they illustrate the symptoms and treatment of organic contraction of this canal, a short notice of them may be useful. The first example met with was the following:—Mrs. S., thirty-six years of age, applied to me in May, 1859. Has never been pregnant; the catamenia are regular, but very abundant; and the general health is bad. Has suffered from stricture of the urethra for some years, with occasional attacks of retention of urine. She has to pass water very frequently, being obliged to rise five or six times every night to do so. Was under the care of Mr. Travers until his death: this gentleman attempted to effect a cure by the use of caustic. On examination by the vagina, I found the urethra hard like a cord, but not over-sensitive on pressure. A number one male catheter was introduced into the bladder with great difficulty: the stricture seemed quite cartilaginous. Day by day, however, a larger instrument was passed, until a number twelve entered easily. The menorrhagia was due to a large fibrous tumour in the cavity of the uterus; which tumour was subsequently removed, after dilating the os uteri. There was no return of the stricture up to 1869, or of the irritability of the bladder; but she passed a large-sized gum elastic catheter about every fortnight, and found some slight difficulty in doing so, if the use of the instrument were omitted for three or four weeks.—The second patient, sent to me by the previous one in May, 1860, had suffered from stricture of the urethra for three years. She had to pass water almost constantly, unless it dribbled away, as it mostly did. There was much difficulty in introducing the smallest silver catheter; but by perseverance it was made to enter the bladder, and was then retained in the urethra for some hours. In a few days a large-sized instrument entered easily; and soon a number twelve could be used. She was directed to pass an elastic catheter every week. On the 17 October, 1861, I heard that there had been no relapse. The cure was complete.

With a hint or two on female catheterism the subject of urethral stricture may be dismissed. Where the practitioner is only occasionally called upon to introduce the catheter, he finds that this proceeding is not so easily accomplished as many authors assert. The simplest plan is to make the patient lie upon her back, with the thighs separated and slightly drawn up; taking care that there is no exposure. The surgeon should then separate the labia and introduce the second finger of his right hand into the vagina, with the palmar surface upwards; along which, as on a director, he slips the instrument held lightly in the left hand. Thus, the catheter cannot enter the vagina, while it will almost certainly slip into the orifice of the meatus urinarius. It should be remembered that in elderly women who have had children, as well as in pregnant females, the meatus is often drawn into the vagina somewhat under the symphysis pubis.
4. CANCER OF THEURETHRA.

A cancerous tumour has been met with at the orifice of the female urethra as a primary growth—i.e., independently of the extension of adjacent malignant disease. According to some authorities, a simple vascular tumour may acquire a carcinomatous nature; but I have never met with an instance corroborative of this opinion.

Two cases have occurred in my practice of cancerous infiltration of the walls of the urethra, but such instances are very uncommon. In one of these the opening of the vagina became narrowed, appearing to be drawn up by the contraction of the diseased mass on the under surface of the urethra; though the walls of the vagina were never involved in the infiltration. Between the commencement of the symptoms until death fifteen months elapsed. With the second case, which I visited in consultation with Mr. Marsh, of St. John Street, Clerkenwell, the disease gradually spread along the urethra to the floor of the bladder. The suffering in urethral cancer is very severe; being at first aggravated by repeated attacks of retention of urine, and at a later stage (when ulceration has set in) by inability to retain a drop of the renal secretion. I hardly know which state is the most distressing,—the pain of passing a catheter through the tight and tender stricture being a frequent source of misery, while the discomfort and stench and excoriations produced by the constant escape of the urine become almost unbearable.

The treatment of cancer in this situation must be conducted on the principles which have already been laid down in speaking of the disease generally.

III. STONE IN THE BLADDER.

In whatever way the fact may be accounted for, it is certain that stone in the bladder is a very rare disease in women. This is well shown in a paper by Mr. Smith, surgeon to the Bristol Infirmary; from which essay we learn that out of 354 cases of vesical calculus, operated upon in that institution during the previous 83 years there were only 7 females, and all of these were under 35 years of age.* Mr. Coulson also remarks that out of 2238 patients, 111 were females, making a proportion of 1 female to 20 males; while by the estimate of Dr. Prout, the numbers are as 1 to 23.† According to some authorities, the comparative exemption of women from

STONE IN THE BLADDER.

this disease is principally due to the facility with which calculi can spontaneously pass through the short and dilatable urethra. But this explanation is probably more specious than true; for numerous inquiries amongst gentlemen of experience have led me to believe, that renal calculi are much more commonly found in male than female subjects, and certainly cases of calculous nephralgia are very seldom met with in the latter.

The symptoms of stone in the female bladder resemble those presented in the other sex; with this exception, that the suffering is commonly more intense. There is pain in the urethra, back, and upper part of the thighs, generally increased by sexual intercourse and by walking; a sense of forcing down, like that which occurs in labour is experienced; there is often vaginal cystocele, procidentia uteri, and sometimes prolapse ani; while there is either incontinence of urine, or very frequent calls to micturate. In one instance where I removed a phosphatic calculus nearly two inches long, one inch and a quarter broad, and 331 grains in weight, the patient had experienced the greatest pain in passing water; and yet she had been obliged to strain and void each drop of urine about every twenty minutes through the night and day. Moreover, in these cases, immediately after micturition, the patient feels that she has not emptied her bladder; while she soon learns that by further attempting to do so, her sufferings are greatly aggravated. The urine generally contains a quantity of ropy mucus; it may be loaded with urates, phosphates, or oxalic acid; while it is frequently bloody, and occasionally so to a marked degree. To examine the bladder, the patient should lie on her back, with the knees drawn up; and then there will be no difficulty in detecting the stone with the sound or silver catheter. Often, too, the calculus can be felt through the vesico-vaginal septum; and it is said that ballottement may be obtained, which might be mistaken for the motion imparted to a fetus by the finger. The nature of the various forms of renal calculi having been already noticed, it is only necessary to say that these concretions in women often have very extraordinary nuclei. Young girls occasionally introduce foreign bodies—such as hair pins, short sticks of pencil, pieces of quill, fruit-stones, ear-picks, &c., into the bladder; and these, if allowed to remain, soon become coated with the urinary salts.

The treatment consists in extracting the stone by the method least liable to lead to subsequent incontinence of urine. There are four methods by which the removal may be accomplished. (1) Dilatation of the urethra by sponge tents, or by Weiss's three-bladed instrument, or by india-rubber bags which can be inflated after introduction, has often been resorted to; and by this practice large stones can be seized and extracted without risk to life. But whether the dilatation be produced slowly or rapidly, or while the patient is conscious or insensible from the inhalation of chloroform, it is very apt to be followed by permanent inability to retain the
urine. My own view of this operation is so unfavourable, that I shall not again resort to it, unless there is some peculiarity in the case specially requiring such a proceeding. Yet if it is practised, I believe that there is more hope of preventing incontinence by rapid dilatation while the patient is under the influence of chloroform, than by slowly stretching the urethra with sponge tents, &c. (2) Incision with dilatation has been advocated. This operation consists in incising or notching the external orifice of the urethra, either upwards towards the pubes, downwards in the direction of the vagina, or laterally; and then stretching the canal with Weiss's dilator, until the finger can be made to pass into the bladder. The same objection, however, applies to this method as to the former one; and hence it is not to be recommended. (3) Incision of the bladder (vaginal lithotomy) has been recommended by Dr. Marion Sims. The surgeon cuts through the vesico-vaginal septum, low enough down to avoid the peritoneum, into the bladder upon a staff introduced through the urethra. The stone is seized by the forceps and removed; the edges of the wound being then brought together by metallic sutures, and the same treatment pursued as after the operation for vesico-vaginal fistula. For a few cases, where the stone is of large size and the bladder very irritable, this method will prove useful; but it ought only to be practised by a surgeon who feels thoroughly confident of being able to cure the vaginal fistula. (4) Lithotrity remains to be considered; and though mentioned last, yet I believe that in forty-nine cases out of fifty it is the only operation which should be resorted to for the removal of a stone from the female bladder. It is practised without much difficulty, is attended with so little pain that chloroform is not required, and unless the stone be large may often be completed at one or two sittings. The patient had better be directed to hold her water for about an hour before the operation. To allow of this being done without any inconvenience, it may often be advisable to administer the tincture of buchu, or a decoction of the triticum repens, for a few days previously; or the practitioner can trust to the use of the belladonna pessaries (F. 423), or of an enema containing about twenty drops of the fluid extract of opium and the same quantity of tincture of belladonna, in an ounce and a half of fluid starch. If, in spite of these sedatives, the urine come away, two or three ounces of tepid water ought to be injected just before introducing the lithotrite. On the day after the calculus has been well crushed, a short tube, having a diameter rather exceeding that of the largest-sized catheter, may be introduced through the urethra; and then the fragments of stone will generally be easily removed by washing out the bladder with warm water.
IV. DISEASES OF THE VAGINA.

1. VAGINAL OCCLUSION.

Putting aside those cases where the vagina is entirely absent, or is considerably malformed, from some arrest of development, it will be found that the examples of occlusion of this membranous canal met with in practice may be arranged under one of three heads:—(1) Those where the hymen is morbidly tough and persistent. (2) Instances of imperforate hymen, in which the vaginal orifice is completely closed. And (3) cases of imperforate vagina (atresia vaginæ); whether this be due to congenital adhesions between the opposite walls, or to closure in consequence of inflammation and sloughing, or to almost impermeable cicatrices the result of prolonged or instrumental labour or other mechanical injury.

_A tough and persistent hymen_ gives rise to no inconvenience until sexual intercourse is attempted; for it does not interfere with the escape of the catamenia, or of vaginal discharges. The practitioner is therefore only consulted when the rigidity of the membrane is such that it prevents intromission of the male organ. In this way, the hymen will usually be a cause of sterility; although many cases are on record where fecundation has occurred while perfect connexion must have been impossible. Some years since, a medical man, now dead, consulted me, two months after marriage, as to the propriety of his dividing the hymen with the bistoury; as he found this structure so unyielding that he had been unable to break it down. And yet, at this time, the lady was three or four weeks advanced in pregnancy, and had just missed her catamenial period. The operation, however, was performed, and all further inconvenience obviated.—In another patient, I found at the time of labour that the hymen had simply been perforated through its centre, the upper portion forming an irritable band which only yielded to the use of the knife.—The treatment of persistent hymen is very simple. If the membrane cannot be ruptured with the finger, it should be divided; reunion being prevented by the careful use of oiled lint. Where the vaginal orifice remains preternaturally small after this operation, dilatation ought to be effected by the use of bougies.

Naturally, the hymen consists of a delicate semilunar fold of mucous membrane, stretched across the lower half of the vaginal orifice. But occasionally cases are met with, where this canal is completely closed from the urethra to the fourchette by a firm membrane. In these examples of _imperforate hymen_, it is most
important that a cure be effected before the patient reaches the age of puberty. Fortunately it usually happens that the presence of this membrane is discovered by the child's mother, while the girl is quite young; and then there is neither difficulty nor danger in the surgeon breaking through the structure with a probe or director, or in cautiously dividing it with a bistoury. The edges of the wound must be kept apart by the introduction of small pledges of oiled lint for a day or two, until cicatrization is complete.

Supposing, however, that the malformation is not remedied, important symptoms will be produced at the time of menstruation. For inasmuch as the membrane may present no orifice whatever, or (as most commonly happens) only a very small oblique one just below the urethra, so the proper escape of the catamenia must be prevented. The patient will experience all the general feelings and straining efforts (the menstrual molimina) which accompany the early monthly periods, but there will be no external discharge. As each time comes round, the constitutional disturbances, the backache, the sense of bearing down, and the feeling of weight about the pelvis will increase; and yet the cause of the loss of health and languor, of the irritability of the stomach and the slowness of complexion, &c. may be unsuspected by the parents. The girl probably holds her tongue; either for the simple reason that she is ignorant of what should occur, or else because she is afraid and ashamed to make any complaint. In this way it sometimes happens that the vaginal canal and the uterine cavity become greatly dilated, while in a few instances the Fallopian tubes have also been considerably enlarged; for the retained menses may, in the course of time, amount to as much as three or four pints, or even more. If, in addition to the presence of this membrane there be also occlusion of the os uteri, the catamenia will of course only accumulate in the cavity of the womb and in the canals of the oviducts; these organs gradually enlarging until perhaps the uterus can be distinguished through the abdominal walls as large as at the sixth or seventh month of pregnancy.

Now it is a curious fact, and one difficult of explanation, that where the menses have been retained owing to this imperfect condition of the hymen, the operation required is a very fatal one. On examining a woman so affected, the practitioner readily detects the bulging obstructing membrane at the orifice of the vagina; and it would seem a very simple proceeding to divide this septum and so permit of the escape of the distending treacle-like and fetid fluid. But however easy it may be to do this, it is well known that many of the cases which have been so operated upon have terminated fatally from endometritis or peritonitis; these inflammatory affections probably having their origin in some septic change produced in the imprisoned secretions by the action of the atmosphere. Nevertheless, in order to avoid ulceration
and rupture of the walls of the uterus or of the Fallopian tubes, or an escape of the menstrual fluid through the fimbriated extremities of the tubes (pelvic hæmatocele), the obstruction must be removed either by a longitudinal or a crucial incision through the thickened hymen; though instead of looking on this proceeding lightly, every precaution ought to be taken to prevent inflammation subsequently. The patient must be kept very quiet in bed, her diet should be plain without being too low, and if there be pain it ought to be relieved by sufficient doses of opium. The bowels should be freely opened just before the operation, and then left quiet for some days. I would administer some preparation of sulphurous acid (F. 48) for several days prior to the surgical interference. A bandage had better also be placed round the lower part of the abdomen so as to facilitate the flow of the discharge. It is apparently safer, at first, to draw off part of the fluid with a trocar and canuula introduced under water while the patient is in a warm hip-bath, or the withdrawal of the fluid may be effected by the aspirator, or with the antiseptic precautions recommended by Mr. Lister. It is not improbable that the effect of the air upon the retained secretion in setting up decomposition might in this way be prevented. After the operation careful dressing with oiled lint must be had recourse to, so as to prevent adhesions forming between the labia; while even for some months afterwards examinations ought to be made now and then, lest dilatation be required to prevent the vaginal orifice from getting constricted.

The vaginal opening appearing quite normal, it may yet happen that the passage is more or less completely closed at some part of its course. Imperforate vagina from the presence of a thin transverse membrane, is the most simple congenital malformation of this description; and if this structure present an opening sufficiently free to allow of the escape of the catamenia, no inconvenience will result until the time of marriage.—Comparatively harmless also is the division of the vagina, from the entrance to the os uteri, by a longitudinal partition. In these cases there is always a double uterus as well as the double vagina; and though generally one division of the latter canal is larger than the other, and is the only one which is used in coitus, yet cases have occurred where either portion has been used indifferently, and where pregnancy has taken place in both halves of the uterus at the same time.—A much more serious condition is the conversion of a portion of the canal into a solid cord, owing to firm adhesions between the walls; so that on introducing the finger into the short vagina, this tube is found to end in a cul-de-sac. In these instances, the uterus and ovaries are usually either absent, or they exist in only a rudimentary state, so that there will be no secretion of the menstrual fluid. But if these organs be present and healthy, the catamenia will be retained and will gradually
produce a tumour as in the cases of imperforate hymen.—Stricture or complete closure of the vagina may result from inflammation set up by disease, or it may be a consequence of the healing of cicatrices after injury inflicted by the use of instruments in a difficult labour. An interesting example of the first form has been reported by Mr. Hancock. In this case, the external organs of generation appeared healthy, but the vagina terminated about an inch from the orifice. The patient stated that she had menstruated regularly for two years: she then had an attack of fever, and the discharge never returned. Mr. Hancock dissected the tissues upwards for three inches, and afterwards dilated the canal by bougies; but no uterus could be discovered. There was no evidence of the existence of any collection of menstrual fluid.* Examples of stricture from the healing of cicatrices are not so very uncommon. I have seen a woman in strong labour, with almost complete obliteration of the vagina, as the consequence of ulceration and sloughing produced by the prolonged pressure of the head in the previous confinement. In April, 1851, I was consulted by Dr. Greenhalgh as to the best mode of effecting delivery in a woman slightly advanced beyond the eighth month of her fourth pregnancy; craniotomy having been required in the third labour. On examination, the canal of the vagina appeared to be one firm contracted cicatrix; although, after some perseverance, the finger could be insinuated between three or four small rings of cartilaginous toughness, with sharp edges. In this instance labour was brought on, the woman being safely delivered after the free division of the rings and the perforation of the child's head; but I found it impossible to avoid wounding the rectum, the fistulous opening which formed necessitating subsequent treatment. Moreover, the stricured tissues were not incised, nor was the foetal skull opened, until it was proved that the parts showed not the least disposition to yield, although the labour pains were strong and recurrent frequently.

While considering how we may best remedy these cases of imperforate vagina it should be remembered, that all operations upon this canal are attended with more or less decided risk. Consequently, it will be better to refuse to interfere when the woman is single, and the catamenial flow is not obstructed. Moreover, it will be useless to attempt any surgical proceeding where the patient, being an adult, experiences no menstrual molimien, and has no sexual desire; for we may be tolerably sure the malformation is not confined to the vagina, but that the uterus and ovaries are also entirely absent, or at least that they are in a very rudimentary condition.†—When the obstruction consists of transverse mem-

† There are occasional exceptions to this rule. Thus, I was consulted by a young lady, in her twenty-first year, who had never menstruated, but who was engaged to be married. An examination showed that though the
branes, we shall often succeed in breaking them down with the finger, or in dilating them with bougies and sponge tents. But if it be necessary on account of the thickness of the tissues to use the knife, great caution must be exercised to avoid wounding the bladder or rectum, as well as to prevent the sharp point of the scalpel from entering the cavity of the peritoneum above. To evade these accidents, the patient should be placed in the ordinary position for lithotomy; a sound ought to be introduced into the empty bladder, while sometimes it is advisable for the surgeon to keep the forefinger of his left hand in the rectum; the edges of the vaginal orifice are to be held widely apart by the hands of an assistant, or by Bozeman’s duck-bill speculum, as in the operation for vesico-vaginal fistula; and then the septum had better be cautiously dissected through from side to side, until there is a gush of thick treacle-like fluid—the retained catamenia. Where this operation has been safely accomplished, care is to be taken to prevent any subsequent contraction; inasmuch as by inattention to this rule, interference has been required on a second occasion.—With regard to those rare cases where the vagina ends in a cul-de-sac, a thorough investigation should be made so as to detect the smallest opening which could be dilated by bougies and tents. Supposing there is no orifice and no depression showing where there might be one, and if it be certain that there is an accumulation of the menses in the uterine cavity, it then becomes a question whether a dissection should be made in the manner already described, or whether the uterus had better be punctured through the rectum so as to permit of the evacuation of its contents. The latter proceeding, though only justifiable where the former seems impracticable, has been successfully adopted in several instances. It is, however, always difficult to keep the artificial opening sufficiently patulous to allow of the woman menstruating for the future through the rectum; though this may be accomplished by, in the first instance, making the puncture sufficiently

external parts were perfectly natural, there was no vagina. No trace of this canal, or of uterus or ovaries, could be detected by the rectum. Being strongly urged to try some means of giving relief I made a cautious dissection through the connective tissue where the vagina should be; and without injuring the bladder or rectum, or discovering any trace of internal generative organs, I succeeded in making an excellent canal. In this, to prevent contraction, a vulcanite tube four inches long by four in circumference was worn for several months. The operation was performed on the 20th June, 1867. On the 15th September, 1868, this lady was married; the impossibility of her ever bearing children, as well as all other material points in the case, having been previously explained to the husband. Both parties, however, were determined on carrying out their engagement. Had it not been for this explanation, I am told it would not have been known that there was anything unusual.—In another exactly similar case the patient was actually married before she consulted me. An artificial vagina has since been made. Although no trace of uterus or ovaries can be detected, there is no loss of sexual appetite. No menstrual molimen has ever been experienced.
free to admit the point of the finger, and then by daily examinations preventing closure until the healing process at the edges of the wound is completed.

2. VAGINISMUS.

By this term Dr. Marion Sims has proposed to designate "an involuntary spasmodic closure of the mouth of the vagina, attended with such excessive supersensitiveness as to form a complete barrier to coition."* This affection must occasionally have been recognised by all practitioners who have had much experience in the treatment of the diseases of women; but to Dr. Sims is due the great credit of especially directing attention to it, of clearly describing its symptoms, and of suggesting the means of cure.

A few remarkable cases, in each of which there has been a combination of lead poisoning with vaginismus in its most intense degree, have been observed by Dr. Neftel of New York. The cause of the poisoning could only be traced to the long-continued employment of a cosmetic containing lead. The chief feature of interest, however, in these patients was this,—that the proper treatment of the saturnin poisoning not only removed the paralysis, but likewise cured the severe vaginal hyperæsthesia. Had it been otherwise, the combination of the two diseases would of course have been regarded as accidental. As it is, such an explanation is merely an easy way of evading a difficult question.

From the cases which have been under my own care, I believe that vaginismus may exist as a simple or as a complicated condition. In other words, there may be no local mischief beyond excessive tenderness of the orifice of the vagina and hymeneal membrane; so that almost the slightest touch, certainly any attempt to introduce the finger into the canal, produces the greatest agony. Or, in addition to this characteristic symptom, there may be indications of inflammation of the follicles about the vulva, or of a painful fissure of the fourchette, or of hyperæsthesia of the whole vaginal mucous membrane, or of some uterine dislocation, or of a contracted state of the os uteri and cervical canal. But whether the disease exist in a complicated form or not, it is equally the bane of early married life. In some instances the woman may at first submit to intercourse, bearing the great suffering under the idea that it is not unusual. After a night or two, however, her courage fails, her nervous system begins to give way, she shivers with terror at the approach of her husband, and consequently all attempts at connexion have to be abandoned. In another class of cases it is found that the marriage has never been consummated; or intercourse may have been imperfectly accomplished, but only with the result of setting up inflammation and

excoriation about the vulva. The seat of this excessive sensitiveness is the vaginal outlet and especially the external surface of the hymen, whether this membrane be entire or partially broken down. The gentlest application to this structure or its remains (the carunculæ myrtiformes) produces spasm of the sphincter vaginae, so that even a probe can scarcely be introduced beyond it. The influence of this condition upon the general health can readily be imagined. The mental distress, the imperfect sleep, the loss of appetite, and perhaps the pain on walking, the irritability of the bladder, the backache and tenderness about the hips, &c., all tend to render the sufferer an unhappy invalid. She looks care-worn, her strength gradually fails, and she gets thin; and if there be any unkindness on the part of the husband the misery becomes intense.

Fortunately, if the suffering be great, the cure is not difficult. Supposing by a lucky accident the attempts at intercourse have led to pregnancy, then interference will be unnecessary; since the act of parturition will certainly prove an effectual remedy. Usually, however, sterility is one of the prominent results of true vaginismus. Under such circumstances it seems to me worse than useless to temporize with inefficient remedies, since they only increase the mental and bodily distress. The use of bougies, caustics, injections, &c. merely inflicts the greatest pain, without producing the slightest good. The treatment consists, as Dr. Sims very properly insists, in the removal of the hymen, the incision of the vaginal orifice, and in subsequent dilatation; and these proceedings should all be promptly and efficiently carried out. The bowels are to be thoroughly cleared out on the morning of the operation. Then the patient being placed on her left side, or upon her back, and being fully under the influence of chloroform, the sensitive and probably thickened hymen is to be seized with the forceps and completely dissected off. At the same time, the operator stretching the vaginal opening with two of the fingers of his left hand, makes an incision, about half an inch deep, through the fibres of the sphincter vaginae at the lower part of the fourchette. If there be much bleeding it may be checked by the application of a drop or two of the solution of perchloride of iron; though I think that the after-treatment is rendered more easy by plugging the vagina with cotton-wool, laying pledgets of oiled lint over the lower part of the orifice, and then keeping the whole in apposition by a T-bandage. The chief inconvenience attendant upon this latter measure is, that the catheter will have to be used every eight or twelve hours. The dressings ought not to be disturbed for forty-eight hours, during which time freedom from pain must be ensured by the use of opium. There should also be perfect quietude. At the end of this time, chloroform is to be again administered, while the wool and lint are removed; and then a proper-sized tube of vulcanite is to be introduced, and kept in
position by a bandage. If grooved upon its upper surface this tube will not interfere with the urethra or meatus urinarius; and it should be worn for a few weeks. The smarting caused at first by this instrument is nothing as compared with the pain which has been experienced prior to any treatment.—This procedure is rather different from that recommended by Dr. Sims; but it has the advantage of being less severe, while from actual experience I can assert that it is quite as efficient. I have said nothing about the management of the complications, because they will have to be remedied subsequently according to the rules laid down in speaking of each affection separately.

3. ACUTE VAGINITIS.

This form of inflammation is much more rarely met with than the chronic variety; from which it differs not only in its greater severity and more rapid progress, but also in its usually involving the whole tract of mucous membrane lining the vaginal canal, instead of being limited to one portion. Moreover, in acute vaginitis the morbid action is not always confined to the mucous membrane; the tissues beneath sometimes becoming involved, producing a very distressing affection. It is seldom observed in women who have not had intercourse.

Causes.—This disease, unless due to some specific poison, rarely occurs save in those who are in a depressed state of health. When the vital power is low from bad living or from the excessive use of alcoholic drinks, the inflammation may be excited by exposure to cold and wet, and perhaps by inattention to cleanliness. Hence it is more frequently met with in hospital than in private practice. Excessive sexual intercourse can, however, give rise to it; and so will the use of force—as in rape. The prolonged pressure of the child's head in tedious labours, as well as mischief inflicted by craniotomy instruments or the forceps, must also be remembered as causes. I have never seen it produced by rising too soon after parturition, and cannot believe in such a proceeding having any effect in inducing this form of inflammation.

Symptoms.—The chief symptoms consist of itching and excoriation about the vulva, weight at the perineum, distressing irritability of the bladder, with pain and a sense of heat extending up the vagina. At first, the secretion of vaginal mucus is checked; so that on examination the mucous membrane of the canal is found somewhat dry and swollen. There may be no alteration in colour from the natural appearance: more often the whole tissue is seen of a scarlet tint, or it is marked with red patches. Then, shortly, a creamy mucous, or muco-purulent, or purulent discharge takes place; the pain lessening as the fluid poured out becomes abundant. This discharge, like the healthy vaginal mucus, is of acid reaction; while if it can come away freely it is seldom offensive. A minute
examination shows that it contains pus corpuscles, with an abundance of squamous epithelium and epithelial débris. The constitutional disturbance is usually slight; but there may be more or less backache, pains about the hips and upper part of the thighs, a sense of weight or bearing-down on standing, smarting and tenderness on sitting down or on passing a motion, with a frequent desire to empty the bladder. The disease commonly runs its entire course, or passes into the chronic form, in from seven to thirty days; the duration partly depending upon whether a cure can be effected before the return of a catamenial period, as otherwise the symptoms are sure to be aggravated by the menstrual molimen.

Sometimes, owing to neglect or to the severity of the attack, the progress towards recovery gets interrupted. Thus, supposing there occurs a sharp rigor, with severe frontal headache, thirst, a loaded tongue, and a frequent pulse, we may be tolerably certain that the morbid action has extended to the structures beneath the mucous lining, and that it is advancing to suppuration. Under such circumstances the local soreness and the throbbing pains will prove most severe. In this way, a troublesome and very painful affection may be set up which will continue for many weeks, to the marked injury of the general health. The abscesses which form generally burst into the vagina; though the pus is apt to burrow and make its way externally, either at the sides of the labia or about the perineum, probably leaving long and tortuous fistulae which can only be healed with great difficulty.

Diagnosis.—Acute vaginitis can scarcely be confounded with acute inflammation of the cervix uteri. The appearances on examination and the nature of the discharge will serve to prevent any error. The mucus of the cervical canal is always alkaline; and though the acidity of the vaginal secretion will neutralize a moderate quantity of uterine discharge, yet it will not suffice to do so when the latter is abundant. Moreover, the menstrual functions are probably never interfered with when the disease is confined to the vagina; though this secretion commonly appears too frequently, too abundantly, and is accompanied with much pain when the uterus is affected.—The difficulty of distinguishing between non-specific vaginitis and gonorrhoea has already been noticed. The application of the discharge poured out in acute vaginitis to the male urethra, will produce a disease in all respects resembling true gonorrhoea.

Treatment.—When the case is seen early, no remedy gives so much relief as the prolonged use of the hot hip-bath, night and morning. In severe cases it will be well to add some carbonate of soda and a strong decoction of poppy capsules to the bath water. The bowels, which may be obstinately confined, should be unloaded by a full dose of castor oil, or of calomel and jalap (F. 140), or of jalap and senna (F. 151); after which it is unadvisable to irritate them further by purgatives. Vaginal injections of warm water
prove serviceable; but instead of sedative or astringent injections, pessaries of oxide and zinc and belladonna, or of acetate of lead and opium (F. 423) will be found most efficacious. The patient should be confined to the sofa, or even to the bed, at the commencement. The diet is to consist of white fish, lightly-cooked eggs, tea and milk, with demulcent drinks; while all stimulants are to be forbidden. Where there is evidence of the occurrence of suppurative, opium and henbane (F. 343, 345), with ammonia and bark (F. 371), will be needed; and then nourishing animal food, with wine, ought to be allowed. Hot fomentations, or large linseed poultices, to the lower part of the abdomen as well as to the vulva, should be employed. When the abscesses begin to "point," they had better be opened.

4. VAGINAL CATARRH.

Chronic inflammation of the vagina may occur primarily and singly, or it can happen as an accompaniment of most uterine diseases, or it may be the sequel of acute vaginitis. Probably chronic vaginitis, or vaginal catarrh, or vaginal leucorrhoea (for the terms may be regarded as synonymous) is the most common disorder to which women are liable. There are indeed few who do not more or less suffer from it during the child-bearing period of life,—so numerous and even slight are the causes which will induce it.

Symptoms.—The prominent symptom is a constant or frequent leucorrhoeal [from λευκός = white + ρέω = to flow] discharge—"the whites." Advice is seldom sought until this discharge has become profuse, or has continued a long time; and then, in addition to speaking of it, complaint is made of backache, a sense of weariness after slight exertion, loss of appetite, lowness of spirits, flatulence or nausea or some other form of indigestion, and frequently of constipation. This low kind of inflammation is often confined to the upper part of the vagina, and to the external portion of the cervix uteri; in which districts the mucous membrane may perhaps be found on examination congested and of a purple tint, though more commonly there is no perceptible change. The disease is always obstinate, partly because it gets aggravated at the return of each monthly period.

Under the influence of inflammation the epithelial covering of the mucous membrane of the vagina will now and then be exfoliated. Sometimes this epithelium mixed with mucus comes away in flakes, or it may be passed in masses which form complete casts of the vaginal canal. By the microscope these pseudo-membranous, parchment-like laminae can be seen to be composed of large epithelial cells of the tessellated variety; and they are generally sufficiently strong and firm to bear free handling. They are not unfrequently expelled when slight inflammatory action has been
set up by the use of strong astringent injections. So again, in the
vaginitis which occurs after scarlet fever, detached fragments of
epithelium will commonly be discovered in the discharge. The
symptoms attendant upon this exfoliation are slight or well-marked,
according as a new and sufficiently dense layer of cells is slowly
or rapidly formed. In the latter case, there may be merely slight
heat and irritation: in the former, the raw surface is very sensitive,
and there will be much pain and smarting. In either instance, as
the membrane is becoming detached, a peculiarly unpleasant crawl-
ing sensation has been complained of. Care must be taken not to
confound these vaginal membranes with those uterine structures
which are not unfrequently thrown off in one form of painful mem-
struation—membranous dysmenorrhœa.

Diagnosis.—In a state of perfect health only sufficient mucus
is secreted to lubricate the flattened vaginal canal, and so prevent
irritation from the friction which necessarily occurs between the
apposed anterior and posterior walls. But under the influence of
many morbid conditions, a more or less abundant discharge comes
away; and the important question which generally arises is as to
the seat of this flow. In other words, is the case one of vaginal
or of uterine catarrh? The distinction can generally be drawn
from an examination of the discharges. Thus, the vaginal mucus,
whether scanty or abundant, is universally acid; and it is owing
to this reaction that the secretion is found opaque and curdy. The
mucus of the cervical canal is always alkaline; so that if a piece
of litmus paper be reddened by application to the vaginal portion
of the cervix, the blue colour will be restored on passing the test
paper within the cavity. Moreover, the mucus as it is seen by
the speculum escaping through the os from the interior of the
cervix, is viscid and transparent, so that it resembles the white of
egg; though it becomes opaque as it passes through the vagina
owing to the action of the acid reaction. A minute examination
shows that the discharge from both parts consists of epithelium,
mucous or pus corpuscles, and a plastic liquid; but the vaginal
epithelium is of the pavement or tesselated variety, while the cer-
vical is of the cylindrical kind. Of course, where there is chronic
vaginitis in conjunction with disease of the interior of the cervix,
then the discharge will necessarily partake of the nature of both
secretions. Moreover, when there is an abundant secretion of pus
from the vaginal mucous membrane this fluid may be found
alkaline. Unless the bodily strength becomes much depressed,
the menstrual functions are not interfered with in cases of vaginal
leucorrhœa.

Treatment.—As in other disorders, the first point is to remove
the cause. The general health must be attended to, one of the
mineral acids with bark or quinine being administered if neces-
sary; while the digestive organs should be made to do their work
efficiently, pepsine sometimes proving useful for this purpose. The
frequency of sexual intercourse ought at least to be limited. Any
disease of the urethra, vulva, or rectum which may be present is
to be cured. Then, cold salt water hip baths, and astringent vagi-
nal injections (F. 425) are to be employed; the latter being used
in quantities of not less than a pint at a time, while they are to
be thrown up slowly and deliberately with a proper syphon
syringe. It is rather remarkable that the small old-fashioned
glass and metal female syringes are still to be found in every
druggist's shop, and yet more useless instruments could scarcely
be manufactured. After a cure has been effected, the woman
who desires to remain well will inject up the vagina a pint of
cold or tepid water every morning, while using the bidet for
the external organs. Where injections fail to give relief, pessaries
containing sulphate of zinc or tannin (from ten to fifteen grains
of either with sixty or eighty grains of cacao butter) may be
substituted. Moreover, if the pain in the back continue had,
a belladonna plaster had better be applied; while the system
is to be strengthened by tonics, sea air, &c. As a rule, the diet
should be generous and nourishing; while if any stimulant be
needed weak brandy and water had better be allowed in preference
to wine or beer.

In not a few instances I have found that a low form of in-
flammation has been kept up by the irritation of a painful
fissure or ulcer at the fourchette. Although this can sometimes
be cured by two or three days' rest in bed, and the application
of the dilute solution of subacetate of lead, or of zinc ointment;
yet this plan often fails. The most certain and efficacious pro-
ceeding is to make a longitudinal incision, the eighth of an
inch in depth, through the ulcer, so as to divide the fibres of the
sphincter vaginae muscle. The patient ought to remain in bed
until the wound has healed; and if cicatrization proceed too
slowly the red lotion (F. 264) may be used as an efficient
dressing.

The foregoing remedies will have but little influence for the
cure of uterine catarrh. In such cases, therefore, the treatment
described in a subsequent page will have to be adopted.

5. TUMOURS OF THE VAGINA.

A physician may be engaged for many years in treating the
diseases peculiar to women before he meets with a case of polypus
of the vagina. Tumours so designated, having a firm fibrous
structure, do occasionally grow, however, from one or other of the
vaginal walls. In an instance which came under my own observa-
tion, advice was sought for a "falling of the womb," a forma-
tion, a firm growth could be detected presenting at the orifice of
the vagina. By gently drawing the tumour downwards it was seen
to be as large as a small orange, having an attachment to the
middle of the posterior wall of the vagina by a pedicle equal in circumference to that of the little finger. The chief inconvenience which resulted from this body consisted of an abundant leucorrhoeal discharge, a constant bearing-down, and some irritability of the rectum and bladder. As a vessel could be felt pulsating in the pedicle, a ligature was placed around it, and then the growth was cut off just below the constricted part. The ligature came away on the fifth day, and the patient has since remained well.

More rare even than the foregoing are fibrous tumours imbedded in the submucous tissue of the vaginal wall. When a growth of this description exists, it may produce very slight general or local derangement; though usually the vaginal walls get inflamed and excoriated, much as they do when long irritated by any kind of foreign body. Sometimes there is bleeding to a considerable extent: in a case which was under the care of Sir James Paget the tumour gave rise to repeated attacks of vaginal haemorrhage. Mr. Curling extirpated one of these growths which projected at the vulva, was extensively ulcerated, and was the cause of an irritating fetid discharge. The tumour was formed of a mass of dense fibrous tissue, partly arranged in lobules; while it was developed in the submucous connective tissue of the vagina. Sometimes these tumours are associated with similar growths in the uterine walls. Whether this be the case or not, or whether the growth be troublesome or not, a cure should be effected, if possible; for such a body may grow to a large size, while in the event of pregnancy it would certainly complicate the process of parturition. The removal may probably be safely accomplished by seizing the growth with a pair of vulsellum forceps, drawing it downwards, dividing the mucous membrane covering it, and then shelling it out with the fingers or the handle of the scalpel. If there be any free bleeding, the vagina should be firmly plugged with cotton wool.

Mucous follicular cysts are occasionally found about the walls of the vagina. When superficial, the cyst is formed by a dilated follicle, the excretory orifice of which has become closed: it seldom attains a larger size than a pea, since its thin coats are easily ruptured: often there is only a simple round cyst, though two or three may be met with, their walls being transparent: and they are most commonly situated about the vestibule, or at the sides of the lower part of the vaginal opening. The deep-seated cysts are produced by the accumulation of the contents of the interstitial or closed follicles, and one or more of this variety may exist alone, or in combination with the superficial kind. Usually solitary, these cysts differ in size from that of a hazel nut to that of a fowl's egg; they are painless, but produce an unpleasant sense of fulness; they may become pediculated; they seldom rupture spontaneously, owing to the firmness of their smooth and shining coats; and they are almost invariably situated at the upper part of the vagina, near
the cervix uteri. To care either the superficial or deep cysts it
is necessary to puncture them, and then to apply the nitrate of
silver to their internal surfaces. Where pediculated, it is better
to snip them off with a pair of curved scissors. In operating upon
the deep kind, care must be taken to avoid wounding the bladder
when the tumour is in the anterior walls of the vagina, or the
rectum when the posterior wall is the affected part.

6. PROLAPSUS OF THE VAGINA.

The descent of the vaginal walls is generally accompanied
by more or less prolapsus of the uterus, although occasionally it
occurs alone. Seeing that the uterus is partly kept in its place
by the vagina, it is difficult to understand how the latter can
become prolapsed without the former also falling. Certainly I
have never met with an example of complete and uncomplicated
vaginal prolapsus in a single woman. And even among married
women, such an event is rare; the cause, in those cases which
have come under my care, having been either a failure in the walls
of this canal to recover their tone after several pregnancies and
labours, or a withdrawal of their support in consequence of a
laceration of the perineum.

Much more common than these cases of complete, are those of
partial prolapsus—where either the anterior or the posterior wall
of the vagina descends. The anterior wall, according to my ex-
perience, is less frequently displaced than the posterior. When
the anterior wall is alone affected, this portion in its fall draws
down the posterior wall of the bladder; giving rise to a condition
which is generally known as vaginal cystocele, or vesico-vaginal
hernia. The result of this is the formation of a vesical pouch; in
extreme examples of which condition the urine may accumulate
and decompose and set up vesical catarrh, owing to the difficulty
which is experienced in completely emptying the bladder. Patients
repeatedly have to remove this difficulty by pressing the vaginal
protrusion upwards during each attempt at micturition, although
complete reduction cannot always be thus effected. If a catheter
be passed into the bladder, the end of the instrument can be felt
in the pouch through the vaginal wall. On passing the finger along
the upper surface of the protrusion its progress is stopped under
the pubic arch; but below the tumour it can be made to enter the
vagina up to the os uteri.

The lower part of the anterior wall of the rectum is apt to
become dilated; a pocket being formed which pushes forward the
posterior wall of the vagina, and ultimately causes a protrusion at
the vulva. This displacement is spoken of as vaginal rectocele or
recto-vaginal hernia. It is the consequence of a loss of elasticity
in the vaginal septum, of habitual constipation, and of excessive
straining to pass the accumulated faeces. It may produce but
slight inconvenience at first; but after a time, as the rectal pouch increases in size and becomes loaded with dry and hard fecal masses so that the external tumour is made to acquire the size of a fist, troublesome consequences ensue. The chief of these are,—a sense of weight and bearing-down, pain on walking, a constant mucous discharge from the irritated mucous lining of the rectum, as well as a varicose condition of the haemorrhoidal veins. On introducing the finger into the rectum it will readily enter the diverticulum when this is empty; or it will come upon the dense and firmly lodged stercoraceous mass.

Supposing a loop of small intestine to descend into the cul-de-sac between the rectum and vagina, it will in time probably push the posterior wall of the latter forwards and downwards. Hence there will be produced a swelling at the vulva; which is technically described as vaginal enterocele, or entero-vaginal hernia. Under such circumstances, the progress of parturition has been delayed by the intestine giving rise to an obstructing tumour which has had to be reduced. Necessarily there is a fear of intestinal obstruction or bruising taking place, either of which accidents might be followed by serious consequences.

All forms of vaginal prolapsus may occur either suddenly or gradually. Sudden displacement is due to anything which induces violent contraction of the abdominal muscles; so that the intestines are abruptly forced down upon the pelvic viscera. More frequently the extrusion takes place slowly and gradually; the vaginal walls being weakened by frequent parturition, by long-continued catarrh, by rupture or loss of tonicity in the perineum, and so on. Moreover, the prolapsed part is at first small; but this portion, like the thin edge of the wedge, serves gradually to secure greater and greater displacement.

The principal symptoms of prolapsus of the vagina are,—bearing-down pains, aggravated by exercise; feelings of weight and fulness and irritation about the vulva; and sensations of throbbing and heat and general discomfort throughout the pelvic viscera. Backache is always mentioned as being troublesome. The general health is never really good: the digestive organs are especially apt to be deranged.

When the whole circumference of the vaginal mucous membrane is prolapsed we find at the vulva a projecting tumour, the surface of which, if the descent be of long standing, is generally inflamed and indurated and more or less excoriated. As the fall of the anterior wall is usually the most complete, the opening leading up to the uterus is somewhat concealed at the lower and posterior part of the projecting mass; while on passing the finger up the passage, the os uteri is met with drawn more or less downwards. The functions of the bladder and rectum may be uninterfered with; although more frequently complaint is made of some irritability of the former viscous.
For the cure of displacement of the vagina which has occurred suddenly nothing more is necessary than the reduction of this organ, with the use for a few days or weeks of astringent pessaries (F. 423). The patient may be kept in bed for two or three days, as a matter of precaution, while care is necessary that the bowels act without any straining efforts being needed. In attempting to remedy either complete or partial prolapsus of the vagina which has come on gradually, it will be necessary to improve the general health; while such agents are administered as provoke muscular contraction, and impart tone to the tissues generally. A nourishing diet, the daily use of cold salt water hip baths, with such tonics as quininc and steel and strychnia (F. 380), or phosphoric acid and nux vomica and bark (F. 376, 414) will always prove useful. The tissues of the vagina can also be strengthened by the proper employment of astringent injections (F. 425), or of pessaries containing tannin and catechu (F. 423). Where there is prolapsus of the posterior wall of the bladder, care must be taken to prevent the undue accumulation of urine. The patient should be recommended to pass water every three or four hours, and before doing so to try and push up the protrusion. The catheter, however, must be employed, rather than allow of any decomposition of the retained secretion. Similarly, in cases of rectoccele, the bowel ought to be carefully emptied at least once a day; a full evacuation being obtained by the administration of pills of colocynth or aloes and nux vomica (F. 175), or oft-times preferably by stimulating enemata (F. 190). Should the practitioner detect any excessive faecal accumulation, it may be necessary, in the first instance, to remove it with the scoop.

Abdominal belts, made so as to prevent the viscera from pressing on the pelvic organs, can often be worn with benefit. Now and then it is advantageous to have a perineal band affixed to the belt; especially where the prolapsus has been of such long continuance that the structures about the vulva have become much relaxed. Vaginal pessaries, whether they consist of elastic air bags, or rings or levers, or globes of wood, are seldom to be recommended. They may perhaps act beneficially for a short time; but their ultimate effect will be to aggravate the evil instead of removing it.

For severe cases of prolapsus without any rupture of the perineum, an operation is often practised to diminish the size of the vaginal outlet. As the subject is referred to in the section on procidentia uteri, I need only here say that I have but little confidence in its efficacy. Moreover, I do not recollect having seen any instance where it has appeared necessary to lessen the calibre of the vaginal canal by dissecting off one or more strips of the mucous membrane, and bringing the edges together with interrupted sutures; although in any exceptional instance, when other
remedies have failed, this proceeding might doubtless be resorted to with advantage.

Finally, where there exists a rupture of the perineum, surgical treatment proves invaluable. This accident results from parturition; the tear occurring in consequence of an excessive disproportion between the size of the fetal head and the maternal outlet, or owing to the employment of instruments—especially the forceps. Under either circumstance the practitioner may be blameless; for in certain instances rupture will happen in spite of the greatest skill, and of the most unwearied attention. The injury will vary in degree; the rupture only involving the fourchette and part of the perineum, or extending up to the sphincter ani, or going completely through this muscle, or tearing the sphincter and part of the recto-vaginal septum. In all these grades there is a subsequent tendency to prolapsus of the vagina, with cystocele or rectocele; to procidentia of the uterus; and to excoriations about the labia uteri, with leukorrhœa, &c. But when the sphincter ani is injured, then (in addition to the foregoing evils) there will be more or less inability to retain the intestinal gases and stools; the latter coming away involuntarily whenever there is any approach to diarrhœa. The misery caused by this misfortune can easily be estimated. Fortunately, however extensive the laceration, a cure can be promised; though it does not follow that success will always attend the first attempt. A great deal depends on the patient being prepared for the proceeding by having the intestinal canal thoroughly cleared out, as well as upon her composure and quietude for several days after the operation. Briefly described, this may be said to consist in completely denuding the surfaces of the cicatrix, as well as the tissues just above them; and in then bringing them into close and firm apposition by the clamp or quill suture, with superficial sutures of silver wire. Where the sphincter ani has been torn through, this structure should be divided on both sides (as recommended by Mr. Baker Brown) before inserting the sutures; but in other cases such a proceeding will be unnecessary. During the after-management the patient is to lie quietly on a water-bed; the bladder is to be emptied by the catheter every six or eight hours, for the first eight days; the bowels are to be kept confined until adhesion is perfect; and the occurrence of pain and intestinal action must be prevented by the administration of opium. The deep sutures are to be withdrawn at the end of forty-eight hours, and the superficial ones about the seventh day. The diet throughout should consist of plenty of milk, raw eggs, wine, and mutton or poultry. Attention must be paid to quantity as well as quality: if we give too little food the surfaces of the perineum will probably not unite kindly; if we allow too much, we shall be encouraging the formation of a large and hard stool, which may very likely tear asunder the newly-joined tissues when it comes away.
V. DISEASES OF THE BROAD LIGAMENT.

The diseases now to be described have been included under the above heading in deference to the authors of the Nomenclature of Diseases adopted by the Royal College of Physicians. For with the exception of certain cystic degenerations there is not one of the following affections the seat of which is limited to, or even chiefly connected with, the broad ligaments. The morbid action is linked with the uterus and its appendages—the tubes, ovaries, and broad ligaments. The starting point of the mischief is usually from the inner surface of the uterus, or from the ovary, or from the oviduct; and not simply from those folds of peritoneum and connective tissue between them, which together constitute the broad ligament. However, with reference to all these diseases it must be recollected that our knowledge is at present in a rudimentary state; and consequently many of the observations which follow may have to be modified by and by, as our opportunities for investigation and comparison have become multiplied.

1. PELVIC CELLULITIS.

Inflammation of the abundant loose cellular (connective) tissue in connexion with the uterine appendages is a very important disease, our knowledge of which has been much increased by recent investigations. Its principal synonyms are pelvic abscess, parametritis, peri-uterine phlegmon, inflammation and abscess of the uterine appendages, inflammation of the broad ligaments, &c. The designation “pelvic cellulitis” is to be considered in the light of a convertible term with “parametritis” as employed by Virchow, Duncan, &c.; just as “pelvic peritonitis” is synonymous with “perimetritis.” Dr. Matthews Duncan, in his work just published (1869) “On Perimetritis and Parametritis,” distinctly confines these terms to the signification of inflammation and abscess in connexion with uterine, tubal, and ovarian disease. By “perimetritis” he strictly implies inflammation of the uterine peritoneum; by “parametritis” he means inflammation of the cellular tissue in connexion with the uterus.

The inflammation is necessarily seldom limited to its primary seat. The mischief spreads to the adjoining textures, and probably by direct continuity of tissue; just as acute morbid action is very frequently propagated in other parts of the body.

Causes.—Pelvic cellulitis occurs most frequently after parturition at the full term, or after abortion; or it may be originated by dilating or cutting or cauterizing operations on the uterus, or by the abuse of the uterine sound, or by excessive sexual intercourse, or by gonorrhoeal or syphilitic or malignant disease, or by
acute or chronic ovarian or uterine affections. Gestation, whether
abruptly and prematurely terminated, or carried on to the full
term, is the cause of probably two-thirds of the cases of this
disorder which are met with. The important point, however, is
this—pelvic cellulitis seldom, if ever, happens except as a
secondary disease. It may be said not to occur after the change
of life. In one case under my care it did so, but only as the
consequence of mischief set up by the removal of an intra-uterine
fibroid.

Puerperal pelvic cellulitis is of much more common occurrence
in primiparae than in multiparae; and the longer the duration of
labour, the greater appears to be the liability to it. A depressed
state of health prior to parturition, and the setting in of hemor-
rhage during this process, also predispose to it. In some epide-
mics of puerperal fever there has appeared to be an unusual
tendency to inflammation and abscess of the uterine appendages;
though it must be remembered that the form of inflammation
under consideration may happen quite independently of puerperal
peritonitis or metro-peritonitis. There is no essential difference
between puerperal and non-puerperal cellulitis: the morbid
action, however, runs a more rapid course in the former than in
the latter, perhaps owing to the effect of that remarkable series
of changes in the uterus, which commences directly after par-
turition.

Pathology.—There is an abundance of loose connective tissue
in the pelvis; especially between the broad ligaments, between
the vagina and rectum, between the uterus and bladder, as well
as about the psoas and iliacus muscles. Beneath the peritoneum
investing the fundus and upper three-fourths of the front and back
of the body of the uterus there is only the narrow trace of con-
nective tissue: in fact, so difficult is it to demonstrate the
presence of this tissue in these parts, that some authors deny its
existence there.

Inflammation attacking the connective tissue of the uterus
runs the same course as inflammation elsewhere. The disease will
be extensive or partial. Starting from the uterus, the morbid
action may spread widely. Thus, the whole of the cellular tissue
and peritoneal lining of the pelvis is sometimes involved; or the
connective tissue between the folds of one or both broad ligaments
will be affected; or the inflammation may be limited to the tissues
between the uterus and bladder, or to those between the uterus
and rectum.

The disease may end in resolution, and leave no trace of its
having been present; or it may subside favourably, though it
causes long-persistent thickening and induration of the affected
tissue, with immobility of the uterus; or it will perhaps terminate
in suppuration—pelvic abscess. Except where the inflammation
is connected with puerperal fever, the great majority of the cases
recover; although where suppuration takes place, the restoration to health will be very slow.

_Symptoms._—Occasionally this disorder comes on very insidiously with mere weakness; so that its existence is not suspected until there is found considerable swelling about the pelvis or the lower part of the abdomen, and when the tissues about the uterus and broad ligaments have got indurated and perhaps matted together. More frequently, however, there is marked constitutional disturbance at the onset. The pulse rises in frequency, and the countenance becomes anxious. There is more or less fever, backache, loss of appetite, restlessness at night, and a sense of pelvic weight and bearing-down; together with local pain and throbbing and tenderness. An aching of the limbs is often complained of, especially about the upper part of the thighs. There may either be frequent or difficult micturition, or attacks of tenesmus; one or other prevailing according as the tissue in front of, or behind, the vagina is involved. In some of the instances which have been under my care there has been very troublesome irritability of the stomach, inducing frequent vomitings of fluid or mucus tinged with bile. At the end of about forty-eight hours, a proper examination will always detect the presence of a puffy and sensitive condition of the vaginal walls; while a little later the affected connective tissue can be felt in a state of induration and thickening. If the tissue of the broad ligaments be the part inflamed, this hardening and swelling may possibly be perceptible at the lower region of the abdomen; but where the morbid action is confined to one side of the uterus, or to the vesico-vaginal or recto-vaginal septum, an internal examination must be made to discover it. This tumefaction is probably the result of oedema of the connective tissue.

Pelvic cellulitis often terminates by resolution in the course of fourteen or twenty-one days. This, however, is not so likely to happen when the disease has ensued upon pelvic peritonitis, or on endometritis, or ovaritis, or inflammation of the oviduct. Supposing that the inflammation runs on to suppuration—to the production of pelvic abscess, the local and constitutional distress will be found to increase in severity. The general symptoms of pelvic abscess very much resemble those produced by suppuration in other organs. There are chills or rigors, fever and sweating, sleeplessness, great thirst with loss of appetite, and both mental and bodily depression. In addition, there is severe throbbing pain about the pelvis; with more or less irritability of the bladder and rectum. By combining a vaginal examination with abdominal palpation a peculiar elastic tumour will be felt, or possibly only a general fulness and oedema of the tissues.

A pelvic abscess may open into the rectum or vagina, or through the abdominal walls, or into the cavity of the peritoneum, or into the bladder. The opening into the rectum is the
most common. While the pus is being alternately discharged and re-secreted pregnancy may possibly occur, and prove a very serious complication.

Diagnosis.—Pelvic cellulitis is only likely to be seriously confounded with an inflamed fibroid tumour of the uterus, an inflamed ovary, an extra-uterine pregnancy, and pelvic haematocele. From the first I know not how it can well be distinguished; and it seems to me that our only hope of avoiding error is by recollecting that inflammation of fibroids is a rare occurrence, while it very seldom happens without the presence of such a growth having been previously determined. A fibroid un-inflamed cannot possibly be mistaken for an acute phlegmon.—An inflamed ovary presents many symptoms like those set up by cellulitis. However, in the latter the swelling is more extensive, and the pain much less severe and less localized: there is a great difference between the loose connective tissue, and the unyielding and firm fibrous capsule of the ovary. Ovaritis, moreover, very rarely ends in suppuration.—In extra-uterine fociation the symptoms come on very gradually, the catamenia are usually suspended, the breasts enlarge and the areolae darken, while there is only slight tenderness about the cervix uteri. Of course, if the gestation be advanced the fetal heart will be heard. The abdominal pains are severe, but they come on irregularly, continue only a short time, and then temporarily cease.—Pelvic haematocele produces suddenly a soft and comparatively painless tumour, without fever, and without heat and swelling of the vaginal walls, but subsequently the blood coagulates and the tumour becomes hard. Local peritonitis sets in subsequently. The haemorrhage often occurs at a catamenial period, especially when there has been suppression of the flow for some previous occasions. The symptoms generally point to depression from loss of blood, rather than to inflammatory excitement. An exploratory puncture with a fine trocar and cannula can at most times be made without risk to clear up any doubt. May be, however, the blood which has been poured out has undergone a kind of suppuration, and then there will be all the indications of a pelvic abscess.

Prognosis.—Caution is necessary in giving an opinion as to the duration and mode of termination of this disease. The inflammation is apt to spread insidiously; and when all seems to be going on well, a slight cause may again light up the mischief. As a general rule, experience justifies our looking for recovery ultimately.

Treatment.—In the early stages, when there is a hope that the inflammation may end in resolution, the practitioner should beware of resorting to very active treatment. The evil will probably be increased by the use of general bleeding, or of strong purgatives. But if the pain and throbbing be very distressing, a few leeches may be applied to the lower part of the abdomen, or
around the anus, or even to the seat of fulness in the vaginal wall; while a dose of some mild aperient can be administered if the bowels have become confined. The remedies, however, in which I have the most confidence are,—the application of linseed poultices or poppy fomentations; the use of vaginal pessaries containing the extracts of belladonna and conium (F. 423), with mercurial ointment if there be any evidence of a syphilitic taint; the employment every eight or twelve hours of the officinal opiate enema, or of the subcutaneous injection of morphia (F. 314); together with complete rest in bed. If there be much abdominal tenderness, relief will be more effectually given by covering the part with a mixture of the extracts of belladonna and poppies (F. 297) and a linseed poultice, than by simple fomentations. Hot hip baths, with hot water vaginal injections, are very soothing and agreeable; but the patient should keep as quiet as possible in the recumbent posture, while the bath and injection require more exertion than can well be borne during the acute stage of the inflammation. Support must be given in the shape of milk, raw eggs, arrowroot, broth, beef tea, &c.; while any irritability of stomach which may be present will be best relieved by the application of a sinapism over the epigastrium, and by allowing a free supply of ice.

As soon as the acute symptoms have subsided, some authorities recommend the application of blisters over the hypogastrium, together with the administration of full doses of iodide of potassium, in order to procure absorption of the effused materials. I have, however, no confidence in the efficacy of these remedies to produce the desired effect; while I am also of opinion that such a line of practice is very likely to cause suppuration. We may depend upon it that when a case of this kind is doing well, the less we interfere by active treatment the better.

Where the disease advances to suppuration, wine and tonics will be required in addition to the foregoing. The question as to the necessity for operative interference will be discussed presently.

2. PELVIC PERITONITIS.

Inflammation of the peritoneum covering the uterus and its appendages is not to be confounded with general peritonitis. The form of peritoneal inflammation now to be considered is strictly limited to the pelvis. Its synonyms are pelvi-peritonitis, metro-peritonitis, perimetritis, &c. The disease has mostly been confounded with pelvic cellulitis, from which it differs in many important points,—just as pericarditis differs from carditis, pleurisy from pneumonia, and meningitis from cerebritis.

Causes.—The causes of inflammation of the serous membrane covering the uterus and other pelvic viscosa are pelvic cellulitis, metritis and ovaritis, inflammation of the oviducts, parturition at
the full term or premature labour, mischief set up by operative
proceedings, injections into the uterine cavity, and gonorrhoea or
other irritating discharges passing into the uterus; as well as
most of those circumstance which interfere with the healthy per-
formance of the menstrual functions, or which excite tubo-ovarian
disease.

Pathology.—As elsewhere happens, the inflammation at first
produces congestion and redness, with harshness and dryness of
the affected tissue. Next, there is swelling and immobility of the
uterus and its appendages owing to the exudation of plastic lymph
and serum. And then lastly, there is either absorption of the
serous fluid, or the mischief extends in violence till it ends in sup-
puration; while the exuded lymph gets organized, and by its
contraction binds the uterine organs together almost like a tu-
mour.

Symptoms.—These will vary according as the disease is acute or
chronic. In the former there is generally chilliness followed by
pain. Often the suffering is slight, merely fretting the patient:
now and then it is unendurable, causing involuntary cries or
shrieks. The more sudden and rapid the action of the exciting
cause, the greater will be the intensity of the pain. There is
always a marked amount of tenderness about the hypogastrum,
increased by pressure. The skin is hot, the pulse frequent, and the
countenance anxious. There is backache, with pains down the
thighs: neither of these symptoms, however, are as constant or
severe as in pelvic cellulitis. Oft-times there are excessive nausea
and vomiting; while as a rule there is tympanites with constipa-
tion. Moreover, all the symptoms are aggravated by the men-
strual molimen, especially if the flow be obstructed or scanty. A
vaginal examination, made at an early stage, detects increased sen-
sibility about the cervix as well as about the recto-vaginal space.
After a short time the uterus is found quite immobile, with the
roof of the vagina hard and unyielding and stretched; while sub-
sequently, the uterus and its appendages give the impression of
being glued together into a kind of solid and sensitive tumour.
Moreover, the uterus is either in part or completely displaced:
perhaps only the fundus is drawn backwards and downwards,
caus ing an irreducible retroflexion. When pus is formed, the
abscess may push the pelvic viscera almost anywhere. Suppura-
tion, however, is much more infrequent than in pelvic cellulitis.

In the chronic variety the symptoms may be so slight as to
pass away without their import being correctly diagnosed. The
patient is thought to be hysterical; while her pains are vaguely
said to be neuralgic. The results are serious, however; especially
in causing uterine and tubo-ovarian disease or displacement, and
in binding the different intra-pelvic structures together with
coagulable lymph. The adhesions may later become the cause of
intestinal obstruction from a coil of intestine finding its way into
a ring thus formed. Menstruation becomes attended with great suffering; while in the event of pregnancy an abortion is likely to happen, or failing this there will be considerable pain and more than usual sickness during the early months. The catamenia may, however, permanently cease; and then of course there will be irremediable sterility.

Terminations, &c.—The duration of pelvic peritonitis varies much in different cases: it may run its course in three or four weeks from the onset, or it may continue for even a few years. Supposing suppuration to occur and the pus to be discharged by the rectum, there will perhaps be a complete cure; but the opening may close although pus continues to be secreted, and then there will be rigors, night sweats, debility, pain, loss of appetite, &c., until the purulent matter again escapes. In these cases of long-continued suppuration, albuminuria (owing to amyloid degeneration of the kidneys) may by and by follow and ultimately prove fatal. So also the cachectic condition induced by pelvic peritonitis now and then causes tubercular phthisis.

Prognosis.—Seeing the dangerous nature of this disease in its early stages, as well as the grave results which will possibly follow it, the practitioner should be somewhat reserved in speaking of the result. Many cases recover completely; but often only after suffering from dangerous complications, and perhaps from several monthly relapses. Where the inflammation follows upon parturi- tion or abortion the danger to life is considerable.

Treatment.—The important remedies are,—perfect rest in bed; the administration of opium in doses sufficient to relieve pain; and the application of heat and moisture by means of large linseed poultices over the hypogastrium. Applications by the vagina had better be avoided; but if they be employed they must consist only of pessaries containing opium and belladonna. I have known even emollient injections increase the pain; while in one instance a cold vaginal douche is said to have rendered the peritonitis fatal. All aperients are to be forbidden; for though it is a misfortune to have faecal matter in the intestines, yet there is too much risk of aggravating the inflammation by the powerful action of cathartics. If the rectum be loaded, however, three ounces of warm olive oil with one of castor oil may be injected, and retained as long as can be conveniently managed. Where there is pain or difficulty in emptying the bladder, the catheter should be employed. The diet must consist of milk and broths, with raw eggs and refreshing drinks. Ice ought to be allowed, as it allays the irritability of the stomach. Unless there be suppuration alcoholic stimulants do harm.

After an attack of pelvic peritonitis care will be needed for some time to prevent any relapse. During the four or five subsequent menstrual periods the patient should remain in bed, since these occasions are always critical. Again, if there be any leucor-
rheal discharge attempts are not to be made to check this by astringent injections or pessaries. Over-fatigue is always to be guarded against. A well-made abdominal belt, by supporting the viscera instead of allowing them to press upon the pelvic organs, often gives considerable relief. Nourishing food, cod liver oil, and a long stay at the seaside are valuable allies in getting a complete restoration to health.

3. PELVIC ABSCESS.

Suppuration occurs within the pelvis as a consequence of pelvic cellulitis with greater frequency than from any other cause. It may also happen from pelvic peritonitis; from inflammation of the walls of an ovarian cyst, or of an extra-uterine pregnancy, or of the structure of a fibroid tumour of the uterus; as well as from degeneration of the blood poured out in a case of haematocele.

Whatever the cause of the suppuration may be, the symptoms will generally be well marked. Thus, there are chills or distinct rigors; attacks of hectic fever, with night sweats, and sleeplessness; and pains about the pelvis, with great throbbing and tenderness. Bodily weakness and mental anxiety are marked features in these cases. Neuralgic pains, extending down the thigh of the affected side are complained of; and pains about the sacrum are wearying. On making a vaginal examination, a sense as of touching a thin-walled cyst full of fluid will be communicated to the finger, provided the abscess be pressed low down, and be not altered in character by the pressure of some fibroid or other tumour upon its walls. In a very few instances fluctuation can be detected by alternately quickly pressing and ceasing to press just under the pubic arch, while one finger of the other hand is applied to the swelling in the vagina. The uterus is also more or less fixed, and at times displaced. The abscess spreads in all directions; and there is scarcely any limit to the size it may possibly attain. I have removed upwards of two pints of pus from one abscess.

After a time, the wall of the abscess may often be felt to be getting thin at one point; indicating the situation at which the contents will probably be evacuated. Although the pus is generally discharged into the rectum or into the upper part of the vagina, yet very rarely it makes its exit into the peritoneal cavity (setting up severe, but not necessarily fatal, peritonitis), or it is discharged into the bladder, or it burrows and makes its escape externally at one or other groin. Where the abscess opens into the rectum or vagina, the sac may become obliterated and the patient soon get well. But, unfortunately, in not a few instances the matter is re-secreted, to be once more discharged at the same spot as before; this process being repeated again and again, until the health becomes much reduced. Nevertheless, steady perseverance with
proper remedies can often at last effect a cure; so that in no instance of this kind should the patient or the practitioner despair. The most troublesome cases to manage are those where the pus burrows, and escapes at different times by different openings. In such, very obstinate sinuses remain which are healed with great difficulty; while if they communicate, as they ultimately are likely to do, with the bladder and rectum, a distressing state of disease will result. In this way there may be fistulous openings about the anus, vulva, groins, or lower part of the abdomen; through all of which offensive pus and urine and fluid feces will be discharged. If one or two of the wounds close, they generally only do so for a time; or if we succeed in firmly healing some of the sinuses, it will probably be at the expense of aggravating the others. A lady who was under my care for nearly two years with small abscesses which burst into the rectum every six or eight weeks, unfortunately became pregnant before a thorough cure could be effected. The consequence was the formation of a large quantity of pus, which burrowed about the loose areolar tissue in all directions; while her sufferings were so great and constant that it became necessary to induce premature labour at the seventh month. Great relief followed the birth of the child, and under the influence of sea air and tonics, &c., the health improved considerably; but the sinuses never showed any disposition to heal, while the abundant irritating discharges which were poured from them, produced, at length, fatal exhaustion.

The treatment of pelvic abscess has to be conducted on those well-recognised principles which guide us in the management of disease which has gone on to suppuration in other organs. There are few if any exceptions to the rule that nourishing food and wine and tonics are required. Good claret, or carlowitz, or oyer, or tokay, or St. Elie (an excellent restorative Greek wine), or red Australian wine, or port, or brandy and soda water, &c., may be prescribed; the choice from among these depending on the state of the stomach as regards acidity and retching. Milk, cream, strong beef tea, soup, and jellies should be ordered; followed by white fish, mutton, poultry, game, roast beef, and so on, as soon as the stomach appears strong enough to digest animal food. With regard to drugs no remedies are better than ammonia and bark (F. 371); for which quinine and one of the mineral acids (F. 379) had better be substituted at a later stage. Cod liver oil does good if it can be assimilated. Where the suffering is severe most relief will be given by the subcutaneous injection of morphia (F. 314). If there be peritonitis, opium in repeated doses ought to be trusted to.

Locally, soothing fomentations, hot and large linseed poultices, and repeated hot hip baths will of course be had recourse to. The most important question, however, is as to the advisability of surgical interference; upon which point there is a difference of
opinion. Some authorities recommend exploratory punctures, followed by incisions, where there is the smallest indication that pus is present. Others, on the contrary, assert that the abscess is not to be opened, but that it is to be allowed to burst spontaneously. My own experience leads me to acquiesce in the soundness of this last principle, unless the pus is evidently near the surface—as when there is pointing in one or other groin, or distinctly in the vagina, &c. With the object of preventing the re-formation of the pus after the contents of the abscess have been evacuated, it would seem advantageous, theoretically, to resort to pressure. To apply this efficiently, however, is by no means an easy task; while frequently there is so much tenderness that no pad and bandage can be borne. I have tried more than once to fit an india-rubber bag, filled with air, just above the pubes, maintaining pressure by means of a kind of truss-spring; but the apparatus could only be worn for a few hours at a time, and no benefit resulted.

4. CYSTS OF THE BROAD LIGAMENT.

Thin and single membranous cysts, of variable size, are sometimes found attached to the broad ligament; or such cysts become developed between the layers of the ligament, or they seem to grow from the fimbriated extremity of the Fallopian tube. Probably the most frequent variety of cyst originates in the remains of one of the little tubules of the parovarium or Wolfian body. Such a cyst does not usually attain a greater size than that of the closed fist; although every now and then a larger one will be met with. Thus, in a case successfully operated upon by Mr. Spencer Wells, under the idea that the tumour consisted of a nearly unilocular ovarian growth, the cyst was proved to have its origin in the broad ligament, and to be about twice the size of an adult head. The ovary was healthy and in no way connected with the cyst.* It seems to me very probable that some of the cases of supposed unilocular ovarian tumours which have been cured by tapping, have in reality been examples of cystic disease of the broad ligament. The fluid from these cysts is transparent, free from albumen, and somewhat resembles limpid urine in appearance; while that from an ovarian tumour is always more or less albuminous, and is very seldom translucent. The removal, by abdominal section, of a cyst having its origin in the broad ligament can never be justifiable until simple tapping has failed to effect a cure. Even then it is unnecessary to do more than expose the cyst, empty it, and excise a small portion of its walls; so that any fluid which is afterwards secreted may escape into the peritoneum,

whence it will become absorbed without exciting inflammatory or other serious symptoms.

5. PELVIC HÆMATOCOELE.

The fact, that an effusion of blood may take place upon or beneath the peritoneum in the immediate neighbourhood of the uterus and its appendages, has attracted much attention for some time past; for although a few examples of this accident may have been described upwards of two centuries ago, yet it was practically unknown until a comparatively recent date. The tumour formed by the effused blood is known as a sanguineous pelvic tumour, or as ovarian apoplexy; though it is now more commonly described under the designation of either retro-uterine, peri-uterine, or pelvic hæmatocèle [Ἀίμα - blood + κύλης = a swelling]. In France, especially, many valuable essays have been published on this disease since the year 1831, when Recamier gave the history of a case which had been under his care. It was not, however, until 1850 that Viguès attempted to collect and systematize the different features and symptoms presented by these sanguineous pelvic tumours; while to Dr. Tilt we are indebted for having, towards the end of 1852, first brought the subject before the profession in this country.

Causes.—Any condition which interferes with the normal performance of the menstrual function, and especially such as impedes the due discharge of this secretion, must be regarded as a prominent cause of pelvic hæmatocèle. Hence this accident almost always occurs at a catamenial period; while it is most common about the age of 30, when the sexual organs are in their greatest vigour. The sudden suppression of the monthly flow, excessive mental excitement or bodily exertion during the period, intemperate coition, and external injuries are likely to induce the form of hæmorrhage under consideration. Dr. J. Byrne of New York believes that in 80 per cent. of the cases there will be found unmistakeable evidence of ovaritis; which in time produces a varicose condition of the vessels, a softening possibly of the gland tissues, a modification of the nervous stimulus, and ultimately rupture with extravasation.

Pathology.—The disease consists of an effusion of blood into the peritoneal pouch between the uterus and rectum, or into the sub-peritoneal tissue behind and around the uterus. The latter is the least dangerous form, as the effusion is generally small; and therefore it may be wrong to infer that it is by no means of such frequent occurrence as the first kind, because post-mortem examinations rarely show its presence. According to M. Bernutz it is only met with during pregnancy or the puerperal state; but this opinion has not been confirmed by other observers. In the former or intra-peritoneal variety, the blood has now and then
been discharged so abundantly as to fill the entire abdominal cavity; although more frequently the extravasation will be found limited to the recto-uterine cul-de-sac, being generally confined there by the effusion of coagulable lymph with the formation of adhesions. Hence the danger is decidedly greater in the non-encysted than in the encysted cases.

The blood may be poured out from various parts. Thus, it can escape from the ovary at the time of menstruation if this organ be diseased, or if it be the seat of inordinate congestion. It may come from one of the Fallopian tubes owing to the rupture of its wall; or in consequence of a reflux of the sanguineous exhalation which takes place from its mucous lining during a catamenial period; or it will happen as the result of a retrograde flow from the interior of the uterus when the os uteri is obstructed. Rupture of one or more of the vessels of the utero-ovarian venous plexus, or of a varicose vein in the broad ligaments, or of the vessels in the cyst of an extra-uterine foetation has been its source. Hæmorrhagic peritonitis will perhaps produce it; and so may that exhalation of blood which is sometimes met with in chlorosis, as well as in purpura and scurvy. And lastly, the effusion may be one of the effects of a general and excessive congestion of the reproductive organs, such as is the cause of some forms of menorrhagia; especially if this congestion have any connexion with the hæmorrhagic diathesis.

Symptoms.—The symptoms will vary according as the escape of blood is large or small. Where the flow is excessive there will be indications of nervous shock, as well as of exhaustion from internal haemorrhage. The patient is suddenly seized with acute pain in the lower part of the abdomen; while there is chilliness or shivering, coldness of the extremities, vomiting, increasing feebleness of the circulation, and a ghastly expression of the countenance. The suffering resembles that produced by rupture of one of the abdominal viscera. Death usually occurs in the course of two or three hours.

In a second set of cases the loss is great but not inordinate. There is violent abdominal pain, tympanites, sickness, and chilliness followed by fever. A sense of pelvic weight is common, with bearing-down pains. The face becomes pinched and pale, and the countenance anxious. Sometimes, but by no means always, there is either difficult micturition with a frequent desire to empty the bladder, or a painful irritability of the rectum. If the catamenia be present at the time of attack they may suddenly cease, or the flow may continue unaltered, or the discharge may even be greatly increased. On examining the lower part of the abdomen, a smooth and elastic swelling will be found in the hypogastric or iliac regions; while on introducing the finger into the vagina, a large tumour will be felt pressing upon this canal. If the finger be passed upwards, the cervix will be discovered drawn upwards
behind the symphysis pubis; but we shall not be able to trace the body of the uterus stretching backwards, as it can be detected in cases of retroversion. On examining by the rectum, the passage of the gut will be found more or less obstructed by the swelling which has been previously detected in the vagina.

The symptoms presented by a third class of cases resemble the foregoing, save that they are less acute. Possibly no tumour can be detected by an abdominal examination, though a well-marked vaginal swelling will be present. Most of these cases do well; although there is a fear of the peritonitis which ensues extending upwards, or of a second attack of hæmorrhage setting in just as recovery is taking place from the first seizure.

To distinguish between intra-peritoneal and sub-peritoneal hæmatocele it may be remembered that in the former the tumour is generally higher (extends more up into the abdomen) than in the latter; while there is greater disturbance of the system, and a more rapid setting-in of peritonitis in the peritoneal than in the extra-peritoneal form. It is rather remarkable, however, that little aid in arriving at a conclusion can be obtained from a vaginal examination; for although theoretically it would seem probable that blood under the peritoneum would press against the vagina and uterus, and so cause displacement much more than an effusion into the peritoneum could, yet in practice it is found that the same results ensue from the blood gravitating in the cul-de-sac between the vagina and rectum.

Diagnosis.—As the recognition of this disease is a matter of recent date, it follows that the symptoms it produces must formerly have been erroneously attributed to other disorders. Cases illustrative of such mistakes, occurring even since 1850, have been recorded; while probably before this time practitioners prided themselves on the correctness of their diagnosis when they classed examples of this affection under the heads of dysmenorrhœa, or of anaemia, or perhaps of those convenient refuges for the destitute—spinal irritation and hysteria. The chief diseases with which pelvic hæmatocele is likely to be confounded, are pelvic abscess, extra-uterine fistula, retroversion of the gravid uterus, fibroid tumours of the uterus, and ovarian cysts.

Considerable difficulty will often be experienced by the most painstaking physician in distinguishing between pelvic abscess and an effusion of blood; for in each there may be local peritonitis, constitutional disturbance, and a pelvic tumour. But the peritonitis sets in after the formation of the tumour in hæmorrhage, instead of preceding the suppuration; while the heat and tenderness about the vaginal walls are much less in the former than in the latter. Nevertheless, where the history of the case fails to throw light upon its nature, and it seems necessary to be exact, the diagnosis must be established by the use of a fine trocar and cannula; just as
we employ the exploring needle in doubtful growths at the surface of the body.

With regard to extra-uterine foetalation it may be remembered that the patient usually believes herself to be pregnant, and she experiences the usual symptoms of this condition. The menses have generally ceased. The practitioner is seldom consulted until the foetus has acquired such a size that its presence can be determined; until indeed rupture of the cyst takes place with abundant hæmorrhage, and then the case as regards treatment may be mistaken for hæmatocele from other causes without any injury to the patient.

In retroversion of the uterus, the position of the os uteri under the pubes, and the possibility of tracing the body of the uterus thrown backwards, point to the nature of the accident.—It would seem impossible to mistake a solid fibroid tumour of the posterior wall of the uterus for a blood-coagulum, did we not know that in one instance an eminent surgeon made free incisions to enucleate a supposed fibroid, and only discovered his mistake too late; while on another occasion the autopsy disclosed the hæmatocele, though the case had been lectured upon as affording a good example of a common uterine tumour.—An ovarian cyst could only be mistaken for a blood-swelling, if the former were small and were confined by adhesions to the peritoneal pouch, between the uterus and rectum. An exploring needle would remove all difficulty, if interference were demanded.

Terminations.—The patient may die outright from the severity of the nervous shock; or from the loss of blood where the hæmorrhage is great, or where one attack of bleeding is followed by a second. The effused blood may become absorbed, and complete recovery follow. The blood will now and again be discharged into the bowel, and escape per anum; the ulceration between the blood cavity and that of the rectum ultimately healing. It has been suggested by Dr. Willoughby F. Wade of Birmingham that a cure is sometimes effected by the effused blood finding its way through the Fallopian tubes into the uterus, and thence into the vagina; and he thinks that in those cases where it has been supposed that the escape has been by a rupture of the vaginal wall, the blood in reality has passed along the oviduct. The blood cyst and its contents can undergo suppuration; recovery perhaps ensuing after protracted suffering and the discharge of serous pus by the rectum, or death taking place from exhaustion. And lastly, the patient may die from the peritonitis which is set up by the effusion, especially where the inflammation spreads and involves the whole serous membrane.

Treatment.—In those formidable instances where the patient is apparently dying from the loss of blood, the only hope of saving life is from the free exhibition of stimulants and essence of beef, with
full doses of opium. The use of sinapisms to the extremities, and the application of bladders of ice to the lower part of the abdomen and the vulva may be of some assistance.

But fortunately those terrible cases are comparatively rare, and there is time to give the patient the benefit of a well directed line of treatment. The most perfect repose in the recumbent posture must always be enjoined, however slight the effusion may at first appear; for without quietude all else will most likely be useless. Opium is to be administered, in doses sufficient to prevent faintness, as well as to relieve the pain. Ice should be continuously sucked to stop the vomiting, while a sinapism may be laid over the epigastrium for the same purpose. Supposing there is reason to fear that the bleeding is continuing, strips of muslin wrung out of cold water or a bladder of ice should be laid over the lower part of the abdomen and vulva. If there be any difficulty in emptying the bladder, the catheter is to be employed; but unless the rectum be blocked up with faecal matter it will be better not to administer any aperient. With regard to the necessity for surgical interference, opinions differ widely. It seems to me, however, quite certain that if the case be progressing favourably, it will be wise to leave well alone; for it is infinitely safer, by gentle means, to do all that can conduce to a sure though slow recovery, rather than to risk the patient’s life by any attempt at a rapid and brilliant cure. The effused blood will in most instances gradually be absorbed, just as certainly as we find those sanguineous tumours disappear which are occasionally developed between the bones of the skull and the pericranium in new-born infants. At the same time, if the symptoms produced by the pressure of the blood are very distressing, or if they are causing increasing prostration, then it may be advisable to puncture with a trocar the most prominent part of the tumour, either through the vagina or rectum. Moreover, if we have reason to believe that there is not only blood but pus present, then recourse can be had to puncture. Sometimes it has been deemed of advantage to leave the cannula in the wound, or to introduce a gum-elastic catheter, so as to prevent too early cicatrisation; while several authorities recommend the frequent injection of small quantities of tepid water to prevent putrefaction of the retained clots. These are proceedings, however, which I should be very loth to adopt. But whether an operation be performed or not, the treatment of pelvic hematocoele, after the subsidence of the acute symptoms, ought to consist in the administration of bark with one of the mineral acids, in carefully avoiding exercise or excitement at too early a period, and in the use of a very nourishing diet. Especially should the patient’s condition be watched at the two or three succeeding monthly periods; so that by keeping her very quiet throughout the flow, we may guard as far as possible against any undue congestion of the sexual organs.
VI. DISEASES OF THE FALLOPIAN TUBES.

The difficulty of recognising morbid states of the oviducts during life is considerable. Many of these states too are frequently not primary diseases but secondary; being such as result from pressure exerted by uterine or ovarian tumours, or by cancerous infiltrations of some of the pelvic viscera. Consequently the symptoms will usually be anomalous, and far from easy to interpret. The chief diseases of these tubes are inflammation, and stricture or occlusion leading to dropsy. The tubes may also become dislocated or displaced, passing (probably in company with the ovary) through the inguinal or femoral openings. Thus, a tumour extending from the inguinal region to the right labium has been found to contain the Fallopian tube of the same side. A fatal case of femoral rupture has also been reported where the sac contained the tube alone.

1. INFLAMMATION OF THE OVIDUCTS.

Although the Fallopian tubes may undoubtedly be attacked with acute or with chronic inflammation, I must confess that I have never been able to diagnose such affections. And it is very probable that the symptoms produced by them so closely resemble those set up by pelvic cellulitis and ovaritis, that they will generally be attributed to one or other of those diseases.

According to most authorities, the principal indications of acute inflammation of the tubes, or salpingitis [from Σαλπίγγεσ = a tube; terminal -ίττις], are deep-seated pelvic pains, with throbbing and tenderness about one or both groins; a sense of bearing-down on assuming the erect posture; together with heat of skin, a dry tongue, constipation, and rapidity of the pulse. In the chronic form, the secretion from the lining membrane is much increased; so that if the uterine orifice of the tube be patent there will be a leucorrhoeal discharge. In rare instances, the morbid action has ended in ulceration or in suppuration; the pus accumulating in the tube like an abscess, if the uterine extremity of this tube has been rendered impervious. Under such circumstances, death has occurred from peritonitis set up either by the pus regurgitating into the sac of the peritoneum, or by its leading to perforation of the walls of the canal.

2. TUBAL DROPSY.

Dropsy of the Fallopian tube is rather an uncommon affection. The fimbriated extremity of this canal, together with the uterine orifice, occasionally gets obliterated from the action of chronic inflammation, or from the pressure of various pelvic tumours.
In such a case the portion of the tube between the openings is very apt to become the seat of an accumulation of pus or of serous fluid; and instances are recorded where an hypertrophied Fallopian tube has alone weighed seven pounds, and has contained twenty-three pints of fluid. The diagnosis of this disease from a simple ovarian cyst is exceedingly difficult, and can only be guessed at in most instances. We can make sure the affection is not uterine where we find an elongated and yielding and fluctuating tumour at the side of the uterus, while this latter organ is able to be separated from the swelling by using the sound. In the museum of the Royal College of Physicians is a preparation, presented by Dr. Francis Hawkins when physician to the Middlesex Hospital, illustrative of dropsy of both Fallopian tubes; the extremities of these canals being all closed.—The Hunterian Museum also contains a preparation (No. 2643) showing a section of a womb having a fibrous tumour in its fundus, and with the fimbriated extremity of one Fallopian tube turned round and closely glued to the side of the uterus; so that in consequence of the closure of both extremities of the tube, fluid has collected in the canal and distended it into an elongated pyriform sac.

The treatment of tubal dropsy, where the suffering is sufficiently severe to require interference, consists in puncturing the cyst with a minute trocar and cannula through the roof of the vagina. Medicines given with the intention of producing absorption are quite useless.

The Fallopian tube may probably become distended with blood in cases where the escape of the menses is prevented by an imperforate os uteri, or by some obstructive disease about the vagina. The menstrual fluid being partly produced by the lining membrane of the oviducts, it must distend these tubes when its outward flow is impeded. After the distension has reached a certain point, it is very probable that the blood will escape at the fimbriated extremities of the tubes; and dropping into the peritoneal cavity, will thus give rise to peri-uterine hæmatocele.

VII. DISEASES OF THE UTERUS.

The greater number of women in this country begin to menstruate between the 14th and 16th year, the time at which this phenomenon is manifested being spoken of as the age of puberty. Not unfrequently a girl will menstruate once about the time she is 14, and then see nothing more for eight or twelve or fifteen months, after which all will go on naturally. For rather more than thirty years the flow recurs every twenty-eight days, calculating from the beginning of one period to the com-
menstruation of the next; while the duration of each period varies from three or four to seven days. Between the age of 45 and 48 years the discharge finally ceases; the date of this cessation being known as the last menstrual climacteric, or the change of life. Sometimes this occurs five or six years earlier, owing to some shock to the system. Thua I have known a permanent cessation take place at 37, in consequence of an attack of typhus, the patient nevertheless enjoying good health and continuing strong at 65. I have seen the same thing happen at the age of 32, as the result of a severe attack of rheumatic fever with endocarditis. Doubtless other disorders affecting the whole system now and then act in a similar manner.

During the years which intervene between the age of puberty and the change of life, there are few diseases of the generative system which are not attended with more or less disturbance of the catamenial functions; and hence either deficient, or painful, or profuse menstruation may become an important symptom of local change of structure. Independently of this, however, disordered menstruation may depend entirely upon a constitutional disease, the generative organs being healthy; while, again, other cases are met with where the uterine organs appear healthy and the general health good, and yet there is some imperfection in the manner in which the menstrual functions are performed.

As just mentioned, the period of sexual vigour (that in which women may be said to be in a fit condition for child-bearing) lasts for a little over thirty years. During this term the female system, both in health and disease, becomes considerably modified by the performance of the function of menstruation; and therefore in treating either the general or the peculiar disorders of women this circumstance should be borne in mind. And it can easily be understood, that if this is the case when the catamenia appear naturally and regularly, how likely it is that any disturbance of this process will give rise to a troublesome complication. The effect of the menstrual molimina is felt by the whole system; but especially does it influence the uterine and ovarian organs when diseased, often proving a source of anxiety while the attempt is being made to cure such affections. Moreover, this menstrual influence renders many of the disorders of the sexual system very tedious; the congestion which precedes and accompanies the flow always aggravating structural mischief for the time.

1. AMENORRHOEA.

Three distinct classes of amenorrhoea [from 'A = priv. + μην = a month + πτω = to flow] have to be described:—(1) The cases where no menstrual fluid has ever been secreted. (2) Those where there has been a secretion of the menses, without any evacuation of them. And (3) the menses having appeared naturally, their return has
become interrupted; or they have been prematurely suppressed, perhaps never to return.

The first form of amenorrhea is not very often met with. In some cases there has been no menstrual secretion because the patient has not reached the age at which the discharge will appear with her. For although the age of puberty mostly occurs between the 14th and 16th year, yet in many instances this does not happen until three, four, or even five years later. Of course such cases of retarded menstruation are no more to be considered as examples of permanent amenorrhea, than is the occurrence of late dentition in infants to be regarded as a perpetual absence of teeth.

But when a female has reached adult life, when her frame has assumed the character of womanhood, when she is not chlorotic, and when all her organs (save the sexual) perform their functions naturally, then a cause for the absence of the flux should be looked for. Most frequently there will be found some congenital malformation. The ovaries are perhaps absent; or, as more frequently happens, they retain their rudimentary condition—that is to say, they would be found, if they could be seen, to present scarcely a trace of Graafian vesicles. Or these glands can exist and the uterus be absent, or so imperfectly developed as to be useless. Or again, the external parts of generation (the labia, nymphæ, and clitoris) may be natural, and yet there can be found neither a trace of a vagina, nor of uterus nor of ovaries.

Occasionally the most complete examination will fail to detect anything wrong with the uterus or ovaries. This is the case in a patient who has been under my care since February, 1855. At the present time (February, 1869), she is forty years of age, robust and apparently healthy, and has been married seventeen years. The catamenia have never appeared; there is no sexual appetite; and there has never been any pregnancy. Yet the external organs of generation are fully developed, the vaginal canal is healthy, while the uterus is of normal size and moveable and naturally placed. The uterine sound passes readily for 2½ inches; and I have attended her for attacks of ovaritis, in which the enlarged glands could be distinctly felt through the vagina. About every eight or twelve weeks—much less frequently now than formerly—there is a menstrual effort; severe pelvic and abdominal pains setting in, with considerable gastric irritability. The pain is at times agonizing, being only comparable to that set up by the passage of a renal or hepatic calculus; while it lasts, in spite of narcotics, for three or four days. Sometimes, but not always, these attacks are followed by a leucorrhœal discharge;—a discharge which many might term a vicarious menstruation. There has never been any symptom of haemorrhage into the peritoneum (pelvic hæmatoccele): though the
probability of such an accident happening during these menstrual molimina has not been overlooked.

Although it is most important for the well-being of women that menstruation should take place naturally, yet it must not be forgotten that the sanguineous discharge constitutes only a part of the process. It cannot be doubted that the uterus and ovaries may be healthy, that a mature ovule may be discharged monthly from a Graafian vesicle, and that the ovule may enter the uterus, while yet there may be no flow of blood from the uterine mucous membrane. The fact of pregnancy occurring in cases where there has never been any sanguineous loss, must be regarded as a proof that this latter part of the menstrual phenomena is not indispensable to the regular accomplishment of the generative functions. Equally true is it, that an excessive flow of blood towards the sexual organs can produce hæmorrhage, without the occurrence of ovulation. I believe that not a few of the examples of very early menstruation which have been recorded, have been nothing more than cases of uterine hæmorrhage; the discharge having had no more connexion with menstruation, properly so called, than if the bleeding had taken place from the nose.

In the second variety of amenorrhæa there has been a secretion of the menses but no evacuation of them. Cases of this kind have already been spoken of in the section on occlusion of the vagina. But this canal may be healthy, while the os uteri is imperforate; owing to which condition the menses will accumulate in the uterine cavity, the latter gradually enlarging as in pregnancy. Now in examining these cases, care must first be taken to ascertain that the patient is not really pregnant; for the uterine orifice may have become closed from the occurrence of inflammation and ulceration after fecundation has occurred. Several examples of complete occlusion from this cause have been recorded; the inflammation having been sometimes excited by attempts on the part of ignorant persons to produce abortion, or by the use of caustics to heal ulcerations upon the labia. Moreover, disease may be set up in the cervix by a difficult labour; and then intercourse taking place before cohesion between the sides of the os uteri has happened, pregnancy has followed while the disease has also progressed.

Supposing, however, that the diagnosis is clear, and that there is a menstrual accumulation, an outlet for the latter must be made. When the os is merely closed by a membrane, this structure may be incised with the bistoury, or it can perhaps be ruptured by the uterine sound. Generally, the occlusion is more perfect; and then, if it be possible to detect any spot or dimple, where the orifice should naturally exist, it will be advisable to carefully perforate this part with a proper trocar and cannula. As
the menses drain away, and for some time subsequently, care must be taken to prevent the opening thus made from closing; and this is to be done by daily using a bongic, or by occasionally introducing a small sponge or sea tangle tent (F. 426). Moreover, if the uterus be large, a compress and binder had better be applied to the abdomen directly after the operation. On the other hand, an incision or puncture will be properly made, and yet the fluid cannot be reached; either because the enlarged uterus is too far from the vulva, or because there is no proper connexion between the womb and the vagina. Then again, there are cases where the vagina is not only wanting, but it does not seem feasible to attempt the formation of such a canal. Under any of these circumstances, in order to prevent rupture of the uterus, this organ will have to be opened through the rectum; this unsatisfactory procedure being adopted with the precautions already noticed.

There remains to be considered the third and by far the most common form of amenorrhoea; viz. that in which the flux having been properly established, and having appeared regularly for a longer or shorter time, becomes prematurely arrested.

This form of suppression may occur suddenly, while the discharge is on, owing to some mental shock, or to the setting in of a severe fever or other acute disease, or in consequence of exposure to damp or cold. On the other hand, the amenorrhoea may take place gradually,—that is to say, without any apparent cause, the menses will not come on at the expected time, though they were natural at the previous period; or the flow may become less and less for several periods, and then entirely stop. There is usually more constitutional disturbance in cases of abrupt or acute, than of chronic suppression; but the latter is most to be feared as it is generally indicative of a more serious cause. With this form of amenorrhoea we sometimes have a variety of sympathetic ophthalmia set up. The conjunctiva gets congested, &c. at the time of the menstrual flow being due. Supposing the latter comes on, relief is experienced; but otherwise, the conjunctivitis continues and does not complete its course for some six or seven days. In almost all cases of phtisis, occurring in women during the period of sexual vigour, there is disturbed menstruation. Sometimes, as the disease is setting in, I have had to use astringents to check an excessive flow; but as a rule, the history is that of a gradual lessening of the secretion, until by the time that the tubercular deposit has begun to soften, there is complete amenorrhoea. The same course of events can be noticed, though less constantly, in affections of the kidney producing albuminuria; as well as in many other diseases which tend to induce anaemia. Moreover, inflammation of the ovaries or uterus may inflict so much structural mischief as to stop menstruation. And lastly, the occurrence of suppression in consequence of pregnancy must
not be forgotten; nor should we overlook that temporary cessation which sometimes occurs for the two or three periods following upon marriage, and which leads the woman to suppose herself pregnant when the amenorrhœa is only due to excessive excitement.

With regard to the treatment of suppressed menstruation, the mitigation or removal of the cause should be the practitioner’s first aim. Then, if there be any menstrual effort, this should be encouraged, and if not, attempts ought usually to be made to induce it. Where the prominent symptoms are those of general plethora, much good may be done by administering purgatives, selecting such as will unload the congested liver while they excite the uterine organs. A mixture of nitric acid and taraxacum and senna (F. 147), or of aloes and senna and sulphate of magnesia (F. 150), or of gamboge and aloes and blue pill (F. 174), or of podophyllin and aloes (F. 422) will often serve this double purpose. When the bowels have been acted upon, iodide of potassium in small doses, with five or ten drops of tincture of iodine will sometimes bring on the flow. These medicines should be particularly given as the time for the period approaches; and then if there be no flow, from three to six leeches may be applied to the lips of the uterus by means of the speculum. Enemata of hot salt water often do good. Sea bathing, or cold hip baths, or mustard podiuvia will also deserve trial. Plenty of exercise should be taken on foot or even on horseback. A light and unstimulating diet had better be ordered.

Instead of the system appearing plethoric, however, the indications are much more frequently those of anaemia. Under these circumstances, the general health is to be improved; and no drugs are generally more useful than those which contain some preparation of steel. The patient is on no account to be purged; but if there be constipation a daily evacuation may be procured by giving steel in combination with aloes (F. 154, 393, 404). Stimulating diuretics sometimes prove serviceable—particularly the spirit of nitrous ether, and the spirit of juniper or common gin. The other remedies deserving of recollection are the iodide of iron (F. 32), strychnia and steel (F. 408), savin and steel (F. 421), oil of rue and ergot (F. 422), stimulating foot baths, hot hip baths, vaginal injections of warm water, galvanism, &c. I have no faith in galvanic pessaries (intra-uterine stems formed of parallel bars of zinc and copper) for any form of amenorrhœa, but on the contrary believe they may produce much more mischief than can arise from the condition they are meant to relieve. The continuous galvanic current passed through the pelvic viscera may however be useful. The use of the waters at Spa (F. 467), Ems (F. 486), Schwalbach (F. 488), Eger (F. 498), &c., may be recommended under certain circumstances. The diet ought to be nourishing, care is to be taken that the food is properly assimilated, and some
light wine or beer must often be allowed. Exposure to damp and cold is to be carefully guarded against; while the body should be warmly clothed, having flannel next the skin.

With regard to those cases where the suppression is a part only of some severe disease—e.g. phthisis, Bright's disease, &c. attempts to bring back the discharge will only prove injurious. It has always seemed to me, that the cessation of the flow in such cases is really conservative; while its spontaneous return may be taken as evidence of a general tendency towards improvement.

2. **DYSMENORRHOEA.**

The woman who enjoys perfect health not only menstruates regularly, but she does so free from any suffering. There are very few, however, who pass through the whole period of sexual vigour without more or less frequently having to endure an attack of dysmenorrhoea [from \( \Delta \upsilon \kappa \zeta = \text{difficulty} + \mu\iota\nu = \text{a month} + \beta\iota\omega = \text{to flow} \)]. Some few females experience great pain with each flow, from the commencement of puberty until the change of life; while in others, pain is only an exceptional accompaniment. With some women marriage effects a cure; while in others (especially where there is sterility) it either aggravates or originates dysmenorrhoea. Whether this pain has its seat in the uterus, or ovaries, or pelvic peritoncum, or in the pelvic connective tissue is often difficult to determine. Three distinct varieties of dysmenorrhoea have to be considered—viz. the neuralgic, the congestive, and the mechanical.

1. **Neuralgic dysmenorrhoea** seems most frequently to afflict young nervous women, in delicate health at the time of puberty; or it comes on after some ten or twelve years of painless menstruation, especially in those who have never been pregnant.

The suffering usually commences a day or two before the period, with a feeling of malaise, headache, and pain about the sacrum and lower region of the abdomen. The upper and inner parts of the thighs become tender, the surface of the abdomen feels sore, and a sense of weight or bearing down about the pelvis is complained of. "Suppose the discharge then comes on at all freely, relief is generally experienced; but more commonly there are only slight gushes, or the flow is scanty, and the suffering becomes so severe that the patient is obliged to keep in the recumbent posture. If she obtain a few hours’ ease, she is in fear of the pain returning; experience having taught her that a short respite may be followed by a violent paroxysm. It is probable that the ovaries are more the seat of this neuralgic pain than the uterus; though the bearing down may be due to the irritability of the oe and cervix uteri, being analogous to that troublesome straining and frequent desire to go to stool which is so constantly
present in diseases of the rectum. On making a vaginal examination, during the intervals, only negative information will be obtained. The parts are neither swollen nor hot, and even on pressing about the ovarian regions little or no tenderness may then be complained of. The effects upon the system are seldom well marked. Yet the patient without being ill can scarcely be said to be well. She is sometimes hysterical, is apt to suffer from flatulence and nausea and constipation, has frequent attacks of headache, is chilly, and often labours under fits of mental depression.

The cure of neuralgic dysmenorrhea is almost always tedious. To relieve the pain just before the flow comes on, the hot hip bath should be employed; the patient remaining in it for from thirty to forty-five minutes. The addition of an ounce of carbonate of soda with the same quantity of extract of poppies to the water, renders it more soothing; while this good effect can be best kept up by the use, immediately afterwards, of a pessary of oxide of zinc and belladonna (F. 423). Where the pain continues severe, some other narcotic will also be needed; and recourse may be had to a mixture of Indian hemp and ether, &c. (F. 342), or to one or two grains of the extract of opium with a glass of hot gin and water, or to the hypodermic injection of morphia (F. 314).

During the intervals between the periods the general health must be improved, and the nervous system strengthened. Such tonics as bark and phosphoric acid and aconite (F. 376), quinine and one of the mineral acids (F. 379), salicin with some bitter infusion (F. 388), or the hypophosphite of soda and sumbul (F. 419), often prove very serviceable. Cod liver oil (F. 389) is frequently useful. Supposing there to be any evidence of gout or rheumatism being connected with the pain, the remedies for these diseases will have to be recommended. So if the patient has been exposed to the influence of malaria, large doses of quinine or of arsenic will be called for. If there be constipation, mild laxatives may be prescribed,—compound rhubarb pill, the offervescing citrate of magnesia, a teaspoonful of taraxacum juice in a tumblerful of cold water, or simple emolata. A cupful of chamomile tea, taken early every morning, not only acts as a tonic and stomachic, but will probably also serve to keep the bowels regular. The diet is to be nourishing, milk or cocoa being substituted for tea and coffee: a regulated quantity of wine, or of weak brandy and water, or of bitter ale, may usually be allowed. Country air and out-door exercise, early hours, interesting pursuits, and warm clothing are all important aids in forwarding recovery. With married women, it is better to forbid sexual intercourse for a few weeks—possibly ten or twelve; and then should pregnancy happen, the cure may be regarded as accomplished. During the period of rest, if there be persistent tenderness about the ovaries the belladonna pessaries already recommended should be
used every night, or every other night. Under these circumstances also, chlorate of potash and bark will often agree remarkably well.

2. Congestive dysmenorrhæa, sometimes described as inflammatory dysmenorrhæa, generally occurs at a later time of life than the neuralgic form. The cause of this variety may be simple congestion with irritability of the uterine lining membrane; or the symptoms will be found connected with endometritis, or ovariitis, or pelvic cellulitis, &c.

The suffering commences, or is greatly aggravated, four or five days before each period; while it may continue, with more or less interruption, for a week. Complaint is especially made of nausea, backache, weariness and restlessness, and a sensation of weight about the pelvis. Frequently the patient also suffers from hemorrhoids, with now and then more or less prolapsus of the rectum; while she is annoyed with repeated flushings, and there is often severe throbbing pain about the uterus. The discharge comes on very gradually; and as for the first day or two it is usually scanty, so it fails to relieve the suffering. But when the flow becomes more abundant, the distress gets mitigated; though there are often paroxysms of pain, as small clots and shreds of membrane get expelled from the uterine cavity. These shreds of membrane are of variable size; occasionally consisting of large flakes, and at other times of small pear-shaped sacs which constitute complete casts of the cavity of the uterus. Such casts are smooth and polished on their internal, and rough and villous on their external surfaces; their continuity being broken at certain parts, showing where the orifices of the os uteri and Fallopian tubes have existed. They consist of the epithelial lining of the uterus, being analogous to the decidua. The epithelial coat of the vagina is sometimes thrown off under the influence of inflammation, as has been previously mentioned.

If a vaginal examination be made in the interim between the periods, the cervix uteri will generally be detected congested and tender, the lips will be often seen excoriated, and there will be found pain on pressing the ovaries. There is usually an abundant and tenacious leucorrhœal discharge. Sometimes also there is uterine displacement; the bladder or the rectum being irritable according as the womb is anteflexed or retroflexed. In other instances the uterus is merely found lower in the pelvic cavity than it should be, owing to its being heavier than natural.—Frequently the breasts swell and become very tender; the tumefaction and pain increasing as each period approaches, but never entirely subsiding during the interval.

The remedies recommended for the relief of the pain in neuralgic dysmenorrhœa seldom fail to afford considerable alleviation in the form under consideration; but where they seem inefficient,
and where the discharge does not come on at the proper time, the application of three or four leches to the lips of the uterus will be serviceable. Not unfrequently I have been able greatly to mitigate the suffering by scarifying the edematous uterine lips directly the increased uneasiness and pain have indicated that the period is approaching.

Throughout the interval attempts must be perseveringly made to effect a cure. The patient should live plainly, avoiding stimulants. She should take out of door exercise without inducing fatigue: but long country walks, dancing, and riding on horseback are to be forbidden. So long as dysmenorrheal membranes come away, pregnancy is scarcely possible; and in such cases it is always better that sexual intercourse be avoided. As helping to produce a more healthy condition of the uterus and ovaries, while relieving the backache and bearing-down and the vesical or rectal irritability, I would recommend the steady employment of the iodide of lead and belladonna pessaries (F. 423). And then, if the disease be associated with the gouty or rheumatic diathesis, or if it have its origin in a syphilitic taint, as I am sure it sometimes has, the proper remedies for these affections must be resorted to. It is in such cases especially that warm sea water baths, colchicum, iodide of potassium, cod liver oil, and mercurial vapour baths succeed in restoring health, when other remedies have failed, and the patient has almost become disheartened.

3. Mechanical dysmenorrhea is that form in which there is some obstruction to the free escape of the menstrual discharge. Hence, there are more or less violent expulsive pains, coming on in paroxysms—uterine tenesmus. The causes of the obstruction are various. There is either a stricture of the internal orifice of the uterus, or a narrowing of the whole canal of the cervix; or the external os uteri is abnormally small and contracted; or there is some uterine tumour, interfering with the patency of the cervical canal; or there is a malposition of the uterus, such as retroflexion or anteflexion, bending the uterus and giving to it the form of a common retort.

On the present occasion, I shall only treat of those cases where the dysmenorrhœa is due to stricture of the internal or external os, or to narrowing of the entire cervical canal. And believing as I do that this variety of painful menstruation is far from uncommon, that it gives rise to very considerable suffering at the periods, that it is one of the most frequent causes of sterility, while at the same time it is very amenable to proper treatment,—believing all this, I shall not distract my readers with the different opinions which gentlemen entertain on these several points. For here, as in other departments of uterine pathology, there is much disagreement; the views of obstetric physicians as to the proper management of many of the cases which fall under their observa-
tion varying as widely, as we find those of other practitioners to do when they speak of the treatment of acute inflammation, of the use of stimulants, of glaucoma and iridectomy, of stricture of the male urethra, of the resection of joints, or even of the comparative value of lithotomy and lithotripsy.

The symptoms produced by contraction of the cervical canal are such as indicate an obstruction to the escape of the menstrual fluid. There is usually a scanty flow. Often the discharge escapes in gushes instead of oozing drop by drop through the os uteri, each gush being preceded by a bearing-down effort and accompanied by an explosive pain. The stomach is irritable, so that there are attacks of nausea and retching, with flatulence and perhaps constipation; while there is always severe backache, often irritability of the bladder, and frequently congestion with tenderness of the ovaries. The narrowing will either be congenital, or it may be the result of an attack of endometritis. On making an examination, the os uteri will be seen very small, perhaps not larger than a common pin’s head; or it may be of the natural size, the stricture only existing at the internal os, through which the uterine sound cannot be introduced without considerable difficulty. Sometimes the contraction is so great that we are unable to pass the sound at all, or it can only be made to enter for about an inch or less. In such cases we must either wait for the end of a menstrual period, or relax the tissues by the application to the uterine labia of three or four leeches before again using this instrument.

The treatment required in these cases consists in so permanently widening the cervical canal that the menses may pass away without difficulty. The question is, how to do this efficiently and with the least risk? Many physicians recommend gradual dilatation; and they effect this either by bougies, sea tangle or sponge tents, or by the introduction of instruments with expanding blades which are specially made for the purpose. Now there is one great objection to this practice—not that it is painful, for all local interference causes more or less suffering; not that it is apt to be followed by pelvic cellulitis, for there is a liability to this in whatever way the uterus may be handled,—but that it does not effect a permanent cure. For to whatever justifiable extent the stretching may be carried, the contraction will certainly return; unless, indeed, pregnancy should fortunately occur directly the course of treatment is over. If we take a piece of india-rubber, shaped and perforated down its centre so as to resemble the uterus, and then daily introduce a larger and larger bougie along the roughly-made passage, leaving the instrument in for ten or fifteen minutes on each occasion,—we shall succeed in forming, by the end of a month, just as great a canal as we can do in the case of the cervix uteri by the same means. A piece of caoutchouc does not more certainly contract after extension, than does the fibro-muscular
structure of the nulliparous uterus. It has happened to me to have to dilate, with sponge tents, a virgin cervix for the removal of an intra-uterine polypus. Six weeks after the extraction of this growth, which was the size of a small orange, the contraction of the cervix had become so great that the sound could only be introduced by employing a little force; although there had been no inflammatory action, and the cure had been effected without an untoward symptom. But I might speak nearer the mark, and adduce instances where I have perseveringly tried dilatation in these cases of contraction, and where the result has been most disappointing to the patient and myself. Suffice it, however, to say, that nothing which I have read, and nothing which I have done, can lead me to advocate this practice.

Some years since (about 1847) Sir James Y. Simpson recommended the incision of the narrowed uterine canal by means of the hysterotome. Of course, this operation has been deemed perfectly unjustifiable; while sad pictures have been drawn of the results which have followed its employment. Nevertheless, among the many improvements in practice which we owe to Professor Simpson's great skill, I believe there are few for which we ought to be more grateful than for this. The hysterotome invented by this gentleman is well known. It is indeed only a concealed knife, the sharp edge of which can be made to protrude to a regulated extent by pressure upon a spring; but as there is only one blade, it has to be applied first to one side of the cervical canal and then to the other. In using it there is a fear also that the incisions may be made too deeply, and hence that severe hæmorrhage will arise from wounding the circular arteries which are found in the neighbourhood of the internal os. To obviate these inconveniences, a very ingenious curved double-action hysterotome has been constructed by Mr. Coxeter, under the direction of Dr. Routh; and I have pleasure in saying that this instrument answers its purpose admirably. The blades are protected, so that the instrument is introduced like the uterine sound, passing it upwards until the lips of the os rest upon the broad shoulder; and then by pulling down the handle from the sheath, the blades are made to open and expand, producing a limited and uniform cut surface as they descend.

The way in which, then, I now treat these cases of contraction is as follows:—The patient is placed upon her left side, in the ordinary position for labour, with her legs drawn up and the body curved. The bowels have been previously well acted on. Chloroform is seldom needed. The sound is passed to render the canal more patent, as well as to make sure that there is no abnormality except the stricture; and then the hysterotome is introduced, without using the speculum, and the incisions being rapidly made, the instrument is withdrawn. Having been taught by experience that severe bleeding is apt to follow this operation, I always take steps to prevent it; either by employing one of Dr. Greenhalgh's spring
stem pessaries which compresses the cut surfaces, or by plugging. To do the latter properly, it is necessary to introduce the speculum; through which I first pass a long strip of oiled lint completely up the whole length of the cervix, and then push up pellets of cotton wool into the vagina so as firmly to plug this canal. The only inconvenience which results from the employment of the plug is, that micturition is most times impeded, so that the catheter has to be employed; but to counterbalance this, the patient can be left with the conviction that she is safe from bleeding. The plug, thus introduced, is usually left undisturbed for forty-eight hours; and then, after its removal, I insist upon the strictest quiet being maintained, not even allowing the patient to sit up in bed, lest haemorrhage should come on. The following day I introduce the uterine sound, well covered with lard; for it must be remembered that no operation will answer in these cases unless we adopt measures to keep the incisions open. After thus using the sound on two or three days I introduce a slight and curved uterine stem which has been made for me by Mr. Coxeter; and this the patient is allowed to wear, unless it be badly borne, for several weeks. She leaves her bed and walks about while the stem is in the cavity; although of course she is watched at intervals, so as to guard against any attack of inflammation. Very rarely (much more seldom indeed than after the employment of sponge tents) symptoms of pelvic cellulitis have set in; but the prompt use of hot hip baths, medicated pessaries, and opiates has always checked the mischief. I do not remember having met with any case where the inflammation has gone on to suppuration under these circumstances. Moreover, the operation has never proved directly or indirectly fatal in my hands.—I have been thus minute in describing this proceeding partly on account of its importance in regard to the cases under consideration, and partly also because, as will appear further on, it is a valuable operation in some of the other diseases to which the uterus is liable.

3. MENORRHAGIA AND MЕТРОРRHAGIA.

Two forms of uterine haemorrhage have to be distinguished, viz., menorrhagia and metrorrhagia. The term menorrhagia [Μηρος = the menses + ρηγματ = to burst out] should only be applied to cases of increased menstrual flow; although it is very often employed to signify any sanguineous discharge from the uterus other than the normal monthly escape. Metrorrhagia [Μηρος = the womb + ρηγματ] is the technical expression for haemorrhage occurring from the uterus, independently of menstruation.

By excessive menstruation is frequently meant either a more abundant escape than is natural to the subject of it, or a prolonged flow, or a recurrence of the sanguineous discharge at short intervals—sometimes so short that the patient says she is constantly
unwell. As a rule to which there are many exceptions, the first variety depends upon undue uterine and ovarian congestion, set up by constitutional causes; the second is also caused by some general influence, or it is induced by slight disease of the uterus or ovaries; while the third (more correctly spoken of as metrorrhagia or uterine haemorrhage) is generally significant of the presence of some organic disease.

The catamenia may be abnormally increased from conditions which produce attenuated blood; as tuberculosis, granular degeneration of the kidneys, affections of the spleen, anaemia from whatever cause but especially from prolonged lactation. Another common cause is excessive congestion of the ovary and uterus during the maturation and escape of the ovule. The same result also ensues from any great excitement at the monthly period, or excessive sexual indulgence at other times; from metritis and ovariitis; from the approach of "the change of life;" from such relaxation of the uterine tissue as is often associated with abrasion of the lips of the cervix, as well as from the hæmorrhagic diathesis, or from purpura hæmorrhagica. Moreover, where there is structural disease of the uterus—e.g. fibroid tumour, polypus, or cancer—the menstrual flow frequently merges into uterine hæmorrhage, and thus proves most troublesome. It is frequently very disheartening in the treatment of fibroid tumour to find, that just as the strength is being regained the monthly period comes round; the flow, by its excess, prostrating the patient, and undoing all that has been accomplished in the preceding two or three weeks.

The diseases which give rise to uterine hæmorrhage, properly so-called, are principally cancer; polypi, whether cellular or glandular or fibrous; as well as fibroid tumours, especially such as produce enlargement of the uterine cavity, or which impede contraction of the muscular fibre-cells and other-structures composing the wall of the uterus. Then this condition may be occasioned by congestion of the uterus or ovaries; by inflammatorystenrgement or hypertrophy of the whole uterus, or of the cervix and labia only; and by fungoid degeneration of the mucous membrane lining the uterine cavity. Among the more exceptional causes of hæmorrhage we must not omit to mention pelvic hæmatoccele; subinvolution, as well as chronic inversion of the uterus; and the retention in the womb of any portion of a product of conception,—such as a vesicular mole, &c. Any of the foregoing affections may produce frequent attacks of bleeding, or a constant loss. The blood comes away steadily, drop by drop, with occasional small coagula, so as to saturate three or four napkins in the twenty-four hours; or there are gushes at intervals, with large clots; or the loss at times becomes so severe as to amount to flooding. The practitioner must also remember the frequency with which copious hæmorrhage proves to be the precursor of abortion; no less than the
constancy with which it indicates more or less separation of the placenta—perhaps owing to placenta previa—in the latter months of pregnancy.

Now with regard to uterine haemorrhage it is scarcely necessary to say, that the effects upon the system will vary with the extent of the loss. In most of the instances which have come under my notice these effects have been but too well-marked. Thus, the patients have been pallid and feeble, unable to go through any exertion, low-spirited, and restless at night; they have suffered from loss of appetite and constipation; there has been more or less irritability of the stomach, as indicated by frequent attacks of nausea and sickness; and occasionally I have found considerable oedema of the lower extremities. In severe cases the bloodless aspect of the patient, and the attacks of syncope which have followed on any attempt to assume the upright posture, have sufficed to show the alarming condition to which the sufferers have become reduced.

Such being the troublesome and dangerous symptoms which may arise from protracted or frequent attacks of flooding, it appears very important that we should have some rule to guide us in their treatment. And it seems to me, from a careful observation of many cases, that some such law as the following may be laid down:—That when a woman suffers from repeated attacks of uterine haemorrhage, which can only be partially or temporarily relieved by the use of rest, nourishing food, and proper astringents, we may be sure that there is some organic disease of the ovaries or of the uterus. If of the former, one or both of the glands will be found enlarged or tender, on making a vaginal examination; if of the latter, the same proceeding may at once afford either positive or only negative evidence. By positive evidence is meant that there will be discovered simple or malignant ulceration of the cervix; or a polypus or other tumour projecting at the os uteri, or lying in the vagina; or an inversion of the uterus; or a morbidly patent os uteri, the consequence of cervical endometritis. The value of negative evidence is, of course, difficult to appraise. Still, although the os uteri may only be of the normal size and free from any excoriation, and though the cervix and body may feel healthy to the touch, yet we can be certain that the bleeding is due to some actual disease—that it is not functional. I would say, under such circumstances, that it is in all probability caused by one of the following conditions:—Either by malignant disease confined to the fundus uteri, by an unhealthy pulpy condition of the mucous coat, or by the growth of fungoid vegetations on this coat; by some dead or diseased product of gestation, retained within the uterine cavity; or by the presence of a polypus, or of a fibroid tumour. The first of these causes is so rare, that it need not be allowed to enter into our calculation; inasmuch as, after some research, I am inclined to think that half a dozen specimens of
cancer, confined to the fundus are not to be found in the whole of the pathological collections of the London Hospitals. With regard to the remaining causes there is only one plan of treatment which can be adopted with a reasonable hope of success, and that is to dilate the os and cervix thoroughly, with sange or sponge tents (F. 426), so as to permit of the removal of the source of the evil. For it matters not whether there be disease of the lining coat of the uterus, a dead ovum, or a tumour, so far as the production of haemorrhage is concerned; while with regard to the two latter conditions, at least, nought but removal can lead to an effectual cure.

It will be necessary to confine the remarks upon the treatment of menorrhagia and metrorrhagia in general to the steps to be adopted for controlling the haemorrhage; since the proceedings required for removing its cause are treated of in describing the morbid conditions which give rise to menorrhagia or metrorrhagia. At once, therefore, it may be said that astringents are the remedies chiefly to be trusted to; and the best of these are gallic acid and cinnamon, either alone or in combination, or with the aromatic sulphuric acid (F. 103, 104). Some authorities advise the acetate of lead: if used, it should be given in larger doses than are ordinarily employed (F. 117). Where any inflammatory action exists, mercury will be a good agent to employ; and, as before mentioned, I prefer the solution of corrosive sublimate (F. 27). The ergot of rye has no styptic property; though when the bleeding is due to a flabby state of the uterus, this drug does considerable good by inducing contraction. There is no objection to administering it in combination with astringents (F. 103). Supposing there is anaemia as a cause of the loss, the ammonio-sulphate of iron proves very efficacious (F. 116); more so, in my opinion, than the perchloride of iron. The latter, however, is sometimes serviceable (F. 101). Every now and then we meet with cases where the discharge of blood is excessive, though we can detect no cause for it, and where no kind of astringent or tonic has the least effect. In such I have found most benefit from corrosive sublimate, or some other preparation of mercury; the infusion of digitalis, in half-ounce or ounce doses, as strongly recommended by Drs. Dickinson and Robert Lee, having given me nought but disappointment.

The local remedies to be resorted to are of considerable importance. The principal are as follows:—A favourite remedy is the application of cold water over the pubes. To be of any service, ice in a bladder should be employed. Napkins dipped in vinegar and water, soon get converted into offensive fomentations. The frequent introduction of small lumps of ice up the vagina, or the use of enemata of very cold water, will often prove efficacious. The same remark applies to vaginal injections of tannic acid or infusion of matico; especially if the patient’s hips be so raised that a portion of the fluid can be retained at the top of the vagina. I have also
seen great good follow the employment of astringent vaginal pessaries (F. 423); or the use of Farination where there is a want of muscular contraction; or the introduction of sponge tents up the canal of the cervix, and through the internal os (F. 426). These plans failing, or it seeming probable that they will fail if tried, recourse should be had to plugging the vagina firmly with some soft material like cotton wool; or with a sponge soaked in vinegar; or with an elastic air-ball enclosed in a case of spangio-pilne, which is capable of exerting considerable pressure on being distended. Plugging the os uteri only, with lint or cotton wool, does not succeed as well as might be anticipated; for the foreign body seems to cause contraction, so that it is soon expelled into the vagina. In several instances where there has been troublesome hæmorrhage from the upper part of the interior of the uterus, I have succeeded in stopping it with the styptic rod of tannin and cacao butter (F. 424). The passage of this rod into the uterine cavity is easily accomplished; while in no case has its retention and dissolution in the uterus produced any unpleasant symptoms. The patient is of course to be kept quiet in bed in all cases; the diet, &c. being such as has been advised in managing the other important varieties of hæmorrhage.

4. UTERINE CATARRH.

The mucous membrane lining the uterus, like that of other cavities, will now and then become affected with catarrhal or croupy inflammation. This condition, accurately defined by the term endometritis [from ἐνδόω = within; μύρων = the womb; terminal -itis], is attended with one prominent symptom—a tenacious mucous discharge; and hence the disease is commonly spoken of as uterine catarrh, or uterine leucorrhea.

Causes.—Whatever irritates the uterine mucous membrane is apt to set up inflammation in this tissue. Hence it is never met with before puberty, though it is by no means rare afterwards. The most common cause of endometritis is the too frequent occurrence of pregnancy, especially when one gestation after another ends in abortion. Polypi within the uterus, as also intra-uterine fibroids, will set up a low form of inflammatory action. Congestion of the uterus may terminate in inflammation of the lining membrane; and in this way exposure to cold and wet, excessive sexual excitement, &c. must be mentioned as causes. Contact with an unhealthy secretion from the male urethra will often induce inflammation; or vaginitis, however originated, can give rise to it when the morbid action travels upwards. Endometritis occasionally occurs as the consequence of a morbid state of the blood. Thus, it is sometimes a manifestation of a syphilitic taint; it may happen during the course of the eruptive fevers; and it has been also observed in cases of typhus and typhoid fever.
of cholera, of dysentery, &c. Just prior to the menstrual period a state exists very much resembling that of catarrhal inflammation; and unless there be sufficient vitality to produce rupture of the vessels and the consequent natural discharge, the inflammatory action will very probably persist and uterine leukorrhoea supersedes or become vicarious of the catamenia. This is a condition often met with in delicate young women for two or three periods after the first menstruation, constituting the *menstrae albae* of old authors; while it is very common in cases of chlorosis, in the anaemic condition which is present during convalescence from severe disease, &c. About the change of life, moreover, a mucous discharge from the uterus not uncommonly takes the place of the menses for a few periods before their final cessation.

*Pathology.*—The inflammation may be acute or chronic; while it is either limited to the mucous membrane of the cervix, or that of the body and fundus of the uterus will likewise be involved. Not unfrequently, the morbid action is confined to the lining membrane of the body of the womb.

Where the affection is acute (acute catarrhal endometritis) the whole structure of the uterus seems to be more or less spongy and congested. The lining membrane is rendered intensely red, oedematous, and softened; while occasionally there are small and scattered patches of extravasated blood. The tubular follicles become somewhat turgid and prominent. The mucous membrane is also easily scraped or separated in shreds or laminae from the subjacent tissues; while now and then it comes away as a complete cast of the uterus. Although at first this membrane is unnaturally dry, it soon pours out a thick tenacious discharge; which subsequently becomes muco-purulent, and often more or less tinged with blood. The more the cervical portion of the mucous membrane is involved, the more tenacious and gummy will be this discharge; which then imparts a starched greenish-yellow or a yellowish-red stain to the patient's linen. The lips of the cervix are often swollen, while they exhibit patches of excoriatio n or one large abrasion.

Chronic catarrhal inflammation presents a condition analogous to that which is seen in chronic nasal catarrh; that is to say, we have an irritable membrane, oedematous in some parts and excoriated in others, secreting an abundant glairy mucus resembling the white of egg. There is no active congestion; but the membrane is spongy, and is often thrown off in small flakes. The discharge is seldom tinged with blood. Acute endometritis sometimes runs its course in ten or fifteen days, and the morbid action entirely ceases; but much more commonly it insensibly passes into the chronic form, when a most troublesome and obstinate disorder gets set up. In consequence of it there may occur a kind of fungous degeneration of the uterine mucous membrane; in which we find this structure more or less studded with little sessile growths, or with minute vegetations like follicular polypi. Such
a degeneration keeps up the catarrhal secretion, while it is also a frequent cause of metrorrhagia. According to some authorities, endometritis may cause glandular and cystic growths; while even fibrous polypi or tumours will result, if the proliferations of the mucous membrane go on to a sufficient extent.

Symptoms.—In the acute variety there are certain general symptoms always present. Thus, we find more or less feverishness, general irritability, a sallow complexion, and loss of appetite; pain about the lower part of the abdomen, the sacrum, groins, and upper part of the thighs; a feeling of heat and fulness in the pelvis; a sense of bearing-down, which is relieved by the recumbent posture; and a frequent desire to pass urine, this secretion being loaded either with urates or uric acid. At first, also, there is often diarrhoea and tenesmus; but in a few days the bowels may become just as much confined as they were previously relaxed. Haemorrhoids are not uncommonly present; at times there is prolapsus of the bowel. The ovarics and uterus are always very tender on pressure, while an internal examination shows that the latter organ is congested and augmented in volume; but when, about the third day, a secretion takes place from the mucous membrane, this tenderness and congestion begin to diminish, while we find the os uteri patulous and the cervical canal dilated.

The chief symptoms of the chronic form are the abundant catarrhal discharges, and the painful derangement of the menstrual functions; while there are also obstinate disturbances of the digestive functions, backache, headache, lassitude, and a slow loss of strength. For a long time the patient is neither ill nor well; and though she gets low-spirited, yet she oft-times tries to persuade herself that there is nothing wrong. After the discharge has continued for some weeks, it begins to tell upon her health; while her sallow appearance, loss of appetite, and incapacity for any mental or bodily exertion begin to alarm her friends.

Now although there is much difficulty in saying where the acute process terminates and the chronic commences, yet it is much easier to ascertain from the symptoms whether the morbid action be confined to the mucous membrane of the cervix, or whether that of the body and fundus be also involved. For in the latter case, the disease not only appears to be more generally severe, but it has a peculiar tendency to set up hysterical or convulsive affections, to induce frequent attacks of nausea and tympanites, to make the breasts tender and swollen, and to cause menorrhagia. Moreover, in endometritis of the fundus a digital examination provokes much more abdominal and pelvic pain than is complained of when the inflammation is limited to the cervix; while in the former the introduction of the uterine sound causes much local suffering, and often brings on an attack of hysteria or even an epileptiform seizure. In both, the withdrawal of the
sound is followed by a glutinous and often sanguineous discharge, the latter perhaps persisting for two or three days; while also in both forms, ulceration, or at all events, excoriation, is set up about the lips of the womb, probably through the irritation caused by the acrid discharge. When the disease is limited to the cervix, the uterine cavity generally remains of its natural size.

Chronic endometritis is an occasional cause of vaginitis, of vulval pruritus, of ovarian irritation, of menorrhagia, of abrasion of the labia uteri, of stricture of the canal of the cervix, of contraction of the os uteri, and of sterility. The persistence of an abundant purulent discharge for many months must greatly injure the general health; and consequently it now and then happens that these cases lead to tubercular disease of the lungs, or to amyloid degeneration of the liver or kidneys or other important structures.

Diagnosis.—The symptoms of acute endometritis are so characteristic that this disease can scarcely be mistaken for any other. After the disorder has been present for some time in a chronic form, there may be some little difficulty in distinguishing between it and chronic vaginitis. The discharge in uterine catarrh consists of an alkaline plastic fluid, containing mucous and pus corpuscles, fatty matter, casts of the tubular follicles, and perfect with disintegrated cylindrical epithelium. In vaginal catarrh the white or creamy-looking secretion is made up of an acid plasma, with fatty particles, mucous and pus cells, and tesselated or pavement epithelium. On other points, attention to the remarks made at p. 333 will help to prevent the practitioner from committing any error.

Treatment.—The management of the acute form is chiefly resolved into ordering complete rest in bed, a diet of fish and milk and mucilaginous drinks, remedies to alleviate uterine congestion and pain, as well as in regulating the bowels. At the commencement, a dose of calomel and compound jalap powder (F. 159) often acts very beneficially. A warm hip bath night and morning, where there is no hæmorrhage, should be prescribed; while the injection of hot water with a syphon syringe, as the patient sits in the bath, gives considerable relief. At night, a pessary of mercury and belladonna (F. 423) may be introduced into the vagina; and if there be much tenderness at the lower part of the abdomen hot linseed poultices ought also to be applied. If the symptoms do not appear to yield, and if there be no menorrhagia, the application of from four to six leeches to the lips of the uterus can be recommended. It would seem unnecessary where there is so much pain and tenderness to forbid sexual intercourse; but remembering that women with even uterine cancer will sometimes submit to connexion, it is better to be explicit on this head. I have seen patients nearly well from an attack of endometritis have all their sufferings reproduced by sleeping with their hus-
bands. Moreover, the uterine discharges in these cases are very likely to excite severe inflammation of the male urethra.

The chronic variety runs a tedious course, which it often seems impossible to influence. Frequently, advice is not sought until the disease has existed some time; or perhaps inefficient treatment is adopted, the case being regarded as one of hysteria. Speaking generally, the two remedies from the simultaneous employment of which I have found the most benefit are mercury and cod liver oil. With regard to the first, we have several preparations to choose from. In very obstinate cases, the green iodide of mercury (F. 53), or the red iodide (F. 54), or even Donovan's triple solution (F. 51), will prove useful; but a prolonged course of the corrosive sublimate with sarsaparilla (F. 27) often suffices, and is usually better borne than the other kinds. Sometimes it has seemed more efficacious to employ iodide of potassium (F. 31), while the mercurial and belladonna pessaries have been introduced into the vagina. It is difficult to explain the action of the cod liver oil, but of its efficacy I have no doubt. The use of pepsine (F. 420) will often aid its digestion. Where there is evidence of much congestion about the uterus and its appendages, leeches may be applied once or twice a week to the labia; but in the absence of this symptom, local depletion is often more powerful for harm than good. Moreover, when there is anything like menorrhagia, leeches are of course unnecessary. The instances in which they prove most useful are those where, with congestion, we find considerable narrowing of the os uteri; but here it is often a better practice to divide the constricted mouth with the hysterotome (p. 369), more especially where the patient is married and is anxious to have children. For it must be remembered, that not only is endometritis a cause of sterility, but by producing constriction of the cervical canal it may render the woman barren after she has been completely cured of the inflammation.

Where the symptoms indicate that the mucous membrane of the body and fundus is involved in the inflammation, I believe that the introduction of remedies into the uterus will only aggravate the mischief. If there be any exception to this rule, it is when the disease has become very chronic and all tendency to convulsive affections has passed off. But in cervical endometritis considerable assistance may often be derived from the application of astringents to the diseased membrane. Hence the solid nitrate of silver can be passed up the canal, or the latter may be swabbed with a piece of cotton wool dipped in a concentrated solution of perchloride of iron; or a strong solution of carbolic acid made by adding 100 grains of the acid to an ounce of the glycerinum acidi carbolici may be applied on cotton wool wound found a sound of roughened soft metal as recommended by Dr. Playfair; or a stick of tannin and cocoa butter, or of sulphate of zine and the same material, or of mercurial ointment and cocoa butter
(F. 424) may be advantageously used. The cases which have been recorded of death from the use of intra-uterine injections, have prejudiced me against the practice of throwing fluids into the uterus; and certainly such remedies ought never to be employed, unless the os uteri be rendered so patulous by the previous use of sea-tangle tents that the injection can readily flow away while the small tube of the syringe is in the orifice of the womb. Counter-irritation by means of blistering fluids, or the actual cautery, or potassa fusa applied to the lips of the cervix is productive of good in very tedious cases.

It only remains to add that the diet in chronic cases must be nourishing, animal food and milk and raw eggs being useful. Stimulants need not be forbidden, with the exception of malt liquors. Gentle exercise in the open air does good; a daily drive in an open carriage being especially serviceable. When the discharge has entirely ceased, the necessity for further treatment is generally at an end; but if the system appear deficient in tone, the cod liver oil should be continued, while one of the minerals acids with bark (F. 376) had better be administered. The officinal sulphate of beberia, in doses of five grains thrice daily, often does great good under these circumstances. I am generally averse to the employment of steel until the recovery has been complete and of some duration; but if there be depression, and other circumstances will permit of it, a visit to the baths of Spa (F. 467), Homburg (F. 491), Carlsbad (F. 496), Marienbad (F. 497), or Kissingen (F. 493), can be advantageously recommended.

5. INFLAMMATION OF THE UTERUS.

Inflammation of the substance or parenchyma of the unimpregnated uterus is undoubtedly a very rare disease. When it occurs, either the muscular tissue of the body will be alone affected; or the morbid action will be confined to the cervix; or, as more frequently happens, the whole of the parenchyma from the os to the fundus will be involved. When the inflammation ends speedily in resolution, the lining membrane generally escapes.

Causes.—Acute metritis [from πόρπα = the womb; terminal -itis] may result from the sudden suppression of menstruation before that congestion of the uterus and its appendages which is present at each period has been sufficiently relieved. In this way, exposure to cold, great fatigue, excessive mental excitement, and intercourse with violence may induce it. Occasionally, the irritation set up by a fibroid tumour in the uterine walls has been the starting point. The extension of the inflammation in endometritis is also possible, as well as that in simple or gonorrhoeal vaginitis. But probably the most frequent cause is mechanical injury; such as may be inflicted by the careless use of the uterine sound, by the abuse of powerful caustics, or by rude and criminal
attempts to bring about abortion at an early period of pregnancy.

Puerperal metritis is not a very uncommon disease; but it has little or no resemblance—either as regards its symptoms, or grave importance, or the treatment it requires, with the non-puerperal variety now under consideration.

Symptoms.—An attack of metritis may set in suddenly with rigors followed by feverishness, though ordinarily it comes on gradually. Complaint is made of a feeling of fulness and weight, of irritation and heat throughout the pelvis. There is an unpleasant sense of throbbing, with tenderness, about the pubes and groins and perineum. The bladder is irritable, there is often nausea with vomiting, while there may be diarrhoea with tenesmus. And then, at the end of twenty-four or thirty-six hours, the uterus becomes the seat of considerable suffering: acute paroxysms of pain coming on at short intervals. With these attacks of pain there is usually a copious purulent or tenacious muco-purulent discharge, although sometimes there is a flow of blood. If a vaginal examination be made, the mouth of the uterus will be found patulous, while the lips are puffy; the body appearing heavy, hot, congested, and exceedingly sensitive. The canal of the vagina often seems to be shortened (partly because the uterus falls lower than it does in health), and its walls are oedematous. The bloodvessels also, about the cervix and upper part of the vagina, can be felt pulsating with considerable force. Moreover, great pain is experienced on making pressure downwards into the pelvis, through the lower part of the abdomen. The patient keeps in the recumbent posture and often with her knees drawn up; for sitting erect increases the pain and throbbing, as well as the irritability of the bladder and rectum.

The acute symptoms generally subside in from five to eight days. In favourable cases the inflammation gets resolved, and no ill-effects ensue. But occasionally, the disease leads to the formation of one or more abscesses in the parenchyma of the uterus; or it may give rise to hypertrophy of the uterus, with induration of the labia, abrasions, and subsequent menstrual irregularities with obstinate leucorrhea, &c. In very exceptional instances, there is fatal gangrene; or a form of subacute inflammation is set up, which will very probably extend to the pelvic connective tissue (pelvic cellulitis), or to the peritoneal investment of the womb (pelvic peritonitis).

Diagnosis.—This disease can scarcely be mistaken for any other if all the symptoms be fairly considered, and if an internal examination be resorted to. The only fear is that the practitioner may fail to make the latter, from his attention being exclusively devoted to the gastric or intestinal irritation. The uterus is not fixed as it is in pelvic cellulitis and peritonitis; while in addition to retaining its mobility, it is more individually the seat of tender-
ness—there is less diffused pelvic pain, than is the case in inflam-
mation of the uterine connective tissue or of the serous coat.
The patency of the os uteri, the swelling of the body of the womb,
and the abundant purulent discharge all point to inflammation of
the parenchyma as the cause of suffering.

Treatment.—During the acute stage complete rest in bed, a
simple diet with cooling drinks, and hot hip baths are required.
After the patient has sat in hot water for half an hour, she can
usually bear the introduction of the speculum without much pain;
so as to allow of the application of four or five leeches to the lips
of the womb. The bites should be encouraged to bleed, for a
short time afterwards, by filling the speculum with warm water;
and then when the redness and fulness of the cervix seem to have
diminished, the instrument is to be withdrawn and a medicated
pessary—especially one consisting of opium and belladonna (F. 423)
introduced into the vagina. If the paroxysms of pain continue
severe in spite of these remedies, the same practice should be re-
sorted to on the following day. But usually it will suffice to con-
tinue the baths, and to have a pessary used each night for some
five or six times. The gastric irritability will seldom require any
special attention; though supposing it to do so, the use of a
sinapism to the epigastrum, with the frequent sucking of small
lumps of ice, will prove efficacious in controlling nausea or retching.
Where the evacuations cease to contain fecal matter and consist
almost entirely of mucus, the irritability of the bowel should be
decidedly checked by an opiate enema or suppository (F. 339. 340).

In chronic cases the engorgement and induration will be best
removed by the use of iodide of potassium with bark, by cod liver
oil, by a nourishing diet, and by the employment of pessaries con-
taining iodide of lead and conium. Unless the general health be
maintained, the treatment will be useless.—Where the cervix
remains much hypertrophied and indurated, it will often be advi-
sable to rub down the hardened tissue with a stick of caustic potash.
For this purpose, a glass speculum (and I may here mention, that
in the treatment of uterine disease I very rarely employ any other
instrument than the excellent one devised by Sir William Fergus-
son), sufficiently large to admit the cervix uteri into its extremity,
is to be introduced into the vagina; the patient lying on her left
side, with the knees drawn up. The mucous membrane over the
labia is then to be destroyed with a hard pencil of caustic potash;
taking care, by frequent mopping with cotton wool, that none of
this deliquescent corrosive runs down between the labia and spe-
culum into the vagina. Having made an eschar of sufficient size
on one or both lips, the latter ought to be well-washed with equal
parts of vinegar and water, then covered with oil, and the speculum
withdrawn. Three or four days afterwards the parts are to be ex-
amined; when, if necessary, the operation should be repeated. In
this way, two or three applications will often suffice to remove a
state of induration which would be unaffected by any milder measures. The patient had better remain in bed for a day or two after each cauterization; while she is to persevere with the general remedies already mentioned. If there be any suspicion of the presence of a syphilitic taint, the solution of corrosive sublimate (F27) ought to be taken steadily for several weeks.

6. ULCERATION OF THE CERVIX.

As a frequent result of congestion and inflammation of the parenychyma of the vaginal portion of the cervix uteri, or of the mucous membrane covering it, we meet with various forms of ulceration. Many cases which are regarded as examples of irritable uterus, of so-called leucorrhœa, or of menorrhagia, have their symptoms produced by abrasions or ulcerations about the labia and cervix.

The most simple and most frequent condition which is met with consists of abrasion or excoration of the uterine lips; with or without eversion and disease of the lower part of the mucous membrane of the cervical canal. In this affection, the epithelium is removed from a part of one or both lips; the exposed villi with their looped capillaries conveying a characteristic "velvety" feel to the touch. The abrasion is usually most marked at the edges of the uterine orifice, while it often extends for some little distance up the canal of the cervix. Sometimes the erosion is so superficial that it is difficult to say whether there is more than intense congestion present; but any doubt which may be entertained on this head can be readily solved—as suggested by Dr. Henry Bennet—by lightly touching the suspected surface with nitrate of silver. On doing this, the abraded surface assumes a much whiter tint and a more coarse appearance than the region which is simply congested, while the limits of the denuded portion become well-marked. These excoriations are of no little importance, inasmuch as they tend to keep up cervical and ovarian congestion; and thus to cause menstrual irregularities—often shown by attacks of menorrhagia; while the pelvic and sacral pains which the disease produces irri-
tate the patient, and the constant leucorrhœal discharge ultimately gives rise to considerable weakness. At times this discharge is tinged with blood, especially after intercourse or any exertion. Should the general health become much affected, an abrasion may degenerate into a troublesome ulceration; such an occurrence, however, being far from common.

Now although there can be no doubt that these abrasions are frequently the result of some general derangement of the system, yet I believe that they are not to be cured by constitutional reme-
dies alone. The treatment must be local and general. With regard to the first, considerable benefit will ensue from the use of two or three leeches, or from scarifications of the labia, where
there is much congestion. Then, alum or zinc vaginal injections (F. 425), or astringent and sedative pessaries (F. 423) should be employed; or, if the woman be married, there can be no objection to the occasional application, through the speculum, of the solid nitrate of silver, or of what often answers better—the undiluted solution of subacetate of lead. In some obstinate cases, gently dabbing the excoriated surface with a pellet of wool moistened with the acid solution of nitrate of mercury, proves very efficacious; but this caustic must be applied most sparingly, since it exerts a powerful influence both locally— and generally. I have seen it frequently produce tenderness of the gums, lasting for two or three days; while once or twice it has even caused salivation. Moreover, after the use of this escharotic, as of any other, I would advise the practitioner to thoroughly smear the cauterized tissue with oil or lard; a suggestion so simple that I should hesitate to make it, had not experience taught me how much such a practice adds to the comfort of the patient. Supposing there to be any eversion of the mucous lining of the cervical canal, the foregoing practice will greatly help to cure it. I have never yet seen a case where it has been necessary to pare the edges of the cervical fissure and bring them together with silver wire sutures, although I have heard of this practice being recommended.

The general treatment of these cases is by no means so simple as might be imagined. Even as regards the daily mode of life, opinions vary greatly; some practitioners confining the patient to the sofa and bed, while others insist upon her taking horse exercise and long walks. Both extremes, however, are equally injudicious. It seems to me better to allow the usual avocations to be quietly pursued, provided no injurious habits have been contracted. The diet should be nourishing, with a proper supply of animal food and milk; while if stimulants be needed, a little claret, or sherry, or champagne, or weak brandy and water will be found preferable to malt liquors. The digestive organs ought always to claim attention, though I would warn the practitioner against resorting to over-active remedies. Granting that abrasion of the uterus, as a local disease, has been the favourite hobby-horse of some physicians, still it is certain that others have found as rampant and mischievous a steed in the same affection when saddled with torpidity of the liver. Dyspepsia is common in these cases, but the stomach only requires gentle aid. Such agents as pepsine (F. 420), quinine and rhubarb (F. 178), oxide of silver and rhubarb and ipecacuanha (F. 179), or the nitro-hydrochloric acid in some bitter infusion (F. 373), are much more valuable than calomel, antimonials pills, black draughts, &c. Generally the system is depressed, and small doses of quinine (F. 379), or especially of salicin (F. 383), improve the appetite and tend to give tone. Supposing any alternative is needed, arsenic in combination with iodide of potassium or with quinine (F. 52) will deserve a fair trial. Where cod liver oil can
be digested, and especially if the case be under observation during cold weather, this agent often proves very serviceable.—I have spoken somewhat at length on the subject of treatment, because the remedies here recommended are useful in all ulcerations (save those of a specific nature) which occur upon the cervix.

The term ulceration is applied to those cases where the uterine lips are not only more or less deprived of their dense epithelium, but where the villi with their vascular loops are also destroyed in patches. Every now and then it happens that the proper tissue of the uterus is involved; the process of molecular gangrene occasionally running on to such an extent, as ultimately to remove a considerable portion of the cervix.

A simple ulcer on the lips of the uterus is generally of an irregular shape, its edges are seldom well-defined, and it presents an uneven granular aspect. The tissue around the orifice of the womb is often involved; and the ulceration extends up the cervical canal, from which a quantity of glutinous mucus can be seen exuding. The vaginal portion of the cervix is also found much congested, and perhaps covered with a thick muco-purulent secretion. Where the ulcer is deep, it is usually coated with a greyish slough; the congestion is great, so that an examination may produce rather free bleeding; dilated varicose veins can frequently be seen ramifying about that part of the neck which is not involved; and the muco-purulent discharge is abundant. The congestion attendant upon ulcerations of the cervix not only extends to the body of the uterus, but to the Fallopian tubes and the ovaries. Hence there is much general uneasiness about the pelvis, sometimes burning pains are complained of, and attacks of menorrhagia are common; while there is a troublesome sense of bearing-down and weight, with backache. The general symptoms are those of anaemia with deficient nervous power. Headache is common, there is often neuralgia, the skin is of a dirty sallow hue, and the pulse is feeble; while the appetite is bad, the tongue is furred, and the bowels are irregular. As the patient feels weak, so she is indisposed to make any exertion; and as she finds the bearing-down and pelvic weight increased by walking or sitting up, she prefers keeping to the sofa. The breasts, bladder, and sometimes the rectum are likewise apt to suffer from reflex irritation.

The remedies required are much the same as those recommended for the cure of abrasion. Local bloodletting, however, is less frequently called for, since the ulcerated surfaces usually bleed freely. Care must also especially be taken not to allow the leucorhea discharge to accumulate in the vagina; cleanliness being insured by the employment, night and morning, of warm water or astringent injections. If the ulceration be deep, the gentle application of caustic potash, or of the acid solution of nitrate of mercury, will be required. No remedies relieve the reflex irrita-
tions so effectually as the pessaries of iodide of lead and bella-
donna.

Primary syphilitic sores are rarely met with on the cervix or labia uteri. Still more infrequent are they on the walls of the vagina. When they have existed in either of these situations, they have seldom been detected until carefully sought for, owing to the bearer having inoculated one or more men with the poison. Chancres so placed are usually single, and very seldom accompanied by any external sore. Ricord mentions a case in which there was (on one uterine lip) a round ulcer with well-defined and sharp edges and an ash-coloured surface surrounded by a red areola or border; which doubtless was syphilitic, inasmuch as two persons contracted chancres from it. Sometimes the chancre is concealed within the canal of the cervix; so that in any suspicious case, where an abundant muco-purulent discharge is seen issuing from the os uteri, and where one or both lips are much injected, the edges of the opening should be gently everted with a couple of long probes. It is by no means improbable that many cases of concealed chancre have been regarded as examples of gonorrhoea in the first instance; while perhaps such, when presenting secondary symptoms, have gone to swell the list of patients who have manifested constitutional symptoms without having had any primary sore. A true Hunterian chancre on the uterus has the same tendency to spread and to infect the system as one elsewhere, and it requires similar constitutional and local treatment.

Secondary syphilitic affections of the uterus are by no means uncommon. They are very obstinate, and will now and then persist as the sole remains of the syphilitic poison. The chief symptoms are considerable enlargement and increased firmness of the vaginal portion of the cervix; an abundant muco-purulent (or purulent) discharge, both from the cavity of the uterus and from the walls of the vagina; with patches of abrasion, or even superficial ulcerations, upon the labia uteri. Now and then the induration and excoriation are so extensive that the case is mistaken for cancer; an error, however, which will seldom be committed if attention be paid to the general state of the system, and if it be noticed that the uterus is perfectly moveable—not fixed as it is in malignant disease advanced to the stage of even superficial ulceration. The functions of the sexual organs are affected in constitutional syphilis; so that menstrual irregularities are frequent—the flow being usually too abundant. There is also evidence of morbid changes in other parts of the body; particularly loss of hair, sore throat, scaly cutaneous eruptions, and nodes upon the tibia or upon the frontal bone. Should a woman thus affected become pregnant, she will either abort, or she will be delivered (probably prematurely) of a dead child, or she will give birth to an infant who will soon exhibit proofs of a contaminated system. One or other of
these results will follow again and again until a radical cure is effected. The cases we read of sometimes of abortion from habit are in nine cases out of ten abortion from constitutional syphilis. The treatment of this disease must be carried out according to the principles already laid down.

Rodent ulcer of the uterus is a severe disease, which has often been confounded with epithelial cancer. The general characters of this peculiar ulceration have already been described in the chapter on diseases of the vulva.

Rodent or corroding ulcer of the os uteri is rarely, if ever, met with before the age of thirty; while in the greater number of cases it seems to have commenced about the time of the cessation of the menses. The ulceration begins very gradually, and extends slowly. As it eats away the affected tissue, complaint is made of pelvic heat and discomfort, with backache or pain about the hips; and there is a thin serous discharge, occasionally streaked with blood. The patient becomes pallid, weak, irritable or anxious, and perhaps thin; while she suffers from indigestion and constipation, from occasional attacks of nausea, and from sleeplessness. After a time, a burning pain often sets in, though it is seldom severe; the suffering altogether, as a rule, being less intense than is experienced in cases of cancer. Attacks of moderate haemorrhage are not uncommon; sometimes constituting the earliest prominent symptom of the disease—or at all events that one which first leads the patient to seek advice. On making a vaginal examination we shall probably find an irregularly-shaped ulcer with ragged or indurated edges; the sore being more or less excavated, and presenting a dry and glossy or a pulpous surface. The parts adjoining are neither indurated nor unhealthy; while the uterus is moveable instead of being fixed as in carcinoma. Sometimes the whole of the cervix around the os is removed; the destruction of tissue having proceeded to such an extent as to produce a large pulpous cavity, into which the finger readily enters without causing pain. The disease, moreover, eats its way upwards into the body of the uterus, instead of extending downwards; so that the vaginal canal generally remains healthy. Ultimately the entire muscular structure of the uterus may be destroyed; though generally death occurs from exhaustion, or peritonitis, or even from haemorrhage before this stage is reached.

The diagnosis of rodent ulcer from malignant disease will seldom be difficult, if we bear in mind that in the former there is simply destruction of tissue; whereas, in the latter, we find not only ulceration, but also an infiltration of cancerous matter into the affected part and the surrounding textures. It is chiefly owing to this infiltration that the uterus becomes fixed, and that the walls of the vagina get thickened so as greatly to diminish the calibre of this canal. Moreover, in rodent ulcer there is no affection of
the lymphatic glands; neither is any deposition of morbid material to be discovered in distant organs.

The treatment is very unsatisfactory; partly because the disease is remarkably intractable, and partly for the reason that advice is seldom sought until the ulceration has made considerable progress. During the earliest stage, when the cervix alone is affected, excision of this portion of the uterus would probably afford a greater hope of cure than any other proceeding; but at a later period this operation is out of the question. The strongest escharotics have been employed, and almost universally they have proved useless. In fact, we are seldom able to do more than soothe the ulcer with sedative vaginal injections (F. 425), or with pessaries containing opium and belladonna (F. 423); while we attempt to improve the general health by a nourishing diet, by tonics, by cod liver oil, and by sedatives to remove the sleeplessness. As I believe that I have found benefit from the administration of arsenic (F. 52) in rodent ulcer of the cheek, I would recommend a trial of this remedy when the disease has its seat on the cervix uteri.

7. ELONGATION OF THE CERVIX.

The cervix uteri can be divided into two portions, viz.—that part which projects into the vagina, and that which is situated above this canal. Consequently, as M. Hugnier has shown, longitudinal hypertrophy of the cervix may be confined to the intra-vaginal portion; or the supra-vaginal part will be alone affected. With regard to the latter I shall merely observe that it is a condition seldom met with, save among laundresses, and women whose occupations entail much standing or walking; that it occurs for the most part in those who have had large families; and that it gives rise to the symptoms which accompany prolapsus of the uterus. It is also often combined with cystocele or rectocele. The os uteri is frequently more dilated than in health; while the sound will be found to penetrate for four, five, or more inches. As I am far from convinced of the necessity for the severe cutting operation recommended by M. Hugnier, I would advise the practitioner to be content with palliating the symptoms. Rest for a few weeks, followed by remedies which give tone locally and generally ought to be tried,—such treatment, in short, as the reader will find described in the remarks on prolapsus uteri.

Longitudinal hypertrophy of the vaginal portion of the cervix is attended with a feeling of pelvic weight and discomfort, tenderness on sitting down, and leucorrhoea. There is usually pain during coition, and conception is prevented. On examination, the vagina will be found in its normal position, but more or less filled by the elongated cervix; which part also projects at the vulva. The patient complains either that she has a tumour, or that there is a falling of the womb. If the sound be introduced it will pass
readily for perhaps some five inches. Sometimes one lip is more prolonged than the other; but in the worst cases the whole of the vaginal cervix has become equally lengthened.

Amputation of the cervix constitutes the only effectual remedy. To avoid both primary and secondary hæmorrhage it is better to employ the érascur rather than the knife or scissors. In applying the chain of the instrument around the cervix care must be taken not to wound the bladder; which viscus can hardly be injured if its lower limit be ascertained with the catheter. So also, by not drawing the womb downwards, and by adjusting the chain about a quarter of an inch in front of the union of the vagina with the cervix, the risk of cutting into the posterior peritoneal cul-de-sac will be removed. Subsequently, as the wound heals, the sound should be introduced every third or fourth day, so as to prevent undue constriction of the os uteri.

8. CANCER OF THE UTERUS.

This fearful affection is most commonly observed under the form of medullary ulceration of the lips of the vaginal portion of the uterus. In the small proportion of about 2 or 3 per cent. the infiltration appears to commence in the mucous or muscular coat of the body or fundus of the womb; the disease occasionally running its entire course while confined to this part, and sometimes spreading downward until the whole organ is involved. Probably in one-third of all the cases of cancer which occur in women the uterus is the organ affected. The pathology, causes, varieties, &c., of cancer having been already treated of, it is unnecessary to say anything here upon these heads.

Medullary cancer is very much more frequent than any other variety of malignant disease of the uterus. Examples of scirrhus are not often met with. Cauliflower excrescence, or epithelioma, is also a rare affection; and when discovered, the excrescence is usually found growing from the posterior lip of the uterus. Just as seldom, I believe, an inveterate form of ulcerated epithelial cancer of the lips or interior of the cervix falls under observation.

Symptoms.—In whatever way malignant disease of the uterus sets in, it gives rise to certain prominent symptoms. Briefly, these may be described as consisting of an abundant watery discharge, which is of a dirty pale green colour, and is always offensive, but sometimes so fetid as to render the patient loathsome to herself and almost so to those around her. There are sudden attacks of hæmorrhage, which (contrary to what might be expected) diminish in frequency and severity as the disease approaches a fatal termination. Pain is experienced of the most distressing kind; and though at first this may only come on at night, yet ultimately it gives the sufferer no respite unless relief
be afforded by médecine. Troublesome disturbance of the digestive organs is present; being chiefly indicated by frequent attacks of nausea with vomiting, distressing flatulence, and a loathing of food. There is likewise most painful mental depression; together with debility which increases daily, and a rapid wasting of the tissues. It must not be supposed that instances are not sometimes met with where one or more of these symptoms are absent, but they are exceptional cases. Thus, hæmorrhage is often the first indication of the presence of cancer of the uterus, though in a few instances the disease has run its whole course without the loss of any blood. When these symptoms, or most of them, have been present for a short time, the patient’s countenance assumes that dingy sallow hue and pinched anxious expression so well known as the cancerous facies. This cachectic appearance follows the symptoms just mentioned and never precedes them, while it occurs the more quickly in proportion to the extent to which the patient has been weakened by the discharges and pain. The only constant symptom which I have observed as a forerunner of the outbreak of uterine cancer is great mental depression; this, of course, being attended with its almost necessary accompaniments of loss of appetite, and restlessness at night.

With regard to those exceptional cases where the disease remains localized in the body and fundus of the womb, the general symptoms do not vary from those just described. There is particularly the same pain, the same abundant watery discharge, the same tendency to hæmorrhage, and the same rapid failure of the vital power. Death usually occurs gradually from exhaustion; but it may take place somewhat unexpectedly from collapse, owing to perforation of the fundus of the uterus accompanied by copious bleeding into the peritoneal cavity.

Diagnosis.—With the great majority of cases the practitioner has no opportunity of making a vaginal examination in the early period of the disease; at that time when the lips of the cervix are merely infiltrated with encephaloid matter, and when they present a moderately hard, uneven, nodulated character. It is but seldom that he is consulted until the disease has far advanced in the stage of ulceration. Then the finger detects readily a more or less deeply excavated ulcer, of a loose spongy character, seated on a tumbid hardened base, and surrounded by indurated tissue. The whole womb is felt to be immovably fixed in the cavity of the pelvis; this fixation, which is almost universally present, being partly the result of the infiltration of the connective tissue with cancerous matter, and partly the consequence of early pelvic peritonitis. The vagina is either involved, or it soon becomes so by the gradual infiltration of its tissues; and then the cancerous degeneration extends through the walls of this canal into the bladder, or more rarely into the rectum, or still more rarely into both these parts, so that one large ulcerous cloaca results. As the
process of disintegration rapidly proceeds, the lips and cervix become completely destroyed; and the body of the uterus gets converted into a funnel-shaped cavity, with its walls irregularly eaten away, or covered with a fungous vascular growth.

When epithelial cancer assumes the form of the cauliflower ex crescense its diagnosis is easy. The peculiar feel of the out-growth, its fringed on papillary structure, the ease with which its tissues are broken down, the exhausting hæmorrhages of frequent occurrence, and the profuse serous discharges which it gives rise to, clearly point out its nature.

Duration.—The average duration of life after ulceration has commenced is barely two years. Prior to ulceration there are probably no symptoms of any importance to direct attention to the uterus; while when this process has set in the patient tries to persuade herself that her symptoms are due to the change of life, or to some accident. Consequently, advice is seldom sought for until six or eight months before death. This event is usually immediately due to exhaustion; though it may happen from pyæmia, uremia, peritonitis, or hæmorrhage.

Treatment.—In very few cases is it possible to do more than attempt to relieve the prominent symptoms as they arise. And in the first place the general health is to be maintained as long as possible. Hence the patient ought to be allowed a wholesome nutritious diet; of which milk and cream, raw eggs, and properly cooked animal food must form the chief constituents. Stimulants will be needed in almost all cases; and none will be found more useful than either of the light sparkling wines, good sherry, or pale brandy. Malt liquors almost invariably disagree, by aggravating the dyspeptic troubles generally, and especially by increasing the flatulence. Such tonics as ammonia and bark (F. 371), phosphoric acid in some bitter infusion (F. 376, 379), quinine and belladonna (F. 383), zinc and conium (F. 413), and cod liver oil (F. 389) are valuable in strengthening the system, as well as in alleviating that terrible sinking and feeling of depression which is so generally complained of. Where the stomach is very irritable the use of pepsine (F. 420), of nitro-hydrochloric acid with the dilute hydrocyanic acid (F. 378), or of ammonia and ether (F. 364), gives relief. From one hundred and twenty to two hundred grains of chlorate of potash in a pint of barley water, taken for some days together, will always cure that soreness of the mouth which is often present. Sucking lumps of ice is frequently grateful; or fruit syrups in iced soda or potash water are very palatable. Much good often arises from the free application of extract of belladonna, with the, wet compress, over the stomach. Small doses of castor oil, or of confection of senna with the juice of taraxacum (F. 194), or the use of simple emisèmata will regulate the bowels better than any other aperients. It need scarcely be added, that the purer and more bracing
the atmosphere in which the patient lives the better. Moreover, as all ovarian or uterine excitement must prove very injurious, sexual intercourse is to be strictly forbidden, even though the disease be in an early stage. It is in consequence of this tendency to ovarian excitement or irritation that I very rarely resort to the administration of any preparation of steel in cases of cancer uteri; since these remedies, as has already been pointed out, cause congestion of the sexual organs, and increase the pain and tendency to haemorrhage. I am sure that much mischief is done in many other diseases of the uterus by the indiscriminate way in which ferruginous tonics and chalybeate waters are given.

Then, secondly, the practitioner must endeavour to keep the sufferer as free from pain as possible; for while persistent uneasiness causes anxiety and irritability, long-sustained physical suffering will alone suffice to kill. In the early stages a good night’s rest may often be afforded by chloral or by giving a couple of pills of henbane and camphor (five and three grains), washing them down with a peppermint draught containing fifteen or twenty minims of the spirit of chloroform. But sooner or later the time arrives when full doses of opium or morphia are needed to allay the anguish. The subcutaneous injection of morphia (F. 314), repeated every eighteen or twenty-four hours, proves very valuable. For exhibition by the mouth or rectum, no preparation is so generally useful as the extract of opium; since, when given in a dose proportionate to the necessities of the case, it seldom induces that subsequent nausea and headache which are so commonly caused by the tincture or the powder. Chloroform, spirit of ether, henbane, Indian hemp, and conium are also useful; and especially so are mixtures containing combinations of these drugs (F. 317). Very frequently, and more particularly when the bladder is irritable, I employ belladonna locally; mixing four or five grains into a pessary with the oil of theobroma, and directing it to be introduced into the vagina every night. When this canal is free from disease, the application to the cervix of a frigorific mixture, by means of a gutta percha speculum, often affords considerable relief. Although the employment of intense cold as a means of cure is quite futile, yet as an adjunct to other remedies for the relief of suffering it is of much value. I have tried the local application of carbonic acid gas, as well as the injection into the vagina of chloroform vapour, but neither proceeding has appeared to be of the slightest service. Sympathetic pains in distant parts are best relieved by the use of strong belladonna liniments or plasters; or by what is often more effectual, the subcutaneous injection of morphia.

In the third place, it has always seemed important to me to check the attacks of haemorrhage as speedily as possible. Independently of the alarm and depression which every flooding gives rise to, I am sure that the loss of blood rapidly hastens the case to
a fatal termination, although immediate death from bleeding is of rare occurrence. The general remedies in which I have most faith are gallic acid, the mineral acids, and cinnamon; the acetate of lead, turpentine, and digitalis having only disappointed me. A very useful draught, which may be given every two or three hours during an attack of bleeding, can be made with twelve grains of gallic acid, fifteen or twenty minims of the aromatic sulphuric acid, a drachm and a half of compound tincture of cinnamon, a drachm of syrup of poppies, and water. It must be confessed, however, that local applications are often more valuable, since they more speedily effect our object than medicines given internally. If a small speculum can be used, the bleeding will generally be immediately controlled by inserting into the ulcerated surface a plug of cotton wool, moistened with a strong solution of the perchloride of iron in glycerine; or a plug of simple cotton wool may be gently resorted to, when it is deemed improper to introduce any instrument for fear of rupturing the vascular mass. So also the actual cautery, cautiously applied, will commonly at once serve to close the orifices of the bleeding vessels. But the great disadvantage of these applications is generally that they cannot be employed when they are most wanted; for the floodings come on suddenly and violently, to the patient’s great alarm. I frequently, therefore, instruct the nurse how she may use an injection of alum and gallic acid, or of infusion of matico, under these circumstances; explaining that it is only necessary to have the hips well raised by pillows and then to inject with a common syringe, or even to pour into the vagina through a funnel a small quantity of either of these astringents, in order to moderate the discharge of blood, if not to control it entirely. Sometimes a pessary made with as much tannin as can be held together by thirty grains of cacao butter, forms an effectual styptic. The use of ice to the vulva may also be recommended.

And fourthly, it is necessary to mitigate the horribly offensive odours of the discharge; by accomplishing which we may generally also succeed in lessening the quantity of the serous flow. This duty will not be thought unimportant by any practitioner who has had the misfortune to see a few neglected or badly-managed cases. Now to begin with, it is advisable (at least as far as the women seen in the hospital out-patient rooms are concerned) to recommend free ablation twice or thrice daily with tepid water. Then, when we can depend upon injections being gently but effectually used about twice a day, with a proper syphon-syringe, we may order from twenty to thirty grains of the crystals of carbolic acid to the pint of water; or twenty grains of chloride of zinc, or one drachm of creasote, in the same quantity of fluid as for the acid. The permanganate of potash (grs. 20—40 to the pint of water) makes a capital injection. So does simple tar water; obtained by stirring a pint of tar with a gallon of water for fifteen minutes, and then
decanting. In several instances comfort has been derived from the use every night of a pessary containing extract of logwood and cacao butter (thirty grains of each); an application, the power of which is not deteriorated by having combined with it belladonna or morphia. And, lastly, I have known ladies attempt to prevent the fetid smell from being perceptible to others by padding the vulva with small muslin bags of vegetable charcoal; a practice which is only of any value in exceptional cases and under peculiar circumstances.

Now the measures which have just been described may be said to be those which are to be practised in almost every instance of uterine cancer; and it is certain that by their skilful adaptation to the exigencies of each particular case much good may be done. But once in a way it happens that we see the patient when the affection is in an early stage, or when it assumes the form of a polypoid excrescence, or when it appears limited to the cervix uteri. Under these circumstances it becomes an anxious question whether some more decided plan of treatment may not be useful; whether something cannot be done to eradicate the disease completely, or at least materially to check its progress? The truth must unfortunately be confessed that here the art of the physician, for the most part, fails him. Uterine cancer seems really to be much more virulent and less amenable to treatment than cancer of the breast. With regard to specific remedies in cancer of the womb, I can only say that I have never seen anything approaching to permanent benefit from their employment, but Dr. Wynn Williams claims to have removed uterine cancer effectually and permanently by means of a strong solution of bromine. Powerful escharotics, repeatedly and thoroughly applied to the diseased surface, have never seemed to me to retard the disease. And the same disappointment follows excision of the neck of the womb; whether this operation be performed with the écraseur, the knife, or the ligature. If there are any exceptions to this statement, it is in the case of epithelial growths (cauliflower excrescence); but even here I fear that in almost all instances the good which may be done is merely temporary. In only one instance can I persuade myself that I effected a cure by amputating the cervix, and in this instance the patient was lost sight of twelve months after the operation. Yet I do not consider that this proceeding is altogether to be condemned. It will possibly in a few instances prove beneficial; and it may certainly be said that neither in my own practice, nor in that of a few other physicians which I have had the opportunity of seeing, has it done any mischief. It gives the patient the inestimable comfort of hope revived; so that for a few months, by controlling the symptoms, it greatly lessens anxiety if it does not afford complete peace of mind. The misfortune is, that the cases are so rarely met with in which there is a fair chance of this operation succeeding; since, for reasons already
insisted on, patients rarely apply for advice in the early stages of uterine cancer.

Extripation of the entire uterus has been practised on some twenty-six occasions for the cure of cancer; but I am only acquainted with one well-authenticated report of its having been really successful, though in four instances the patient recovered from the operation. In the successful case, the woman remained well for twenty-five years. But it must be remembered that there was a previous preciosity of the organ, so that the operator, Conrad J. M. Langenbeck, had a comparatively easy task; while, without being hypercritical, a doubt may be suggested as to the correctness of the diagnosis. The details of the case are given by Professor Max. Langenbeck in his thesis De totius Uteri Exirpa

VIII. UTERINE TUMOURS AND OUTGROWTHS.

The tumours to be considered in this section are,—fibroid tumours, with a short notice of recurrent fibroids; uterine polypi; and cystic degenerations of the uterus.

1. FIBROID TUMOURS.

Of all the organic diseases of the uterus which first manifest themselves during the period of sexual vigour, the non-malignant tumours are the most common. In the present section I intend to speak only of the non-pediculated fibroid bodies—commonly known as fibrous tumours of the uterus.

Pathology.—Fibroid tumours may be developed in any portion of the uterus. According to their position they are often classified as sub-peritoneal or surface tumours, when just beneath the peritoneum; interstitial or intra-mural tumours, when imbedded in the uterine walls; and sub-mucous or intra-uterine tumours, when they are pressed into the cavity of the womb. Fibroids consist of outgrowths of uterine tissue. The dense and firm muscular structure of the uterus is made up of bundles of smooth or unstriped muscular fibres, arranged in layers; together with areolar or connective tissue, bloodvessels, lymphatics, and nerves. And so we find that uterine tumours are composed especially of unstriped muscular fibre, an element which is wanting in fibrous tumours. Hence the use of the term "fibroid" in preference to that of "fibrous" as ordinarily employed.

Fibroid tumours are met with at all ages after puberty, though they occur most frequently between the years of 25 and 48. The earliest age at which I have observed such a growth has been 15, the woman being married. It is very probable that these tumours occur equally in the married and single, in the sterile and fruitful. My own notes of cases of true uterine fibroids, show a preponderance of married sterile women; but the experience of one practitioner is of little value on such a point. The following table, however, gives the number of cases of both non-pediculated fibroid tumours and of polypi, of which I have kept a record, between the 1st January, 1851, and the 1st January, 1869, exclusive of fifteen doubtful instances, where the diagnosis was either imperfect or the statements of the patient seemed unreliable:

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<tr>
<th></th>
<th>Fibroids</th>
<th>Polypi</th>
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<tr>
<td>Virgins</td>
<td>31</td>
<td>13</td>
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<td>Married and sterile</td>
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<td>Been pregnant, but always aborted</td>
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<td>Borne one or more children</td>
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<td>First pregnancy while under treatment</td>
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Fibroid tumours vary in size from that of a small nut, to that of a foetus at the full term of gestation: indeed, their bulk is sometimes much greater than that of a newborn infant. They commonly weigh one or two pounds, but they have been found fre-
quently as heavy as six or eight pounds; while extraordinary cases are recorded where they have reached thirty, forty, and even seventy pounds. In form they differ considerably, but usually they are round, or pear-shaped, or irregular and lobulated; although in consequence of pressure they may attain every imaginable figure. Now and then we find a large tumour occupying the whole fundus of the uterus, with an outgrowth of a most irregular shape attached to the uterus by a pedicle. This was the case in a patient who was sent to me to be relieved of an abdominal “floating tumour.” By careful manipulation no difficulty was experienced in making out the thick pedicular attachment to the posterior wall of the uterus, which organ was greatly enlarged by an intra-mural fibroid. Occasionally the pedicle in these cases gets ruptured, and then the growth remains in the abdomen as a moveable foreign body. When the cavity of the womb becomes much enlarged by a fibroid projecting into it, the uterine walls get hypertrophied, while the sinuses may undergo development as in pregnancy. Under the influence of congestion (such as occurs at the menstrual periods) the walls of one or more of these venous canals may get ruptured; blood being poured out until a conglom forms, or the opening heals, or the uterine contractions compress the bleeding orifice against the tumour.

These growths may exist alone or in combination with other diseases: it is not uncommon to find a fibroid and a mucous polypus in the same case. Occasionally, with a fibroid of the womb there is a cystic tumour of the ovary. Fibroids will also be single or multiple. Very often there are three or more separate tumours; and in one specimen which I removed from the body of an old woman, as many as nine distinct outgrowths from the external walls of the uterus could be counted. In the Hunterian museum a preparation (No. 2674) may be seen in which eight or nine large fibroids are present in the uterine walls, all of them projecting upon the peritoneal surface; the largest growth retaining only a narrow base of attachment to the fundus of the uterus, while another somewhat smaller is fixed to the side of this organ by a flat band.

The tumours recognised as recurrent fibroids differ from ordinary fibroids inasmuch as if removed a new growth forms at the site of the old one; while all such bodies manifest a tendency to ulceration, followed by free discharges of blood and fungous degeneration. Recurrent fibroids destroy life with almost as much certainty and rapidity as scirrhous does. Fortunately, they are very seldom developed in the walls of the uterus.

Symptoms.—The symptoms produced by fibroid tumours are often neither important nor well-marked; and indeed these growths not unfrequently exist without giving rise to a suspicion of the presence of any uterine disease. But on the other hand, when of a size sufficient to be detected through the abdominal
wall, they are usually the cause of menstrual disturbance; of a
leucorrheal discharge; of a dull, aching, or throbbing pain in the
back—especially all over the sacrum; of a sense of weight and
bearing-down in the pelvis; of cramp or numbness in one or both
thighs; of a difficulty in evacuating or in holding the urine; and of
constipation, with haemorrhoids. Just as pedunculated fibrous
tumours (commonly known as uterine polypi) are almost always
attended by one very prominent symptom, viz., haemorrhage; so,
with a little latitude, it may be said that the same happens in
sub-mucous tumours merely projecting into the cavity of the
uterus. When the first symptom of the existence of a fibroid is a
sudden attack of haemorrhage, the patient not infrequently tries
to persuade herself that she has been pregnant, and aborted; but
the practitioner must not be misled by her statements or opinions.
He will distinguish the true nature of the disease by learning that
the loss of blood has probably been excessive; that the haemor-
rhage has returned more than once without warning, and without
being accompanied by uterine contractions or pain; and especially
by finding that the tissue of the cervix is firm, and the os thin and
small, instead of being relaxed and swollen and patulous as after
abortion. Very frequently, especially with sub-mucous tumours
projecting into the cavity of the uterus, the patient first has her
attention directed to the womb by noticing that the menstrual
discharge is more abundant than usual, that its duration is greater,
that it is attended with clots, and that its cessation is followed by
leucorrhœa. The monthly periods also recur more frequently than
is natural; they are accompanied with great pain in the back and
thighs, and bearing-down or dragging sensations; there may be
expulsive efforts, simulating labour pains, sometimes occurring
only with the catamenial flow, and sometimes coming on in the
intervals with more or less frequency; while during the time the
courses continue, and even for some few days before and after-
wards, the patient is incapacitated from following her usual duties.
Now and then there is actual flooding.

On making a vaginal examination we shall generally find the
weight of the uterus increased, while its mobility is somewhat di-
minished; the vagina also being lessened in length. If the tumour
be in the cavity, the os may sometimes be felt quite patulous,
and the tumour projecting between its lips; but more frequently
the mouth of the uterus is closed, and the cervix absorbed into the
substance of the walls, so that we feel merely a rounded body with
a slight depression and opening at its lowest part. When the
tumour occupies the posterior wall it often produces retroversion
of the uterus; and consequently the fundus of this organ then lies
upon the rectum, while the cervix is pushed forwards and upwards
under the pubic arch. Supposing the growth to be in the anterior
wall, the uterus will frequently be found antverted; that is to say,
it will lie across the pelvis with its fundus on the bladder, and its
os looking directly towards the sacrum. Instead of retroversion or anteversion, there may merely be retroflexion or anteflexion; or the tumours may even be large and heavy, without causing any uterine displacement whatever. Provided that the practitioner is certain of the non-existence of pregnancy, he will derive great assistance in forming a positive opinion on the nature of the growth and its exact position from the use of the uterine sound. When this instrument is introduced into the healthy uterus, it passes for two inches and a half; and by it (without any rough manipulation) the organ can be slightly elevated, or turned to either side, or bent backwards or forwards. In most instances of fibrous tumour the cavity is elongated; while if the tumour be in the walls, or broadly attached to them, the sound appears to enter the mass so that the uterus cannot be separated from it, both can only be moved simultaneously, and at the same time the womb is found to have lost its healthy mobility and freedom.

Whatever may be the cause of uterine enlargement—whether it be a tumour or retention of the catamenia, the breasts generally become somewhat developed and tumid; while sometimes the areola also darkens, or the follicles increase in size and number. But it is only in pregnancy that the nipples and the areola undergo all those peculiar changes which are so characteristic of this state; for in no other cases do we find, combined with the development of the glands, enlargement of the follicles and an increase in their number, edema of the areola, moisture of these parts, and a gradually increasing deposit of pigment in their tissues.

If we practise auscultation over a fibroid tumour we shall very frequently detect, synchronous with the pulse, a loud souffle; which may sometimes be due to the pressure of the growth on the aorta or iliac arteries, but which I believe generally has its seat in the vessels of the enlarged uterus. This murmur might lead to the case being mistaken for pregnancy; but unless this condition co-exist, we shall of course be unable to discover the fetal heart, or anything approaching to fetal movements.

Terminations.—Fibroid tumours of the uterus are generally benign and harmless; many patients having been known to live for twenty, thirty, or even more years after the growth has first manifested itself. In such cases, the tumours commonly attain a certain size, and then remain stationary; giving rise to no symptoms beyond what may be produced by their bulk or their pressure upon other organs. Where a fibroid induces severe attacks of haemorrhage, however, the results are likely to be more serious, though death very seldom occurs from this cause. In only one of my cases has death taken place from anaemia due to the frequent floodings; the fatal event happening nearly seven years after the first abundant bleeding. The constant leucorrheal discharge will oft-times induce weakness, but I have never seen anything like a dangerous set of symptoms from this source.
Fibroid Tumours.

Fibroids occasionally undergo a cystic degeneration; one or several cavities, containing a limpid fluid, being developed in their centres. I do not believe, however, that the whole tumour can thus be converted into a simple cyst, as some authors seem to imagine. In the cases which have led to this idea being entertained, it is probable that one or more fibroids have coexisted with a cystic growth. Now and then these fibroids become swollen, softened, and oedematous; either as the result of great congestion, or possibly of a low form of inflammation. In the same way, an abscess may form in the interior of the tumour; an unfortunate result which has proved fatal in most instances where it has happened. A more favourable event is that of fatty degeneration; a change which occurs much more rarely than might be expected. Where a fibroid tumour gives rise to ascites the symptoms necessarily assume a more serious character.

That fibroids are occasionally partially absorbed is I believe certain; while it is highly probable that they may be entirely removed in this way, especially after the permanent cessation of menstruation, quite independently of any treatment.*

* The following case affords a striking example of partial absorption synchronous with the climacteric change.—Mrs. T., 42 years of age, came under my care on the 15th October, 1856. She has been married eight years, and never been pregnant. The catamenia are irregular: has leucorrhoea. Has had some severe attacks of flooding,—one in August, 1854, a second in October, 1854, a third in January, 1855. Then for nine months there was no excessive loss; but at the end of this time the haemorrhage became so abundant that she had to be admitted into Charing Cross Hospital. She did not detect any abdominal tumour until the Christmas of 1854. Since then, has rapidly increased in size, so that now she is quite as large as a woman at the full term of gestation, the uterus reaching to the ensiform cartilage. On making an examination, the vagina is found contracted, the uterus high up in the pelvis, while presenting at the os uteri (which is as large as a penny piece) is a hard fibroid tumour. This tumour is evidently too large to be drawn through the pelvic cavity. As there were no urgent symptoms her general health was improved with Tonics, &c. In January, 1856, the tendency to flooding returned, and it seemed desirable to remove the tumour if possible. I thought that by ligaturing a portion of it, there would be a possibility of getting away the part when dead, and that by repeating the operation the whole might ultimately be removed. All attempts, however, to pass Gooch's cannulae, armed with whipcord, failed; owing to the presence of firm adherences between the front of the tumour and the uterus. Drs. Tyler Smith and Graily Hewitt, who were present, allowed that they had rarely if ever seen so large a tumour. After this attempt the flooding lessened in frequency again. Twice or thrice there was a severe loss; but it was generally checked in a day or two by perfect rest, and the administration of gallic acid with cinnamon. I frequently saw this patient afterwards up to the year 1865. The tumour had long been decreasing in bulk: there had been no haemorrhage for many months, the catamenial periods having apparently ceased about the beginning of 1864; and the abdomen was then of natural dimensions, the tumour being reduced to about the size of the fist. 19th November, 1865.—This tumour has got larger again. There has been no bleeding since December, 1864, until this week. Has had a discharge of blood for four days. Tumour has again got much larger.
The sub-peritoneal and sub-mucous fibroids not uncommonly become gradually pediculated, so that in the latter case they may be removed like other polypi. But in both instances it has occasionally happened that the tumour has become entirely detached from the uterus; the growth, when of the sub-peritoneal kind, having been found with an attachment to one of the abdominal viscera. It is even said that a fibroid may remain loose in the cavity of the peritoneum, and be nourished in the same way that a loose cartilage in a joint is kept from decay. I have never, however, seen any example of such an occurrence.

And, lastly, a fibroid may undergo calcareous degeneration,—a process which is probably allied to that spoken of as ossification of the coats of the arteries, such as is met with in old people. Whether these tumours ever suffer from malignant degeneration, is a disputed point. I have met with three or four cases where the most careful local examination could detect nothing but what appeared to be true fibroids; though the general symptoms, and the fatal results, proved that the tumours were cancerous. But whether they were so from the beginning, or whether they were originally fibroids which became infiltrated with cancer, I cannot say.

Treatment.—As a general rule, I believe that the less we interfere with fibroid tumours, the better will it be for the patient. It is exceedingly doubtful if drugs have any power in producing absorption of these bodies, or even of arresting their growth. I have watched the effects of mercury, iodine, iodide of potassium, chlorate of potash, and liquor potassse, when given by myself or others, and I have never seen these remedies exert the slightest favourable effect. I question very much whether the chloride of calcium will prove of any real value; although Dr. M'Clintock has met with one case which got well, after taking the liquor calcii chloridi of the Dublin Pharmacopoeia (the now official chloride of calcium, in solution) for two years. The chloride of calcium, with full doses of conium, continued steadily for several months, has now and then seemed useful. In the few instances where I have tried this remedy, it has appeared to do neither good nor harm. The same remark applies to the chloride of ammonium, which I have used perseveringly. The bromide of potassium has also been largely employed, and all that I can say in its favour is, that one patient became pregnant while taking it.

Remembering therefore the low vitality of these bodies, that they frequently are only productive of mechanical inconvenience, that they will often attain a certain size and then remain stationary for years, and that their partial absorption or degeneration occasionally takes place at the climacteric change, we had better be content with limiting our treatment to the palliation of any important symptoms which may arise. The danger of attempting a radical cure, either by enucleation, or by gouging the growth and scooping away portions, or by opening the abdominal cavity