. If ruptured, pressure, or the application of some styptic as tincture of matico, or it may be necessary to place a ligature on the bleeding point.

10. Syphilis.

Definition.—Primary chancre affecting the labia majora or minora; or, more rarely, the cervix uteri.

See authorities on Syphilis for *Diagnosis* and *Treatment.*

11. Cancer.

Definition.—Epithelioma affecting the vulva.

Causes.—Unknown. Predisposing heredity, irritation from discharges, dirt or sequela of some irritating local malady.

Symptoms.—Sharp, stabbing pain, and heat in the parts.

Signs.—At first a red irritable sore, tending to be intractable to treatment; afterwards a coarse granular growth, secreting an irritable ichorous discharge, or an excavating ulcer of the part, with a hardish base.

Diagnosis.—From syphilis by the history and effect of treatment; from other ulcerations by the character of the pain, and its resisting healing remedies.

Treatment.—If seen in time, free excision; if too late, destruction by pernitrate of mercury, potassa caustica, or the actual cautery, and the application of carbolic acid (p. 212, 10, *a*) and morphia pessaries (p. 209, A, *a*). Even if the disease is far advanced it

may be desirable to excise the morbid growth, as tending to prolong the patient's life, or, at all events, to make it more tolerable by lessening the pain and distress.

12. Vascular Growth of the Urethra.

Definition.—A brilliantly red excrescence from the canal of the urethra, usually the posterior aspect, or from the posterior margin of the orifice; occasionally hidden in the urethral orifice.

Causes.—Unknown.

Symptoms.—Extreme tenderness and dysuria, the pain lasting only during micturition; dyspareunia.

Signs.—The growth is easily seen protruding from the urethra. If it is some little way up the urethra, the passage of a sound will reveal it by the exquisite pain caused.

Diagnosis. — From vegetating cancer by the smoothness of its surface; from syphilitic warts by the latter existing elsewhere also, and being less painful.

Prognosis.—Favorable.

Treatment.—The growth must be carefully seized with a pair of fine forceps, care being taken not to tear it, and then freely excised with a fine pair of scissors, and the actual cautery applied; or the growth may be removed by the cautery knife.

13. Cyst of the Vulva.

Definition.—A cyst in the labium majus, very rarely in the labium minus.

Causes.—Accumulation of fluid in one of the vulvo-vaginal glands.

Symptoms.—Swelling and fulness of the part, unaccompanied by much pain.

Signs.—A tense, hard swelling, not red.

Diagnosis.—From hernia by the touch; from abscess by the absence of inflammation.

Prognosis.—Favorable.

Treatment.—Excision of a piece of the cyst wall; incision, and the keeping of the parts dressed until the wound granulates up; or by dissection out of the cyst, which occasionally may have to be carried to a considerable depth.

14. CONDYLOMATA.

Definition.—Warts on the labia majora and minora.

Causes.—Gonorrhea, sequela of syphilis, or from irritation in a case where there is an hereditary syphilitic taint.

Symptoms.—Irritation about the parts, not necessarily painful.

Signs.—A profuse crop of warty growths studding the parts.

Diagnosis.—Not to be confounded with any other growth, but difficult to differentiate as to whether from gonorrhea or syphilis.

Prognosis.—Often tedious to cure.

Treatment.—The application of pernitrate of mercury, nitric acid, strong carbolic acid (p. 212, 10, *a*); excision of all the growths with scissors, and the

subsequent application of the actual cautery, or the application of a powder of equal parts of acetate of copper and savin.

15. Ulcer of the Vulva.

Definition.—Simple strumous ulcer of vulva, or gangrenous ulcer.

Causes.—Of the former, the strumous diathesis; of the latter, epidemic puerperal mischief, scarlet fever, &c.

Symptoms.—Of the former, irritation, soreness, not much pain; of the latter, severe cachexia, a fœtid discharge.

Signs.—Of the former, a simple ulcer; of the latter, a swollen, purplish state of the part; then an ashy grey patch, which soon ulcerates and spreads rapidly. Discharge ichorous and very fœtid.

Diagnosis.—From symptoms and signs as above; from cancer (see p. 150); from syphilis (see p. 150).

Prognosis.—Of the simple form, favorable; of gangrene of the vulva, unfavorable.

Treatment.—Of the strumous ulcer, stimulating applications, as nitrate of silver, "red" wash, tonics, fresh air, &c.; of the gangrenous ulcer, stimulating food, alcohol, iron and quinine; to the ulcer a powerful caustic, the actual cautery or nitric acid, followed by charcoal poultices.

CHAPTER IX.

DISEASES OF THE MAMMA.

1. INFLAMMATION.

(*a*) *Of the Areola and Nipple.*

Definition.—Inflammation, rare, either at the tip of the nipple in connection with the lactiferous tubes, or inflammation terminating in suppuration of the areola.

Causes.—Dirt, or other obstruction of the lactiferous tubes ; in the second variety, convection from the former, chill, or bruising by the child's mouth.

Symptoms.—Pain of a throbbing nature, swelling and great tenderness, rendering suckling impossible, or dangerous to the child from the risk of its imbibing pus.

Signs.—Small swellings containing pus at the tip of the nipple ; the formation of a nodule in the areola.

Diagnosis.—Easy from the above symptoms and signs.

Prognosis.—Favorable.

Treatment.—Poultices ; and when pus is evident, its free evacuation.

(*b*) *Inflammation of the Mamma.*

Definition.—Mastitis. Inflammation (1) in the connective tissue, (2) in the gland, and (3) rare, beneath the gland.

Causes.—Chill in the lactiferous breast, blows, constitutional cachexia.

Symptoms.—Deep throbbing, burning pain, restlessness, rise of temperature; less severe if the inflammation is only sub-cutaneous.

Signs.—A hard, red, if superficial, tender swelling.

Diagnosis.—From cancer and chronic mammary tumor by the character of the pain, by the history, and by the constitutional disturbance.

Prognosis.—Favorable.

Treatment.—Attempt resolution by ice, leeches (?), poultices, anodyne fomentations (belladonna), support to the breast by strapping, calomel (?); on the presence of pus being detected, free incision followed by poultices; tonics.

2. Abscess of the Mamma.

Definition.—Suppuration following inflammation, either simple or affecting a large portion of the breast, producing several centres of suppuration.

Causes.—Chill during nursing, or a sequela of puerperal mischief.

Symptoms.—Deep-seated aching pain, sometimes without much tenderness.

Signs.—The breast swollen, hard, purplish; the skin threatening to become disorganised.

Diagnosis.—By the fluctuation and the history of preceding inflammation.

Prognosis.—Favorable.

Treatment.—Deep and free incision ; care being taken to cut in a direction radiating from the nipple, so as not to wound the lactiferous ducts ; keep the wounds open to allow of the free escape of the pus.

N.B.—Cold chronic abscess needs careful diagnosis to differentiate it from simple cyst. It should be laid freely open, and stimulating applications, as iodine (p. 212, 10, *c*), applied to the interior of the abscess.

3. GALACTORRHEA.

Definition.—(1) An abnormal and continuous flow of milk from the breast of a nursing woman ; or (2) a continuous secretion of milk long after she has ceased to suckle.

Causes.—(1) Insufficient tone of the nipple ; (2) morbid stimulation of the gland, or debility.

Symptoms.—(1) Unhindered flow of milk in the intervals of nursing ; (2) ability to get milk from the breast on slight pressure.

Signs.—See Symptoms.

Diagnosis.—Easy from symptoms.

Prognosis.—Often intractable.

Treatment.—(1) Astringent applications to the nipple, tannic acid lotion (p. 211, 8, *i*) gentle friction ; the nipple should be drawn out into a breast pump from time to time. (2) Application of belladonna plaster strapped firmly round the breast ; the breast to be kept cool ; iodide of potassium, iron, and other tonics.

4. Hypertrophy of the Mamma.

Definition.—Undue largeness of the breast from (1) fat, or (2) true hypertrophy of the gland.

Causes.—(1) Excessive coïtus, masturbation ; (2) subinvolution of the gland after suckling.

Symptoms.—Increased weight and fulness.

Signs.—(1) Large, soft, fairly firm ; (2) large, with nodular hypertrophic enlargement of the gland.

Diagnosis.—By signs as above.

Prognosis.—Intractable.

Treatment.—(1) Avoidance of cause, large doses of bromide of potassium, gr. 15 to 30; (2) mercury, emplastrum plumbi iodidi, strapping the breast, tonics.

5. Atrophy of the Mamma.

Definition.—Male type of breast.

Causes.—Non-development of the ovaries, old age.

Symptoms.—Amenorrhea.

Signs.—The breast remains flat or slightly fat, and the nipple small.

Diagnosis.—As above.

Prognosis.—Unfavorable as to cure.

Treatment.—Galvanic intra-uterine stem ; leeches to the uterus.

6. Depressed Nipple.

Definition.—The nipple scarcely elevated above the level of the mamma.

Causes.—Congenital (?), pressure from stays.

Signs.—The nipple does not become erectile, and cannot be seized by the child.

Prognosis.—Intractable.

Treatment.—Friction of the nipple, astringent lotions; the nipple should be drawn out into an exhausted breast pump, and retained in that position for half an hour or longer at a time.

7. Cracked Nipple.

Definition.—Cracks or fissures on the nipple, sequela of excoriations; they may extend so as almost to cause the nipple to be lost.

Causes.—Too frequent suckling; saliva of infant, thrush.

Symptoms.—Severe pain on attempt at suckling, accompanied often with bleeding.

Signs.—Fissures more or less deep, from one-twenty-fourth to half an inch in length; at first irregular, then smooth, with exudation of serum.

Diagnosis.—From above symptoms and signs.

Prognosis.—Often tedious.

Treatment.—The nipple should never be put away wet with the infant's saliva, but be carefully washed and dried. If nursing is to be maintained it should be through a protecting shield. Lotions of Goulard water, borax in powder, solution of nitrate of silver, grs. 30 to the ounce; or, which is often sufficient, one or two applications of the solid nitrate of silver; collodion. If all measures fail, nursing must be given up.

8. Eczema of the Nipple.

Definition.—Nipple and areola the seat of acute

eczema, leading, if not cured, to cancer of the breast. Sir James Paget, and, more recently, Mr. Butlin, have drawn attention to this malady as a precursor of cancer. The disease tends to morbid alteration of the cells contained in the lacteal glands.

Causes.—Dirt, ill-health, chronic cracked nipple.

Symptoms.—Soreness of nipple.

Signs.—The nipple is flattened, and it and the areola become of a brilliantly red color, the surface moist, sore and granular.

Diagnosis.—From symptoms and signs as above.

Prognosis.—If taken in time favorable as to the prevention of the development of cancer.

Treatment.—Entire destruction of the whole of the areola down to the subcutaneous tissue by Potassa Caustica, or the actual cautery; or free excision followed by the cautery. Guard against secondary hæmorrhage.

9. Cancer of the Mamma.

Definition.—Cancer affecting the mammary gland, or the interlobular connective tissue.

Causes.—Generally: unknown. Exciting: blows, arrest of secretion, heredity, eczema of nipple (*vide supra*).

Symptoms.—Pain of a lancinating, intermittent character, sense of weight; afterwards cachexia; occasionally, where the disease is in the connective tissue, there may be but little pain.

Signs.—A hard unyielding swelling in the substance of the mamma, at first freely moveable, afterwards becoming more or less fixed; swelling and pain in the

axillary glands; indrawing of the nipple, adherence of overlying skin to the tumor; tenderness; red blush of skin proceeding to purple. In cases of diffuse cancer of the connective tissue, the breast may feel generally somewhat hard without presenting a defined swelling.

Diagnosis.—From cyst by character of pain. Chronic mammary tumors are free, and do not produce pain; they may remain inactive throughout life.

Prognosis.—Unfavorable.

Treatment.—Early removal by the knife, or if the knife is objected to, by any of the means that have for their object the destruction of the morbid tissue, as Michel's process, electronecrosis, etc. In doubtful cases large doses of iodide of potassium, gr. 5 to 20, with purges; leeches. Inunction of iodide of lead ointment or of iodide of potassium; cod-liver oil; mist. terebinthinæ chiæ. Palliative in ulcerated cases: Goulard water, opium externally and internally, carbolic acid ditto, Levico water (arsenical), persulphate of iron, collodion. In very advanced cases with open ulceration, so-called "inoperable," the removal of the uterine appendages (Beatson) has been found of service; but better still that operation, combined with the administration of thyroid extract (Herman).

NOTE.—In removing the breast for cancer, use the knife as little as possible, and the fingers more; clear out axillary glands and all possible neighbouring foci of the disease.

N.B.—The size of this work precludes all mention of the various and mostly ineffective measures that have been tried at different times for the cure of cancer,

and also the enumeration of the various compound forms of the disease.

10. Chronic Mammary Tumor.

Definition.—A non-malignant tumor of the breast, generally manifested in isolated tumors, hard, of a fibrous nature, several being often present in the mamma.

Causes.—Some disorder of menstruation in early life, chill, blows ; the tubercular diathesis.

Symptoms.—Scarcely any.

Signs.—Small tumors varying in size from a filbert to a walnut appear to be freely moveable in the breast ; they feel hard, are often flattish, are not tender, and do not tend to increase.

Diagnosis.—Sometimes difficult from commencing scirrhus ; but as time goes on they do not grow, nor is there any pain, nor do they become fixed, nor tender.

Prognosis.—Favorable.

Treatment.—If let alone and the patient has several children, and especially if she suckles, the tumors may gradually lessen until they disappear. If the patient does not become pregnant, and the presence of the tumor is a cause of annoyance, it is well to apply gentle pressure by strapping with iodide of lead plaster or belladonna, and administer cod-liver oil and iodide of potassium. If their presence disturb the health through nervousness, it is better to remove them.

11. Cyst of the Mamma.

Definition.—A tumor in the mamma, the result of

the presence of a cyst or cysts. They may be of the nature of fibro-cysts, sebaceous cysts, hydatids, serous cysts, sero-sanguineous cysts, or muco-serous cysts.

Causes.—Blocking of some lobule of the gland, or degeneration of some tubercular deposit, or the result of some local extravasation of blood or serum.

Symptoms.—Swelling, with sensation of fulness or weight, often tenderness, and dull aching pain; occasionally none.

Signs.—A tumor defined, smooth, with sensation of fluid in a tense cyst, moveable, or groups of small cysts are felt; these often are situate at the base of the mamma, in some cases extending in a broken ring all round.

Diagnosis.—From chronic mammary tumor by its lesser duration, by sensation of fluid, by its not tending to resolution in pregnancy and suckling.

Prognosis.—Favorable.

Treatment.—If distressing to the patient, extirpation. Prior to this operation, if the cyst is single, aspiration should be tried. In the case of hydatids, early removal.

In the case of multiple cysts, if pain is present it is better to remove all the cysts, for cases have been known where this condition not unfrequently passes into that of malignant disease.

CHAPTER X.

FUNCTIONAL DISEASES.

NOTE.—Nearly all the maladies arranged under this heading are in reality symptoms, and as such are noticed under the heads of the various diseases of which they are some of the characteristics ; but they are here enumerated for facility of reference, and because in some cases they may be the prominent symptoms for which the patient applies for relief, and therefore a study of them separately may lead the practitioner to a more correct diagnosis.

1. LEUCORRHEA.

Definition.—"The whites" ; the name given by women to any discharge from the vagina, whether colorless, purulent, or milky. A vaginal discharge is a symptom of many diseases of the uterus and vagina, and is of great importance as a matter of diagnosis. It is not to be looked upon as a disease in itself but rather as a symptom. Women themselves are too apt to regard it as natural, and consequently to make no complaint of it ; or else they consider it a cause and not an effect of disease, and say "I have a discharge which is weakening me" ; but its existence should

always be made a matter of enquiry, and according to the description given further investigation should be made with the view of discovering the disease of which it is a symptom.

Varieties.—*Colorless*, glairy, like white of egg, comes from the uterus, and indicates cervical catarrh or endocervicitis. This variety is only morbid when it is excessive. There is a peculiarly viscid colorless discharge that is seen just inside the labia minora in cases of masturbation and excessive coïtus.

Puriform, from the vagina in vaginitis, or from the vagina and urethra in gonorrhea.

Muco-purulent, from the uterus, a symptom of endometritis.

Watery, if continuous and offensive indicates cancer.

Watery, if intermittent may arise from hydrosalpinx, when the overdistended oviduct discharges itself through the uterus.

2. AMENORRHEA.

Definition.—Total absence of the catamenia.

Causes.—Pregnancy; occasionally double ovarian tumor; non-development or absence of the ovaries; late appearance of the catamenia; absence of the uterus; occlusion of the os uteri; occlusion of the vagina; phthisis; during some acute diseases, as pelvic peritonitis and some fevers.

Diagnosis.—Pregnancy confirmed by other signs; double ovarian tumor confirmed by the symptoms and signs of such; in non-development or absence of the ovaries by absence of any catamenial nisus, by non-development of the mammæ and the external

organs of generation, absence or small quantity of pubic hair, patient retains the figure of a young girl, little or no sexual desire ; in delayed appearance of the catamenia absence of any other morbid symptom ; in absence of the uterus the catamenial nisus may be exhibited by vicarious menstruation, with or without the presence of some sexual desire ; in occlusion of the os uteri, catamenial nisus exists, and the uterus becomes enlarged and globular from the accumulation of the retained menstrual fluid ; in occlusion of the vagina, similar signs with bulging of the occluding membrane at the vaginal orifice ; phthisis, confirmed by other signs.

Prognosis.—According to cause.

Treatment.—In pregnancy none. In double ovarian tumor, ovariotomy (p. 42) ; in non-development of the ovaries, stimulants to the uterus, as galvanic stem ; in absence of the ovaries or uterus, none; in occlusion of the os uteri, puncture at the seat of the os uteri with slow careful evacuation of the contents, care being taken by pressure and by the administration of ergot that air is not admitted into the uterus ; in occlusion of the vagina, free incision into the occluding membrane, with precautions as above ; in phthisis, general treatment.

3. SPAMMENORRHEA.

Definition.—Scanty menstruation (see p. 32).

Causes.—Phthisis, ovaritis, ovarian tumor, torpid action of the ovaries, arrest of development, anteflexion, mental depression.

Treatment.—According to the cases (*vide in loco*). In functional cases stimulants to the uterus, leeches (p. 205), pulsatilla (p. 215, 15, *b*), ice bag to sacrum (p. 214, 15, *a*), warm enemata, good diet, exercise, change of air, iron, quinine, strychnia, potassii permanganas.

4. Chlorosis.

Definition.—Spanæmia (?), "green sickness," associated with diminished amount of red blood discs.

Causes.—The epoch of puberty, associated with disordered ovulation. Great mental anxiety or fear, deprivation of fresh air and exercise, disappointment in love, ungratified erotism, nostalgia, mental labor.

Symptoms.—Langour, aversion from society, spammenorrhea, greenish yellow complexion, palpitation, dyspepsia with depraved appetite, constipation, neuralgia.

Signs.—Diminution of red blood discs, loud systolic cardiac murmur, pressure on the spine about the seventh cervical vertebra produces pain; conditions similar to the invasion of phthisis.

Diagnosis.—From phthisis by absence after long observation of confirmatory signs; from spanæmia by difficulty of cure, by color of complexion, by nervous unrest, by neuralgia, by distress in region of solar plexus.

Prognosis.—If uncomplicated, favorable, though recovery often tedious.

Treatment.—If possible, remove cause, cure the neurosis, improve general condition; change of air

and scene, sea voyage, exercise in open air, sea bathing; nerve tonics, as arsenic, strychnia, quinine; continuous electric current; iron; nitrite of amyl; nutritious diet.

5. MENORRHAGIA.

Definition.—Abnormally profuse menstrual flow.

Causes.—Plethora, areolar hyperplasia, granular inflammation of the cervix, fibrous tumor, polypi, epithelioma, chronic ovaritis (?), subinvolution of the uterus, retroflexion, constipation.

Symptoms.—Increased menstrual flow, emaciation, pallor, sterility, dyspepsia, hysteria, and, in many cases, some vaginal discharge.

Signs.—If due to any of the above causes, the signs of such maladies will be present. Menorrhagia should not be passed over as if it were necessary to "change of life," but the cause carefully explored. Women often labour under the idea that the "change of life" is associated with menorrhagia, and medical men not unfrequently give such as their opinion without examination or any further enquiry into the case; but when such a condition exists it is generally morbid, and the cause should be sought for.

Diagnosis.—If not due to any apparent cause, the uterus should be investigated by the touch, uterine sound, and speculum, the whole pelvis explored, and if necessary the cervical canal dilated in order to examine the interior of the uterus.

Prognosis.—Depends on the discovered cause.

Treatment.—Entire rest, cold applications to vulva

and thighs, cold drinks, gallic acid, ergot, opium (for other drugs see p. 216); intra-uterine injections during the intervals of the catamenia, of carbolic acid and glycerine (p. 211, 9, *a*), iodine (p. 212, 9, *c*), persulphate of iron (?); in cases of retroflexion, reposition of the uterus after local depletion; change to a cooler climate. Care must be taken that the menorrhagia is not natural, lest it be unwisely checked. Cases due to definite causes must be treated accordingly.

6. METRORRHAGIA.

Definition.—Hæmorrhage from the uterus, continuous or in the intermenstrual periods.

Causes.—Advanced areolar hyperplasia, intra-uterine fibrous tumor, cancer, polypi, fungous growths, retained and organised relicts of conception. Cases are very frequently met with where, after abortion, or even after labor, metrorrhagia may exist for weeks, reducing the patient to a condition of great weakness. The hæmorrhage is, in these cases, often due to some small fragment of placenta remaining behind in the uterus, and becoming organised, forming a villous growth.

Symptoms.—Intermittent or continuous hæmorrhage.

Signs.—If due to any of the above causes, the characteristic signs of such maladies will be present.

Diagnosis.—The cause should be diligently looked for; in many cases it is necessary to open up the cervix in order to explore the interior of the uterus, with the view of ascertaining the cause of the hæmorrhage.

Treatment.—Conditions of the cervix to be treated as each case requires (*vide in loco*). When due to organised relicts of conception, as above, it is advisable to dilate the uterine cavity with uterine sounds to No. 12 or 14, and then withdrawing the largest sound to rapidly insert a solid stick of nitrate of silver quite up to the fundus uteri, and move it about so as thoroughly to cauterize the part, when it will often be found that one such application has effected a complete cure. For acute hæmorrhage, plugging the vagina; in cancer, the application of strong solution of tannin, or a plug of glycerine of tannic acid with carbolic acid (p. 212, 10, *a*); in growths from the interior of the uterus, the cervix must be opened up and the morbid growth removed with the curette or with forceps; the application to the cavity of the uterus of nitric acid, nitrate of silver, iodine, carbolic acid, the cautery sound, or persulphate of iron. Where a polypus or intra-uterine fibroid exists that can be reached, it should be removed.

7. Vicarious Menstruation.

Definition.—In cases where spammenorrhea or amenorrhea exists, hæmorrhage from some other source, as epistaxis, hæmoptysis, hæmatemesis, dysentery, bloody sweat.

Causes.—Congenital or other conditions of the ovaries or uterus hindering the normal flow; hæmorrhagic diathesis (?).

Symptoms and Signs.—Hæmorrhage as indicated above, occurring only periodically with the catamenial nisus.

Diagnosis.—Care must be taken in each case to exclude the existence of any other disease that might in its natural course give rise to the special manifestation of the hæmorrhage, as general plethora, phthisis, ulcer or cancer of the stomach, hæmorrhoids, disease of the liver, or ulcer or cancer of the rectum.

Prognosis.—Favorable, if the uterus is amenable to treatment.

Treatment.—Anticipate the hæmorrhage by venesection, leeches to the uterus (p. 205) or anus, dilatation of the cervix and the introduction of a galvanic stem, exercise, counter-irritation over the ovaries.

8. Dysmenorrhea.*

Definition.—Painful menstruation: (1) neuralgic, (2) congestive, (3) obstructive, (4) membranous, (5) ovarian.

Causes.—1. Tendency to general neuralgia, chlorosis, gout, rheumatism, weakness of constitution, malassimilation, over brain work, shock, mental strain, luxury, masturbation, excessive coïtus.

2. Plethora, chill, sluggishness of liver, retroflexion, areolar hyperplasia, endometritis, pelvic cellulitis, pelvic peritonitis.

3. Constriction of the inner os, anteflexion, fibrous tumor, polypus, constriction of vagina (?).

4. Endometritis, with exfoliation of entire lining membrane; hypernidation.

5. Congestion of ovaries, ovaritis.

Symptoms.—1. Pain, sharp, fixed, over pelvis and

* "Dysmenorrhea," by the Author. Churchill.

loins or in distant parts, either before or during the flow.

2. Severe pain in pelvis, with constitutional disturbance if caused by a chill. If from inflammation, pain dull and heavy. If in cases of uterine hyperæmia or subinvolution, heavy bearing-down pain relieved by the flow.

3. Severe extruding bearing-down pain before the flow, eased on the flow being established.

4. Steady increasing pains as of labor, ceasing on the expulsion of the membrane.

5. Pain for several days before the period in one or both inguinal regions, extending down the thighs; usually accompanied by pain in one or both mammæ; "intermenstrual" pain.

Signs.—1. Nothing beyond the symptoms.

2. Cervix tender and swollen; retroflexion detected by the touch, confirmed by the uterine sound during the menstrual interval, or the whole uterus enlarged heavy, and boggy.

3. Constriction and anteflexion detected by the sound; the presence of tumors, &c., by the touch.

4. The extruded membrane, which is really a true decidua unassociated with pregnancy, an unbroken denidation.

5. Region of ovaries tender as a rule, not invariably.

Diagnosis.—1. Pain not expulsive, flow uninterrupted, absence of clots; examination reveals absence of obstruction; absence of constitutional disturbance; no intermenstrual leucorrhea nor pain.

2. Constitutional disturbance; other signs of inflammation; intermenstrual pain increased on locomotion; leucorrhea.

3. By marked bearing-down pains and detection of the obstruction on examination.

4. By the membrane.

5. In many cases by the detection of the swollen tender ovaries; by the characteristic pain.

Prognosis.—1. If hygienic conditions can be had recourse to, favorable.

2. If the cause can be remedied, the symptoms will disappear. In fibrous tumors, pelvic inflammation, or severe displacement, unfavorable.

3. If the obstruction is amenable to treatment, favorable.

4. For entire cure, unfavorable or very tedious.

5. Unfavorable.

Treatment.—1. General neuralgia, often associated with "weakness" by nerve tonics, Indian hemp, bromide of ammonium, exercise, change of air; of chlorosis (see p. 166); gout and rheumatism, by warm clothing, Roman bath (*i.e.*, so-called Turkish bath), colchicum, guaiacum, &c.; avoidance of other causes.

2. According to cause (*vide in loco*).

3. By dilatation, incision, intra-uterine stem, tents (*vide causes in loco*, pp. 74, 117, 86).

4. Dilatation of the cervix and the application to the whole lining of the uterus of carbolic acid, nitric acid, or solid nitrate of silver.

5. Leeches to the cervix, anus, or perineum just before the period (p. 205), iodine or blisters to the inguinal regions, anodyne pessaries (p. 209), pregnancy.

9. DYSPAREUNIA.

Definition.—Painful coïtus.

Causes.—Areolar hyperplasia, imperfect rupture of the hymen, or hyperæsthesia of the carunculæ myrtiformes, constriction of the vagina, disparity between the organs in the sexes, cervicitis, vaginal tumors, vaginitis, vaginismus, ovaritis.

Symptoms.—Severe pain preventing the act, or rendering it agonizing.

Signs.—According to the various causes enumerated above.

Diagnosis.—The examining finger will usually detect the cause.

Prognosis.—Favorable in proportion as the cause is remediable.

Treatment.—Of areolar hyperplasia (*vide* p. 95); of imperfect rupture of the hymen, the ragged remains to be carefully and completely dissected off, and Sims' vaginal dilator used frequently (p. 143); of constriction of the vagina by the vaginal dilator; of cervicitis (*vide* p. 67); of vaginal tumors according to the case (*vide in loco*); of vaginitis (*vide* p. 129); of vaginismus (*vide* p. 142); of ovaritis (*vide* p. 33).

10. STERILITY.

Definition.—Barrenness.

Causes.—Absence of uterus or ovaries, occlusion of vagina, vaginismus, occlusion of cervical canal, polypi, anteflexion, pinhole os (?), ovaritis, double ovarian cyst, stricture of oviduct, endometritis, endocervicitis, areolar hyperplasia, membranous dysmenorrhea, hæmorrhage, growths at the os uteri, acid vaginal secretion, condition of the male.

Symptoms, Signs, Diagnosis and Prognosis. } According to the cause.

Treatment.—Of absence of uterus or ovaries, none; of occlusion of vagina (*vide* p. 141); of vaginismus (*vide* p. 142); of occlusion of cervical canal (*vide* p. 74); of polypi (*vide* p. 93); of anteflexion (*vide* p. 117); of ovaritis (*vide* p. 34); from double ovarian cyst and stricture of oviduct, none; of endometritis (*vide* p. 66); of endocervicitis (*vide* p. 68); of areolar hyperplasia (*vide* p. 97); of membranous dysmenorrhea (*vide* p. 172); of acid secretion alkaline injections; if impotency of the male, treat the husband.

11. HYSTERIA.*

Definition.—A disease of the nervous system (mind?) (rare in males); a perversion of nervous energy characterised by neuromimesis.

Causes.—Severe nervous or mental shock, celibacy, masturbation, sterility, luxury, the strumous diathesis, disappointed love.

Symptoms.—Legion. Depression of spirits, occasional "fits" of quasi-unconsciousness, with merged sobbing and laughter, during which the patient rarely injures herself as not unfrequently happens in other kinds of "fits"; apparently causeless pains, anomalous in their situation or rationally imitative of some supposed lesion or disease. There is scarcely a disease that has not been imitated in hysteria, sometimes with

* "Dysmenorrhea," by the author, p. 73.

an accuracy and persistence that baffles the most acute observer.

Signs.—Disordered menstruation ; incompatibility of symptoms with the absence of the necessary objective signs that should be present if the imitated malady were real.

Diagnosis.—At times extremely difficult. The practitioner should carefully search for the symptoms and signs that should be found were the simulated disease really present ; the absence of many, or a general incongruity or insequence of symptoms, should put him on his guard as to the case being one of hysteria.

Prognosis.—Unfavorable as a rule.

Treatment.—On no account should hysteria be made light of to the patient, as if it were a trifle or of no consequence. On the contrary, it should be characterised as a most serious and intractable malady, and the line of treatment when once determined on carried out rigorously and seriously with the view of its ultimate cure. If the disease can be traced to a distinct cause, that should first of all, if possible, be removed. In many cases healthy exercise, change of air and scene, rectification of the disordered menstruation, gentle purgations, may work a cure. In obstinate cases cold shower bath, galvanism, nerve tonics, valerian, assafœtida, iron, or sedatives, as large doses of bromide of potassium, chloral, inhalation of chloroform; Weir Mitchell's treatment ; pregnancy.

12. Inordinate Sexual Desire.

Definition.—Craving for sexual intercourse; nymphomania.

Causes.—Some brain diseases, hypertrophy (? effect) of clitoris or nymphæ, ovarian irritation, masturbation.

Prognosis.—Unfavorable.

Treatment.—Cold sitz bath, leeches to uterus, perineum, or inside of thighs; large doses of bromide of potassium, camphor, conium, tartarized antimony, ipecacuanha; blisters to clitoris and nymphæ; chloral, avoidance of alcohol and high living, out-door exercise, healthy occupation of the mind, sedative suppositories (p. 209); removal of nymphæ or clitoris, or both.

13. Loss of Sexual Desire.

Definition.—Coldness, dread of intercourse.

Causes.—Vaginismus, former inordinate coïtus, masturbation, congenital malformation or absence of clitoris or ovaries.

Prognosis.—Unfavorable.

Treatment.—Pregnancy, stimulant application to the vulva and clitoris, as equal parts of nitrate of amyl and glycerine, leeches to the uterus (p. 205), galvinism, galvanic stem; horse exercise or cycling, sea air and bathing; nerve tonics, iron, alcohol; abstention for a time from coïtus.

CHAPTER XI.

DISEASES CONNECTED WITH PREGNANCY.

NOTE.—In the following chapters, space compels the notice chiefly of local diseases and lesions.

1. INCONTINENCE OF URINE.

Definition.—Constant desire to micturate, or a continuous escape of urine, often called by the patient "irritability of the bladder."

Causes.—Anteversion of the pregnant uterus keeping up pressure on the bladder; anterior vaginal roof-stretching keeping the urethra more or less patent; overflow in cases of retention (*vide infra*).

Symptoms and Signs. } As above.

Prognosis.—Favorable as pregnancy advances.

Treatment. — Anteversion pessary; the supine decubitus, or with the foot of the couch elevated from six to ten inches. (Tilted bed, p. 208).

2. RETENTION OF URINE.

Definition.—Difficulty of micturition, or total retention.

Causes.—Pressure on the neck of the bladder from the forward position of the cervix in cases of retroversion or retroflexion of the pregnant uterus.

Symptoms.—Constitutional disturbance; pain referred to the neck of the bladder, vesical tenesmus, rectal tenesmus, urine dribbling away and ammoniacal.

Signs.—A fluctuating tumor in the hypogastrium which may be mistaken for an ovarian cyst. Vaginal examination reveals the cervix pressing forwards on to the neck of the bladder, and the enlarged fundus occupying the cavity of the pelvis.

Diagnosis.—From ovarian cyst by the use of the catheter.

Treatment.—Rest in tilted bed (*vide* p. 208). On the tilted bed the patient should lie quite flat, and in some cases, after a time, the uterus will right itself. The urine to be periodically drawn off; sedative suppositories (p. 209). If as the pregnancy advances the uterus does not right itself, the patient must be placed in the knee-shoulder position, and an attempt made to replace the uterus by steady pressure of the fundus *per vaginam* or *per rectum*; this procedure is not without the risk of bringing on abortion. Air-ball pessary. If these measures fail and the patient's life is endangered, induction of labor.

3. Extra-Uterine Fœtation.

Definition.—Growth of the ovum outside the uterus. It may be in the oviduct, or in the embrace of the fimbriated extremity of the oviduct; or so-called abdominal. In the latter case the ovum has probably

at some time been attached to some portion of the extremity of the oviduct, and, by growth or tubal abortion, has become dissociated from it.

Causes.—Impregnation of the ovum before it has reached the uterus, with arrest of its passage in some portion of the pre-uterine tract.

Symptoms.—Those of pregnancy, with pain on the side to which the ovum is attached.

Signs.—Abdominal swelling lateral. As pregnancy advances, child is felt in thin subjects too superficially. Occasional metrorrhagia. Vaginal examination reveals the uterus only slightly enlarged from the presence of the decidua. In tubal pregnancy a swelling is detected in one or other lateral cul-de-sac, unlike any other, viz., as a cyst containing a body floating in fluid. Bi-manual examination reveals such tumor more or less moveable; the uterus is felt to be moveable, and its cavity is found to be scarcely more than three inches long. Examination per rectum may make the diagnosis easier.

Diagnosis.—Often very difficult. From ovarian tumor by the history of pregnancy, though it must be borne in mind that an ovarian tumor may exist coïncident with uterine pregnancy; from fibro-cystic disease of the uterus by the uterus being moveable in the latter case by pressure on the abdominal tumor; by the history and duration of the swelling. Occasionally an ordinary pregnancy has been mistaken for an extra-uterine one, when the cervix is unusually long, and when, therefore, the uterine tumor has seemed to be separable from the cervix.

Prognosis.—Unfavorable.

Treatment.—If tubal pregnancy is detected early, the liquor amnii should be evacuated by an aspirator, or, which is far better, the oviduct and its contained ovum should be removed by cœliotomy. Also if the pregnancy is advanced, and the child is viable, as it is at all times important to save the child, if it be not at obvious risk to the mother, it should be removed by abdominal section. In this operation it should be borne in mind that the placenta should not be withdrawn, because of the severe and often fatal hæmorrhage that follows the attempt, owing to the containing walls of the sac not being able to contract on the removal of the placenta. The edge of the sac should be stitched to an opening left in the abdominal wound, and a strip of iodoform gauze left in as a drain. If left to nature, an extra-uterine fœtus may be retained for years without producing much inconvenience, and after a certain time the mass may break up and the disorganised fœtus be discharged piecemeal *per rectum* or *per vaginam.*

4. Mole Pregnancy.

Definition.—A spoilt egg. The life of the ovum is destroyed and subsequently expelled as a misshapen mass; or the fœtus may die from hydatidiform degeneration of the chorion.

Causes.—Unknown. Syphilis (?)

Symptoms.—Those of pregnancy, and afterwards some of the signs of death of the fœtus; the abdomen ceases to enlarge, and the mammæ become flaccid; discharge of water with small cyst-like bodies.

Signs.—Absence of fœtal circulation, softness of the uterine tumor, bi-manual examination revealing want of firmness of the uterus; on passing the finger into the os uteri, a soft placenta-like mass is felt.

Diagnosis.—Not difficult if attention is paid to the symptoms and signs.

Prognosis.—Favorable.

Treatment.—Dilate the os uteri and empty the uterus of its contents; ergot to insure proper contraction.

5. Deciduoma Malignum.

Definition.—The pathology, and, therefore, the separate existence of this disease is still under discussion, nevertheless, investigation up to the present seems to tend to its recognition as a malignant disease following the development, or extrusion of a hydatidiform mole, and having its origin in the syncytium (the uterine epithelial layer of the chorion), and spreading to the subjacent tissue.

Causes.—Hydatidiform degeneration of the chorion.

Symptoms.—Intermittent hæmorrhage after labor or abortion, followed by fragments of necrosed tissue, general cachexia.

Signs.—Os uteri patent, interior surface of uterus somewhat ragged and soft, uterine walls dangerously friable, body of uterus enlarged and boggy, metastasis in vagina and lung.

Diagnosis.—From ordinary carcinoma by history and comparative softness of uterus. Examination microscopically of portions thrown off.

Prognosis.—Very unfavorable.

Treatment.—Hysterectomy.

6. Varicose Veins of the Labia and Vagina.

Definition.—The veins of the vulva become enormously enlarged and tortuous, often only on one side, and occasionally the veins of the vagina are similarly affected.

Causes.—Pelvic pressure hindering the return of the blood.

Symptoms.—Great sense of fulness and discomfort of the vulva, pain of a bursting character, and tenderness on sitting.

Signs.—The labia are seen of a dark purple color, and swollen, covered with knotty veins. If not discovered before labor, their rupture may give rise to violent or even fatal hæmorrhage.

Diagnosis.—From signs as above.

Prognosis.—Difficult of cure.

Treatment.—Dorsal decubitus with the foot of the bed raised ten inches; cold applications with pressure on the vulva; sedative lotions. If rupture takes place, pressure on the wound; compress saturated with persulphate or perchloride of iron or tincture of matico.

7. Frequent Abortion.

Definition.—Ovum expelled prematurely, often at the same period of utero-gestation.

Causes.—Syphilis primary or inherited; some acute diseases; ovarian tumors; fibrous tumors or fibro-cystic tumors of the uterus; flexions; constitutional weakness.

Symptoms.—Albuminuria (?); rigors, fever, followed by labor; or hæmorrhage followed by expulsion of the ovum without constitutional symptoms.

Signs.—Gradual weakening of the fœtal circulation, labor pains, discharge of liquor amnii, more usually hæmorrhage.

Diagnosis.—Cause sometimes difficult to trace.

Prognosis.—Unfavorable often to cure.

Treatment.—If due to syphilis, mercury, iodide of potassium, chlorate of potash, during the whole of pregnancy, and in the intervals during successive pregnancies. If albuminuria is a symptom, Roman bath, cupping over loins, digitalis, iron and quinine, calcium phosphate. In flexions, remedy the malposition. If through weakness, either rest, or tonics with gentle exercise. In cases of ovarian tumor, the question arises as to the advisability of ovariotomy during pregnancy or waiting. The experience of most now is in favor of the operation. Each case must be decided on its own merits. In cases of fibrous tumor, rest; further treatment to be deferred until after delivery. In some cases of fibrous tumor, or where a solid ovarian tumor is situated low in the pelvis, the Cæsarian section may be necessary, or Porro's operation.

8. Excessive Vomiting.

The natural vomiting of pregnancy does not usually extend beyond the first three or four months. Occasionally it may persist during the whole period of pregnancy, and at times is so violent, frequent, and exhausting as to endanger the patient's life.

Treatment.—Rest in bed ; light nourishment given in small quantities, at frequent intervals. Vini Ipecac. ℥ss or ℥j every half hour in ʒj of water ; Tinct. Iodi, ℥iij, cerii oxalatis gr. 5, or ingluvin gr. 10. If these fail champagne. Dilatation of the os uteri by carefully sweeping the finger round it so as slightly to separate the membranes at the edge, but not so extensively as to bring on labor.

CHAPTER XII.

DISEASES CONNECTED WITH PARTURITION.

1. INERTIA UTERI.

Definition.—That condition of the parturient uterus where it strikes work, as it were, through weariness or shock.

Causes.—Labor prolonged owing to constitutional weakness, or following frequent abortions; from impaction of the head, from cross presentation, from nervous or mental depression.

Symptoms.—The pains which have hitherto been regular and effective become shorter in duration at longer intervals; the head makes no advance; the patient becomes low, restless, and moans, with a sunk expression, and apprehension of danger.

Signs.—Pulse small, frequent, and weak, and the pains seem gradually ceasing.

Diagnosis. — If uncomplicated with accidental hæmorrhage, not difficult.

Prognosis.—Often unfavorable.

Treatment.—Food, stimulants, ergot and quinine (p. 216, 16, *d*); deliver with forceps.

2. Rigidity of the Os Uteri.

Definition.—A condition of the os uteri in parturition where dilatation is very slow or seems arrested.

Causes.—Early escape of the liquor amnii ; nervousness ; induration from areolar hyperplasia ; abnormal toughness of the lower segment of the cervix, elongation of the cervix, cancer of the cervix.

Symptoms.—Pains severe and painful ; pain referred to the sacrum ; patient hot, restless, and intolerant of the pain.

Signs.—Pulse frequent and hard, or full and bounding ; os felt as a hard ring, each pain making scarcely any impression on it. In cancer, the diseased cervix felt as a hard, irregular, nodulated ring.

Diagnosis.—By the touch not difficult to differentiate.

Prognosis.—Varies with the case.

Treatment.—Chloroform ; chloral ; nauseating doses of tartarized antimony ; the application to the cervix of a small portion of belladonna ointment ; hot vaginal injections or a hot hip bath ; warm enemata. Should these fail, dilatation by Barnes' bags, and if necessary incision of the os ; forceps ; if there is extensive and hard cancer of the cervix, Cæsarian section.

3. Rigidity of the Perineum.

Definition.—A condition of the perineum where its dilatation is very slow or apparently arrested.

Causes.—Old cicatrices.

Symptoms.—Expulsive pains severe and painful, patient restless and anxious.

Signs.—Centre of perineum bulges as if the head would come through it (which it very occasionally does); its anterior edge thin, hard, and unyielding.

Diagnosis.—Easy.

Prognosis.—Not unfavorable.

Treatment.—Hot bath, ointment (of belladonna?). If the perineum threatens to rupture, it should be divided on either side of the central line with scissors.

4. HÆMORRHAGE.

(*a*) *Accidental.*

Definition.—Hæmorrhage, the result of partial detachment of the placenta from its normal situation, the source of bleeding being from the uterine sinuses.

Causes.—Violent emotion, blows, jerks, straining, or accidental dislodgement during the progress of labor.

Symptoms.—Fainting, collapse, dull pain over the fundus uteri, partial cessation of pains, hæmorrhage, especially between the pains.

Signs.—A doughy feel of that portion of the uterus where the placenta is detached, specially marked if the hæmorrhage is concealed; pulse small and feeble.

Diagnosis.—From inertia uteri by the pain and the bleeding, and by the pains, if present, being still effectual.

Prognosis.—Unfavorable if concealed, if it have existed for some time before the hæmorrhage becomes manifest, leading to the formation of a clot on the walls of the uterus which becomes adherent and

difficult to remove, eventually becoming a source of septic mischief; favorable if discovered and treated early.

Treatment.—Rupture the membranes and hasten delivery; wash out the uterus daily with Condy and water, or iodine and water (p. 210, 8, *b*), or carbolic acid 2 p.c.

(*b*) *Unavoidable.*

Definition.—Hæmorrhage, the result of partial detachment of the placenta in the progress of labor, where the placenta is situate partially or wholly over the os uteri.

Causes.—The abnormal situation of the placenta.

Symptoms.—Hæmorrhage at the sixth, seventh, eighth, or ninth month, or at each of these periods successively.

Signs.—The hæmorrhage is nearly continuous and is augmented during the pains; on examination the placenta is felt to be presenting.

Prognosis.—Often unfavorable.

Treatment.—If the os uteri is not sufficiently open for delivery, plug the vagina carefully through a speculum for several hours; give nourishment. Some practitioners object to plugging in these cases, deeming it wiser to proceed to delivery at once; but where the os uteri is still undilated and rigid, plugging, if properly carried out, is effective in arresting the hæmorrhage and inducing dilatation. On removing the plug, if the os uteri is opening, dilate with the hand and deliver by turning. The best method of plugging the vagina is by means of a contrivance

called the kite-tail plug. Plugs of cotton-wool are tied at intervals of a few inches, say six or eight on one piece of string; they are then packed tightly into the vagina one by one through the speculum. The advantage of this method is the facility of removal, for on pulling the string the plugs come out one by one in the inverse order of their introduction.

5. PUERPERAL CONVULSIONS.

Definition.—Uremic convulsions (spasm, eclampsia) occurring during pregnancy, more often during parturition, slight or violent, proceeding to coma and death.

Causes.—Albuminuria, slight from pressure of growing uterus, or serious from Bright's disease; cholæmia; imperfect elimination of carbonic acid; poisons medicinal or septic, shock, undigested food.

Symptoms. — Precurrent—irritability, headache, dizziness, noises in the ears, hallucinations, stupor, dropsy.

Signs.—Epileptiform fit. Rolling of the eyeballs, distortion of face and head, twitching of limbs, grinding of the teeth with protrusion of the tongue, clonic spasm of voluntary muscles, and occasionally of respiratory muscles leading to lividity; urine and fæces occasionally pass, unconsciousness during the fit; fits last one to four or five minutes; recur at intervals of minutes or hours, notably at the onset of a labor pain.

Diagnosis.—From the symptoms and signs; of the cause not always easy unless albuminuria exists.

Prognosis.—Unfavorable, or, at all events, serious.

Treatment.—(1) During pregnancy, purgatives to produce watery stools ; diuretics ; potassii bicarb. with digitalis ; dry cupping ; hot baths, or hot wet pack ; if serious, induction of labor. (2) During labor, croton oil, gtt. j ; calomel ; during fit prevent self-injury ; if plethoric, venesection ; full doses of chloral and bromide of potassium, or the same *per rectum* if the patient cannot swallow ; chloroform ; hasten delivery. If fits not uræmic, seek cause and treat, as distended bladder or rectum.

CHAPTER XIII.

DISEASES CONSEQUENT ON PARTURITION.

1. PUERPERAL FEVER.

Definition.—Idiopathic very rare. A continued fever, contagious (or infectious?), affecting puerperal women at any time within two weeks after delivery, or even commencing before delivery.

Causes.—Direct contagion, or from infected air; from the aggregation of puerperal cases. Other specific fevers affecting puerperal women are not to be designated puerperal fever, even though they may be epidemic in puerperal cases.

Symptoms.—Severe rigor, general constitutional disturbance, loss of appetite and sleep, diarrhea, arrest of lochia and secretion of milk, and of the excretion of urine.

Signs.—High temperature, pulse frequent, full, or small and incompressible, distressed countenance, tongue furred, purplish flushes, delirium.

Diagnosis.—From puerperal septicæmia by absence of septic cause, by absence of fœtid lochia, by absence of early tympanites or abdominal tenderness.

Prognosis.—Unfavorable.

Treatment. — In sthenic cases free venesection, chloral, antifebrine (gr. 5), salines; in asthenic cases, large doses of quinine; alcohol (p. 218, 17, *f*), opium, veratrum viride (p. 218, 17, *e*); tinct. aconite, ℥ij, every hour; boric acid (gr. 10).

2. Puerperal Septicæmia.

Definition.—A disease similar to surgical fever affecting puerperal women. Highly contagious.

Causes.—Infection from without by hands of practitioner attending similar cases, or cases of erysipelas, or pyæmia, or post-mortems, or from any other septic influence; infection from within from fœtid lochia, discharge from ruptured perineum, or fœtid lochia passing over the perineal wound; incomplete contraction of the uterus exposing the placental site to contagium.

Symptoms.—Severe rigors, distressed and pinched expression, countenance sunken and sallow, profuse perspiration, often arrest of milk and lochia, delirium. In some bad cases the patient expresses herself as feeling quite well, and has no pain nor tenderness.

Signs.—High temperature and pulse often running, tongue at first furred and moist, then dry, red at edges, brown at sides with white in middle, or white at sides, and with a brown central line; lochia, if present, fœtid; purple patches on face, chest, and thighs; bowels constipated, followed by diarrhea, tympanites, loss of appetite and sleep.

Diagnosis.—From pure puerperal fever by history of convection of poison, by offensiveness of lochia.

Prognosis.—Usually unfavorable.

Treatment.—Intra-uterine injection of Condy and water or carbolic acid and water (1 in 80) every three hours, calomel (gr. 5-8) with opium; nourishment; quinine in large doses (gr. 5-10), salicylate of soda, (gr. 10-15); hypodermic injection of antistreptococcus serum. Lower the temperature by the ice-cap (p. 217).

3. Puerperal Metritis.

Definition.—Inflammation of the uterus in the puerperal state.

Causes.—Chill, septicæmia, mental shock, unskilful use of instruments, roughness in the operation of turning, difficult labor.

Symptoms.—Rigor, hypogastric pain, pinched countenance, arrest of lochia.

Signs.—Uterus swollen, very tender; pulse frequent, full, and incompressible; temperature high.

Diagnosis.—From septicæmia by prominence of uterine pain and tenderness; from peritonitis by localisation of pain and mobility of uterus, and by absence of primary tympanites; from cellulitis by absence of peri-uterine deposit.

Prognosis.—Cautious.

Treatment.—Leeches (1 or 2 doz.) to the hypogastrium and uterus (p. 205), calomel (gr. 8-10), opium (gr. 2); continuous hot poultices to the hypogastrium; hot injections; quinine in large doses; spare diet.

4. Puerperal Peritonitis.

Definition.—Inflammation of the pelvic perito-

neum, spreading often to the intestinal peritoneum, and occasionally to the pleura.

Causes.—Chill, septicæmia, unskilled operations. constipation, purgatives, incautious getting up.

Symptoms.—A severe rigor, countenance very anxious and pinched, abdominal pain, loss of appetite and sleep, arrest of lochia.

Signs.—High temperature, pulse frequent, small, and often hard; great hypogastric tenderness, with tympanites; tongue dry, red, and brown in middle.

Diagnosis.—From metritis by pain being more widely spread, and tenderness not limited to uterus; from cellulitis by absence of frequent rigors.

Prognosis.—Unfavorable.

Treatment.—Leeches to abdomen when pulse will bear them, calomel and opium in large doses; the opium should be pushed to narcotism; ice-cap (p. 217); hot injections, continuous poultices to abdomen; quinine in large doses, veratrum viride (p. 218), antifebrine (gr. 5); nourishment in small quantities, and often; if strength fails, alcohol (p. 218).

5. Puerperal Pelvic Cellulitis.

Definition.—Peri-uterine inflammation of the connective tissue, accompanied by effusion.

Causes.—Similar to those of metritis and septicæmia.

Symptoms.—Severe rigors, which may be repeated at intervals for several days; pain referred to one or both inguinal regions, countenance anxious, arrest of lochia.

Signs.—Tenderness on pressure over one or both

inguinal regions; temperature and pulse high, the latter fuller than in septicæmia; examination *per vaginam* reveals a mass by the bi-manual touch on one side of or surrounding the uterus, which is more or less fixed; after a time, suppuration may take place in the effused mass, and a pelvic abscess result, which may point to the abdomen, or more usually burst *per rectum*, or *per vaginam*.

Diagnosis.—From the other puerperal inflammations by the frequency of the rigors, and by the vaginal examination. The uterus is more rapidly fixed in peritonitis.

Prognosis. — Not so unfavorable as the other maladies. In many cases, when puerperal mischief arises, should cellulitis supervene, it is a favorable sign, the mischief apparently becoming less serious in proportion as it becomes distinctly localized.

Treatment.—Perfect rest, nourishing diet, continuous poultices, leeches to the abdomen, opium, perchloride of mercury; afterwards quinine, with opium or henbane and iodide of potassium. When an abscess is formed evacuate the pus by the aspirator, or free incision and drain; blister over the abdominal swelling for the relief of pain.

6. Rupture of the Perineum.

Definition.—A tear extending from the posterior fourchette backwards a variable distance; in some cases through the sphincter ani, or occasionally to some extent up the rectum.

Causes.—Rigid perineum; too rapid delivery, not

allowing the perineum sufficient time to become properly dilated ; use of instruments.

Symptoms.—Sore feeling at the seat of injury.

Signs.—A manifest rent through the thickness of the perineum ; small rents in the vaginal mucous membrane are not unfrequent, and beyond cleanliness by constant injections, need no special care.

Diagnosis.—Easy.

Prognosis.—If seen to at once, favorable ; if neglected, mischief may arise from absorption through the exposed wound.

Treatment.—(1) Prophylactic. Support the perineum gently during the passage of the head, and if the uterine action is too strong, gently retard it by slight pressure, so as to give the perineum time to stretch. The application of lard to the perineum is often of service. If rupture threatens, divide the perineum freely on each side of the central line with scissors. (2) Cure. Within six hours postpartum, pass two or three sutures of silver-wire through the whole thickness of the ruptured tissue. If this treatment is omitted, the patient recovers with a wide gap which may either result in a mere lengthening of the vulval orifice, or may throw both passages into one. When the patient's health is quite established, an attempt must be made to close the fissure. The opposite sides of the whole thickness of the perineum are to be vivified. One deep suture is then to be passed, in cases where the sphincter ani is involved, from the anterior edge of one side of the torn sphincter through the recto-vaginal septum, and be brought out at the opposite end of the sphincter. Where the tear does

not extend into the rectum, the edges, after being vivified, are to be brought together by a sufficient number of deep silver sutures, and, if necessary, by some superficial sutures; or, a triangular space being vivified, the sutures—Aveling's shot and coil are the best—should be passed on the three separate sides--viz., rectal, vaginal, and perineal. Adhesion should be favored by a nourishing fluid diet, the bowels should be kept freely open daily by small doses of castor oil, as, if the bowels are locked up for several days as some recommend, there is great danger of the hardened fæces tearing down the fresh adhesion. In some cases it may be necessary to lessen the tension of the sphincter ani by dividing that muscle bi-laterally, or to lessen the tension of the skin by two superficial incisions through the skin on either side of but not nearer the perineal wound than one and a half or two inches. The best operation, however, is the flap-splitting operation of Lawson Tait, which is done without any loss of tissue and produces very good results, restoring, in fact, the perineal body.

7. Rupture of the Uterus.

Definition.—A tear through the substance of the uterus, either through the body or neck.

Causes.—Degeneration of the contractile tissue; severe labor with obstruction; injury with instruments or in the operation of turning.

Symptoms.—A sudden severe pain causing the woman to cry out; subsidence of labor pains; alteration of the shape of the abdominal tumor, from the child or part of it passing through the rent; hæmorrhage; collapse with cold perspiration.

Signs.—Small rapid pulse; recession of the presenting part; child's head or some other part felt too easily through the abdominal parietes.

Diagnosis.—From symptoms and signs as above.

Prognosis.—Unfavorable.

Treatment.—If the child cannot be delivered *per vias naturales*, immediate cœliotomy in order to save the child, finishing up with removal of the uterus (Porro's operation). But if only part of the child has escaped and delivery can be effected *per vias naturales*, then plug the uterus up to and partly through the rent with a strip of iodoform gauze, when, with care, a recovery may be hoped for.

8. Rupture of the Vagina.

Definition.—A tear through the vaginal wall into the cavity of the peritoneum. It usually takes place at one side or other of the cervix uteri, near its junction with the vagina.

Causes.—Spontaneous through a severe pain after considerable pressure of the head, or owing to the act of turning, or through unskilful use of instruments.

Symptoms.—Severe pain, collapse, hæmorrhage.

Signs.—The rent can be felt on examination, and not unfrequently the intestines protrude through the rupture.

Diagnosis.—On examination the finger can be passed through the rent and the intestines felt, and also the peritoneal surface of the uterus, and the brim of the pelvis.

Prognosis.—Unfavorable.

Treatment.—Keep the patient for at least forty-eight hours on that side on which the rent is, so that the weight of the uterus may keep the sides of the wound in apposition ; full doses of opium to narcotism.

9. Phlegmasia Dolens.

Definition.—Peripheral venous thrombosis ; white leg ; the formation of thrombi in the veins of the lower extremities.

Causes.—Puerperal blood dyscrasia, resulting in the formation of clots in the veins with probable accompanying obstruction of the lymphatics ; or rarely a result of embolism, a clot being carried into the circulation until it blocks some vessel.

Symptoms.—Severe pain in some part of the leg especially in the course of the chief venous trunks. It may begin from above or below. On the limb swelling, the pain usually abates. Restlessness, rigor.

Signs.—Pulse rapid, temperature high, tongue coated, bowels constipated. The leg is greatly swollen, more usually the thigh, or it may affect the leg or the whole limb. The veins are felt to be hard and painful, and their course marked with a red line. The swelling is hard and tense, does not readily pit, and is whitish.

Diagnosis.—From œdema by the severity of the pain, by the absence, or nearly so, of pitting, by the feel of the blocked veins.

Prognosis.—Not unfavorable ; recovery takes place slowly, the constitutional disturbance abates, the swelling diminishes, and absorption commences. Suppuration may take place or an embolus may

be thrown off, and pulmonary or cerebral obstruction happening, sudden death may result.

Treatment.—Leeches very rarely, and only in cases where the patient is plethoric and there is much tenderness and redness along the veins; wrap the entire limb in continuous linseed meal poultices. Fomentations with opium or belladonna; light, nutritious diet; chlorate of potash, hydrochlorate of quinine, perchloride of iron, Dover's powder; hypodermic injections of morphia. Avoid friction of the limb, for fear of dislodging an embolus.

10. Embolism.

Definition.—The blocking of some artery by a clot thrown off from a thrombus or from vegetations on the cardiac valves.

Causes.—Puerperal blood dyscrasia, and thrombosis.

Symptoms.—Of pulmonary embolism, sudden and most distressing dyspnea, face pale or livid; of cerebral embolism, hemiplegia or paraplegia. Occasionally gangrene may supervene in the lower, or in both lower and upper extremities.

Signs.—Pulse threadlike, respirations hurried and shallow, murmur over the pulmonary artery.

Diagnosis.—From symptoms and signs as above.

Prognosis.—Unfavorable.

Treatment.—Alcohol, ammonia carbonate administered in milk and pushed to the limit of tolerance, absolute rest, dry cupping to the chest, fluid food.

11. Post-Partum Hæmorrhage.

(*a*) *During the Third Stage.*

Definition.—Hæmorrhage, the result of partial separation of the placenta with insufficient contraction of the uterus.

Causes.—Inefficient contractile power of the uterus to throw off the placenta rapidly, or morbid adhesion of part of the placenta ; the source of the hæmorrhage being the uterine sinuses.

Symptoms.—Fainting, restlessness, collapse.

Signs.—Free or severe continuous hæmorrhage.

Treatment.—Ergot (extr. liq. ʒss--ʒj). Attempt removal of the placenta by expression ; or, if that fail, remove it manually.

(*b*) *After the Third Stage.*

Definition.—True post-partum hæmorrhage.

Causes.—Tedious labor, too rapid labor, inefficient uterine contraction, or relaxation of that organ after contraction.

Symptoms.—Fainting, collapse.

Signs.—Small, feeble, rapid pulse ; continuous and alarming hæmorrhage.

Diagnosis.—From rupture of varicose veins of vulva by careful examination.

Treatment.—Grasp and knead the fundus uteri ; injection of cold water, or hot water (120F.) ; pass pieces of ice into the vagina, or, better still, into the uterus ; ergot ; galvanism. If all other means fail, swab out the uterus with a solution of the persulphate

of iron or of the perchloride (1 of strong liquor to 4 of water). This, however, is not free from risk, as the iron may be absorbed and produce clotting in the sinuses and be followed by septic mischief.

(*c*) *Secondary Post-partum Hæmorrhage.*

Definition.—Hæmorrhage coming on from the third to the fourteenth day post partum.

Causes.—Irregular contraction of the uterus; the retention of a portion of adherent placenta preventing firm contraction of the uterus in its immediate neighbourhood; or such retained portion of placenta may, by pressure, cause ulceration on the inner surface of the uterus, and lay bare some small uterine arteries.

Symptoms.—Restlessness, often with symptoms of septic mischief.

Signs.—Frequent pulse, pain over the uterus, hæmorrhage continuous and bright, the source being the open ends of the uterine arteries.

Diagnosis.—From symptoms and signs as above.

Prognosis.—Often unfavorable.

Treatment.—If necessary, open the os uteri with dilating bags, carefully explore the interior of the uterus, and remove the portion of placenta. Intra-uterine injections of iodine (p. 212, 9, *c*), tincture of matico, glycerine and carbolic acid, equal parts; solid nitrate of silver carried to the fundus uteri, or swab out the uterus with solution of perchloride of iron as above (p. 201).

(*d*) *Transfusion.*

After severe hæmorrhage when the patient's life is threatened, it may be necessary to supplement the loss of blood. This may be done either by the transfusion (*a*) of blood from arm to arm, or (*b*) of defibrinated blood. Experience has, however, established the fact that if a sufficient quantity of a warm saline solution (℥j of common salt to the pint) be introduced into the circulation, it will equally well save life, and it is, moreover, readily done, and the material is more quickly procured than blood. When the solution is prepared, it may be injected into a vein, or into the rectum, or into the sub-mammary connective tissue.

12. Puerperal Mania.

Definition.—Mania arising after labor, probably not specially connected with the puerperal state.

Causes.—(?) Puerperal blood dyscrasia ; mental shock ; hereditary tendency wherein the lowered vitality of the puerperal condition is only a proximate cause.

Symptoms.—May come on suddenly or gradually, usually after the milk supply has been established. Patient begins to get careless of her infant, and dislikes to nurse it ; refuses her food ; incoherent rambling, lucid intervals rare, impatient of restraint in bed, disregard of the presence of friends, or manifests actual dislike. In severe cases, delusions. Constipation, foul tongue.

Prognosis.—If hereditary taint strong, unfavorable, otherwise not so.

Treatment.—Patient should never be left alone; in many cases has to be fed artificially; usually has to wean the child; aperients. If the symptoms persist for some weeks, the patient should be put under proper restraint and treatment, as affording the best chance of recovery.

APPENDIX OF REMEDIES.

1. Leeches to the Cervix Uteri.

These should be applied either by a medical man or by a nurse specially trained for the purpose. The patient should be placed in Sims', or the semi-prone position (p. 22), and a full-sized Fergusson's speculum passed. The cervix uteri should then be carefully wiped clean, with a "mop" of absorbent cotton-wool on a sponge-holder, from all discharge. If the discharge is very tenacious and difficult of removal, the mop should be first dipped in glycerine or white of egg, and the cervix again wiped dry with cotton-wool. Each leech (and three will generally be found sufficient to apply at a time) should then be seized lightly just behind its head with a pair of leeching forceps and held to the lower (left) margin of the cervix until it has bitten, and so on with the others. The leeches should on no account be turned adrift into the speculum, as otherwise one might find its way into the uterus and give rise to severe pain. If the operator fear such an accident, it is better to plug the os uteri with a small portion of cotton-wool.

2. Puncturing the Cervix.

In cases where the application of leeches is unadvisable, or, from its tediousness, to be avoided, free scarification or

puncturing of the cervix uteri gives as good a result. A lancet-shaped knife should be used, and several deep stabs should be made spoke-wise into the lips of the cervix. If the bleeding is not deemed sufficient, inasmuch as the cuts tend to close, they should be reopened the next day with the point of a flat sound, when the cuts will probably bleed more than they did when first made.

3. Graduated Sounds.

For the purpose of rapid dilatation of the uterine canal previous to curetting, and where it is not necessary to proceed to the larger dilatation by means of Hegar's dilators, a set of graduated metal sounds should be employed, running from No. 5 to No. 15 or 16 (catheter size). The uterine portion should be straight and only the points slightly conical. It is well to have a small nodule at the inner aspect of the

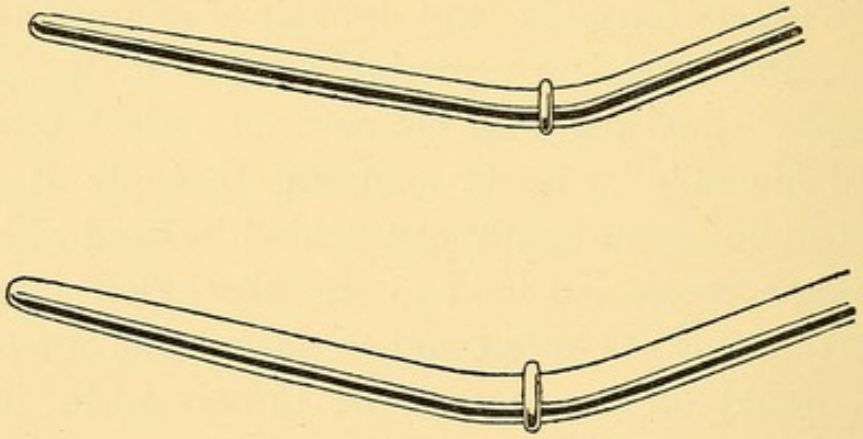


Fig. 18.

angle, or a raised ring, to mark the normal length of the uterine cavity.

4. Curetting.

This minor operation is of the greatest use in many cases, as endometritis, after the acute symptoms have subsided,

in order to remove the proliferated mucous membrane, or thickened product of the inflammation; to remove shreds for examination in cases of suspected malignancy, to renovate the uterine mucosa in cases of membranous dysmenorrhea, and for the dislodgment of small intra-uterine polypi. Some patients can bear it without an anæsthetic, but it is better to employ one. The uterine canal should be rapidly dilated with graduated uterine sounds to No. 13 or 15, and then, using aseptic precautions, the whole cavity should be scraped with a spoon or loop curette. But, inasmuch as it is difficult and tedious to do this so as to ensure the complete denudation of the uterine cavity, it is better to use the dredge-curette —introduced by Dr. Robert Bell and improved by others,— as this instrument not only sweeps round the whole cavity of the uterus, but, as a dredge, brings away with it, entangled in its wires, the removed *débris*.

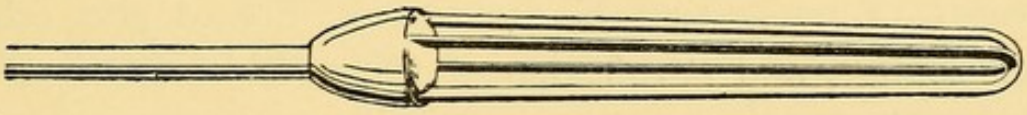


Fig. 19.

5. Poulticing the Cervix.

In some cases of cervicitis great benefit may be obtained by poulticing the cervix uteri. A large speculum should be used if possible; the poultice of linseed meal, as hot as possible, should be quickly inserted into a small bag of muslin, which should be at once closed with a few stitches and the poultice passed up the speculum, and held in close apposition to the cervix while the speculum is withdrawn. This proceeding often affords great relief.

6. The Tilted Bed.

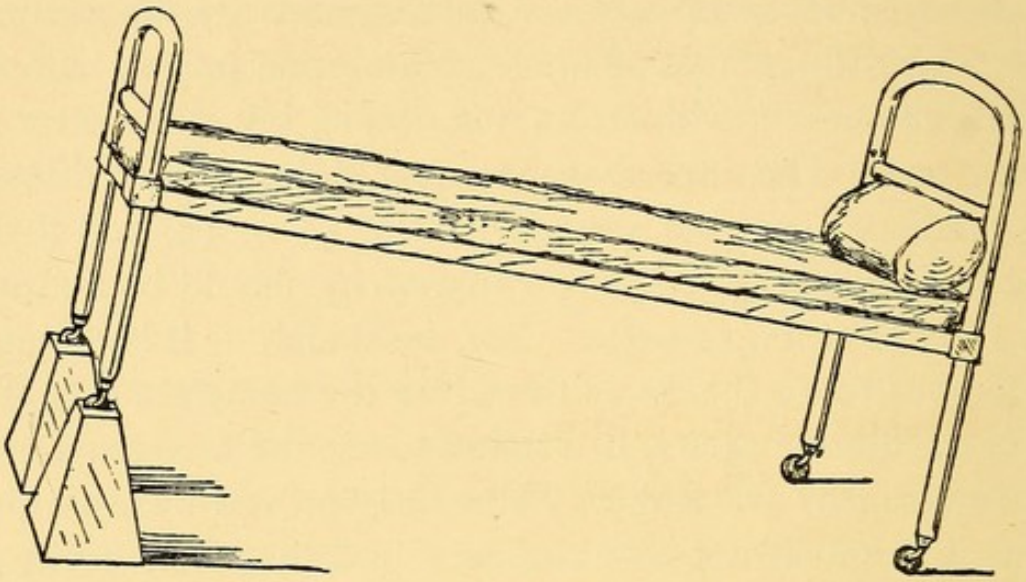


Fig. 20.

The Tilted Bed is a device that affords considerable relief in cases of congestion of the ovaries, fibroid and other pelvic tumors, and retroflexion of the gravid uterus. It is a far better plan than putting extra pillows or mattrasses at the end of the bed, for the tilted bed gives a uniform backward slope without any risk of the body shifting from the declined position.

7. Pessaries.

Massa pro pessis.

Gelatinæ . . . . partem unam
Glycerini . . . . partes quatuor
Modo subscripto misce.

Gelatinæ aquam infunde et statim defunde, tum sic humida quasdam per horas stet; deinde ei adde glycerinum et in balneo aquæ caleface, donec massa liquetur.

(A). Sedative and Alterative Pessaries.

(*a*) Pessus Morphinæ.

Morphinæ Acetatis . . .	gr. $\frac{1}{3}$–$\frac{1}{2}$
Massæ	gr. 24. M.

(*b*) Pessus Atropiæ et Morphinæ.

Atropiæ Sulphatis	gr. $\frac{1}{20}$
Morphinæ Acetatis . . .	gr. $\frac{1}{2}$
Massæ	gr. 24. M.

(*c*) Pessus Belladonnæ.

Extracti Belladonnæ viridis .	gr. 4
Massæ	gr. 20. M.

(*d*) Pessus Conii.

Extracti Conii (Ph. 1885) . .	gr. 10
Massæ	gr. 20. M.

(*e*) Pessus Coninæ.

Coninæ	♏ ss.–j.
Massæ	gr. 20. M.

(*f*) Pessus Potassii Bromidi et Belladonnæ.

Potassii Bromidi	gr. 10
Extracti Belladonnæ viridis .	gr. 2
Theobromæ Olei	gr. 20. M.

(*g*) Pessus Hydrargyri.

Ung. Hydrargyri	gr. 5
Stearine	gr. 10. M.

(*h*) Pessus Ergotæ.

Extracti Ergotæ	℈j
Extracti Belladonnæ viridis .	gr. 2
Massæ	ʒjss.
M. et divide in pessus . . .	vj

(*i*) **Pessus Iodoformi.**

Iodoformi	gr. 2	
Massæ	gr. 20.	M.

(*j*) **Pessus Ichthyol.**

Zinci Sulpho-Ichthyolatis vel		
Ichthyol	gr. 10	
Massæ	gr. 15.	M.

(B). Astringent Pessaries.

(*a*) **Pessus Acidi Tannici.**

Acidi Tannici	gr. 20	
Massæ	gr. 20.	M.

(*b*) **Pessus Plumbi cum Iodo.**

Plumbi Acetatis	gr. 6	
Iodi	gr. 1	
Massæ	gr. 20.	M.

8. Injections (Vaginal).

(*a*) **Injectum Acidi Carbolici.**

Acidi Carbolici	oz. $\frac{1}{4}$–$\frac{1}{2}$	
Aquæ	Oj.	M.

(*b*) **Injectum Iodi.**

Tincturæ Iodi	℥iv.	
Aquæ	Oj.	M.

(*c*) **Injectum Alkalinum.**

Liquoris Potassæ	℥ij	
Aquæ	Oj.	M.

(*d*) **Injectum Aluminis.**

Aluminis	gr. 120	
Aquæ	Oj.	M.

(*e*) Injectum Aluminis et Zinci.

Aluminis	gr. 120
Zinci Sulphatis	gr. 40
Aquæ	Oj. M.

(*f*) Injectum Zinci.

Zinci Sulphatis	gr. 60
Aquæ	Oj. M.

(*g*) Injectum Plumbi.

Liq. Plumbi Subacetatis Fortis	ʒj
Glycerini	ʒvij
Aquæ	Oj. M.

(*h*) Injectum Zinci Sulpho-Carbolatis.

Zinci Sulpho-Carbolatis . .	gr. 100
Aquæ	Oj. M.

(*i*) Injectum Acidi Tannici.

Acidi Tannici	gr. 240
Aquæ	Oj. M.

(*k*) Injectum Acidi Hydrocyanici.

Acidi Hydrocyanici diluti . .	ʒij
Aquæ	Oj. M.

(*l*) Injectum Belladonnæ.

Tincturæ Belladonnæ . . .	♏ xx–xxx
Aquæ	Oj. M.

(*m*) Injectum Tabaci.

Tabaci	gr. 120
Aquæ ferventis.	Oj. M.

9. Injections (Uterine).

(*a*) Injectum Acidi Carbolici.

Acidi Carbolici,	
Glycerini	ana ʒj. M.

(*b*) **The above with Belladonna.**

Injecti Acidi Carbolici . . . ℥ij
Tincturæ Belladonnæ . . . ♏ x–xv. M.

(*c*) **Injectum Iodi.**

Tincturæ Iodi . . . . . ℥ss
Aquæ vel Glycerini . . . ℥jss. M.

10. Applications for the Cervix Uteri.

(*a*) **Strong Carbolic Acid.**

Acidi Carbolici . . . partes ix
Aquæ . . . . . partem j. M.

(*b*) **Chromic Acid.**

Acidi Chromici . . . . . gr. 120
Aquæ . . . . . ℥j. M.

(*c*) **Iodine.**

Liquor Iodi fortis.

(*d*) **Chloride of Zinc Wool.**

Cotton-wool wrung out of a saturated solution of Chloride of Zinc and applied damp. The vagina must be protected with plugs soaked in a solution of Soda bicarbonate.

11. Applications for Pruritus.

(*a*) **Ung. Acidi Carbolici.**

(*b*) **Tinct. Benzoini Co.**

(*c*) Hydrargyri Perchloridi . . gr. 1–5
Misturæ Amygdalæ . . . ℥viij. M.

(*d*) Acidi Sulphurosi . . . . ℥iv
Aquæ vel Decocti Hordei . . Oss. M.

(*e*) Potassii Bicarbonatis . . . ℥ij
Aquæ . . . . . Oj. M.

12. Application for the Breast.

Extracti Belladonnæ viridis . ℥ij
Glycerini . . . . . ℥j. M.

13. Plugs.

(*a*) **Plugs** should be made of cotton-wool (the red-cross absorbent wool is the best) according to the size required, usually about the size of a Tangerine orange or larger, tied once round with a piece of string having a knot at its extremity to facilitate removal. The application, *e.g.* glycerine, should not merely be poured over the plug, but the plug should be well kneaded in the glycerine until it has taken up from half an ounce to one ounce and becomes pulpy. The plug should then be passed *per speculum* and firmly packed up against the cervix uteri, and if necessary another one, dry or soaked in olive oil, passed up afterwards; care being taken that the string of the former one is not carried up out of reach by the introduction of the second. It is well to make a different knot on the string of the second as a guide for the removal of the last one first. Plugs of glycerine, glycerine of carbolic acid, glycerine of tannic acid, or the latter carrying a small portion of strong carbolic acid (9, *a*) on the part towards the cervix, may be left in 12 hours.

(*b*) Iodine Plug.

Make a plug as above of iodized wool, and pack up against the cervix uteri, placing a second, oiled, to defend the vagina. These should be removed in 6 hours.

(*c*) Iodoform Plug.

Iodoformi 1
Glycerini 10
Ol. Menth. Pip. . . . . gtt. vj. M.

14. Sedatives in Dysmenorrhea.

(*a*) **The Hot Hip Bath.**

A hip bath at the temperature of 105° to 110° F. for one minute, or as long as it can be borne until the pain is relieved. *Useful in ovarian pain.*

(*b*)

Tincturæ Cannabis Indicæ . . .	♏x–xv
Glycerini vel Mucilaginis Tragacanthæ	℥j
Spiritus Ammoniæ Aromatici . . .	℥ss
Aquæ	℥j. M.

Quaternis horis vel ter quotidie sumatur.

(*c*)

Ammonii Bromidi	gr. 20–30
Aquæ	℥j. M.

Ter quotidie sumatur.

(*d*) Or the latter may be added to (*b*).

(*e*)

Tincturæ Gelsemii	♏x–xxv
Aquæ	℥j. M.

Quaternis horis sumatur.

(*f*)

Quiniæ Sulph.	gr. 5–10
Ammonii Bromidi	℈j
Aquæ Chloroformi	℥j. M.

Bis terve quotidie sumatur.

(*g*)

Liquori arsenicalis	♏v
Tincturæ Belladonnæ . . .	♏v
Aquæ Chloroformi	℥j. M.

Bis quotidie post cibum sumatur.

(*h*)

Liq. Sedans (P. D. & Co.) .	℥j
Aquæ	℥vij. M.

Quaternis horis sumatur.

15. Emmenagogues.

(*a*) **Ice Bag.**

Chapman's Ice Bag, filled with small pieces of ice so as

to apply dry cold to the sacrum. To be kept on half-an-hour at a time.

(*b*) **Pulsatilla.**

Tincturæ Pulsatillæ nigricantis ♏ x–xx
Aquæ destillatæ . . . . ℥j. M.

Three times a day during the intermenstrual epoch, and every four hours during the period.

(*c*) **Aloes and Iron.**

Pilulæ Aloes et Ferri . . . gr. 5.

Two pills at bed-time, or night and morning, for several weeks.

(*d*) Ferri Sulphatis Exsiccati . . gr. 1
Pilulæ Aloes et Asafœtidæ . gr. 4. M.
Bis terve quotidie sumatur.

(*e*) **Ergot.**

Extracti Ergotæ liquidi . . ♏ x–xx
Aquæ . . . . . ℥j. M.
Ter quotidie sumatur.

(*f*) **Ergot with Iron and Quinine.**

Quiniæ Hydrochloridi . . . gr. 2
Tincturæ Ferri Perchloridi . ♏ x–xv
Extracti Ergotæ liquidi . . ♏ x–xv
Glycerini . . . . . ℥j
Aquæ . . . . . ℥j. M.
Ter quotidie sumatur.

(*g*) **Iron and Gamboge.**

Pilulæ Ferri . . . . . gr. 3
Pilulæ Cambogiæ compositæ . 1½
Olei Sabinæ . . . . . gtt. j. M.
Bis terve quotidie sumatur.

(*h*) Potassii Permanganatis . . gr. 1
Unguenti Kaolin q. s. ut fiat pilula ter quotidie sumenda.

16. Astringents (in Menorrhagia or Metrorrhagia.)

(*a*) **Heat.**

Chapman's Ice Bag filled with *hot* water and applied to the sacrum. *Useful in restraining uterine hæmorrhage.*

(*b*) **Haustus Acidi Gallici.**

Acidi Gallici	gr. 10–20
Acidi Sulphuric diluti . . .	♏v
Infusi Rosæ Acidi	℥j. M.

(*c*) **Ergot.**

Extıacti Ergotæ liquidi . .	♏xx–xxx
Acidi Sulphurici diluti . .	♏x–xv
Aquæ	℥j. M.

(*d*) **Ergot and Quinine.**

The above (*c*) with

Quiniæ Sulphatis	gr. 3. M.

(*e*)

Extracti Ergotæ	gr. 1½.
Pilulæ Plumbi cum Opio . .	gr. 2½. M.

(*f*) **Turpentine.**

Olei Terebinthinæ	♏x–xv
Mucilaginis Tragacanthæ . .	℥j
Aquæ Menthæ Piperitæ . .	℥j. M.

(*g*) **Hamamelis.**

Tincturæ Hamamelidis . .	℥ss
Tincturæ Hydrastis . . .	℥ss
Aquæ	℥j. M.

(*h*)

Hayden's Viburnum Compound	℥j
Aquæ destillatæ	℥j. M.

17. In Inflammation with Pyrexia.

(*a*) **Cold.**

Chapman's Ice Bag (15, *a*) to be applied to the abdomen for an hour or longer in the early stage of peritonitis.

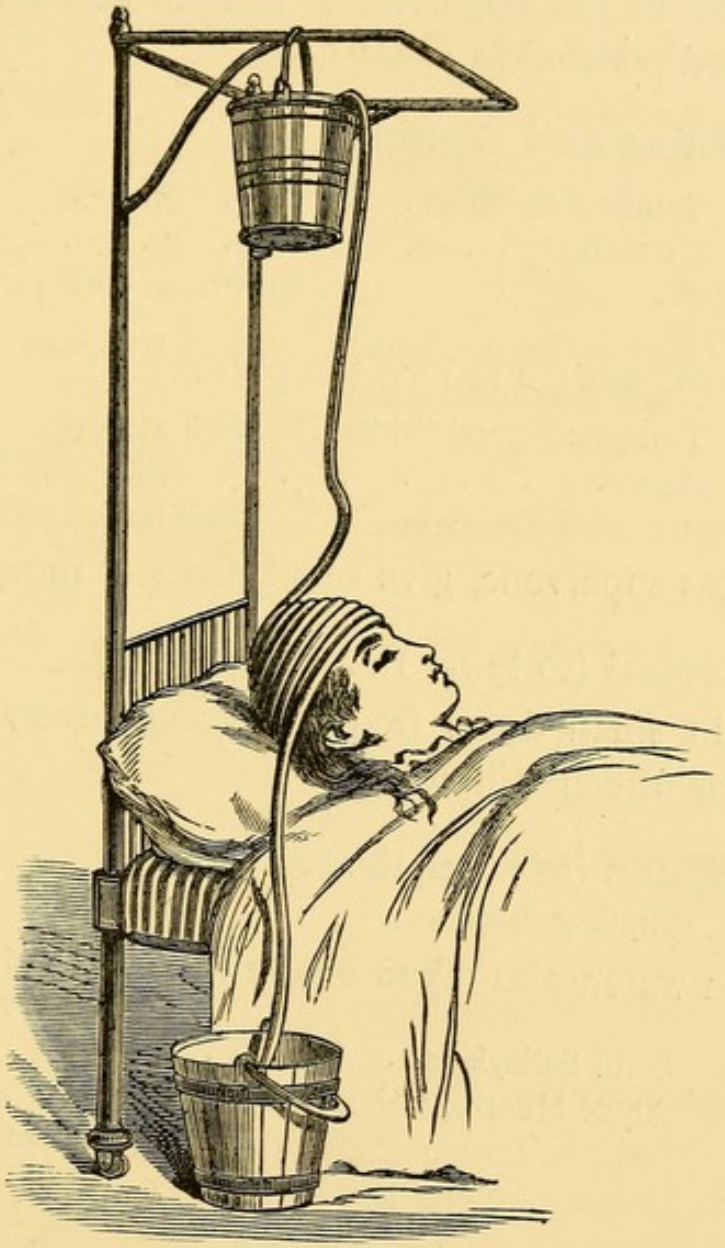


Fig. 21.

Thornton's Ice Cap.

(*b*) The Ice Cap, whereby continuous cold can be applied to the head in cases of peritonitis. (Introduced by Mr. J. K. Thornton.)

(*c*) **Calomel and Opium.**

Hydrargyri Subchloridi . . gr. 6–10
Extracti Opii . . . . . gr. 1½–2½. M.

Or the calomel may be given dry, and washed down with Tincturæ Opii ♏ xx–xxx in water. Or the calomel may be given alone: in the larger doses it often acts like a charm in threatened peritonitis.

(*d*) **Quinine and Opium.**

Quiniæ Sulphatis . . . . gr. 2–3
Extracti Opii . . . . . gr. ½–1. M.
Quaternis horis sumatur.

(*e*) **Veratrum** (to reduce the pulse).

Tincturæ Veratri viridis (Ph. 1885) ♏ v
Aquæ . . . . . ℥j. M.
Binis horis sumatur.

If sickness supervene, give small doses of morphia.

(*f*) **Alcohol** (to lower the temperature).

Brandy in small doses frequently, as ℥j every hour to ℥j every ten or fifteen minutes.

(*g*) **Quinine** (to lower the temperature).

Quiniæ Sulphatis . . . . ℈j

Mixed with water, and taken before it is much dissolved.

(*h*)
Sodii Salicylatis . . . . gr. 10
Aquæ Menthæ viridis . . ℥j. M.
Ternis horis sumatur.

18. Tonics.

(*a*) **Haustus Strychniæ** (cheap).

Liq. Strychniæ Hydrochloridi ♏ iij
Acidi Hydrochlorici diluti . ♏ x
Aquæ . . . . . ℥j. M.
Ter quotidie sumatur.

(*b*) **Pilula Trium Sulphatum.**

Quiniæ Sulphatis
Ferri Sulphatis
Zinci Sulphatis . . . ana gr. I
Extracti Gentianæ . . . . gr. 2. M.
Ter quotidie sumatur.

Useful in atonic leucorrhea.

19. Nutrient Suppository.

Glycerini . . . . . ♏v
Beef Tea . . . . . ♏xv
Brand's Concentrated Beef Tea ʒj
M. and cast in a mould.

Quinine or (and) opium may be added.

INDEX.

A LIST OF WORKS

PUBLISHED BY

HENRY J. GLAISHER,

57, Wigmore Street, Cavendish Square,

LONDON, W.

Price 7/6 net; Post free, 7/10.

Granular Kidney and Physiological Albuminuria.

By SAMUEL WEST, M.A., M.D. Oxon., F.R.C.P. Lond.

Assistant Physician, St Bartholomew's Hospital; Senior Physician, Royal Free Hospital, etc.

Cr. 8vo, Cloth. Price 5/- net; by Post, 5/4.

Practical Gynæcology.

A Handbook of the Diseases of Women.

By HEYWOOD SMITH, MA., M.D., Oxon.

Many Illustrations.

Sm. 4to, Black Cover. Price 6d. net; by Post, 8d.

The Nurse's Report Book.

Compiled by K. H. (Cert.). Containing space for general detail at the beginning of the book, and for general remarks on the case at the end of the book, and with space for 200 entries of each of the following details: Time, Nourishment, Stimulants, Temperature, Pulse, Respiration, Urine, B.O., Sleep, and Remarks.

Cr. 8vo, Cloth. Price 2/6; by Post, 2/9.

Pyorrhœa Alveolaris, and its Relations to General Medicine.

By JOHN FITZGERALD, L.D.S.

SECOND EDITION.

It is extremely useful in bringing together in a concise form the *principal facts which are at present known. . . . The remarks on treatment are good."—Lancet.*

INDEX.

Sewed, cr. 8vo. Price, 1/6 net; by Post, 1/8.

Consumption: Its Nature and Treatment.

BY

WILLIAM H. SPENCER, M.A., M.D. CANTAB., M.R.C.P. LOND.,
Consulting Physician to the Bristol Royal Infirmary;
Formerly Lecturer on the Principles and Practice of Medicine, and on Pathology, at University College, Bristol, Medical School.

Cloth, demy 8vo. Price 5/- net; by Post, 5/4.

Clinical Lectures on Neurasthenia.

BY

THOMAS D. SAVILL, M.D.
Physician to the West-End Hospital for Diseases of the Nervous System;
Examiner in Clinical Medicine in the University of Glasgow.

Cloth, cr. 8vo. Price, 1/- net; by Post, 1/3.

Care of Growing Children.

BY

THOMAS W. NUNN, F.R.C.S.
Consulting Surgeon to the Middlesex Hospital.

"Mr. NUNN describes the physiology of Normal Growth with the object of assisting those who may have charge of the young to recognise early abnormalities, which if left unheeded, may develop into grave defects. Should be of value to all who have the charge of young children."—*Scotsman.*

"May be read with profit by mothers and others who have children in their charge."—*Spectator.*

"Mr. NUNN has written a readable little book.....he has discharged his duty well."—*British Medical Journal.*

"It is clearly written."—*Lancet.*

Cloth, cr. 8vo. Price 2/- net; by Post, 2/3.

CANCER.

Illustrated by Consecutive Cases, and by Selected Cases.

Plates of Microscopical Sections.

BY

THOMAS W. NUNN, F.R.C.S.
Consulting Surgeon to the Middlesex Hospital.

Price 1/- net. By Post, 1/1.

Lord Lister & Surgery.

By ROBERT TURNER, M.A., M.D., F.R.C.S., EDIN.

"Likely to spread useful information, and give confidence to patients."—*Literary World.*

Cheaper Edition, 350 pp.

Cloth, cr. 8vo. Price, 2/6 net; by Post, 2/10.

Indigestion:

An Introduction to the Study of the Diseases of the Stomach.

By GEORGE HERSCHELL, M.D. Lond.

Fellow of the Royal Medico-Chirurgical Society; Senior Physician to the National Hospital for Diseases of the Heart, &c., Soho Square; late Physician to the West End Hospital for Diseases of the Nervous System.

Cr. 8vo., Cloth. Price 1/6 net; by post 1/8.

Cycling as a Cause of Heart Disease.

By GEORGE HERSCHELL, M.D. LOND.

Crown 8vo. Price, 2/6 net. By Post, 2/8.

With half-tone Illustrations.

Constipation & its Modern Treatment.

By GEORGE HERSCHELL, M.D. Lond.

Fellow of the Royal Medico-Chirurgical Society; Senior Physician to the National Hospital for Diseases of the Heart, &c., Soho Square; late Physician to the West End Hospital for Diseases of the Nervous System.

Price 1/- post free.

Clinical Diagrams.

With Directions for Recording Cases of Heart Disease.

Price 6d. post free.

Diagrams for Recording Cases of Heart Disease.

BY

GEORGE HERSCHELL, M.D. Lond.

WORKS BY EDWARD BLAKE, M.D.

Second Edition. Cloth, 8vo. Price, 3/6; by Post, 3/10.

Thirty-eight Illustrations.

On the Study of the Hand

For Indications of Local and General Disease.

A new Section on The Pulse—Chloroform Syncope, an improved treatment on purely scientific lines—The Immediate Cure of Engorged Liver.

The Bibliographies are exceptionally complete. There is a full and complete Index.

Cloth, 8vo. Price, 3/6 net; by Post, 3/10.

Eight Illustrations [Two Coloured.]

Myxœdema, Cretinism & the Goitres,

With Some of their Relations.

"We are glad to welcome such a work as this, dealing with morbid processes which are by no means thoroughly understood.....The text is enriched with some good plates."—*Practitioner.*

Cloth, 8vo. Price, 2/- net; by Post, 2/2.

Heart Hurry.

A clinical study of Tachycardia, as distinguished from Tremor Cordis and Palpitation proper.

Second Edition. Royal 8vo, Cloth. Price 3/6 net; by Post, 3/10

Numerous Illustrations.

CONSTIPATION

And Some Associated Disorders,

INCLUDING

Recent Observations on Intestinal Innervation; The Venous Hearts. With Sections on Venous Stasis of Abdomen; Piles; Fissure; Pruritus Ani; Rupture and Corpulency.

WORKS BY EDWARD BLAKE, M.D.

Cloth, 8vo. Price, 1/- net ; by Post, 1/1.

Lip Chorea : A Handbook on the Causes and Treatment of Stammering.

Cloth, 8vo. Price, 2/- net ; by Post, 2/2.

Ankle Strain :

A Clinical Study, giving the Physiological Anatomy of the Ankle-joint.

Cloth, 8vo. Price, 1/- net ; by Post, 1/1.

Sewage Poisoning: Its Causes & Cure.

"Embodies the results of very serious thought and a considerable acquaintance with the faults of hastily-erected houses.....The right kind of book, brought out at an opportune moment."—*Sanitary Record.*

Cloth, 8vo. Price, 1/6 net ; by Post, 1/8.

The Inframammary Pain, Why on the Left Side?

ITS NATURE, CAUSES, AND TREATMENT.

A Study in Evolution.

Its nature ; its causes ; its concomitants, supraorbital pain, pain 19th spinal nerve, in ilio-hypogastric, genito-crural, posterior lumbo, sacral and posterior cervical filaments. Their Treatment, local, general and etiological.

Clinical Forms (Blake).

CASE FORM - - - 25 for 1/- net.
SYMPTOM LIST - - 25 for 1/- net.

ABDOMINAL DIAGNOSIS, with blocks - 25 for 1/6 net.

Cloth, 8vo.

Studies in Human and Comparative Pathology.

BY

WOODS HUTCHINSON, A.M., M.D.,

Professor of Comparative Pathology, University of Buffalo, Medical Department.

Sewed, demy 8vo. Price 1/- net; by post, 1/1.

The Treatment of Hæmorrhoids and RECTAL PROLAPSE BY MEANS OF INTERSTITIAL INJECTIONS.

BY

DUDLEY WRIGHT, F.R.C.S.

Cloth, 8vo. Price 5/- net; by Post, 5/4.

With Coloured Frontispiece and Illustrations.

ASTHMA.

Recent Developments in its Treatment.

BY

ERNEST KINGSCOTE, M.B., C.M., L.R.C.S. Edin.,

Fellow of the Medical Society of London, &c.

Author of "On So-Called Spasmodic Asthma."

Sewed, demy 8vo. Price 1/- net; by post 1/1.

On So-called Spasmodic Asthma.

Considered from an entirely New Standpoint with regard to its Radical Cure.

BY

ERNEST KINGSCOTE, M.B., C.M., L.R.C.S. Edin.

6d. net; post free.

On the Importance of Personal Character in the Profession of Medicine.

BY

CHARLES J. CULLINGWORTH, M.D., D.C.L., F.R.C.P.

6 Books, 4/6; 3 Books, 2/6; 1 Book, 1/-. Postage extra.

GLAISHER'S
Message and Appointment Tablets.

In books of 50 *each, with name of Practitioner printed.*

These Tablets ensure the correct delivery of Messages from Patients to Practitioners, thus preventing the confusion and error which too frequently arise from verbal or slate-written communications. As the Caller writes his own message, name, and address, all carelessness on the part of the servant, or possibility of error, is avoided. The leaflet is torn off, and filed for reference.

Cloth, fcap. 8vo. Price 1/- net; by post, 1/2.

A New and Greatly Improved Edition of

The Human Face as Expressive of Character and Disposition.

By R. D. STOCKER,

Author of "A Concordance of Graphology and Physiognomy," &c.

"Interesting and suggestive. I have no hesitation in recommending the outcome of his researches to those of my readers who are interested in physiognomy. —LADIES' PICTORIAL.

Price, 6d. net; by Post, 6½d.

The Genesis of the Soul.

By HEYWOOD SMITH, M.A., M.D. Oxon.

Author of "The Gospel According to Satan."

"Dr. HEYWOOD SMITH, in THE GENESIS OF THE SOUL, finds in the opening verses of the Old Testament a picture or parable of Man's soul-development. As a study, suggestive though slight, the book will be helpful." —*The Christian.*

Cr. 8vo. Sewed, 1/-; Cloth, 1/6.

The Gospel according to Satan.

By HEYWOOD SMITH, M.A., M.D., OXON.

Fcap. 8vo, Cloth, gilt top, 2/6 net; by Post, 2/8 net.
Or sewed, 1/6 net; by Post, 1/8.

Excursions in Comedy.

By WILLIAM TOYNBEE.

Saturday Review.—"In all his dialogues there is wit and a peculiar formal grace very rare in playwrights."

Westminster Gazette.—"Either for stage or drawing-room, where short pieces are required, no more charming can well be imagined than those by Mr. William Toynbee."

Cloth, gilt top, fcap. 8vo. Price 2/6 net ; by Post, 2/8.

On Oaten Flute, and other Versicles.

By WILLIAM TOYNBEE.

"Has a keen eye for the gladness of life and the beauties of Nature."—*World.*

"His sonnets have a note of distinction."—*Westminster Review.*

Cloth, fcap. 8vo. Price 2/6 net ; by post, 2/8.

Lyrics from Lazyland.

By ELPHINSTONE THORPE.

"The author of this dainty little volume of lyrics has a very pretty gift of song, and succeeds in wedding refined and tender thoughts to melodious and expressive diction."—*Lady's Pictorial.*

Cr. 8vo. Price, 9d. net ; by Post, 10d.

"A National Disaster," & other Stories.

By DESBOROUGH.

"A NATIONAL DISASTER, by 'Desborough' is a little book of four stories, the idea of which is work for others in a life after death—of atonement for the dead, of love for the living. The thoughts expressed in it so simply may be a comfort to many a mourner."—*The Guardian.*

Cheaper Edition, 3/- net ; by Post, 3/4.

The Life of Our Ladye :

Scriptural, Traditional and Topographical.

Compiled from approved sources by

M. P.

WITH PREFACE

BY

HIS EMINENCE CARDINAL VAUGHAN

ARCHBISHOP OF WESTMINSTER.

"I shall quote no more at present from this estimable volume, but leave the reader to gain the many lessons which it teaches from the perusal of the pages of the original work."—THE LAMP.

"We welcome with great heartiness this 'Life of the Blessed Virgin,' which is written in a style well befitting the subject—devotional but clear, temperate and graceful.—THE CATHOLIC TIMES.

Cheaper Edition, cr. 8vo, Cloth. Price, 2s. 6d. net ; by Post, 2s. 9d.

Amongst the Pots and Pans.

(DAINTY COOKERY).

By MRS. RONALD-TAYLOR.

HENRY J. GLAISHER, Publisher & Bookseller,

57, *Wigmore Street, Cavendish Square, London, W.*