and extracting the tumour, is so great that I should be loth to recommend any such proceedings. It is certain that even in the case of a pediculated sub-peritoneal fibroid, the risk of the abdominal section and removal of the tumour is much greater than that of ovariotomy; although it is not easy to see why it should be so. I am of course aware that large uterine tumours have been extinguished by opening the abdomen, and that in the hands of Dr. Clay and M. Kœberle and two or three American surgeons such operations have been now and then successful. Dr. Storer has removed the uterus and both ovaries by abdominal section, the patient recovering. But, except in cases of general practice: otherwise the so-called “triumphs of obstetrical surgery” will have a most disastrous influence. Of 29 cases in which this operation had been performed, recorded up to the end of 1868, 22 had proved fatal.

One of the commonest symptoms we have to treat is menorrhagia, which occurs most frequently in the submucous and next in the intramural fibroids. The most efficient drugs are, corrosive sublimate (F. 27); gallic acid alone; or in combination with the aromatic sulphuric acid and cinnamon (F. 103); the oxide of silver with Indian hemp (F. 47); and the iron alum (F. 116), which is particularly useful where there is much anaemia. But it sometimes happens that all astringents prove inefficient, and we must then resort to surgical measures. An excellent practice is that recommended by Dr. Mc Clintock, Mr. Baker Brown, and M. Nélaton; who all allow that a free incision of the os and cervix uteri is generally followed by a remarkable decrease in the haemorrhage. According to Mr. Brown the division of these parts permits the fibres of the body of the uterus to contract upon the contained tumour so as to compress the vessels. Whatever the explanation may be, however, I can confirm the statement that the operation is frequently very efficacious in preventing metrorrhagia. Where the fibroid can be reached, Dr. Atlee recommends a free incision into the most exposed part of the tumour; which is to be practised by passing a bistoury, upon the finger, along the vagina into the uterine cavity. The incision is followed by a slight gush of blood, but as the cut ends of the vessels quickly retract and get closed by clots, the haemorrhage entirely ceases. According to this gentleman, therefore, the source of the discharge is not in the uterine walls, but in the vessels of the membrane covering the tumour.

When a fibroid is confined to the true pelvis, and by its pressure is interfering with defection and micturition, or causing severe cramps, these mechanical inconveniences may possibly be removed by pressing the growth upwards into the false pelvis. The difficulty is that there will perhaps be adhesions, though they cannot always be detected; and if these be ruptured fatal peritonitis may ensue. Moreover, it is by no means easy to draw the line between judicious
and injudicious force. In one instance where I succeeded in efficiently raising the tumour, I certainly remember that an amount of force had to be employed which many would have condemned. However, great relief was afforded without any mischief resulting. Sometimes, where the pains, &c. are due to temporary congestion of the growth, or to oedema, the administration of the bromide of potassium (F. 42) will remove these complications; or they may be subdued by the use of the Kreuznach waters (F. 484), the patient's system being at the same time invigorated by the change of air and the regular living adopted at this bath.

2. POLYPUS OF THE UTERUS.

The term polypus [from \( \Pi\omega\lambda\nu\sigma = \text{many} + \pi\omega\nu\sigma = \text{a foot} \)] is by general consent here employed to designate those tumours which are attached to the inner surface of the uterus by a pedicle or neck. They differ much in size; sometimes being scarcely larger than a pea, while on other occasions they have a bulk equal to that of the adult head. Moreover, they are either found occupying the uterine cavity, or they may be in the vagina and merely attached to the fundus or body or cervix of the uterus by their pedicles.

Pathology.—Polypi vary in structure, but it is probable that they may all be referred to one of the three following species—viz., the fibroid, the mucous or gelatinous, and the placental.

The fibroid have the same structure as the tumours of the uterus already described; that is to say, they are essentially outgrowths of the uterine muscular tissue. I believe that it is not an uncommon occurrence for a common intramural fibroid gradually to assume the polypoid form, as it increases in size, and gets forced more and more into the uterine cavity by the muscular contractions. These contractile efforts are in fact, attempts on the part of the uterus to throw off the tumour, and they might be divided into three stages—in the first they render the growth polypoid; in the second, they expel the tumour into the vagina, possibly with all the symptoms which attend a natural labour; while in the third, they would cause rupture of the neck of the fibroid, did not art generally step in and divide this part.

The mucous or gelatinous or cellulo-vascular polypi spring from the canal of the cervix. They are composed of delicate bundles of fibro-areolar tissue, covered with mucous membrane containing numerous bloodvessels. They are often very small, perhaps seldom exceeding a walnut in size; but notwithstanding their minuteness they frequently give rise to attacks of free haemorrhage, and cause the catamenial periods to be unduly prolonged. It is probably true, as Dr. Hassall has conjectured, that these growths sometimes have their origin in enlarged villi of the cervix. In the Hunterian muscum there are four preparations (Nos. 2660-2663) very clearly showing the form and attachments of these polypi.
Placental polypi are produced by portions of after-birth left in utero, after an abortion or a labour at the full term. The profession is indebted to Dr. Carl Braun, of Vienna, for showing the great importance of retained masses of placenta in the pathogenesis of uterine polypi. This eminent physician and pathologist believes that at least the majority of the so-called fibrinous polypi are the remains and products of pregnancy; and his opinion has been especially confirmed by Dr. Stadfeldt in a paper which should be read by every obstetrician.* From this essay it appears that Dr. Braun rests his views on five cases, in which at a variable interval after delivery there was violent hæmorrhage from the uterus. On examination, the polypi were found; in four instances being extracted with the finger, while in the fifth the tumour separated spontaneously. On investigation, these bodies distinctly exhibited the composition of the placental tissue. He moreover describes two preparations in the Vienna Museum, in which may be seen polypoid tumours in puerperal uteri; and these tumours consist of distinctly recognisable placental remains. It is of course no new fact that a portion of placenta may be left in utero after the removal of the greater part of this structure, and that while so retained it may be the cause of serious attacks of hæmorrhage. But it has not previously been shown that such placental débris can assume the external form of a polypus, and may, even years after delivery, give rise to all the symptoms of a common polypus.

Symptoms.—The most important symptom produced by a polypus is profuse menstruation. After a time there are likewise irregular and frequent discharges of blood, often amounting to attacks of flooding. The tumour also, by its irritating effect upon the mucous lining of the uterus or vagina, gives rise to an abundant leucorrhœal discharge; which discharge is often sanious, while in other respects its character varies according to its seat. Moreover, as the growth increases in size, so by its pressure it irritates the pelvic viscera; and we have complaints of frequent micturition, tenesmus, backache, &c. Occasionally also, there are paroxysms


An interesting case of fatal hæmorrhage from placental polypus has also been recorded by Mr. John S. Beale (Lancet, 23rd April, 1864). At the autopsy, on opening the uterus, a fleshy tumour seven inches in length, and surrounded by a conglomera weighing over twenty ounces, was exposed. The tumour was attached by a pedicle, over one inch in diameter, to the right side of the fundus uteri. This pedicle was about three inches in length, and so firmly adherent that the uterine wall was injured in its removal. The tumour itself was about three inches long, b} seven broad; and it consisted of a glossy, soft, even mass, which presented the cotyledonous structure (only smaller) of the placenta, with the usual spongy areolar tissue.

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of pain, such as attend upon abortions. Where the growth has only formed after the change of life has occurred, then a discharge of blood will probably be the first symptom manifested. Oft-times under these circumstances the bleeding does not return for a considerable period; while it is seldom as abundant as in younger women. So true is this, that in maiden ladies over the age of fifty the polypus can often be left alone; little risk resulting from such a practice, while it saves a probably over-sensitive woman from much mental and physical suffering.

The foregoing symptoms are of little value, except in so far that they show the necessity for a digital examination. On instituting this, all doubt about the nature of the case is removed when the practitioner finds the tumour in the vagina, or feels it presenting at the dilated orifice of the uterus, while at the same time the sound can be made to enter the uterine cavity for two inches and a half. But frequently there is no body present in the vagina, and the os uteri is closed. Sometimes, under these circumstances, the cervix is discovered much shortened, and the uterine body more or less enlarged; or there is retroflexion or anteflexion of the uterus, or even greater displacement; or the position of the womb is normal, while the educated finger feels that this organ is heavier than natural, with its body round and increased in size. The investigation must therefore be pursued another stage with the aid of the uterine sound; by which instrument the size of the uterus will be learnt, and the presence of any movable substance in the cavity be ascertained. If still there be doubt, the os and cervix ought to be dilated by tents, in the manner presently to be mentioned, so that the interior of the uterus can be explored by the finger. I have made several attempts to obtain a view of the uterine cavity by means of Dr. Cruise’s endoscope; with which instrument deep cavities hitherto looked upon as inaccessible to sight, have been satisfactorily examined. In the cases under consideration, however, the results have been negative.

Terminations.—So long as the polypus remains either in the uterus or vagina there is, as a general rule, considerable danger from the haemorrhage. This is invariably true with regard to women under the age of forty-eight or fifty. Although the bleeding very seldom destroys life directly, yet it often goes on to such an extent as to induce severe anaemia; while it may even lay the foundation for some tubercular affection. And it is important to remember that the amount of haemorrhage is in no way dependent upon the size of the tumour; a polypus no bigger than a hazel nut often giving rise to as much flooding as a very large growth. This circumstance has been said to afford support to the view that the bleeding takes place from the uterus, and not from the tumour as some imagine; but it is very possible that the blood is poured out both from the tumour and the uterus.
Very rarely the tumour has set up inflammation and ulceration of the uterus; the morbid action having progressed to such an extent, in a few instances, as to destroy adjoining structures. In this way a portion of the uterine wall has been gradually eaten away; this destruction being followed by the polypus making a passage for itself through the coats of the bowel, or of the abdominal wall, or of the perineum. A termination of this kind is, of course, very rare; but it serves to show how extensive the irritation must be in these cases to be capable, even once in a way, of setting up such destructive inflammation.

Treatment.—I do not think it necessary to speak here of the remedies which may be employed to relieve the symptoms, because it is mere trilling to waste time with astringent injections, blisters to the sacrum, and astringent medicines. So long as the tumour remains, it does so to the jeopardy of the patient. Undoubtedly in some cases a polypus will degenerate, and a spontaneous cure result. Or the pedicle can be fractured by strong uterine contractions forcibly expelling the growth entirely out of the sexual organs. But either of such events is too exceptional to influence our practice generally. Hence the real question is, how the polypus may be best removed?

When the tumour is in the vagina, I believe that no operation in obstetric surgery is easier to perform, or less likely to be attended with dangerous consequences, than that of cutting through the pedicle with a pair of curved blunt-pointed scissors. I have not only thus removed almost all the growths of this kind which have fallen under my observation, but I have seen other physicians adopt the same practice with the best results. There has been, in short, neither haemorrhage nor any other unfavourable symptom. At the same time, if the practitioner be nervous, or if the neck of the growth be unusually large, there can be no harm in using the écraseur armed with copper wire, in place of the scissors or bistoury. But to place a ligature round the neck of the tumour, and gradually to tighten this cord until at the end of some days the semi-purid polypus comes away, seems to me a practice which can no longer be defended. There is but one caution to be added with regard to excising the tumour, and it is this. That before using any cutting instrument the sound must be fairly introduced into the uterine cavity; so that the practitioner may feel thoroughly convinced that he has to deal with a tumour, and not with an inverted womb.

Now although nothing can be more simple than the treatment of uterine polypus when the growth has been expelled into the vagina, and is merely attached by a pedicle, yet the removal of the tumour is not so easy when it is still retained in utero. Under these circumstance, the os and cervix have to be thoroughly dilated with sponge or sea-tangle tents (P. 426). The best plan of using these instruments is as follows:—The patient, having had
her bowels freely operated on a few hours previously, is to lie at
the edge of the bed in the ordinary position for labour. A sea-
tangle tent, of such a size that it will pass easily, is then introduced
up the whole length of the uterine cavity. This tent should be
left for twenty-four or forty-eight hours, the latter being preferable.
At the end of the time it is removed, and one of a larger size
introduced; this being taken away in its turn, and another used,
until the finger will readily enter the uterus. The tumour and
its attachments can then be thoroughly explored; and if it appear
probable that the growth may be successfully removed we ought to
proceed to induce further dilatation, should this seem to be
required. I am sure it is bad practice to attempt extraction of
the polypus until the os uteri be sufficiently dilated. For the
stretching of the os at the last stage, a sponge is better than a
tangle tent; since the former expands more readily than the latter,
and does not exert as much force. When sufficient room has
been obtained, I have generally removed the tumour by torsion,
or by gradually breaking down its attachments with the finger nail;
but if there be a distinct pedicle, and if it be thick, then it had
better be divided by the wire érasur. Should there be any diffi-
culty in introducing this instrument, a whipcord ligature may be
applied by means of Gooch's cannulae provided with a windlass;
so that the ligature may be made to cut through the neck of the
growth at once, or at the latest on the following day. The growth
being separated, it can readily be withdrawn by seizing it with the
vulsellum forceps; patience and skill being employed instead of
force. The patient had better remain in bed for a few days after
the operation, until the uterus seems to have contracted to its
normal size. Since I published some cases illustrative of this plan
of treatment about eight years ago, I have adopted it in several
other instances with success. The practice, however, is not devoid
of danger. In one of my cases there were two intra-uterine
growths of considerable size. One of these, the largest, I removed
without much trouble, and with great relief to the patient's
sufferings. Some months afterwards, on attempting to separate
the second growth from its attachments, death took place,
apparently in consequence of pyæmia.

3. CYSTS OF THE UTERUS.

Unilocular cysts, or closed sacs, filled with mucus or serum,
are occasionally developed either in the substance of the uterus, or
beneath the internal mucous coat, or just under the external serous
covering. Sometimes one portion of the uterine structure is
invaded by a cystic growth, while another part is the seat of an
ordinary fibroid tumour.

The mucous cysts have their origin in the follicles about the os and cervix uteri; and they are found to have their seat immediately beneath the lining membrane, or in the muscular substance. They are either single, or several can be developed; and their size may vary from that of a large pin’s head to that of a small pear. Not uncommonly the lips of the cervix are studded with them. They are occasionally found projecting through the os; but they may also, instead of passing downwards, extend upwards into the cavity of the womb. This latter direction is possibly most commonly taken in the cases of women who have borne several children; obviously because the resistance which is offered to such a route is less than in instances where fertilisation has only occurred once or twice some long time previously. After such cysts have passed into the cavity of the uterus, their attachment seems occasionally to become pediculated; while subsequently they may be expelled with all the symptoms which attend upon an abortion. On one or two occasions where this has happened, I have been so struck with the resemblance borne by the tumour to a small hydatid cyst, that search has been made for the echinococci heads; though, of course, nothing of the kind has been discovered. The vesicles or cysts which not very unfrequently result from a morbid alteration of the villi of the chorion, and which lead to the formation of the "vesicular mole," might likewise, if they were expelled singly, give rise to an erroneous diagnosis; but as they almost always come away in masses, as their formation is attended with (or preceded by) the symptoms of pregnancy, and as the indications of their presence are well marked and characteristic, it is scarcely possible for them to be mistaken for the cysts under consideration.

In an excellent essay on "Cysts of the Womb," by M. Hugnier,* it is shown that each of these growths has two envelopes:—First an internal one, which is smooth, polished, transparent, excessively thin, and very vascular; and secondly, an external membrane, composed of elastic areolar tissue, thicker than the first tunic, and like it transparent. The fluid in these bodies is albuminous, unctuous to the touch, stringy, alkaline, clear and transparent,—in short it resembles the mucus secreted by the follicles of the cervix. Occasionally it is slightly opaque, and sometimes it contains one or two little greyish or yellowish-white bodies which vividly reflect the light. A microscopic examination of the liquid by MM. Hugnier and Robin, has shown that it contains a quantity of molecular granules, as well as spherical or ovoid granular globules formed by the agglomeration of the molecular particles. The uterine tissue around the cysts, as well as the mucous membrane covering them, is generally somewhat congested; while the entire cervix is frequently hypertrophied.

The formation of these cysts takes place more rarely than might be expected. Their growth is slow; while as they occupy parts of feeble sensibility they give rise to no appreciable symptoms in the early stages of their development. But when they have attained a certain size they produce uterine leucorrhœa, irregular with too abundant menstruation, and often attacks of haemorrhage. Pains in the loins and upper part of the thighs are complained of, frequently there is a sense of bearing down, and in exceptional instances the growth is thrown off with the symptoms which are produced by the expulsion of an early ovum or of a polypus. An examination may fail to detect the cyst if it be situated in the substance of the uterus, or if it project into the canal of the cervix without causing dilatation of the os uteri; but where the latter is patulous, or where the cyst projects from the external surface of the neck, it will be found as a somewhat supple and imperfectly fluctuating, or as a firm and elastic body. When the cyst occupies the cavity of the uterus, the body of this organ will be appreciably enlarged, and feeling as if occupied by a fœtus or fibroid tumour; the diagnosis being difficult until the os and cervix have been dilated, so that the growth can be reached with the finger.

The treatment consists in making a sufficient incision into the mucous cyst, with the assistance of the speculum; or in having recourse to an incision with the application of caustic to the walls; or in snipping or twisting off the growth if it be at all pedunculated. These cases ought never to be allowed to end fatally, or even to injure the general health; because in any instances of uterine disease where there is constant leucorrhœa, with occasional attacks of haemorrhage, and a small healthy os uteri, the latter should be dilated with sponge or sea tangle tents (p. 426). After this stretching has been fairly accomplished, the removal of a dead ovum, or of a mass of hydatids, or of a pedunculated fibroid or cystic tumour becomes comparatively easy.

The serous cysts may be developed in the subperitoneal areolar tissue, or very rarely in the muscular substance of the uterus. They are probably of more frequent occurrence than the mucous bodies; but their presence is ascertained with greater difficulty during life, inasmuch as they grow from the external or abdominal surface of the uterus, while they give rise to no symptoms of any moment unless they happen to press upon the rectum or bladder. It is very probable that not a few of the cases of floating abdominal tumours, which are every now and then met with, consist of these cysts with a long pedicle; while it is also not unlikely that some of the instances of ovarian tumour, that have been recorded as cured by spontaneous rupture into the peritoneum, have really been examples of uterine cysts. The largest growth of this kind with which I am acquainted, occurred in a patient long under my care for severe uterine haemorrhage, due to a fibroid tumour seated in the pos-
terior wall of the uterus. In this case, the post-mortem examination revealed the presence of an oval cyst, formed under the peritoneum which was stretched upwards from the fundus uteri; and as the growth was supported upon the expanded wings of the iliac bones, the uterus had been almost kept out of the true pelvis by it. The sac measured nine inches in breadth, and contained about a pint and a half of urinous-looking fluid.*

When these serous cysts are detected during life, and when they give rise to troublesome irritation of the rectum or bladder, they should be cautiously punctured either with a bistoury or a trocar and cannula.

IX. DISPLACEMENTS OF THE UTERUS.

The displacements to which the uterus is liable have excited the attention of practitioners of medicine since the days of Hippocrates. It is only in the present century, however, that the different flexions and versions to which the non-pregnant womb is subject have been determined and distinguished from each other; while now in the second half of this century, we are employed in discussing the pathological significance of these displacements. The history of these questions is just a repetition of that which has happened over and over again. First, the occasional occurrence of some morbid state of the body is described, and after a considerable interval generally recognised. In the second term, the gravity of this condition is over-estimated, and its treatment often conducted with unnecessary severity. During the third period, the importance of the disorder is unduly depreciated; while the few practitioners who think such excessive depreciation an error, and who attempt to remedy the malady, are often ungenerously censured. And then in the fourth stage, “spirited discussions” (as many exhibitions of bad taste and imperfect knowledge have been euphoniously called) gradually cease; the disease being allowed to drop into its proper position in the practice of physic. This last epoch has yet to be reached by some of the affections now to be described. To say that prolapsus and procidentia, flexions and versions, can now and then exist without giving rise to any symptoms of moment, is undoubtedly true; but it would be very incorrect, in my opinion, to argue that these conditions of the womb are therefore unimportant, or that they are not often the source of daily annoyance and discomfort, or that they do not readily lead to serious and painful complications.

* For a detailed report of the patient’s history, together with an excellent sketch of the uterus and the tumours, by Dr. Westmacott, see Transactions of the Obstetrical Society of London, vol. iii. p. 11.
1. PROLAPSUS AND PROCIDENTIA.

These terms have long been used in practice to designate a descent of the womb as it exists in two different grades. By "Prolapsus" [from Pro labor = to glide forward] is meant that condition in which the uterus falls below its natural level in the pelvic cavity; while by "Procidentia" [Pro ci do = to fall down] is signified the protrusion of the uterus beyond the vulva. The causes of both conditions are the same: the symptoms vary but little save in degree.

Causes.—All women are liable to a falling of the womb; but it occurs most commonly after the age of thirty-five in such as lead a laborious life. Hence, cooks and laundresses and market labourers often suffer from it, and next to these perhaps are nurses. Women who have borne children are more frequently affected than those who are sterile; while lingering or instrumental labours especially predispose to it. Amongst other causes also must be enumerated all those conditions which tend to increase the weight of the uterus, such as congestion, hypertrophy, subinvolution after labour, tumours, &c.; violent bearing-down efforts, such as are made during parturition, in straining to pass hardened faeces, or in urging an evacuation through a stricture of the rectum; and forced respirations, particularly those used in coughing, the lifting of heavy weights, &c.

The immediate causes of the displacement may be said to be the pressure on the uterus by the superincumbent visceras, combined with a diminution in the tone of the uterine supports. Consequently, prolapsus or procidentia is prevalent among women who have a preternaturally shallow and capacious pelvis; in the sufferers from ascites and ovarian dropsy; in delicate flabby subjects, where the vaginal walls are relaxed, and the broad and round ligaments unbraced and elongated; as well as in cases where the perineum has been lacerated and the torn edges have not reunited. Very rarely we find procidentia during the early months of pregnancy; the uterus, however, as it subsequently rises out of the pelvic cavity assuming its normal position.

Symptoms.—The uterus can seldom fall to any extent without giving rise to much discomfort. Complaint is generally made of a sense of fulness or weight about the pelvis, of dragging or bearing-down pains, of a wearisome backache, and of a leucorrhoeal discharge. Menstruation is seldom interfered with; there is no impediment to conception, since even in most cases of procidentia the uterus goes back by itself or is easily pushed up when the patient is in bed; and the general health is not directly affected. The extent to which the bladder and rectum suffer, in consequence
of the pressure of the displaced womb, varies very much independently of the amount of displacement. In some few instances, there is a complete inability to pass water until the patient lies down and replaces the uterus with her fingers; while in other cases micturition may be annoyingly frequent. Constipation is often complained of, and if the woman be careless a large accumulation of feces may take place in the rectum.

By a vaginal examination, in cases of prolapsus, the uterus is found depressed from its normal site, being often so low that it rests upon the perineum. The detection of the os uteri, at the inferior part of a cervix of the natural length, prevents any error in diagnosis.—In procidentia uteri, a round or pear-shaped tumour, of variable size, is seen projecting beyond the vulva; the mouth of the uterus, often somewhat dilated and covered with thick mucus, being visible at the centre of the lowest part of the tumour. It is always advisable to introduce the sound so as to learn whether the depth of the uterine cavity is increased beyond its normal extent of two inches and a half; as well as to make sure that the opening is not a mere cleft in a polyloid growth. The labia uteri frequently present excoriations, or even rather deep ulcers, produced by friction with the clothing and the irritation of the discharges. The epithelium of the vaginal mucous membrane is also dry and harsh and cracked; while sometimes there are one or more ulcers, looking as if portions of the mucous lining had been punched out.

Treatment.—The general principles may be summed up in a few directions:—Afford artificial support to the superincumbent abdominal viscera; give tone to the round and broad ligaments of the uterus, to the relaxed vaginal walls, and to the perineum; and remove any complications which can favour the falling, such as uterine congestion or hypertrophy, cough, constipation, &c.

Before speaking of the best mode of carrying out these indications, a remark or two must be made as to the way in which a procident womb is to be replaced. With the great majority of cases there is no difficulty in effecting reposition. It is merely necessary to put the patient on her left side, with the legs well flexed; and then, having thoroughly oiled all the parts, to push up the uterus so as to allow this organ in its ascent to draw in the vagina. Supposing this plan to fail, it will be well to repeat the attempt while the woman rests upon her hands and knees, with her head much lower than her pelvis; in which position the downward pressure of the intestines must be removed. And still success not following, the procident uterus should be firmly encircled with strips of adhesive plaster, re-applying them every forty-eight hours; while the patient is to be kept quiet in bed for a few days, until the circumference of the tumour is sufficiently reduced. Immediately after the removal of the strapping, the uterus will almost certainly be replaced with ease. * Dr. M'Clin-
DISEPLACMENTS OF THE UTERUS. [PART XIII.

Tock has recorded a case where, the procidentia having existed continuously for four years, he was unable to effect reposition until he had thus compressed the uterus and vagina by four consecutive strappings. In a remarkable instance, where this plan was not tried, and where the uterus was passing into a state of sphaecelation although it had only been down three or four days, Mr. T. F. Edwards applied a whipcord ligature around the neck of the tumour. On the following day, a fresh ligature was put on; while the parts below it—consisting of the whole uterus—were excised. Seven days subsequently, the ligature came away; and in another fortnight the patient (who was 74 years of age) was walking about the streets of Denbigh to the astonishment of her surgeon and friends. The first symptoms of displacement had been observed twenty years previously, and there had often been some trouble in replacing the womb. Three months after the operation she appeared in good health.*

Returning to the subject of general treatment, attention must be directed to the importance of affording support to the abdominal viscera, a point which is too often neglected. Now support may be given in many ways. Where the patient is poor, she can generally be directed how to manufacture a belt of common jean, making it to lace behind; instructions being given that it is to be so constructed as to produce pressure from below upwards, while it ought to be comparatively easy above. A couple of bands, covered with wash-leather, are fastened behind, so that they may be brought under the perineum and then buttoned to the jean in front. These bands prevent the belt from riding upwards; while a pad covered with oil silk should be fitted on them, if necessary, to give support to the perineum. A much more perfect instrument is known as Hull's "Utero-abdominal Supporter," which forms an excellent abdomino-perineal bandage. Mr. Bigg has also contrived a very useful kind of abdominal plate, which is fixed with steel bands something like a double truss.

To give tone to the uterine ligaments and vagina, a nourishing diet with strengthening medicine ought to be prescribed. Every practitioner has a preference for some particular kind of tonic, and my predilection is in favour of a combination of nitric or phosphoric acid, nux vomica, and bark (F. 376). Of the various ferruginous preparations none are superior to the common tincture of perchloride of iron (F. 380, 392). Locally, recourse is to be had to astringent vaginal injections (F. 425); or to astringent pessaries (F. 423), which have answered admirably in my hands. In mild cases, tannin pessaries will almost alone effect a cure; but care must be taken that they do not set up too much irritation, and that their remnants are not allowed to accumulate in the vagina. Cold salt-water hip baths are also to be recommended. Where the

mucous membrane is ulcerated, the application of nitrate of silver proves very serviceable.

Three special methods of giving relief in these cases yet remain to be considered. And, first, with regard to mechanical pessaries, I would say that they have only seemed to me to be required in very rare instances. They are indeed clumsy inventions, mostly of use for concealing the practitioner’s want of skill. But some poor women do not ask to be cured: they are unable to give the necessary attention, and all they desire is that they may still work as laundresses, cooks, market gardeners, &c., without a day’s cessation. Under these circumstances the womb may be kept up by a well-adapted pessary. Many various kinds of instruments are sold; the best being Hodge’s lever oblong ring or horse-shoe pessary, the oval vulcanized india-rubber pessary, the common elastic air pessary, and that known as Zwanké’s pessary. This latter support is made of two oval plates of tin, united at one extremity by a hinge. On each side of the hinge, upon the lower surface of the plates, there is a metallic stem. These stems on being widely separated from each other, carry the oval plates face to face, thus allowing the instrument to be closed and easily introduced. Then by bringing the stems in contact, the plates are separated, so as to form an expanded surface like a pair of wings; this position being maintained by a screw which holds the stems together. Mr. Coxeter has somewhat modified this instrument for me, by substituting strong wires interlaced, for the oval plates; so that while the pessary is worn the patient may still use astringent injections, and thus hope for an ultimate cure.—Whatever pessary, however, is employed, the patient should be impressed with the importance of frequently removing it. The most offensive task I ever had was to extract an impacted boxwood pessary, which had been worn continuously since its first introduction two years previously. It was impossible to get it away without breaking it to pieces, and the stink from the matters which had accumulated in its interior was exceedingly disgusting. Moreover, several weeks elapsed before the ulcerations which the pressure of this globe had produced upon the vaginal mucous membrane were healed; and even then it was found that the procidentia remained uncured.

The second method aims at a radical cure, and consists in subjecting the patient to a somewhat severe surgical operation. The plan, originally known as Marshall Hall’s, is to dissect off one or more longitudinal strips of the vaginal mucous membrane, and then to bring the edges of the wound together with sutures; so that after the surfaces have healed, the calibre of the anal will be found diminished in proportion to the extent of tissue removed. The strips ought to be somewhat wedge-shaped, the apex being towards the meatus urinarius; while by some surgeons it is thought better to remove a slip from each side of the vagina, rather than
to take a very broad one from only the anterior or posterior surface. In the very few instances in which I have resorted to this procedure, the result has been successful; but it must be remembered that it is an operation not free from danger, and that the after-treatment is somewhat tedious.—Dr. Marion Sims and Mr. Ewart have improved upon this procedure by denuding a V-shaped portion of the tissue, with a transverse line of scarification to unite the two arms; the raw surfaces being brought into contact by silver wire sutures. This operation (elytroorrhaphy) has to be followed by perfect rest in the horizontal posture, with the repeated use of the catheter; while opium is given to relieve pain, as well as to procure constipation. The sutures through the angle of the V, next the urethral orifice, are removed at the end of nine or ten days; the upper ones, being withdrawn about four days later.

A third proceeding, which has been extensively practised, and which I formerly resorted to more frequently than I do now, consists in partly closing the vulval opening; so that if the uterus afterwards descends it falls upon an elongated perineum, instead of escaping externally. The mucous membrane from part of the sides and posterior wall of the lower part of the vagina is cleanly dissected off, an extensive horseshoe-shaped raw surface being formed. Quill or clamp sutures are then employed to keep the opposite surfaces in close contact, and the edges of the wound are brought together with a few superficial sutures; the former being removed about the sixth or seventh day, while the latter are allowed to remain for a couple of days longer. This operation is principally adapted for those cases where the perineum is more or less deficient, owing to some rent having occurred at the time of labour; but where there is a healthy perineum it has seemed to me very often to fail. At all events, I have not succeeded to anything like the extent I had anticipated; and cases have come under my care of bad procidentia, although the perineum had been thus lengthened some months previously by surgeons of great experience. And this is not surprising. For it must be remembered after all, that the perineum has but little to do in preventing uterine depression; inasmuch as it is sometimes seen completely ruptured without any procidentia occurring, while it may be perfectly natural in some of the worst forms of descent. I have even observed a firm and large hymen coexistent with procidentia, as in the following case:—On the 3rd June, 1864, C. P., aged 41, single, with the catamenia regular, and following the occupation of a nurse, consulted me for a falling of the womb, from which she had suffered for three years. To my surprise I found a small cervix uteri completely protruded, there being also a tough and extensive hymen. The cervix, which appeared constricted, was gently pushed upwards into the vagina; the opening in the hymensal membrane being then felt so contracted that it only
admitted the finger with pain. A complete cure was effected by using the tannin pessaries, while a slight abdominal belt was worn.

In conclusion, it is necessary to warn the practitioner against placing much reliance upon those reports of cases of procidentia of the uterus which only show that the patient leaves the hospital "cured." For this term can never fairly be applied, unless she remains well for several weeks after resuming her customary occupation. To assert that a woman is cured, because her womb does not descend when she has just undergone some operation and has had a month's rest in bed is as great an abuse of language, as to say that a sufferer from mammary cancer is cured because her breast has been amputated and the wound has healed.

2. RETROFLEXION AND ANTEFLEXION.

The condition known as retroflexion [from Retro = backwards + flecto = to bend] consists of a bending back of the uterus at the part where the neck joins the body; so that the fundus is found between the cervix and rectum, the os uteri being in its normal position. The uterus, indeed, becomes shaped like a common retort. In anteflexion [Ante = forwards + flecto] we find the fundus pressing upon the bladder. Considering that in the natural condition of the nulliparous womb this organ is slightly inclined forwards, it might be expected that in after-life cases of an exaggerated degree of anteflexion would be much more commonly met with than examples of retroflexion. And according to some authorities this is the fact to a marked extent; although in my own practice it has been the very reverse. Without explaining the circumstance it is certain, that for every case of anteflexion about which I am consulted, I see five or six of retroflexion: and this has been my experience for several years. Displacement of either kind is rare in virgins.

Causes.—The displacements under consideration may result from the fundus being top-heavy, owing to the presence of a fibroid tumour in either the anterior or posterior wall of the uterus, or of a polypoid growth in the uterine cavity. Prolonged congestion also probably acts in the same way. Any weight upon the fundus—whether this be due to an abdominal tumour, or a faecal accumulation, or tight lacing forcing the viscera downwards will produce displacement. Relaxation of the proper tissue of the uterus is not an uncommon cause of retroflexion; and therefore we meet with this displacement in cases of too frequent childbearing, in fatty degeneration of the uterine walls, in delicate women suffering from menorrhagia, and in women who become exhausted through excessive sexual intercourse. The false membranes formed in pelvic peritonitis are now and then the cause of these deviations owing to their shrinking like cicatrices elsewhere.
Irregular contraction of the uterus, especially after abortion, often produces backward displacement; while the latter is certainly increased, even if it be not sometimes originated, by constipation and the straining exerted to pass hardened faces.

Symptoms.—Retroflexion may undoubtedly exist without giving rise to symptoms of the least importance. This only happens, I believe, when the displacement is slight and the uterine structures are flabby, or when the pelvic cavity is more than ordinarily capacious. But where the angle of flexion is acute, where the circulation through the uterus is much interfered with, and where the fundus is immovably pressed upon the rectum—encroaching upon its cavity like a firm tumour, I have always found the patient complains of considerable annoyance if not of actual suffering; annoyance, be it observed, which continues day after day, and is only varied periodically by dysmenorrhœa.

In a typical case of retroflexion the practitioner’s attention is first directed by the patient to a dull, wearing, and constant backache, which is most marked about the sacral region. He will be told that the pain shoots down the thighs, and that the groins are tender. Complaint is also made of a feeling of fulness about the rectum, so that there is an unusually frequent desire to go to stool although nothing comes away. Moreover, the passing of a motion which is at all constipated aggravates the aching in the back, and perhaps produces pains which shoot through the pelvis. Sexual intercourse is attended with suffering, and is not followed by pregnancy; while just before and after the monthly periods there is so much tenderness that connexion cannot be tolerated. The catamenia always come on with pain and difficulty; but about the end of the second day the flow of blood seems to give some relief. This is a more or less abundant catarrhal discharge. The general health is bad; there are frequent attacks of nausea; the appetite is small; the spirits are much depressed; and a train of symptoms is present which the sufferer has been assured is only due to hysteria. Very violent hysterical attacks may in fact be induced in a woman or girl previously entirely free from hysteria by the occurrence of acute retroflexion. On making an examination, the os and cervix uteri are found in their proper situation in the median line; but encroaching upon the rectum is a round body, exquisitely sensitive to the touch, and which consists of the congested fundus. On touching this part, or on attempting to elevate it, the patient will exclaim that it is the seat of her suffering. Owing to this great tenderness there will be but little difficulty in recognising the nature of the case; but in order to be absolutely certain that there is no tumour, the substance must be gently raised with the finger, while the sound is cautiously passed into the uterine cavity. The disappearance of the tumour during the time that the uterus is kept in its normal position, makes the diagnosis certain; but if any confirmation be still needed, it may be found in the circum-
stance that after the withdrawal of the sound the fundus will be gradually felt falling back again.

In the comparatively few cases of anteflexion which I have seen, the general symptoms and the local suffering have seldom exhibited much severity. In fact, such cases would hardly fall under observation, were it not that the pressure of the fundus very commonly produces great irritability of the bladder; so that while the patient is in the erect position the desire to micturate is almost as frequent as in cases of vesical disease. Moreover, although it is not uncommon to find considerable engorgement and tenderness of one or both ovaries in retroflexion, such complications are rare in anteflexion. Sterility is the consequence of both displacements when they are well marked; since at the angle of flexion the canal of the uterus is completely obstructed. Where the uterus is bent and its fundus fixed to the right or left side, the cervix remaining in the median line (lateroflexion), this deviation from the natural position will generally be found to have been caused by some congenital maldevelopment, or to have subsequently originated in an attack of inflammation of some of the pelvic structures—especially of the connective tissue.

Treatment.—Supposing the deviation to be recent, there is a hope that the uterus when replaced by the sound will retain its natural position. In some few cases of retroflexion and anteflexion this happens; and then the patient by remaining quiet in bed, for some twenty-four hours, is enabled to leave it quite well.

But in the greater number of instances, the womb falls back almost immediately after it has been replaced. If there be much congestion of the labia and cervix, good results will follow on relieving this hyperemia by applying leeches to the lips of the womb or by puncturing them. Then, when it is certain that there is no endometritis, a cure may sometimes be effected by the introduction of a stem pessary; by which instrument the circulation through the uterine tissues is allowed to go on naturally, and therefore the fundal congestion gets removed. The intra-uterine stem which I have found most useful is one which has been made by Mr. Coxeter at my suggestion. It is two and a quarter inches in length, and is fashioned somewhat like a flattened silver female catheter; having a slight curve corresponding to the natural bend of the uterus, and terminating at its lowest part in a thin concave plate on which the labia uteri rest. If this instrument produce the least pain, if the congestion of the uterus do not gradually disappear, or if there be any ovarian tenderness, medicated pessaries containing belladonna and the iodide of lead or the mercurial ointment (F. 423) are also employed at the same time. The patient is kept in bed for the first few days, and then gradually allowed to get about. If there be any approach to menorrhagia at the periods, the stem ought to be withdrawn at the time of the flow, and re-introduced after the discharge has ceased. But in many cases I have
allowed the instrument to be retained during the whole time, merely keeping the patient on the sofa until the period has ended. The whole duration of the treatment (the time during which the stem has to be worn) varies very much in different cases: a cure may be effected perhaps in two or three weeks, or not for as many months. Whatever the length of time may be, the patient is to be watched during the whole term.

There are cases, however, where this plan is inapplicable. With such, when the mucous membrane of the uterine canal is healthy, we may resort to the measure suggested by Dr. Moir of Edinburgh. This consists in dilating the cavity of the uterus with the sponge or sea sponge tents (fig. 426); beginning with a small size, and persevering until the finger can readily enter and explore the cavity. Having satisfied ourselves that there is no foreign body present, the uterus is allowed to contract upon a metallic stem such as has just been described. The stem should be changed every forty-eight hours, beginning with one of considerable size, and ending with one rather larger than the utricle sound. The stem last used, moreover, had better be worn for some few weeks. Dr. Moir recommends wire pessaries covered with gutta percha, but I have not employed them.

In a third class of cases, where the uterine congestion and tenderness have been very great, or where there have been more or less prominent symptoms of endometritis, I have adopted a practice the value of which I first learnt from Mr. Baker Brown. This gentleman, believing that the muscular tissue is not passive in retroflexion, and that there is probably active contraction at the point of flexion, has incised the os and cervix with the hystermotome; dividing the parts freely up to, but not through, that contracted part of the cervical canal usually known as the internal os. I am not quite certain whether Mr. Brown divides the tissues at the angle of flexion, but I have always done so; although the incisions at this point must be made very cautiously, inasmuch as the tissues are often thinner there than in healthy uteri. With the precautions already recommended in using the hystermotome, I believe that this operation is almost free from danger, and that if adopted in suitable cases it will effect a cure.

One word of warning must be added as to those rare cases where the uterus is not only displaced, but in which the fundus is bound down by adhesions to its unnatural situation. To rupture these would probably be to excite severe, and perhaps fatal, peritonitis. Should such adhesions be present they may be diagnosed by the practitioner finding it impossible to elevate the fundus with the finger; while if he attempt to replace the womb with the sound the tearing pain produced will be unbearable. In such cases, we shall have to be contented with giving relief by the frequent use of the iodide of lead and belladonna pessaries; two or three leeches must be occasionally applied to the uterine lips when there
is evidence of congestion; and the bowels ought to be kept regular by pepsine, the mineral acids, and very simple aperients, so as to prevent any lodgment of fecal matter in the rectum above the projecting fundus.

3. RETROVERSION AND ANTEVERSION.

These displacements are very seldom met with in the unim-
pregnated state. In retroversion [from *Retro* = backwards + *veto* = to turn] the uterus lies almost transversely in the pelvic cavity; the fundus being towards the hollow of the sacrum, while the os is drawn under the arch of the pubis. The opposite condition, anteversion [Ante = forwards + *veto*], is characterized by the fundus lying towards or against the bladder, while the os is found directed to the cavity of the sacrum.

The chief symptoms are backache and bearing-down pains. There is usually a leukorrheal discharge, but this is due more to the cause of the malposition than to the displacement itself. Menstruation is not interfered with, neither is impregnation absolutely prevented. In retroversion the os uteri is seldom pushed forward with such firmness as to press on the urethra, and so give rise to retention of urine; although such an occurrence is very commonly the result of this displacement when the uterus in enlarged by the existence of pregnancy. Nevertheless, it may happen that miciturition will be impeded; and therefore if any tumour be felt at the lower part of the abdomen, or if the patient complain of a constant desire to pass water, or especially if the urine should dribble away, the catheter ought to be passed without loss of time.

Supposing the fundus to be inclined to one side of the body while the os uteri looks towards the opposite side (lateroverision), there will usually be obtained a history of previous pelvic peritonitis, unless there has been some congenital arrest of development causing a neighbouring viscus to drag aside the uterus. Under either of these circumstances the malposition is most times incurable. The occurrence of pregnancy in these cases though not impossible, is surely very improbable.

In the cases of retroversion and anteversion of the non-preg-
nant uterus which I have seen, the general condition has been one of debility; the muscles especially being deficient in tone, and the vaginal walls much relaxed. The treatment has therefore con-
sisted in allowing a nourishing diet; in administering such tonics as quinine and steel and nux vomica (F. 380), or the mineral acids with strychnia and some bitter infusion (F. 378); while locally astringents have been employed, particularly injections of alum and sulphate of zinc (F. 425), or tannin pessaries (F. 423). Cold sea water baths have proved especially useful. The occasional replacement of the uterus with the sound has also materially as-
sisted the cure.
4. HERNIA OF THE UTERUS.

Hernia of the uterus or of its appendages is an accident concerning which the records are very scanty. Of the reported cases, it is remarkable that the greater number are examples of displacement of the gravid uterus. Hernia differs from eversion of the womb in this respect; that whereas in the former case the womb passes through the inguinal or crural opening, in the latter it is forced through some artificial aperture—as between the recti muscles, &c., or through a wound in the abdominal parietes.

Hernia of the unimpregnated uterus can happen at the inguinal ring, or at the crural arch, or through the obturator foramen; while it may probably arise from too great relaxation of the ligaments of the uterus, or from displacement of the uterus by tumours within the pelvis, or from the contraction of bands of false membrane, &c. The diagnosis of this condition from ordinary intestinal herniae will hardly be very difficult, if a vaginal examination be instituted; though without this a mistake is not unlikely to be made, since the symptoms may at times resemble those due to strangulation of the intestines. An examination of the recorded cases of uterine hernia shows that pregnancy can occur, and full development of the fœtus take place, while the uterus remains in its abnormal position. The treatment of such an accident must depend very much on the length of time which has elapsed since its occurrence, and on the nature of the symptoms. When recent, it would seem not unlikely that cautious attempts at reduction might be attended with success; although supposing the manipulation to be fruitless, an operation would scarcely be justifiable unless there happened to be severe suffering and constitutional disturbance.

The protrusion of the gravid uterus at the umbilicus has been met with more frequently than any other variety. Dr. Evory Kennedy says that he met with a remarkable example, in a woman who had borne a number of children. When in labour of her second child, hernia took place at the umbilicus, which gradually increased in extent with each child she carried; until at length the impregnated womb made its way completely out of the abdomen, and became suspended over the pubes, so that at the end of the ninth month it hung down as low as the knees.

I believe that no instance of hernia of the gravid uterus at the inguinal ring is known to have occurred in our own country; and probably not more than five or six examples are to be found recorded in medical literature.
5. INVERSION OF THE UTERUS.

Not a few practitioners pass through a long and busy life without ever meeting with a case of uterine inversion. The uterus, in this accident, is literally turned inside out. The fundus descends through the os uteri; so that the mucous lining of the cavity of the womb becomes the external covering of the tumour, which projects into the vagina and generally through the vulva.

The uterus may be inverted immediately after labour; either from delivery occurring unexpectedly while the patient is in the erect posture, or from irregular contractions of the uterine fibres, or from the practitioner making violent traction on the funis to remove the placenta.*

The fundus of the uterus will now and then become much depressed directly after parturition, although complete inversion does not follow for many hours or even for a few days until some irregular contractions have forced the fundus and body quite externally. These cases are sometimes spoken of as examples of spontaneus inversion, the accident occurring independently of any interference on the part of the practitioner.

Cases of inversion have also been observed quite independently of parturition. Thus, a polypus attached by a very short pedicle to the fundus uteri having been expelled into the vagina, the womb

* The examples of inversion which have been under my own observation are the following:—The first case happened on the 2nd July, 1860, when I received a note asking for my immediate attendance, as "a large tumour had been spontaneously expelled from the womb directly after the birth of the child." The gentleman who had effected delivery thought the tumour might be ligatured, or at once cut off, with advantage. On examination the uterus was found completely inverted, with placenta attached. The patient was very faint, but on peeling off the after-birth only slight difficulty was experienced in effecting reposition. She recovered favourably.

The second instance occurred on the 2nd August, 1860. The patient, a primipara, was attended by an experienced student from King's College Hospital. On the birth of the child there set in considerable haemorrhage; and while the accoucheur was attempting to check the flooding by removing the placenta, the uterus became completely inverted. I took away the placenta, reduced the inversion, and the patient did well.

The third example was met with on the 28th February, 1866. Mrs. ———, nineteen years of age, was delivered of her first child at the end of the eighth month of gestation. Directly after the removal of the placenta Dr. O'Flaherty discovered that the uterus had become inverted. On my arrival about an hour afterwards, I found the patient much prostrated. There was complete inversion, the uterine being between the patient's thighs. The placenta had evidently been attached to the fundus. Owing to the flabby nature of the organ (it seemed almost as if there were advanced fatty degeneration) great care had to be taken in effecting reposition, which was however accomplished. But within an hour afterwards the exhaustion rapidly increased, and the patient sank in spite of the liberal administration of stimulants.
DISPLACEMENTS OF THE UTERUS. [PART XIII.

has become inverted owing to the continuance of the forcing pains. An excellent example of this occurrence can be seen in the Hunterian museum—Preparation 2654. Or again, straining efforts like those of labour have been set up by a fibroid tumour, and the uterus has been inverted so that the growth could be seen projecting from the uterine wall.

The symptoms which immediately result from inversion are those of severe nervous shock. There are also bearing-down pains, nausea and vomiting, and cold sweats; together with a rapid feeble pulse, and perhaps hemorrage. Where the placenta has come away prior to the accident, the latter may escape detection; the symptoms probably being attributed to the hemorrage. Under these circumstances, death has occurred from exhaustion without a suspicion as to its cause; until the nature of the case has been revealed at the autopsy. Or the patient has gone on for months, or perhaps for years, suffering from very bad health, anæmia, repeated attacks of hemorrage, nausea, &c., without the cause being surmised until a proper vaginal examination has been made. And even then, at least some nine or ten cases are known where the inverted womb has been mistaken for a polypus; the error not having been discovered until after the organ has been excised, or a ligature placed around it. No false diagnosis can be made, however, if the relations of the tumour to the os uteri be observed. For on passing the finger, or the sound, upwards along the tumour, a cul-de-sac will be found all round its neck; so that the instrument will not penetrate between the tumour and the os uteri for more than about half an inch. If the inverted womb be protruded beyond the vulva, the rough and bleeding surface of the body will proclaim its nature. Moreover, if further evidence be needed, the orifices of the Fallopian tubes may be sought for and a probe passed for some little distance into each canal.

Supposing that the uterus is inverted with the placenta attached, the latter organ had better be peeled off before attempting reposiion. It has been thought that by adopting this practice, the risk of hemorrage would be increased; but independently of the great advantage derived from lessening the bulk of the womb, the danger is more imaginary than real. Then the uterus should be grasped as firmly as possible, and steady long-continued pressure made in an upward direction, so as to reduce that part first which has last descended. The inhalation of chloroform or some other anesthetic can generally be allowed with advantage; for independently of the importance of saving the patient unnecessary pain, these agents will help to relax the os uteri.

For chronic cases the same plan of treatment is to be resorted to. If the inversion be of some years' duration, it will probably be necessary to repeat the attempts at replacement day by day, for some seven or eight occasions; keeping up pressure in the intervals by the introduction into the vagina of a well-adapted air-pressa.
DISEASES OF THE OVARIES.

This practice failing, Dr. Robert Barnes' suggestion of making an incision on either side of the os uteri, and then reappling pressure, ought to be tried. In a case of inversion of six months' standing, which resisted elastic pressure steadily maintained for five days, Dr. Barnes made three longitudinal incisions into the os uteri, so as to relax the circular fibres; the taxis when then applied succeeding quickly in effecting reduction. Assuming that, after as many fair attempts as seem justifiable, the inversion is found irreducible, is further treatment to be abandoned? As a general principle, the answer to this question must be in the negative. For there is sufficient evidence to show, that the danger of the patient sinking from the constant irritation and repeated haemorrhages produced by an inverted womb is really greater, than that which follows the removal of the organ by the ligature or écrasur. The experience which I have had with the latter instrument in other operations upon the uterus, leads me to recommend its employment in this; for if the chain be worked slowly and cautiously there is no fear of haemorrhage, while the risk of inflammation is certainly less than with the ligature.

X. DISEASES OF THE OVARIES.

The ovaries (the analogues of the male testes) are oval-shaped bodies, placed one on each side of the uterus, in the broad ligament, behind the Fallopian tube and the round ligament. Each gland is some eighteen lines in length, twelve in breadth, and about one hundred grains in weight; each is in a great measure invested by peritoneum; while each is connected with the side of the uterus by the ligament of the ovary, and with the fimbriated extremity of the Fallopian tube (the oviduct) by a slight ligamentous cord. Along the anterior margin of the ovary, where there is no peritoneum, the proper fibrous tunic of the ovary (the tunicæ albuginea) is seen; enclosed in which is the vascular stroma, having numerous transparent vesicles (Graafian follicles) imbedded in its structure. Every vesicle is an ovisac, containing an extremely minute ovule or ovum, surrounded by albuminous fluid. As each menstrual period approaches, a Graafian vesicle reaches the surface of the ovary; and then rupturing, the contents of the vesicle pass into the canal of the oviduct, the orifice of which, for the time, has become attached over that part of the ovary containing the ripe vesicle. The ovisac having discharged its contents, a little extravasation of blood and serum takes place into it; and some firm yellow material having been exuded from the walls, a corpus luteum is formed. If pregnancy happen from the union of the male sperm cell with the female germ cell (or ovum), then the corpus luteum is much larger and more vascular and presents more yellow matter than
where the ovule perishes without fecundation. In the one case there is a true, in the other a false corpus luteum.

The ovaries may be absent; or they are sometimes found undeveloped, retaining their fetal condition throughout the life of the bearer; or they can become prematurely atrophied—before the usual time for the change of life. Their other morbid states will now be considered under the heads of inflammation, tumour, and displacement.

1. ACUTE AND CHRONIC OVARIITIS.

Inflammation of the ovary (formerly known as Oophoritis) in the non-puerperal state, occurs under two forms,—the acute, and the subacute or chronic. The first variety is as rare as the second is common. It is comparatively seldom that both glands are simultaneously affected in either form; while the left ovary is more frequently attacked than the right. In sixty-eight cases of acute and chronic ovaritis, the histories of which have been collected by Dr. Tilt, the inflammation was on the left side in 34, on the right in 21, and on both sides in 13. Moreover, it is happily an exceptional circumstance to find the morbid action running on to suppuration.

Acute ovaritis may be due to violence, or to the application of strong caustics to the cervix, or to the suppression of the menses from a sudden shock or cold, &c. Pelvic cellulitis and peritonitis now and then originate it, the inflammation spreading to and involving these glands. Ovaritis has also occurred during the progress of gonorrhoea; but whether due to this disease, or to its treatment by astringent injections, copaiba, &c., seems doubtful.

One of the prominent symptoms is pain, which is of a variable character. Sometimes it is persistent and intense; although more frequently it is not continuously severe but rather of a dull aching character, with a recurrence of sharp lancinating paroxysms. The lower part of the abdomen is tender; and especially so are the groin and the inner part of the thigh, on the side corresponding to the affected gland. If the morbid action continue unchecked, the tissues of the broad ligament (if not already inflamed) become involved in the mischief; and then the pain is greatly increased, while the bladder usually suffers. The calls to micturate are frequent: the urine becomes scanty, high-coloured, often loaded with urates, and scalding. When also that portion of the serous membrane covering the lower part of the descending colon and rectum gets affected, there will be symptoms of tenesmus; while the passage of scybala often causes intense suffering, especially if the hardened feces press upon the inflamed ovary. There is usually considerable constitutional disturbance,—such as fever, rapid pulse, a thickly-coated tongue, distressing nausea and retching, flatulence, disgust for food, restlessness, &c. A vaginal exploration shows...
that the cervix uteri is free from swelling or undue heat, although it is often somewhat tender. But on moving the finger to the right or left side, according to the ovary affected, the practitioner will detect an exquisitely sensitive body; which body is found to be almost immovable, and at least about the size of a large walnut. Where the abdominal walls are thin, the gland may be more distinctly felt by making pressure with the left hand above the pubes, while the forefinger of the right hand is retained within the vagina.

Pus may form in the ovary without there being any well-marked symptoms to indicate its presence, excepting more or less severe and constant pain. This happened with a lady who was under my care several years ago, and who died in consequence of the effusion of the matter into the peritoneum. In the larger number of instances, however, the occurrence of suppuration has been indicated by rigors, a quick and feeble pulse, a glazed red tongue, excessive sickness, and a sense of weight and throbbing about the lower part of the abdomen. The tissues in the neighbourhood of the ovary and broad ligament get involved in the suppurative inflammation; so that the case becomes one of pelvic cellulitis. Should the abscess burst into the rectum, or into the vagina, a feeling of relief will usually be experienced immediately, and the patient may ultimately do well; though not unfrequently these cases are very troublesome, as the opening closes and the matter accumulates again and again. Where the pus is discharged into the peritoneum, inflammation will be set up which is almost certain to end fatally.

During the treatment of acute ovaritis complete rest in bed is needed. I have seldom had recourse to depletion, unless the attack has been connected with a sudden suppression of the menses. But in such cases, the application of four or six leeches to the lips of the uterus often gives marked relief. Hot hip baths, repeated night and morning for twenty or thirty minutes at a time, are always serviceable; their employment being followed by the introduction of a pessary of opium and belladonna (F. 423) into the vagina. When the bath produces faintness, half a tumblerful of white wine whey (F. 10) ought to be given at the time of depression. If it be thought desirable to administer mercury, this agent may be advantageously mixed with the pessary; but care should be taken not to produce salivation. As a rule, a mixture containing full doses of iodide of potassium with chlorate of potash will be found much more efficient than any of the mercurial preparations. Fomentations to the lower part of the abdomen, or hot linseed poultices applied over the vulva and hypogastric and inguinal regions, are serviceable. Where these measures fail to relieve the pain, opium should be given; sometimes one grain of the extract being needed every three or four hours. Supposing that suppuration has occurred, and that the abscess decidedly points in the
vagina, it may be advisable to carefully let out the pus with a
trocar or bistoury; but the practitioner had better not interfere
unless he feels quite certain with regard to the diagnosis. I know
of no means by which an ovarian abscess can be distinguished
from a pelvic abscess; and therefore as regards treatment it is
fortunate that such differentiation is unnecessary.

**Chronic or subacute ovaritis** is a very common affection during
the period of sexual vigour. This will not appear remarkable if it
be remembered how closely allied the process of ovulation is to
inflammation. The monthly congestion of the ovary, terminating
in a rupture of its coats, is just that kind of physiological process
which would seem most likely to run on to disease upon very
slight provocation. And not only does this periodical congestion
predispose to attacks of ovaritis, but it often renders the affection
very obstinate when once established; for while the inflammation
interferes with the healthy performance of the menstrual functions,
the morbid menstruation aggravates or perpetuates the inflamma-
tion. So also, whatever interferes with the due performance of
the uterine and ovarian functions may induce subacute ovaritis. In
this way it can be set up by cold, especially if this cause be called
into play during menstruation. The injection of iced water into
the rectum to check flooding, has been known to induce an attack
of ovaritis. Again, this disorder is not infrequent in the newly-
marr ied, being produced by excessive sexual intercourse; while it
is not an uncommon cause of suffering to prostitutes. The in-
proper application of caustics to the uterus, or the rough use of the
uterine sound can set up inflammation; just as the rash employ-
ment of the catheter may make false passages in the male urethra,
or may induce orchitis. But as catheterism is not to be condemned
because it is productive of mischief in unskilful hands, so the
uterine sound can only be spoken of as "an abomination" by
gentlemen who have not the dexterity to handle it with the care
which all instruments require. Lastly, I believe that subacute
ovaritis will at times occur spontaneously in women of a rheumatic
diathesis; and also in such as have a syphilitic taint. It is very
probable that ovarian syphilis may consist either of an inflamma-
tory action diffused through the whole gland; or of hypertrophy
from the production of gumma.

The chief symptoms of this form of inflammation are—a dull
and continuous aching in the ovarian and sacral regions; tender-
ness about the upper part of one or both thighs; scanty and difficult
menstruation; and pain on sexual intercourse. Irritability of the
stomach is common; so that there are frequent attacks of nausea,
of indigestion, and sometimes of sickness. There are paroxysms
of hysteria; with soreness and irritability of the bladder. Evidence
is given of more or less dysmenorrhea and leucorrhoea; as well
as of tumefaction and tenderness of one or both breasts. In ex-
ceptional cases there may be appearances leading to the suspicion of masturbation. Attacks of nymphomania, or even some chronic forms of insanity, occasionally have their origin in subacute ovaritis. If pressure be made over the groin on the affected side complaint will be made of pain, while now and then there is a slight apparent fullness; and if a vaginal examination be instituted, the inflamed gland will be felt swollen, and sensitive to the touch.

As to the selection of remedies it must be remembered, that the sufferers from subacute ovaritis are for the most part delicate women; and that no plan of treatment will be successful which does not tend to improve the general health. Hence it is always important to pay attention to all that pertains to hygiene. The patient should clothe warmly; and especially ought she to wear cotton drawers in the summer, and flannel ones during the winter months. Her diet should be nourishing; animal food being taken at least once a day; while malt liquors must decidedly be forbidden, and milk freely allowed. Gentle exercise had better be taken daily in the open air, walking generally causing less annoyance than the jolting of a carriage. Riding on horseback does harm, even if it can be borne. Warm hip baths, once or twice a week, are also useful; whereas cold bathing is generally injurious. Sexual intercourse will at least retard the cure. With regard to drugs I confess to having most faith in the chlorate of potash, which should be ordered in twenty grain doses three or four times a day. Where this fails, success often follows from the use of the iodide of potassium, which is generally best given in combination with some bitter infusion (F. 31). Where there is much pain, from five to ten minims of tincture of aconite should be added to each dose. Cod liver oil is especially serviceable, provided the stomach can digest it; and even if there be any difficulty in this respect, a daily dose of peписи (F. 420) will often overcome it. And then, locally, no agents will prove so serviceable as the iodide of lead and belladonna pessaries (F. 423), one being introduced into the vagina every night. When the sacral pain continues in spite of the use of these pessaries, a belladonna plaster ought to be applied. It is only necessary to add that bleeding and purging and blistering have never appeared to me to be necessary. On the other hand, I have seen all the symptoms considerably aggravated by the administration of steel.

2. OVARIAN TUMOURS.

Three varieties of tumours are met with in the ovary, viz. the fibrous or solid, the cancerous, and the cystic. The first two kinds demand but little notice. For not only are they rarely met with, but the innocent growths seldom destroy life unless improperly interfered with; while the attempt to remove a malignant tumour by abdominal section will probably prove immediately
DISEASES OF THE OVARIES. [PART XIII.

fatal, and in any case can scarcely be expected to effect a thorough cure.

Cystic disease of the ovary—the common ovarian tumour—consists in the conversion of the gland, or of parts of it, into cysts. These cysts, in at least the majority of cases, have their origin in the Graafian vesicles. This seems proved by Rokitansky's demonstration of the presence of an ovule or ovum in an ovarian cyst. Dr. Woodham Webb has likewise examined a tumour, the multilocular character of which was produced by clusters of ovisacs of various sizes; while he found ova in all the small sacs. There is also every probability that Dr. C. G. Ritchie's suggestion is correct,—that in some cases ovarian cysts are actually due to the development of the ovum while still in its ovisac. From some cause the ovule has not been able to escape out of its sac, and it has undergone a series of transformations while retained. Such changes occur quite independently of impregnation. Looking at the structure of the ovary—seeing that it is a cyst-forming organ, the wonder is, not that cystic development now and then proceeds to an abnormal extent, but that it does so with such comparative infrequency.

There are three varieties of ovarian cysts,—the simple or unilocular; the compound, multilocular, or proliferous; and the dermoid cysts. The simple cysts are less frequently met with than the compound; they often attain a considerable size; and the fluid they contain generally resembles urine in appearance and density, while it is loaded with albumen. The multilocular tumour is the most common; the cysts vary in size, there frequently being one large one, with a number of smaller sacs congregated towards the pedicle; and the albuminous contents are thick or gelatinous, often dark-coloured from admixture with altered blood, and presenting large quantities of cholesterine which may be skimmed from the surface after the fluid has been evacuated. The dermoid cysts (or ovular growths, as I would call them) are peculiar, inasmuch as they are examples of an attempted development of the ovule or ovum, without fecundation; such growths containing skin, bone, hair, teeth, and sebaceous matter.

Ovarian tumours run their course much more rapidly than is generally supposed; and it seems to me probable that the greater number prove fatal within four years from the first recognition of the symptoms. For although the growth of the tumour is at the commencement slow, yet after it has attained sufficient size to prove of considerable inconvenience the rate of increase is as rapid as the development becomes marvellously great. Like all diseases of the sexual organs, the one under consideration is most common during the time that the functions of the ovaries are called into play. The greater number of cases occur between the ages of 30 and 40, and next between 20 and 30. The disease affects both married and single women,—perhaps the former more frequently.
than the latter; while the sufferers from it are often sterile, or at all events their pregnancies have been few.

With regard to the ovary most liable to be affected, it seems that if we look to the records of 500 cases of ovarian tumour, examined only during life, we shall find the disease said to be seated in the right gland in about 230 cases, in the left in some 190, and in both in 80. But if we take only those cases where the opinion has been verified by operation or post-mortem investigation, then the numbers become much more equal, though there is still a slight preponderance in favour of the right side. In about one case in twenty both glands are diseased, although the proportion is said to be much greater by some authorities.

The deaths registered as due to ovarian dropsy, in England, during the twenty years (1847-66) have averaged 225 annually. Throughout these years the mortality has not varied very considerably; the largest number of deaths for any one year being 277 (in 1859), while the smallest number has been 178 (in 1852). The proportional number of deaths from ovarian disease to the increased population has very considerably decreased during the last seven years. Whereas the mean annual deaths from ovarian disease in 1,000,000 living, from 1860-64 was 12.8, during the five years from 1865-69 they averaged only 10.6, and in the two following years 1870-71 only 10 and 9 respectively. This decrease may perhaps be due to the improved method of treatment by operative interference.

The symptoms produced by an ovarian tumour in its early stages are usually so slight, that the disease oftentimes fails to attract any attention until the patient finds her abdomen rapidly enlarging; while even then, so little pain or annoyance does she experience, that the increase in size is often attributed to pregnancy, to flatulence, or to the growth of fat. It is only in exceptional instances that the tumour, while small enough to remain in the pelvic cavity, gives rise to irritation of the rectum or bladder, or to a sense of weight and oppression, or to pain and numbness extending down the thigh of the affected side; these symptoms being much more characteristic of ovaritis, and even of fibroid tumours of the uterus. Pain in the back—an annoying aching and weakness about the sacrum, is not unfrequently complained of; but women so constantly suffer from this that they hardly think of seeking advice for it. Moreover, in the greater number of cases menstruation continues regular; though in others the flow may be entirely suppressed, or it will appear irregularly, or it may be scanty or profuse.

When the tumour has attained such a size that it can no longer escape observation (which, strange as it may appear, will probably not be until it is as large as a child’s head) then pain or tenderness begins to be complained of; the pain not being so unbearable, however, as is the sense of distension, although the
suffering becomes severe when any peritoneal inflammation sets in. The menstrual function often gets disordered or suppressed, the patient loses flesh, and the tumour by its pressure interferes with the functions of the abdominal viscera. Constipation, indigestion, diminished secretion of urine, with frequent micturition, are amongst the chief complaints; while there is loss of appetite, restlessness at night, dyspnœa, diminution of strength, and in fact a sense of progressive general decay. On examining the abdomen, it is found much enlarged; and it may be difficult at first to decide whether this enlargement be due to a tumour, or to ascites, or to a combination of both. There is fluctuation, which varies in distinctness according to the number of cysts, their distension, and their size; while percussion elicits a dull sound over the whole tumour, except in those rare instances which will presently be referred to. In not a few cases the growth gives rise to ascites; but almost always, after a time, the lower parts of the abdomen, as well as the vulva with the thighs and legs become calcinatus. Then the suffering rapidly increases, and the tumour greatly impedes the patient's movements; the nights are wretched; the sleep being imperfect and unrefreshing, while the attacks of dyspnœa prevent the woman from lying down; there is sometimes suppression of urine, followed by headache and stupor, convulsions and coma; or great prostration sets in, which soon ends in death.

The diagnosis of this disease is not always so easy as the physician might imagine from examining a well-marked case. In the early period, when the tumour is confined to the cavity of the pelvis, the patient seldom seeks advice; since she is either unaware of the existence of any morbid condition, or if she experience some slight inconvenience she deceives herself as to its cause. At this stage, however, if by chance an examination per vaginam be made, a tumour, varying from the size of a hen's egg to that of a large orange, will be discovered on one side or other of the uterus; while the vagina will be found elongated, and the os uteri drawn upwards and towards the affected side. At the same period, inspection of the abdomen will detect the existence of a certain amount of fulness on one side of the hypogastrium, or in one of the iliac regions. As the enlargement increases, the abdominal swelling becomes more symmetrical; so that when the tumour has reached the umbilicus, it is often somewhat difficult to decide whether one side of the abdomen presents any greater prominence than the other. Many practitioners imagine that an ovarian tumour always occupies the side on which the disease is situated, while the pregnant uterus is believed to have its centre as constantly in the median line; but neither of these propositions is absolutely correct.

A small ovarian tumour is more likely to be mistaken for a fibroid tumour growing from the side of the uterus, or for a dis-
tended urinary bladder, or for an abscess in the broad ligament, or for an extra-uterine gestation, than for the pregnant uterus. But the former may often be distinguished by the feeling of great elasticity, hardly amounting to fluctuation, communicated to the touch on making a vaginal examination; by the facility with which the sound can be passed into the uterine cavity, and the manner in which the uterus can be perceptibly moved away from the tumour and independently of it; by the persistence of the tumour after emptying the bladder with the catheter; by the non-existence of those constitutional symptoms which arise from inflammation ending in suppuration; and by the absence of those firm inequalities of surface which are produced by the different parts of the foetus. The history of each case, and the duration of the symptoms, will also afford material help in forming the diagnosis: though I have seen recent cases of ovarian dropsy where there has existed suppression or irregularity of the catamenia, morning nausea and vomiting, indigestion, troublesome constipation, irritability of the bladder, a sense of movement in the abdomen, and swelling with tenderness of the breasts.

The chief diagnostic marks of an ovarian tumour which has attained a large size are the following:—The abdomen is found more or less completely occupied by the morbid growth; the enlargement being smooth and rounded without any prominences when the disease is of the unilocular variety, but often very uneven in the multilocular form. A practitioner has been known to confidently assert that the limbs of a child could be distinctly felt through the parietes, when there was only an ovarian tumour causing a considerable inequality of surface. In the erect posture, as well as in the supine, the tumour projects forwards, the flanks being undistended. In the multilocular, more commonly than in the unilocular tumour, the superficial veins coursing over the abdomen are seen to be enlarged; and it has been thought by some observers that the vessels on the side corresponding to the diseased ovary are generally the most distended. This observation, however, I have not been able to confirm. Pressure with the hand on the tumour communicates a sensation of great resistance; this resistance being most equable in the case of the unilocular disease, though it is almost the same in the multilocular tumour when there are large cells. Fluctuation is always very distinct where there is only one cyst; being of course more imperfect and obscure where there are several, and no single one of great size. Unless the morbid growth is very large and projects into the loins, or unless ascites coexists, fluctuation will not be detected in the flanks. The more viscid the contents of the cyst, the more obscure will be the fluctuation, as a general rule; and the same remark holds good when the cyst walls are very thick, or when the sac is very much distended. The pulsations of the aorta are sometimes communicated to the hand laid over the tumour. Percussion
clicits a dull sound over the whole of the tumour, the only exceptions being when a coil of intestine passes between the tumour and abdominal wall, as it sometimes does just above the pubes; or when the cyst has been tapped, and has afterwards filled with air; or when a cyst has emptied itself into the intestine, and flatus has passed from the latter into the former. The dulness is uniform over the mass of the tumour, and its note is not affected by change in the posture of the patient; but there is resonance above the tumour, and in that lumbar region into which the intestines have been forced, which is always the one corresponding to the healthy gland. By auscultation a murmur can sometimes be heard in one or both iliac regions, owing to pressure exerted by the diseased mass upon the iliac arteries; otherwise only information of a negative kind is gained, there being an absence of borborygmi, and of course of the sounds produced by pregnancy. Cysts of moderate size, when free from adhesions, do not modify the respiratory movements; but when the growths are large they restrain the descent of the diaphragm, and especially do they do so when adherent. And then, in every case the signs of pregnancy should be looked for; not only to prevent any gross mistake in diagnosis, but so as to avoid the more excusable error of overlooking the coexistence of uterine gestation with ovarian dropsy.

The diseases which have chiefly been mistaken for ovarian tumours are the following:—Fibroid and fibro-cystic tumours of the uterus, especially when these have attained a great size. Instances of ascites, with a much enlarged spleen; or other examples of peritoneal dropsy, where the effusion of fluid is so copious that the intestines cannot float on its surface, and consequently there is dulness on percussion. Cases of extra-uterine pregnancy, which have gone on until the death of the fetus without rupture of the cyst. Enlargements of the kidney, either from hydroureteritis or cancer. Hydatid tumours of the liver, and of the omentum. A tumefaction produced by a mass of intestines bound together by old peritoneal adhesions. Malignant and other growths from the peritoneum. Phantom tumours of the abdomen; the result probably of abnormal muscular action, combined with flatulence, and an excessive accumulation of fat in the abdominal parietes as well as in the omentum. And lastly, extensive collections of feaces, filling the rectum and even the greater portion of the colon, have led to an incorrect suspicion of ovarian disease.

Hitherto reference has been chiefly made to the diagnosis of simple ovarian disease from other affections causing abdominal enlargement. Every now and then, however, we meet with complicated cases,—that is to say, in combination with an ovarian tumour there is an enlarged spleen, or hydatid disease of the liver or omentum, or a renal tumour, or chronic inflammation of the peritoneum with a considerable effusion of ascitic fluid, &c. When, together with an ovarian tumour, there is enlargement of the
uterus from disease, the diagnosis is difficult. In one very puzzling case which was under my care there were three separate affections; viz., ascites, a multilocular ovarian tumour the size of an adult head, and a uterus enlarged by two intramural fibroid tumours which had passed upwards out of the pelvis. The abdomen was immensely distended; but whether this distension was chiefly due to an ovarian tumour with one large cyst and a good deal of solid matter, or to ascites complicating some pelvic tumour, could not be determined until after tapping. An examination per vaginam showed the presence of some large uterine tumour; for there was a solid body evidently attached to the womb and appearing to cause retroversion, the os uteri being drawn high up under the pubic arch. In truth, however, the state of things could only be guessed at; the exact condition not being learnt until after death.

As regards the treatment of ovarian tumours nothing can be more absurd and reprehensible than the practice which some gentlemen even now adopt of administering hydragogue cathartics, diuretics, emetics, mercurials, iodine, iodide of potassium, liquor potasse, bromide of potassium, muriate of lime, &c. Equally injurious are the local applications which the same practitioners employ, such as leeches, blisters, iodine ointment, friction with stimulating liniments, electricity, &c. It is only necessary to examine a single ovarian tumour, to see that such agents cannot by any possibility do good; and consequently as they are of a very powerful nature, they must be productive of harm. That such is really the case, I know too well; and I am led to speak thus plainly, from the painful examples which have come under my notice of health entirely ruined, and death hastened, by violent medical treatment.

There are only four ways in which the physician can hope to give effectual relief or to accomplish a cure in ovarian dropsy. The first plan is by abdominal tapping; the emptying of the cyst or cysts being followed by the application of firm and well-adapted pressure, with the administration of large doses of chlorate of potash for several months, or of this salt in combination with iodide of potassium. Usually the fluid re-accumulates, and repeated tappenings are necessary, but occasionally a permanent cure is obtained.

The second plan is by paracentesis and the retention of an elastic catheter (or a drainage-tube) in the wound, to withdraw the fluid as it is resecreted. This proceeding, however, is by no means free from danger. It is seldom had recourse to unless the tumour be firmly fixed. Where it is movable, however, it should be made to adhere to the abdominal wall before evacuating the contents of the cyst and introducing the tube. With this object the ingenious plan suggested by M. Trousseau had better be adopted, in preference to the use of caustic. This gentleman used
to select the site most convenient for the ultimate introduction of a trocar, covering the skin in this region with a patch of diachylon plaster about the size of a crown piece. Through this he plunged from twenty to thirty steel needles (each about four inches long and tempered in the flame of a candle) which passed into the tumour, and were prevented from sinking through the skin by a head of glass or sealing-wax that rested upon the plaster. These needles caused scarcely any pain in their introduction, and they were allowed to remain in situ for five days. During this time some local tenderness usually developed itself, which was strictly limited to the area in which the needles had been introduced. At the expiration of the five days the needles were removed; and a small drop of the fluid of the cyst following the withdrawal of each, showed that adhesion had taken place. This fact might also be ascertained by palpation. After this proceeding M. Trousseau could always plunge a trocar into the cyst without fear of any accident. Tapping per vaginam may be practised in certain cases in which the cyst can be readily reached from this canal, the cannula being left for a time, or a self-retaining drainage tube being introduced.

The third plan consists in tapping the cyst, removing its fluid contents, and then injecting into it a solution of iodine. With regard to this I can only say, that in the cases in which I have tried it no permanent good has resulted; while in the hands of some physicians it has caused death. The only instances in which it is available are the unilocular tumours, or just those that may be often cured by tapping and pressure. Moreover, there is a fear of the disease being ascites and not a simple ovarian cyst; and then the injection would probably prove fatal. If, however, this plan be resorted to, the cyst must be emptied; and then a mixture, made of forty grains of iodine, sixty grains of iodide of potassium, and two ounces of water, is to be injected and left in the cyst, care being taken that none of it escape into the peritoneal cavity. Sometimes a cure is effected by rupture of the cyst, with extrusion of its contents into the intestine or vagina, or into the sac of the peritoneum whence they are removed by absorption. I have never seen a case where the fluid has been discharged through the Fallopian tube; and I believe that, in all probability, the examples which have been recorded of such an occurrence have been instances of dropsy of this canal owing to inflammation combined with obliteration of its orifices.

The fourth and last plan is by abdominal section, and the removal of the entire growth through the wound.

Before describing the operation of ovariotomy it may be mentioned, that my guiding rule in all cases of ovarian cystic disease is this:—When the tumour is not increasing in size, is not affecting the patient's health, and is unproductive of any unpleasant symptoms beyond those resulting from its weight, I do nothing at
all, merely directing the patient to see me in the event of any change. These cases are unfortunately very rare. Supposing that the tumour is small but gradually growing larger, there can be no objection to trying to retard such growth by administering chlorate of potash. This salt never does any harm, and I cannot help thinking that I have seen small tumours remain stationary in consequence of its free exhibition. As a matter of fact, however, much more than simple palliative treatment is needed in the majority of cases. We have really to decide between paracentesis and ovariotomy; in doing which regard must be had to the patient’s health, constitution, age, the condition and nature of the tumour, the presence or absence of firm adhesions, &c. Where there is any hope of cure from paracentesis, it is of course to be resorted to in preference to attempting the removal of the tumour; but in certain cases, and especially in the multilocular tumours, ovariotomy is the only proceeding which offers a reasonable chance of rescuing the patient from an early and very painful death. Taking into consideration all the examples of this operation which have been published, it appears that success has followed in about two cases out of three; while with greater care in the selection of cases than has yet been generally exercised the results will probably be more favourable.

The mode of performing ovariotomy remains to be described. And first, with regard to the preparation of the patient it is only necessary to say that she should be in her usual health, that the bowels ought to be properly relieved every day for some time before the operation, and that solid food must be avoided on the day that the tumour is to be removed. If the operation can be performed about a week after the catamenial period, so much the better.—Secondly, the temperature of the apartment is to be raised to about 70° Fahr., while it is advisable to render the air moist with steam. A good nurse should be present, who is to take charge of the patient afterwards. The duties of the assistants are to be arranged beforehand; while no one is to approach the patient who has been in the post-mortem room for two or three days previously, or who has been in attendance upon any case of erysipelas or puerperal peritonitis or scarlet fever, &c. The operator will take care to have ready on a handy tray such instruments as scalpels, strong scissors, a broad director, two large trocars with elastic tubing connected with the cannulae, strong vulsellum forceps, artery forceps, a couple of clamps, one or two cauteries, needles with and without handles, silver wire for sutures, and strong hemp ligatures. A supply of new fine sponges, flannels, lint, adhesive straps, towels, ice, basins of warm water, and one or two pails will also be required. An excellent operating table may be made by covering an ordinary dressing table with three or four blankets and a piece of impermeable cloth, and putting some firm pillows at the head. The bed which the patient is afterwards to occupy ought to be in the same apartment.—
Thirdly, the patient lying upon her back, with the head elevated, and the dress so arranged that the abdomen can be thoroughly exposed, is to be put under the influence of chloroform or ether. The operator having passed the catheter so as to be certain that the bladder is empty, then makes an exploratory incision in the linea alba; commencing about two inches below the umbilicus, and carrying it downwards for three or four inches. Easy as it may appear to cut down through the peritoneum, the most experienced operators are sometimes puzzled to know when they have reached this membrane; inasmuch as this serous sac bulges forward and often looks very much like a portion of the bowel, or it resembles the wall of the cyst. The peritoneum can, however, always be distinguished from intestine by making one or two taps on the finger laid over it; the percussion note being dull, unless there be a portion of bowel present. To discriminate between the peritoneum and the cyst is more difficult, and needs a sharp eye with a delicate touch; many cases being known where gentlemen have proceeded to separate this structure from the superimposed transversalis fascia, under the belief that they were merely breaking down adhesions between the tumour and the lining membrane of the abdomen. However, the peritoneum having been divided, and the ascitic fluid which is usually present having been allowed to escape, the hand (dipped into warm water) is to be introduced so as to learn whether any adhesions are present. If any be found they should be cautiously broken down. When the cyst is freed it begins to bulge through the wound, and the trocar is then to be introduced at the most prominent part, taking care that none of the fluid escapes into the abdominal cavity. As the sac gets emptied, its walls are to be grasped with a pair of strong vulsellum forceps, and traction exerted so as to withdraw the whole tumour. While an assistant keeps the intestines within the abdomen by pressure with one or more fine new flannels wrung out of warm water, the operator takes care that the tumour is nowhere adherent to the omentum, and examines the pedicle. Finding that all is clear, he applies the clamp (nothing answers better than the common carpenter's callipers) as tightly as possibly round the latter and as near the tumour as possible, and then cuts off the greater bulk of the tumour. For by leaving a small portion about the size of half an orange, to be removed at the end of twenty-four hours, all fear of slipping and secondary hemorrhage will be prevented. The other ovary having been examined and found healthy, the wound is to be quickly closed by silver wire sutures. These had better be introduced about an inch apart, by means of a needle with a handle; and I believe it is better to pass the sutures through the entire abdominal wall, just including the edges of the peritoneum. The portion of tumour left outside, with the clamp, is then wrapped in lint; three or four long strips of strapping are applied completely round the body, so as to cross over the wound;
and a suppository of two grains of opium is introduced into the rectum, or—and it answers better—half a grain of morphia is injected under the skin. The patient is then lifted into bed; and if the administration of the anaesthetic has been well managed, consciousness will not return until she has been comfortably arranged.

There are one or two significant points in the foregoing operation which had better be mentioned before speaking of the after-treatment. The most important is as regards the management of the pedicle. Now although the clamp has been just recommended, yet I am sure it will often be advantageous to dispense with this instrument; for it cannot be denied that keeping the pedicle outside the abdomen retards the healing of the wound, while months afterwards the traction exerted may be the cause of very annoying dragging pains. To obviate these inconveniences, the pedicle has been secured with strong hemp ligatures; and these having been cut off short, the stump has been returned into the abdomen. The late Dr. Tyler Smith had great success with this plan; and I have seen it answer admirably in the hands of Sir William Fergusson, as well as in some of my own cases. Dr. Marion Sims transfixes the pedicle with a double silver wire, and dividing it twists each wire tightly round half the pedicle. The ends of the wire are then cut close off, the tumour is separated from the pedicle, and the latter with its ligatures dropped into the pelvis. The metallic ligature becomes entirely imbedded in the structure of the pedicle, the tissue cut by it overlapping the wire and healing over it, so that even strangulation does not occur as with a silk or hemp ligature. It is an excellent practice; though I doubt if it be as generally applicable as the division of the pedicle by the actual cautery. He has also recommended that an opening should be made from the recto-uterine cul-de-sac into the vagina, through which a drainage tube is to be passed for the purpose of conveying away any fluid which may accumulate here. With the actual cautery the late Mr. Baker Brown had a succession of favourable cases; and it is decidedly a valuable proceeding, especially where the pedicle is thick and short and fleshy. For long and thin pedicles the ligature, cutting it off short and letting the whole fall into the pelvis, is more suitable. In one instance where I had recourse to this cautery, it answered perfectly; for although the case ended unfavourably, yet death only occurred five days after the operation, and could in no way be attributed to the manner in which the pedicle had been treated. When adopting this practice, the pedicle is compressed with a clamp invented by Mr. Clay, of Birmingham; and the tumour is then removed by dividing the pedicle with the cautery at just below a white heat.—There has been much unnecessary discussion with regard to the length of the wound. The best plan is to make the incision as already recommended; and then enlarge it, rather than try by force to
bring a large mass of semi-solid matter through a small opening. Where the tumour is of the unilocular kind, or where there are only two or three cysts which can be each emptied by the trocar, a short incision of course suffices.—Then with respect to adhesions, care will be necessary lest when they have been broken down they give rise to hemorrhage. To prevent this their site should be examined before closing the wound, so that if blood be escaping the bleeding points may be lightly touched with the cautery. If the omentum be wounded, one or more ligatures had better be applied, and the ends cut off short, instead of bringing them out at the wound.—And lastly I would advise the surgeon to dispense with all kinds of bandage after the operation. Having very seldom used one, I can certainly affirm that such an appliance is unnecessary; while it is no little advantage to have the arrangements such, that the wound can be inspected without disturbing the patient.

The more simple the after-treatment, the better. If there be thirst, or troublesome sickness, ice ought to be freely sucked. Then, for nourishment during the first twenty-four hours, iced milk, and the yolk of a new-laid egg beaten up in water with a teaspoonful or two of brandy will suffice. If there be no sickness, and if all be going on well, white fish with a glass of sherry and water may be allowed on the second day; while on the following, a mutton chop should be given. When there is much vomiting, however, we must trust to enemata of milk, beef-tea, &c. In those cases where I have employed the clamp, the part of the pedicle and tumour above this instrument has been cut off close at the end of twenty-four hours; and then two days subsequently the clamp itself has been taken away. The wire sutures through the edges of the abdominal incision have seldom been withdrawn before the fifth, and often not before the eighth or ninth day; long slips of strapping being then employed until the wound has healed. It need scarcely be added that the air of the patient's room must be kept most pure, that the temperature should be about 60°, and that the strictest quiet ought to be maintained. If any symptoms of general peritonitis set in, linseed poultices, hot fomentations, and opium are the remedies to trust to. Caution will be necessary with regard to stimulants, avoiding both extremes; that is to say, while not commencing them too soon, care must be taken not to defer their administration until it is too late.

Several years since I proposed, that in those cases where the abdominal section was made and it was found impossible to remove the tumour owing to the presence of extensive adhesions, the pedicle should be tightly tied after the withdrawal of the fluid contents of the cysts by tapping. Thus it was hoped, that whilst the supply of blood furnished to the growth by its adhesions might be sufficient to prevent gangrene, the obstruction of the main arterial channels would prevent the fluid from being secreted.
anew. In truth, however, this suggestion is of little value. For in almost all cases where adhesions exist they will be found in the pelvic cavity; and consequently the application of a ligature around the pedicle is as difficult to accomplish as the removal of the tumour itself. Still it may be as well to call attention to the suggestion; so that if by chance an instance should occur where the pedicle is found free from the surrounding structures, other circumstances preventing the removal of the cyst, such a pedicle might either be ligatured or secured by acupressure.

3. DISPLACEMENTS OF THE OVARY.

The displacements to which the ovary is liable are of two kinds,—those where one or both glands are forced out of position by some uterine or other tumour, and those where the ovary escapes from the pelvis as a hernia.

The displacements of the first class chiefly aggravate the symptoms of the disease causing them. In addition, however, they will frequently be the cause of considerable suffering. Thus, a small fibroid tumour of the uterus may be accompanied with severe dysmenorrhœa, with attacks of nausea, and with pain; these troubles ceasing as the tumour enlarges and passes upwards out of the pelvic cavity, so as to allow the ovary to occupy its normal position. Under the head of prolapsus of the ovary, Dr. Rigby has described a condition in which this gland has descended between the rectum and uterus—into the recto-vaginal pouch. Complaint is made of a sense of forcing and throbbing at the lower part of the abdomen, of backache, pain in the groin of the affected side, indigestion, sickness, difficulty in passing the faces, &c.; these symptoms coming on in paroxysms. There is also dysmenorrhœa, with the passage of clots and portions of membrane. If a vaginal examination be made, the ovary will be found swollen, exquisitely sensitive, and occupying the recto-vaginal pouch; the pain produced by the examination, like that caused by the passage of a solid motion, continuing for hours afterwards. The treatment should consist in the exhibition of mild aperients, so as to clear out the intestinal canal and prevent further accumulation of faces; in the use of the iodide of lead and belladonna pessaries (F. 423), so as to reduce the ovarian swelling and tenderness; and in rest on the sofa, with the avoidance of sexual intercourse. Under such management, the ovary will sometimes be restored to its natural position; or we may be able to gently raise it with the finger, and perhaps to keep it up by the introduction of an elastic pessary.

In the second set of cases, the ovary has escaped out of the pelvis, constituting a true hernia of the gland. This condition is sometimes congenital, but it may also happen accidentally after puberty; while it can take place on one side of the body only, or on
both sides. The ovary has escaped from the cavity of the pelvis either at the inguinal ring, or at the crural arch, or through the tissues of the vagina, or at the sciatic notch like an intestinal ischiatic rupture. From the anatomical relations of the pelvic viscera it can be readily understood that hernia of the ovary occurs more frequently at the inguinal ring than at any other site; the passage of the round ligaments through the internal abdominal ring, and along the inguinal canal to the labia majora, leaving a weak point. The hernial sac may contain the ovary alone; or with this gland there will possibly be a portion of intestine, the Fallopian tube, and even the uterus.

The history of a peculiar case in which the left ovary was found in the sac of an oblique inguinal hernia, was related at the Royal Medico-Chirurgical Society by Mr. Holmes Coote. The patient, a young woman, was admitted into St. Bartholomew’s Hospital with a swelling in the left groin, and suffering from the symptoms of strangulated hernia. In the course of a few hours the usual operation was performed, when the ovary and the Fallopian tube were found in the sac. A similar malposition of parts was subsequently noticed on the opposite side of the body. The left ovary was removed, some thickened omentum carefully cut away, and the patient put to bed; but the sickness and constipation continued, and she died four days after the operation. The cause of the sickness, &c., was displacement of the stomach and transverse arch of the colon. The most remarkable feature in the case, however, was that the woman said she had always menstruated regularly. Now, on the examination of the body, it was found that both ovaries were well developed, and that the formation of the Graafian vesicles was going on naturally; but the Fallopian tubes were quite impervious, the uterus was completely absent, and the vagina was a short canal—an inch and a half in length terminating in a thin membrane. She said that she had been menstruating in the customary manner the week before her admission; and some of the female attendants at the hospital noticed the usual marks, though faint, upon her dress. If this were so, the menstrual discharge could only have taken place from the mucous lining of the imperfect vagina.

An example of hernia of the right ovary, in which this gland was successfully removed, has been reported by Dr. Meadows.* In this case the patient was twenty-three years of age, single, and from birth had had a swelling in the right inguinal region. At fifteen she began to menstruate; but it was only five years afterwards that the swelling commenced being painful, when another one appeared just below it. At the next monthly period this second tumour became the seat of considerable suffering, and it increased

much in size. From this time the pain was violent at each period, while the tumour would swell up to the size of two fists and be exquisitely tender to the touch. Dr. Meadows having decided that this tumour was ovarian (the upper being probably an omental hernia), got Mr. Lawson to excise it; when it was found to consist of the right ovary, measuring two inches in length and one in diameter, and in a state of cystic degeneration. The operation proved eminently successful.*

Speaking generally, surgical treatment is seldom to be practised in these cases. When the hernia is recent, attempts ought to be made to reduce it; and then, if success should follow these efforts, a well-fitting truss should be worn to prevent any recurrence of the ovarian descent.

PART XIV.

DISEASES OF THE SKIN.

The early writers on skin diseases separated the study of these affections from general pathology, and thereby committed no small amount of mischief. For medical men having thus been led to regard dermatology as a speciality—to look upon skin eruptions as simply disorders of either the epidermis (cuticle) or of the derma (cutis), took but little pains to acquire any accurate knowledge of them; so that from inexperience they were led to believe that cutaneous affections were multitudinous in their nature, very confused in their respective appearances, particularly rebellious to treatment, and governed by pathological laws at variance with those controlling other structural diseases. It is only during the last few years that more enlightened opinions have prevailed: that practitioners have begun to see how these disorders are chiefly brought about by the relationship between the blood and the investment of the surface of the body being disturbed,—such disturbance being originated sometimes by an alteration in the composition of the blood, sometimes by modified blood-distribution owing to morbid changes in the nervous centres or in the nerve-trunks, and sometimes by disordered changes in the cells of the skin tissues secondarily affecting the blood and nerves.

Although the division of cutaneous affections into Orders or Classes assists very materially to simplify their diagnosis and management, yet the student must not expect to find these disorders always existing in one simple form. On the contrary, we frequently see two or three in combination, as in the coexistence of scabies and eczema, or of urticaria and lichen. So again, one source of irritation may produce a different eruption in different individuals. Thus, the effect upon the skin of wearing clothing dyed with the brilliant coal-tar colours will be the production of troublesome excoriations in some individuals and of stubborn nettle-rash in others; while socks coloured with these poisons may give rise (as Mr. Webber has clearly shown) to obstinate irritation only, or to protracted pain and lameness—not to mention the symptoms of general poisoning. Again, the
ingestion of some particular kind of food will set up urticaria in one person and erythema in another; while the Acarus scabiei can give rise to a vesicular, pustular, or papular rash, according to some peculiarity existing in the supporter of this parasite.

The classification which it is proposed to adopt in these pages is that of Willan, considerably modified. There are certainly much more ambitious and extensive arrangements to be found in our various systematic treatises; but their value can be judged of from the fact that most special writers on these affections ignore the classification adopted by their predecessors and contemporaries, although at the same time they confess that the day for suggesting a perfect synopsis has not yet arrived. While hoping therefore that our knowledge may become sufficiently precise to enable us to draw a distinct line between the essentially local and essentially constitutional skin diseases, to determine the exact causes of both kinds, as well as to show in what part of the cutaneous structure the different disorders have their seat,—while waiting and hoping for this good season it seems useless to adopt a confessedly imperfect plan because it is novel. Willan’s classification has at least the merit of having lived for more than sixty years, of being based on the visible characters of the disease, and of being simple and intelligible. The different orders are as follows:—

**Order 1. Erythema.**—Erythema; rosola; urticaria.
**Order 2. Vesiculae.**—Sudamina; herpes; eczema.
**Order 4. Pustulae.**—Ecthyma; impetigo.
**Order 5. Papula.**—Strophulus; lichen; prurigo.
**Order 6. Squamae.**—Psoriasis (including lepra); pityriasis; ichthyosis.
**Order 7. Tubercula.**—Elephantiasis Arabum; molluscum; acne; framboesia; keloid; vitiligo.
**Order 8. Parasitici.**—Tinea tonsurans; tinea favosa; tinea decalvans; tinea sycosis; tinea kerion; tinea versicolor. Scabies; phthiriasis, &c.

The order “Macule” [Macula = a stain or blemish] has been omitted. This has been done partly because it is often a matter of little moment whether portions of the skin are marked by the presence of too much or too little pigment; and also for the reason that where the discoloration is thought to be a symptom of an important constitutional affection (as in Morbus Addisoni), it is better to describe such disease in its proper place rather than give undue prominence to only one of its symptoms, especially as that one is often the least important. It may of course be said that the greater number of skin diseases, properly so-called, are secondary affections; but then it should be recollected that in these, the visible sign of the constitutional derangement is of greater
significance than the derangement itself. On the opposite principle jaundice, purpura, typhus, and enteric fever might be regarded as cutaneous diseases. Whether therefore there is an excess of pigment (as in freckles, moles, pregnancy, and Addison's disease), or a deficiency (as in leucoderma and albinism), is a matter of little consequence. The actual discoloration which results cannot generally be remedied.

Skin diseases will be materially modified according as the patient is strumous, anaemic, plethoric, gouty, rheumatic, or dyspeptic; as well as by the age and sex, the mode of life, and the residence of the sufferer; and by the condition of the uterine functions in women. These affections may also be considerably altered by, or entirely dependent on, a syphilitic taint.

There is no skin disease which the practitioner need be afraid of curing. The public has become imbued with the idea that suddenly "to drive in" an eruption is a proceeding often followed by very grave symptoms—by apoplexy, haemorrhage from the bowels, internal inflammations, &c. Extended experience gives no countenance whatever to this opinion. On the contrary, it is to be regretted that cutaneous diseases cannot be cured as quickly as may be wished. Like other disorders, a skin eruption is mischievous: it sets up considerable irritation, while it is often a proof of a vitiated state of the vascular or of the nervous system.

In attempting to cure diseases of the skin, we have to resort to constitutional and local remedies; the former being, as a rule, by far the most important. Speaking generally, our object in employing constitutional treatment is twofold. Thus, we endeavour to eliminate from the system the morbid matter upon which the eruption depends; and this can best be done by the proper use of purgatives, diuretics, and often of diaphoretics. Then we have to try and alter the constitutional state which led to the formation of the poison, and so restore the healthy tone of the body; a proceeding which will usually be most readily effected by the careful use of such medicines as the mineral acids, the alkalies with vegetable bitters, iodine, arsenic, phosphorus, quinine, steel, cod liver oil, colchicum, tar, creasote, bichloride of mercury, bark, &c. The local remedies (amongst which are included hot air, vapour, hot and cold water, and medicated baths) are of considerable value in assisting the radical cure of the disease, as well as in moderating irritation and pain; while in the class of Parasitic disorders they can often be alone trusted to for giving permanent relief.

The diet may always be nourishing and sufficient in quantity to satisfy the patient's demands. Cocoa or chocolate, milk, sherry and soda water, or claret; white fish, mutton, beef, chicken, and game; together with fresh vegetables, bread and butter, and light suet puddings,—these are all unobjectionable articles of diet. On the contrary, it will be advisable to forbid tea and coffee, but especially the latter; as well as beer, raw spirits, sugar, pastry,
most salt meats, and indigestible fruits. There must be the most strict attention to cleanliness. The patient ought to wash with warm soft water, using a thick downy towel; resorting to oatmeal, or starch, or arrowroot, or glycerine in the place of soap when the eruption is at all irritable. If any soap be used, however, the transparent glycerine soap found at most chemists' is preferable to other kinds. To clean the scalp nothing is more efficacious than the yolk of an egg and warm water; though in the parasitic affections soap (especially the officinal soft soap, or the carbolic acid soap) may always be freely employed. It is also better that flannel should not be worn next to that part of the skin which is affected; chamois leather proving an excellent substitute where, owing to general delicacy, it is necessary that the body be warmly clothed. And then, the physician in giving directions as to treatment must recollect that a caution will be necessary with regard to those eruptions which are contagious. When the skin of a nursing woman begins to present any eruption indicative of a cachectic state of constitution—e.g., eczema, rubia, pemphigus, &c.—she ought at once to wean her infant; while no female with elephantiasis, lupus, or any one of the syphilitic cutaneous disorders, should be allowed to suckle her child for a single day.

ORDER I. EXANTHEMATA.

The exanthemata \([\varepsilon \xi\acute{\alpha} \nu \theta \eta \mu \alpha, \text{from } \varepsilon \xi\acute{\alpha} \nu \theta \iota \omega = \text{to blossom or break out in an eruption}]\) consist of variously formed superficial reddish patches, varying in intensity and in size, disappearing under pressure, and terminating in resolution or desquamation. There are neither vesicles nor pustules, neither papules nor scales. The small bloodvessels are overloaded with blood. The exanthemata are frequently complicated with gastro-intestinal irritation or inflammation, and sometimes with cerebral or pulmonary diseases. This order includes erythema, roseola, and urticaria. By many dermatologists, erysipelas, mucasle, and scarlatina are regarded as exanthematous diseases; but such an arrangement seems to have only the questionable advantage of making the class as comprehensive as possible.

1. ERYTHEMA.

Erythema \([\text{from } \varepsilon \rho\nu\theta\alpha\nu\omega = \text{to redden or cause blushing}], \text{ inflammatory blush, } \epsilon \phi \rho \iota \lambda \rho \iota \varepsilon \sigma \kappa \tau \alpha \nu \acute{e}, \text{ is a non-contagious affection;} \text{ characterized by slight superficial red patches, which are irregularly circumscribed, of variable form and extent, and which subside on pressure. The patches are most frequently seen on the face, chest, and extremities. The duration of erythema often varies} \)
from a week to a fortnight. It is preceded, though rarely accom-
panied, by febrile symptoms; it causes but slight heat, and no pain;
and the prognosis is always favourable.

Several varieties of this disorder are usually enumerated. Thus
there is erythema fugax, so named from its fleeting nature; in which
transient patches of redness appear about the face and neck, accom-
panied by heat and tingling. This form is generally due to some
derangement of the stomach or other part of the alimentary canal.
Erythema intertrigo is commonly produced by friction between
folds of the skin, where the secretions are not removed by washing.
The parts about the neck, groins, lower part of abdomen, &c., are
apt to become thus affected in obese women and children. Occa-
sionally this rash is superseded by slight and superficial ulceration.
Erythema pernio is the technical name for the peculiar inflamma-
tion of the skin which constitutes an unbroken chilblain. Erythema
circinatum is very seldom met with. There are usually round red
circles, or segments of circles, with well-defined rims outside.
The ring-shaped patches are, slightly raised; each lasts for rather
less than a week, and is perhaps succeeded by a fresh patch. It
comes on during the progress of rheumatic fever, especially in young
women. Then there is erythema lave, which is developed on the
lower extremities when they become anasarcs owing to renal or
cardiac dropsy, &c. The skin is red and hot and glistening; the
limb looks like brawn. The obstructed circulation through the
limb leads to more and more exudation; and this, if unrelieved,
gives rise to the formation of cracks and excoriations, or of small
blisters, that burst and discharge quantities of serum, or often to
deep ulcers which may end in mortification when severe. But the
most curious species of this disorder is that known as erythema
nodosum; in which the eruption is confined to the fore part of the
leg, taking the form of one or more large oval patches running
parallel to the tibia, and rising into painful protuberances much
resembling nodes. Erythema nodosum occurs commonly in
children, youths, and young women badly nourished or overworked.
Erythema tuberculatum and erythema papulatum are merely modifi-
cations of erythema nodosum; the patches consisting either of
tubercles or papules, which are scattered over the face and neck,
upon the arms and legs, &c.

After certain injuries and surgical operations a rash now and
then appears over the body resembling that seen in scarlet fever.
It has been already noticed that I believe this eruption is of an
erythematosus nature. Some authorities regard it as a kind of
roseola. Mr. Morant Baker describes it under the term Erythema
serpens.

Erythema is often mistaken by the public for erysipelas. Patien-
ts say that they are liable to attacks of erysipelas, and wish
for some remedy to prevent this disease. In nine cases out of ten
it will be found that the disease is erythema, though the sufferer...
are very unwilling to be persuaded that they have not been the victims of the severe disease.

The treatment is very simple if the cause can be removed. A few doses of some mild saline aperient, such as the effervescing citrate of magnesia, or the compound rhubarb powder, do good at the onset. Then warm water or vapour baths; light diet; and tonics (especially quinine, or the compound tincture of bark, or the mineral acids) are sufficient for the cure of most forms of this affection. Any derangements of the digestive, urinary, or uterine functions which may be present, must be remedied. For some varieties a local application will be required, and then the dilute solution of subacetate of lead can be used. In erythema nodosum the official ointment of veratria may be employed, if there be much tenderness; while quinine is being simultaneously administered to effect a cure. The annoyance of erythema intertrigo will be greatly relieved by washing the part every few hours with the lead lotion, thoroughly drying it, and then dusting it over with the oxide of zinc. The carbonate of zinc also forms a good dusting powder; as does the native carbonate of zinc (calamine) which is adulterated with sulphate of baryta and oxide of iron. Warm gloves or stockings, friction with a stimulating liniment, animal food, and the administration of cod liver oil will remove unbroken chillblains. And lastly, in erythema leave the limbs ought to be raised so as to favour the return of blood from them; while the skin should be punctured here and there with a lancet or a needle, in order that the collected serum may drain away.

Many years ago an epidemic of erythema prevailed in Paris to which the name of Acrodynia was given. The eruption, however, was but an unimportant feature in a severe constitutional disorder; regarded by Chomel and others as originating in the consumption of diseased grain. Certainly the symptoms (vomiting, diarrhoea, facial oedema, muscular pains, fever, boils, uræmia, &c.) seemed to point to some such cause. The mortality was large.

2. ROSEOLA.

Roseola [Dim. Rosa = a rose], rose-rash, or false measles, consists of a non-contagious and diffused and inflammatory mottling of the skin, which runs its course without producing more than very slight constitutional disturbance. The rash is characterized either by transient patches of redness, of small size and irregular form, distributed over more or less of the surface of the body; or by the formation of numerous, small, slightly raised, rose-coloured spots. The eruption, at first brightly red, gradually subsides into a deep roseeate hue, and slowly disappears. It is accompanied by slight fever, and sometimes there is redness about the fauces. The rash fades after a duration varying from three to seven days.
Sometimes this eruption simulates measles, or more frequently it resembles simple scarlet fever. Coryza is never present; however, nor is the rash of a crescentic form, as in measles; though there is often soreness and redness of the fauces, with gastric disturbance, as in scarlatina. Belladonna now and then produces rose-rash. So does derangement of the stomach. In infancy, dentition will at times cause it. The eruption of small-pox is at times preceded by roseola variolosa. About the fifth day after vaccination, when the vesicle has formed, an eruption of roseola vaccinia now and then spreads over the body; this state being attended with febrile disturbance. An epidemic of roseola (described under the names of rosalia, rubeola notha, anomalous exanthem, &c.) which prevailed in London during 1863-64, was in all probability caused by some peculiar atmospheric condition.

There is one form of this affection which frequently affects adults, especially females, in the summer. This is called roseola astica. Women of an irritable system, with irregularity of the uterine functions, are mostly attacked. The disorder is preceded by chills and smart fever; while, when the eruption appears, the fauces often become affected. The rash and general symptoms disappear on the fifth day.

But little treatment is usually necessary for the cure of these rosy eruptions. Mild alteratives or laxatives, a plain diet with lemonade, a few doses of one of the mineral acids with any bitter infusion, may in some cases be required. Where the eruption occurs in children during dentition, the gums ought to be lanced if they are tender and swollen.

3. URTICARIA.

Urticaria [from Urtica = a nettle], or nettle-rash, may be described as a non-contagious exanthematous eruption. It is characterized by the formation of prominent patches or wheals (technically known as pomphi), which are either red or white, of regular or irregular shape, and of uncertain duration. They are probably produced by contraction of the smooth or unstriped muscular fibres of the derma, with a slight exudation of serum. These wheals, whether few or numerous, large or small, bandlike or round or irregular in outline, &c., are accompanied (especially at night) by intense heat, a very annoying burning and tingling, and great itching.

There are two varieties: one in which the disease is acute, running a short, rapid course; another in which it is chronic, very obstinate, and either persistent or intermittent. Both forms attack individuals of all ages and constitutions. The acute variety commences with febrile symptoms—frequent pulse, dry skin, white tongue, headache, pyrosis, and epigastric tenderness; all which, however, rapidly diminish as the eruption comes out.
This may happen almost suddenly, and cover various parts of the body; or the wheals may appear in one district and fade, and then again in another, and so on. The chronic intermittent variety is the *urticaria evanida* of Willan. There is no marked constitutional disturbance. The rash is very irritating: it sometimes lasts for months or even years. Acute and chronic nettle-rash assume different appearances. Hence, the terms *urticaria evanida*, *u. perstans*, *u. conferta*, when the wheals rapidly vanish, or remain a longer time than usual, or are closely packed together respectively; *u. subcutanea*, when the wheals are less superficial and fissured more deeply than usual, forming gravescent tuberose subcutaneous swellings; and *u. tuberculata* when the wheals are very large and nodular.

Urticaria is often caused by certain derangements of the digestive organs. These derangements arise from the use of particular articles of diet, such as shell-fish of different kinds, cucumbers, mushrooms, cheese, nuts, bitter almonds; or from the employment of peculiar medicines, as nux vomica, hcnbane, turpentine, and balsam of copaiba, &c. Urticaria is also seen occasionally in connexion with uterine irritation; or mental anxiety, sudden emotion, over-fatigue, rheumatism, dentition, &c., may induce it. In certain cases attacks of asthma and urticaria seem at times to replace each other. The bites of gnats and bugs and fleas, as well as the irritation of pediculi will now and then induce rebellions nettle-rash. A more transient form is caused by contact with the jelly-fish (*Medusa pelagica*), with the common nettle (*Urtica urens*), &c. Patients are occasionally met with whose cutaneous nerves are so susceptible that slight pressure with the finger, or any attempt at scratching, will produce a patch of urticaria.

The treatment of acute urticaria must consist in the administration of emetics and saline purgatives, where the disease depends upon stomach derangement. In the chronic form, a simple diet (without wine, beer, spirits, or tea and coffee) ought to be rigidly adhered to; while laxatives, antacids (especially bismuth, F. 65), and tepid or cold baths, are the chief remedies. The Turkish bath is serviceable at times. Such preparations of steel as can be readily assimilated (F. 394, 401, 403) will often effect a cure. In obstinate cases, where there are no symptoms of gastro-intestinal irritation, small doses of arsenic (F. 52, 399) may be required. If the patient be gouty, colchicum (with or without alkalies, F. 46) should be tried. Quinine is serviceable where the attacks recur with any approach to periodicity. Cod liver oil cures some cases. Aconite has been recommended. The irritation can be relieved by the common lead lotion, or by sponging with equal parts of vinegar and water, or by a solution of corrosive sublimate (F. 271, 276) frequently applied. Flannel underclothing always aggravates the itching and heat: the abnormally sensitive skin requires to be soothed, as well as to be kept scrupulously clean.

VOL. II.
ORDER II. VESICULÆ.

A vesicle is a slight elevation of the epidermis, containing a serous fluid—generally transparent, but occasionally opaque or sero-purulent. The fluid may become absorbed; or it will be effused upon the surface, causing excoriation and small thin incrustations. Some vesicles are umbilicated, i.e., they have a central depression: some are acuminated: most are globular. Vesicular eruptions are occasionally preceded by fever, but often break out imperceptibly. They give rise to a peculiar appearance, as if drops of water had been scattered over the surface of the skin; they may appear upon any part of the body; and they are not unfrequently more troublesome to cure than would be anticipated from their apparently slight nature. In this order we find three affections—sudamina, herpes, and eczema. Varicella, vaccinia, and scabies are often also included; but the first two may be much more appropriately placed among the eruptive fevers, while the third is a parasitic disease.

1. SUDAMINA.

During the progress, and especially towards the favourable termination of many acute and chronic diseases attended with sweating, crops of small transparent vesicles make their appearance. Thus, in acute rheumatism, typhus, scarlatina, enteric fever, &c., sudamina [Sudo = to sweat] are frequently found upon the trunk and extremities; especially in the latter stages of these affections. Owing to their minuteness and transparency these vesicles are apt to be overlooked, but they can usually be felt like firm little beads under the cuticle. The skin around their bases is not inflamed. They are most frequently developed upon the front of the abdomen and chest: they are sparse and scattered, or numerous and grouped in patches: frequently as one group dries up after a duration of twenty-four hours, a fresh eruption takes place: and as a rule they remain clear and transparent throughout their whole progress, their acid watery contents never becoming purulent.

Some authors speak of Miliaria [Milium = millet] as a distinct fever, arising from constitutional causes, and differing from sudamina produced by copious sweating. Such a view is in all probability erroneous. The distinction between the two is slight. The vesicles in miliaria are the result of sweating, but possibly of a sweat which is more acrid and irritating than that which causes sudamina. Thus, in a mild variety of rheumatic fever we may find sudamina, while in a severe form there will be miliaria. Miliary vesicles are rather opaque, somewhat irregular in form, and often present a slight red margin at their bases; while their acid (now
and then alkaline) contents are more or less turbid. These vesicles often produce irritation; which is best relieved by sponging with warm water containing a little soda. Miliary eruptions are said to have occasionally been epidemic, and then they have been thought to be attended with considerable danger.

2. HERPES.

Herpes [from ἑρπεῖν = to creep], or tetter, is a transient non-contagious affection, consisting of clusters of vesicles upon inflamed patches of irregular size and form. In some respects, however, herpes resembles the exanthemata, while in others it is like a neurosis.

The eruption runs a definite course, rarely continuing for more than two or three weeks; while it is not usually severe, leaves scarcely perceptible scars (except in shingles), and is not usually accompanied by any constitutional symptoms. Care must be taken not to mistake its nature; since herpes prepontialis has been actively treated for syphilis, and herpes circumans—when occurring on the scalp—for tined tonsurans, or ringworm. In a common cold, a cluster of herpes will usually be found upon one of the lips constituting herpes labialis. A singular and sometimes obstinate species of this disease is named herpes zoster, or zona, or shingles; the inflamed patches with their clustered vesicles being arranged in the form of a band along the course of one or more of the intercostal nerves, encircling half the circumference of the body and stopping at the median plane. In the greater number of cases the zoe will be found to occupy the right side of the body. This variety has frequently a duration varying from fourteen to twenty-one days, it occurs only once (as a rule) to the same individual, it leaves small scars, and it causes severe stinging hot pains of a neuralgic character, which in old people may be extremely severe and obstinate, lasting for a long time after the eruption has disappeared. Herpes occasionally appears in the course of other cutaneous nerves, from the cervical, brachial, or lumbar plexus, following their distribution with great accuracy. There are feverish symptoms, headache, lumbar pains, constipation, and attacks of chilliness; while although the vesicles usually dry into little scabs, yet at times they ulcerate somewhat extensively. Herpes zoster is popularly regarded with great fear; and village nurses assert that death is certain if the patches extend round the body. There is, however, no danger, unless the patient be particularly old and feeble.

In herpes zoster frontalis, or herpes ophthalmicus, or brown shingles, the small vesicles appear on the forehead, on the upper eyelid, and on the side of the nose in the area of the ophthalmic division of the fifth nerve. One district may be alone affected, or all three regions. Often the disease is limited to the distribution of the
right or left supra-orbital nerve; which nerve may be the seat of neuralgia for some days before the rash appears. The eruption is always confined to one side: it is often the cause of much pain; and is very apt to leave little pits, or even large irregular scars, which are permanent. When the herpes appears on the side of the nose in the distribution of the nasal branch of the ophthalmic nerve which also sends branches to the interior of the eye, the various tissues of the eye are very liable to become inflamed, the morbid action possibly giving rise to considerable mischief. The disease is most liable to be mistaken for erysipelas; from which, however, it can be distinguished by the comparative mildness of the constitutional symptoms, and by the lateral arrangement of the rash. The pain is not only very severe at the time, but it lasts for some days after the vesicles have disappeared. The latter generally happens within fourteen days from their commencement. The remedies consist of quinine, and the use of lead lotion.*

Very little is necessary in the way of treatment beyond attention to the bowels, and regulation of the diet. The local irritation may be relieved by the application of zinc ointment, or the officinal ointment of subacetate of lead, or the dilute solution of the same salt; or by dusting the part with powdered starch. Herpes zoster is sometimes followed by a neuralgia of the affected part which is difficult to relieve. In these instances hypodermic injection of morphia, or friction with the aconite liniment may perhaps remove the pain; but if it be severe or obstinate, a mixture of quinine and arsenic (F. 52) will usually prove curative.

3. ECZEMA.

Eczema [from Ekzēma = to break forth in pustules], humid tetter, or running scall, is a very common non-contagious disease; consisting in well-marked cases of an eruption of small vesicles on various parts of the skin, closely crowded together, and often running into each other so as to form, on being ruptured, superficial moist excoriations, from whence exudes a sero-purulent discharge. The heat and inflammation and serous infiltration of the affected part, the irritation and tingling produced by the scabs or crusts, as well as the pain of the fiery red or raw surface which results, all tend to produce considerable fever and restlessness. The serous secretion may be thin and clear, or thick and yellow and glutinous. Eczema is more often a chronic than an acute disorder.

A few years ago Dr. M'Call Anderson, following Hebra, asserted that the elementary lesion in eczema is not necessarily a vesicle: it may be a pustule, a papule, a fissure, or a patch of

* For a good account of this disease the reader should refer to a paper by Mr. Jonathan Hutchinson in The Royal London Ophthalmic Hospital Reports, vol. v. p. 191. London, 1866.
erythema, cases being seen which present all these lesions in combination. Similar views are held by Mr. Erasmus Wilson; but Dr. Tilbury Fox still maintains that the disease is essentially a vesicular one. The latter gentleman, writing in 1869, says that typical eczema is an acute inflammatory disease; in which, with more or less superficial redness, there is an eruption of closely packed vesicles that exist only for a very short while, and are often unobserved. These vesicles run together, burst, and are replaced by excoriations which pour out serum, that stiffens linen, and dries into thin yellow crusts, which are composed of blistera, pus corpuscles, epithelial cells, and granular matter. The vesicles may appear in successive crops, prolonging the disease indefinitely. Excoriations and crackings occur, the true skin may get infiltrated, and the parts around the patches will perhaps inflame. When the disease is extensive there may be sharp pyrexia; together with headache, loss of appetite, dirty tongue, &c. If the eruption becomes chronic, the skin gets harsh and dry and thickened: there is frequent oscillation between cure and relapse.

Now seeing that eczema is the commonest of all skin diseases, the fact that several gentlemen who have enjoyed more than ordinary opportunities for the study of cutaneous affections should differ in opinion as regards its elementary lesion is rather remarkable. But the explanation is probably this,—that the patient very seldom comes under observation during the early stage. The balance of evidence is in favour of there being such a vesicular rash at the outset of the disease.

There are several species of this disease. In all forms there is serous infiltration of the affected part of the skin; and this leads to exudation on the surface, the production of crusts or scabs, and the setting up of heat and itching which are aggravated by stimulants and warmth. When the eruption consists of minute vesicles on different parts of the skin, with infiltration and reddened scaly patches, it is called eczema simplex: when the skin is inflamed, the redness persistent, and the heat and swelling and general pyrexia well-marked, the disease is known as eczema rubrum. Eczema impetiginosum is a severe degree of eczema rubrum: the constitutional disturbance is great. Where the disorder arises, as it sometimes does, from great heat, especially from the heat of the sun, it is called eczema zolare; when as a result of the use of mercury, eczema mercuriale. Both of these are merely forms of simple eczema. In infants at the breast, and in children during dentition, this disease—eczema infantile—is often very severe and obstinate. It may extend over the whole body; becoming complicated with erythema, impetigo, pityriasis, and in fact with almost every eruption that the skin seems

liable to. The general health of the infant becomes much depressed.

All the varieties of eczema are often obstinate, and for a time will resist the power of medicines. Mild local applications, such as thin gruel, barley water, linseed tea, lead lotion, or linen rags dipped in warm water and covered with oiled silk, are useful. Frequent bathing with warm alkaline or starchy water is very soothing. I have found the glycerine of starch, or a lotion of glycerine and water in equal parts, very beneficial in some instances; while in a few others, a small portion of a mixture of equal parts of soft (potash) soap and the officinal tar ointment; rubbed in night and morning, has answered better. The officinal lime liniment (the old carron oil) has been recommended; and so have lotions containing bella donna or corrosive sublimate, sulphur ointments, the ointment of nitrate of mercury diluted with lard, as well as the ointment of ammoniated mercury (white precipitate). The latter is very useful where there is thickening and induration of the skin. Great attention to cleanliness will, be needed. The scabs ought to be thoroughly saturated with washed lard or olive oil, and then removed by linseed poultices; for as long as any crusts remain it is impossible properly to affect the diseased surfaces with local remedies. Moreover, such crusts are in themselves very irritating, while they may even set up inflammation.

The general treatment must consist in the use of warm or tepid baths, a plain diet with fresh meat and plenty of milk, and daily walking exercise. As regards medicines there may be needed saline laxatives or an occasional dose of blue pill and colocynth, slightly acidulated drinks, opiates to relieve the irritation, sarsaparilla, the mineral acids, &c. Supposing the kidneys act inefficiently, diuretics had better be prescribed; the two best agents of this class for the present purpose being simple water in large quantities, and the acid tartrate of potash (cream of tartar) very freely diluted. As regards severe or chronic cases the remedies which have proved most efficacious in my hands have been steel, quinine, arsenic, and cod liver oil. Sometimes one of the first three agents has been administered separately; but often it has appeared advisable to give them in combination (F. 381). Supposing improvement has been manifested for a few weeks, and the case should then have become stationary, benefit has resulted from substituting the corrosive sublimate with sarsaparilla (F. 27) for the tonics. Moreover, where there has been any evidence of gout in the system, colchicum (F. 46) has been employed; when rheumatism has been present, iodide of potassium and bark (F. 31), or iodide of iron (F. 32), have been trusted to; where the nervous system has appeared depressed the hypophosphite of soda or lime (F. 419) has been prescribed; while if there has appeared to be any syphilitic taint, mercurial vapour baths (F. 131) have been ordered, and the red iodide of mercury (F. 54) has been ad-
DYSIDROSIS.

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ministered by the mouth. During the greater part of 1868 the widow of an eminent physician took full doses of arsenic for the cure of very obstinate eczema, and for a time with advantage. Matters then came to a stand-still, or even retrograded. Without much hope, I prescribed two tar capsules (F. 36) thrice daily; and with such astonishing benefit, that I rather sank in the patient's estimation for not having resorted to this agent at the commencement of the treatment. A complete cure seems to have resulted.

In eczema infantile the child's bowels had better be acted on by a few doses of magnesia, or of rhubarb and magnesia, or of calomel. Then care ought to be taken that the milk on which the patient is fed is pure and good. Scabs are to be removed by olive oil and bread poultices; while the local distress is to be relieved by the free application of zinc ointment, or of ointment of acetate of lead, or of a lotion of elder-flower water. Finally, the blood is to be restored to its healthy condition by the employment of the arsenical solution (one minim may be given to an infant three or four months old, thrice daily) in a little steen wine and syrup, or in chemical food (F. 405). One teaspoonful of cod liver oil, twice or thrice a day on a little sweetened orange juice, will always prove most valuable, especially during the winter months.

4. DYSIDROSIS.

This is a special disease, first described by Dr. Tilbury Fox.* It is connected with the sweat glands, and in it vesicles are formed in the first instance by distension of these sweat glands and their ducts. The disease attacks the hands chiefly, and rarely the feet. It has hitherto been confounded with eczema. "In its slightest form it is confined to the hand, occurring in the interdigs, over the palm, and along the sides of the fingers, and over their palmar surfaces—in one or all of these parts. The eruption makes its appearance in those who habitually perspire freely, and generally in the summer, but oftentimes in the winter, and the patients attacked complain of feeling weak and depressed. The eruption is made up in the first instance of minute vesicles deeply imbedded in the skin. The vesicles are at first isolated. They do not readily burst, and when they have existed for a few days the appearance of the part is just as though a number of small boiled sago grains were imbedded in the skin. These sago-grain-looking points are caused by distension of the sweat ducts and glands by clear sweat, whose transparency contrasts with the aspect of the follicular wall and adjacent parts. There is always much itching and burning present. As the disease progresses the vesicles become more distended and raised; they eventually became yellowish in colour,

and run together into the form of aggregated clusters of bullæ. Actual bullæ of greater or less size may form. . . . After a while the fluid dries up, the cuticle peels off, leaving a non-discharging reddened exposed derma. Or the cuticle, especially about the roots of the fingers on the palmar aspect, may become soddened and like wet chamois leather. In some of the slighter cases the disease does not run on to the development of bullæ. In the severer and the slighter form one or both hands may be affected.” (Tilbury Fox). The eruption leaves the hands very stiff and sore oftentimes. It may be complicated by a mililiary rash over the body. It differs from eczema in being a disorder of the sweat glands, the vesicles being produced by their occlusion, and there is no such discharge in it as in eczema. Dr. Fox states the proper treatment to be diuretics internally, with soothing and emollient applications externally at the outset, to be followed by general tonics and mild astringents subsequently.

ORDER III. BULLÆ.

As a general rule, bullæ differ from vesiculae merely in being larger; and hence it is almost unnecessary to separate them into two orders. Bullæ [from Bulla = a bubble of water] consist of variously shaped superficial tumours or blebs, caused by effusions of serum beneath the epidermis; the bladders bursting after a few days, while their contents form thickish crusts. Pemphigus and rubra are the two eruptions which are classed under the denomination of bullous diseases.

1. PEMPHIGUS.

This affection is characterized by the appearance of large round or oval bullæ or blebs, each being two or three inches in diameter, upon one or more regions of the body. Each bleb is filled with ordinary alkaline serum; which after a time loses its transparency, and then becomes acid and puriform. The eruption in pemphigus [from Πυμφίγος = a bubble or blister] is generally preceded for twenty-four or forty-eight hours by slight general indisposition, fever, and itching of the skin. Small red circular patches then form, which gradually increase in extent, and become covered with bullæ; these either fading away on attaining their full size, or bursting and being replaced by thin brownish-coloured incrustations. There may be only one bleb (P. solitarius), or a dozen or two, and the disease may run an acute course: this is very rare, usually it has all the characters of a chronic disease. The duration of this disease is commonly from one to three weeks, although it occasionally becomes unusually
chronic and is prolonged for months. The subjects of it are almost always more or less debilitated. Elderly people now and then have some four or five bullæ developed about the ankles or wrists, giving evidence that they are out of health. It is important under these circumstances to examine the urine, as there is oft-times either sugar or albumen present. Moreover, I have seen a few marked cases of pemphigus in pregnant women who have been badly fed.

Pemphigus sometimes attacks infants within a short time after birth. The bullæ usually appear on the palms of the hands or the soles of the feet, or more seldom about the buttocks; and as they burst, unhealthy (perhaps sloughing or gangrenous) ulcers are often disclosed. If the disease occurs in very young infants and is limited to the soles of the feet and the palms of the hands, it is probably syphilitic. Unless these cases are promptly treated, the disorder rapidly runs on to a fatal issue. Diarrhoea and vomiting set in, the little patient quickly becomes greatly emaciated, and death occurs from exhaustion. The only remedy which has appeared to me to have any beneficial effect in pemphigus neonatorum has been a simple solution of raw meat; while it has also been found necessary to have the infant fed by a healthy wet-nurse. It has never seemed advisable to trust to the mother in these cases. Moreover, where the child has presented any indication of syphilis chlorate of potash (from two to five grains thrice daily) has been given. There is a rare form of pemphigus which begins in the front of the chest and rapidly spreads all over the body, and in which the bullæ are abortive or ill-developed, at the same time that they run together, producing a thickened crusted surface covered with flaky scales, the remains of the dried up bullæ walls, and resembling at first sight an eczema. This is called pemphigus foliaceus.

Pompholyx [from Πομψόλες = a blister] is merely a variety of pemphigus, unattended with fever, and running its course in eight or ten days; it is very rare.—A kind of artificial pompholyx may be produced by the application of cantharides. I remember a young woman in King's College Hospital who deceived all who saw her for a short time by rubbing powdered cantharides into various parts of her person, and thus raising numerous small blisters. Particles of the fly were detected with a lens.

Tonic medicines, rest from work and warm clothing, with generous diet and fresh air, appear to be the remedies called for in the management of pemphigus. Hence ammonia and bark (F. 371), nitro-hydrochloric acid and some bitter infusion (F. 378), or quinine and iron (F. 380) should be prescribed. For the aged or very weakly, cod liver oil is useful. As an aperient, if one be needed, the effervescing citrate of magnesia answers well. In any obstinate cases, arsenic with quinine and steel (F. 381) will certainly effect a cure. Most practitioners agree that it is better
to puncture each blister with a fine needle, directly it has formed. Care should be taken that the cuticle is not rubbed off. There are few applications better than water dressing for any superficial ulcerations which may result.

2. RUPIA.

Rupia [from 'Ρυπες = filth; in consequence of the foulness of the affected parts] may be considered as a modification of pemphigus occurring in persons of debilitated constitutions, and always in those whose systems have been contaminated with the poison of syphilis. The disease is characterized by the eruption of isolated flattened bullæ; these blebs containing at first serous fluid, which soon becomes purulent or sanguinolent. The blebs and their contents then concrete or dry into dark and black and rough scabs. The margins of the surrounding skin inflame; more serum continues to be poured out; and thus the incrustation increases in circumference and thickness until it somewhat resembles the shell of one of the mollusca. When the crusts fall off they leave circular ulcers, of various sizes, indisposed to heal, and which often only cicatrize after the lapse of many weeks; ugly red or brownish marks being left, which persist for very many months. The loins and lower extremities are most frequently affected. The duration of rupia varies from two or three weeks to several months. There is seldom any danger, unless a great deficiency of vital power be present.

Two forms of this disease are usually described. When the crusts are thin, and the ulcers beneath them superficial, we speak of rupia simplex. If the crust be large (from three or four to eight or nine lines in thickness), constituting the marked feature of the case, the disorder is known as rupia prominens: the surrounding skin puts on an erythematous blush. Where the ulceration is extensive and deep and spreading, rupia escharotica is a technical term employed to distinguish this coarse sub-variety. Weakly syphilitic children, especially if they are insufficiently fed and imperfectly washed and clothed, are apt to suffer from rupia escharotica; foul and ragged and painful ulcers being produced about the thighs and nates and loins, so that the already bad health deteriorates still more until perhaps even death results.

Warm baths, generous diet, wine, cod liver oil, and bark with nitric acid, or quinine with tincture of serpentary, with a full course of iodide of potassium (F. 31) will generally effect a cure. Where the system is much depressed, iodide of iron and cod liver oil had better be trusted to. The bullæ ought to be punctured early in all cases, and the sores dressed with iodide of starch paste, in the first place, and then some weak mercurial ointment.
ORDER IV. PUSTULÆ.

The pustular affections of the skin are characterized by the formation, between the cuticle and cutis vera, of small tumours or pustules containing purulent fluid. The pustules are sometimes scattered irregularly, sometimes united in clusters; they vary in their shape and degree of elevation, as well as in the size of their inflamed bases; while they are succeeded by irregularly formed scabs, and frequently by permanent cicatrices. The diseases of this class are—echyma and impetigo. Small-pox is often ranged with the pustular diseases.

1. ECHYMA.

Echyma [from 'Εκθύμων = to break out in eruptions] is a non-contagious inflammation of the skin; characterized by large and prominent pustules, with hard and inflamed bases, occurring upon any part of the body. These pustules or phlyzacies are usually distinct, they are seated upon a hard inflamed base, and they terminate in thick dark-coloured scabs. The latter leave superficial ulcers, followed by cicatrices. The disease may be acute; being preceded by lancinating burning pains in the limbs or other parts about to be affected, as well as by feverishness. More commonly, however, echyma is chronic, and is often one of the ills of poverty; resulting from the use of improper or innutritious food, from debauchery, from exposure to damp, and from residence in close rooms. In echyma cachecticum the ulcers assume an unhealthy appearance; while the general health, which was bad prior to the eruption, becomes still more deteriorated. The lower the constitutional powers, the more chronic will be the disease.

Echyma will frequently occur spontaneously; or it is often met with as a sequela to some other disease—as one of the eruptive fevers, syphilis, &c.; or it may result from some irritant applied to the skin, and is a common accompaniment of scabies and phthisisitis. It is easily produced by croton oil liniment, or by the ointment of tartarated antimony: the irritation caused by handling sugar gives rise to it—grocer's itch. When arising without any apparent cause, young persons appear to be most obnoxious to it, especially in the spring and summer. The eruption may be very partial, or it may almost cover the body; and it will possibly continue troublesome for many weeks, sometimes one crop after another appearing in rapid succession.

The treatment of the acute form must consist in the use of gentle laxatives, slightly acidulated drinks, and a nourishing diet. Water dressing, or the sub-acetate of lead lotion, or the elder-flower ointment of the London Pharmacopoeia, or the zinc ointment of the last British Pharmacopoeia, may be applied to the pustules.—In
the chronic variety it is necessary in the first instance to get rid of scabies or phthiriasis if present. In cachectic subjects stimulants and generous living should be allowed; while the health is to be improved by cod liver oil, quinine and iron, and warm or tepid or gelatine baths. Where the disease is very chronic, a cure will be effected by combining small doses of arsenic with the ferruginous tonic.

2. IMPETIGO.

Impetigo [from Impeto = to attack; terminal -igo] is a severe purulent inflammation of the skin. It is described as pustular eczema by some writers. The disease is characterized by an eruption of small hemispheroidal or flattened pustules or psudraciae, which are most frequently grouped in clusters, which have a tendency to run together, and which form thick and moist yellowish scabs or incrustations. From the psudraciae, as well as from beneath the incrustations, a sero-purulent or puriform discharge takes place; while the crusts become thicker and larger, until they fall off leaving a raw surface. The mode of distribution of the pustules has caused a division of the disease into two varieties,—impetigo figurata and impetigo sparsa. The first kind occurs generally on the face, especially on the cheeks; it is attended with febrile and other constitutional disturbance, and often with swelling of the lymphatic glands; while, as the psudracious pustules (which are arranged in round or oval or irregular groups) burst and form scabs, the heat and itching become intolerable. In children, the impetiginous eruption and its yellow tenacious secretion sometimes cover the face or head like a mask, the disease being called crusta lactea, or porrigo larnuldis, or meliagra from the honey-like appearance of the discharge: it is now and then originated by the irritation set up by the presence of the pediculus capitis. The second form of impetigo slightly differs from the first, inasmuch as the pustules are more scattered; being sometimes irregularly distributed over an entire limb, or even over the whole body. Both varieties may be looked upon as diseases almost peculiar to the poor. Amongst the lower orders the ill-fed and the scorbutous are those who chiefly suffer.

Dr. Tilbury Fox describes a special contagious form of pustular disease, under the term impetigo contagiosa, and his observations are confirmed by Wilson, M'Call Anderson, several American dermatologists, such as Taylor, Wigglesworth, Duhring, Henry, and others, and we believe Hebra himself now admits the existence of the disease. The eruption is characterized by the development of little “watery heads,” that become vesico-pustules, and give place to thin yellow crusts, that appear as if “stuck on.” These spots are distinct the one from the other, are very superficial indeed,
and the secretion derived from them possesses a contagious quality. The disease is sometimes accompanied by slight fever. It attacks the cleanly equally with the dirty. It is often semi-epidemic, and usually attacks several or all of the children of a family. It is rarely seen in adults. Its seat is the face, especially, but also the limbs and body.

In the most contagious forms, when there is much inflammatory action, the patient ought to be kept very quiet, and on a light diet with a free supply of diluents. The bowels must be acted upon by saline purgatives. The best local applications are lotions containing extract of poppies, or lead, or the oxide of zinc, or hydrocyanic acid, or creasote, or glycerine: dusting the affected part with the oxide of zinc, or with the impure carbonate of zinc, occasionally relieves the irritation. Vapour or warm water baths are always beneficial. The scabs ought to be removed by poultices or water dressing, and by ointments. Creasote ointment, after the scabs have come off, is useful. The ointment of nitrate of mercury, or that of the red oxide of mercury, may also prove valuable. If the scalp or beard be involved, the hairs will have to be cut short. The constitutional treatment must consist in paying attention to the diet, forbidding stimulants but allowing plenty of milk; together with recommending the use of mild laxatives, alkales, and tonics—especially quinine. Arsenic is sometimes required; while cod liver oil may be said to be indispensable. Contagious impetigo is cured by local remedies alone. All that is needed is to get off the scabs as they form, and apply to the surface beneath a very weak ammoniated mercury ointment.

ORDER V. PAPULÆ.

Papulæ [from Papula = a pimple] are small, solid, acuminated elevations of the cuticle, resembling enlarged papillæ of the skin. They generally terminate in resolution or in slight desquamation. Papular eruptions are usually preceded and attended by itching; they are rarely accompanied by fever; they are slowly formed; they are not contagious; they may be developed on any part of the body; and they are sometimes very troublesome, varying in their duration from a week to several months. Strophulus, lichen, and prurigo are the diseases of this class.

1. STROPHULUS.

This papular disease, commonly known as red gum or tooth rash, is peculiar to infants and young children. By some dermatologists, however, strophulus is regarded as lichen modified by the delicate skin of the infant. Strophulus is characterized by an eruption of minute, hard, sometimes slightly red, and clustered or
scattered pimpls; which may appear upon a part, or extend over the whole surface of the body. The pimpls are most common on the face and neck. The irritation is slight. The affected surface may be moist, and there may be slight desquamation.

Several varieties of strophulus have been described, according as the papulae appear to be large or small, scattered or grouped. But whether the papules are scattered, with vivid red blushes or dots, interspersed among them, as in strophulus intertinctus; or whether the eruption is copious and confluent, as in strophulus confertus; or whether the spots are white and large, often resembling fleabites, as in strophulus candidus; or whether the papulae form circular patches, which come out successively in different parts of the body, as in strophulus volaticus,—whichever variety is present is really of little moment. For practically all forms are due to stomach or intestinal derangement; this derangement being the consequence of improper feeding, or of irritation about the gums from dentition. In infants brought up by hand, the acidity of cow’s milk often produces diarrhoea and sometimes red gum. To prevent these results, and to make the milk more nearly resemble that of the human female, it ought to be rendered slightly alkaline by the addition of a few grains of carbonate of soda or of bicarbonate of potash to each pint. Even in infants who are properly nursed but who are suffering from strophulus, care should be taken to ascertain that the mother’s milk is natural. Then, if there be constipation, a little rhubarb and magnesia in dill water may be given; or if there be any diarrhoea, a few doses of chalk mixture will be required. Where the eruption seems connected with dental irritation, lancing the gums often gives complete relief. If there be any troublesome itching, a little oxide of zinc ointment, or glycerine and rose water, or a dusting powder of starch or calamine, should be applied; while small doses of the syrup of iodide of iron are administered internally. In all forms attention must be paid to cleanliness; as well as to having linen next the skin instead of irritating flannel.

2. LICHEN.

Lichen [from Λεχάνα = moss] is an obstinate and annoying papular affection. It may be readily recognised by the minute and hard, dry and red elevations of the skin which it presents, and which are either distinct or arranged in clusters; by the tingling and itching that accompany the eruption; as well as by the slight desquamation which follows its fading.

According to Willan there are seven species of this eruption:—

1. Lichen simplex, in which there is an eruption of red inflamed papulae, appearing on the face or arms, and extending to the trunk and legs. There is slight fever, with itching or tingling; the eruption begins to fade in about a week, when desquamation
takes place; and the disease is apt to return every spring or
summer in individuals of an irritable constitution. This form is
sometimes mistaken for measles or for scarlet fever.—2. Lichen
pilaris, or hair lichen, is a modification of the preceding, the
papule appearing only at the roots of the hairs. It is often due
to stomach derangement, especially such as arises from the abuse
of alcoholic drinks.—3. Lichen circumscriptus, or clustered lichen,
is characterized by patches of papulae which have a well-defined
margin, and an irregularly circular form.—4. Lichen agrarius, or wild
lichen, is by far the most severe form, and is ushered in with fever.
The papulae are much inflamed, and are developed on an ery-
thematos surface which appears hot and painfully distended.
In a short time the inflammation diminishes, and the papulae
become covered with a furfuraceous desquamation; or their points
are scratched off, the skin around them becomes fissured into deep
and painful cracks, and a sero-purulent fluid exudes which dries into
thin scaly crusts. The itching, tingling, and smarting are often very
intense; there is usually fever, nausea, headache, rigor, and other
symptoms of constitutional disturbance; while although in mild
cases the symptoms may subside and the eruption die away in
about fourteen days, yet in severe varieties the disease is frequently
prolonged for several months. Women are said to suffer more
frequently than men from this variety.—5. Lichen lividus is dis-
tinguished by the livid hue of its papulae, which chiefly form on
the limbs, and are not accompanied by fever. It is rather a purpura
than a lichen.—6. Lichen tropicalis, or prickly heat, is peculiar to
tropical climates. It appears to be partly due to exposure during
the heat of the day, before the system has become acclimatized,
and, as pointed out by Dr. Tilbury Fox, the papule are formed by
hyperæmia of the sweat follicles.—7. Lichen urticatus, or nettle
lichen, is peculiar, inasmuch as its commencement is marked by
the occurrence of wheals, like those which are produced by the
bites of bugs or gnats. These wheals soon subside and leave
papulae, which are sometimes obstinate; both wheals and papule
being accompanied with itching, pricking, and tingling. The
disease is in fact an urticaria, followed by the formation of papulae
in the seat of the wheals.

The treatment of all the above forms of lichen except the
fourth and fifth is, as a rule, simple; for tepid baths, mild
laxatives, and unstimulating diet, and acidulous drinks will most
times effect a cure. The irritation will be best relieved by a weak
lotion of the liquor plumbi subacetatis, to which a little laurel water
or hydrocyanic acid has been added; or by equal parts of the
subacetate of lead and oxide of zinc ointments; or by a lotion
consisting of one ounce of glycerine, six grains of corrosive
sublimate, twenty or thirty drops of chloroform, and seven ounces
of water.

In lichen agrarius, however, alterative remedies will be required.
Sometimes, especially where the skin is thickened, a mixture of corrosive sublimate and bark (F. 27) acts very favourably; in other cases arsenic (F. 52) has certainly proved more useful. Occasionally I have found it advantageous, where the disease has proved very refractory, to administer arsenic, while about twice a week a mercurial vapour bath (F. 131) has been employed. The sulphur baths (F. 125, 126) are strongly and justly recommended by some authorities.

With regard to lichen lividus, it is only necessary to say that our remedies must be such as impart tone to the system. Local stimulation of the skin is unadvisable. A generous diet with a moderate allowance of Bordeaux or Hungarian or Greek wine, quinine with one of the mineral acids (F. 379), and cod liver oil are the agents to be trusted to.

But there are two other special forms of lichen recently admitted as distinct diseases by dermatologists. The first is lichen scrofulorum, which occurs in scrofulous subjects, characterized by papules formed by the plugging up of the follicles by epithelial débris and sebaceous matter, and distributed over various parts of the body, and cured by cod liver oil. The second is the lichen ruber of Hebra, and its modified form, the lichen planus of Wilson. Lichen ruber is very rare in England, and is an exaggerated form of lichen planus. The latter is characterized by the development of dusky-red papules, which have an angular base, a flat, shining top, and a central puncture, in recent cases plainly visible and indicating the opening of the hair follicle. These papule are about the size of millet seed, and are attended by much itching. They occur in the discrete form or crowd together into patches, and then their individuality is only seen at the edge of the patches, whose surfaces are covered by a few thin, whitish, transparent scales, giving the appearance in slight degree of psoriasis. These papules and patches occur especially above the wrist, on the front of the forearm, about the flank, the gluteal region, the inside of the thigh and leg, and below the knee. When the papules or patches disappear, dark stains are left behind. The patients attacked by the disease are mostly weak and otherwise out of health. The disease is obstinate, and must be treated by tonics, especially arsenic internally, and the inunction of oily matters with sedatives locally.

3. PRURIGO.

Prurigo [from Prurio = to itch; terminal -igo] is a cutaneous disease characterized by an eruption of small papulæ or pimples, which until scratched are of the natural colour of the skin, together with more or less pruritus of severe character. Under all circumstances prurigo is a chronic and a rare affection. It may last for months or years, causing great discomfort, not to say misery. The itching or pruritus is intense in most cases. Patients
PRURIGO.

Affected with it scratch and tear themselves constantly till the blood flows; their sufferings being aggravated by stimulants and warmth. Willan describes three varieties—prurigo milis, prurigo formicans, and prurigo senilis. The first two can be regarded as prurigo. The first is the mildest form: the itching is seldom unbearable, but it becomes worse towards evening. In the second variety, the annoyance is very great, frequently preventing sleep during the early part of the night: the pricking and burning sensations are compared to the creeping of numberless ants or the stinging of insects. The third kind is in reality phthiriasis: it is caused by pediculi, occurs mostly in old persons, and is most obstinate, often continuing for the rest of the patient's life. The skin becomes rugous and somewhat thickened; while commingled with the papulae are found patches of erythema and urticaria, small pustules, &c. The general health suffers, inasmuch as the complaint renders life miserable.

Prurigo may attack the cutaneous surface generally, or it will be found limited to certain districts. From the latter peculiarity we are in the habit of speaking of prurigo scroti, p. pubis, p. pudendi when the skin round the anus is attacked, and p. pudendi when the parts around the female vulva and perineum are affected. But those are instances of pruritus attended by papulation and excoriation, induced by scratching to relieve the pruritus.

In attempting the cure of prurigo, hot alkaline (F. 121), sulphur (F. 125), conium (F. 122), creasote (F. 123), or even plain water baths, should be used daily. The Turkish bath, where there is no disease of the heart or large bloodvessels, can often be taken twice or thrice a week with great benefit. The local applications which give the most relief are vinegar, lime water, tobacco water (F. 265), a weak solution of corrosive sublimate, a dilute solution of carbolic acid, a lotion containing prussic acid or laurel water, an ointment prepared with a small quantity of aconite, tar ointment, &c. The less the patient scratches himself the better. If thread worms infest the bowel, they must be thoroughly expelled: if there be uterine disease, all remedies will fail till this be cured.

The general treatment must consist in the use of a light and cooling regimen; the avoidance of stimulating food or drinks; and the employment of laxatives with tonics (F. 148, 153, 165). Where the kidneys do not act efficiently large doses of acetate of potash, freely diluted, are indicated. Then the practitioner can select, according to circumstances, either sarsaparilla and iodide of iron (F. 32), tar in pills or capsules (F. 36), acid tonics with taraxacum (F. 376, 377, 378), or even arsenic in full doses (F. 52, 399). Occasionally, small doses of strychnia with cod liver oil prove very serviceable.

With the object of affording temporary relief to the irritation recourse must oft-times be had to the internal administration of
sedatives. Of the various drugs belonging to this class there is not one that can be especially recommended. Perhaps the best is belladonna; about fifteen minims of the tincture in two fluid drachms of syrup of poppies now and then sufficing to give a good night's rest. In other cases, full doses of hyoscyamus answer well. Opium acts like a charm in some instances, and greatly aggravates the annoyance in others. Morphia is usually injurious; but if tried, it is best to use it subcutaneously with a minute dose of atropine (F. 315). Aconite, conium, digitalis, and stramonium are very uncertain in their action.

ORDER VI. SQUAMÆ.

The term Squamae [from Squama = a scale] is applied to the scales of degenerated, thickened, dry epidermis which cover minute papular elevations of the skin; these scales or particles of scurf being readily detached, though they are reproduced by successive desquamations for a long time. The scales or scurf are the result of a morbid secretion of the epidermis. Their formation gives rise to but slight constitutional disturbance, and to mere local heat and itching; while none of the squamous diseases are contagious, though they are very chronic in their duration. Psoriasis (including lepra), pityriasis, and ichthyosis are the disorders which range under this division.

1. PSORIASIS.

Psoriasis [from ψώρα = tetter], psora leprosa, alphos, or dry tetter; is a chronic non-contagious inflammation of the derma. It is characterized by the development of dry and indistinctly copper-coloured patches of various extent and form, which are slightly raised above the level of the skin; these patches being covered by thin and adhesive and whitish or silvery scales of altered epiderma, and being accompanied by rhagades or fissures (with an insignificant thickening) of the skin. Whether there are distinct varieties of psoriasis, or whether what are so termed are merely different stages of the same disease (as Dr. M'Call Anderson's writings have led me to believe) is not of much consequence. Suffice it, that as forms or stages of this disorder we have to recognise psoriasis vulgaris, p. guttata, p. diffusa, p. gyrata, and p. inveterata. The cutaneous eruption which has long been known as Lepra [Δέρα = a scaly state of the skin] is now allowed to be merely a variety or a declining stage of psoriasis, and not a separate affection. As a rule, the general health is not appreciably affected in psoriasis; there being few if any symptoms beyond slight itching, and the sense of annoyance which results from having "a skin disease."
Psoriasis vulgaris (the lepra vulgaris of Willan, the alphos circinatus of Erasmus Wilson) is the most common form of this disorder. The dry silvery scales formed of epithelium, situated on tawny-red patches of skin, are at first very small, though they sometimes increase rather quickly in size. They are most often seen about the elbows and knees. The disease next appears upon the back, the chest, the inside of the thighs, &c., but rarely on the face. Psoriasis guttata is peculiar, inasmuch as the scattered patches are said to give an appearance to the skin as if it had been splashed with mortar. The patches are mostly seen on the trunk, and next on the limbs. Psoriasis diffusa is merely remarkable for the great extent of the patches; these not uncommonly covering an entire limb, or even a great portion of the cutaneous surface. This diffusion is not only due to the spreading of the disease by its gradual encroachment on healthy tissue, but also to the recurring development of new spots. In psoriasis gyrata, (alphos gyratus, lepra gyrata, &c.) the eruption takes a serpentine form, owing to the irregular commingling of the circles of the rash. Lastly, psoriasis inveterata (lepra inveterata, &c.) is that form in which the disease is chronic, the scales are thick and large and cracked, and the subjacent skin is red and hot and tender. There may even be a more or less copious serous exudation, causing the scales to become prominent scabs. It is this form which is described by Dr. M'Call Anderson as "psoriasis rupioides;" the large conical crusts marked by concentric rings resembling the scabs of rupia. There is, however, no connexion between psoriasis rupioides and rupia except in the shape of the scabs; for on removing them in the former no ulceration is found, but only a dusky-red and slightly weeping surface; and Dr. Tilbury Fox* has pointed out that there is a tendency to pus formation in this form, for pus can be detected oftentimes in goodly amount in the slight discharge from the weeping surface, and even in the semiconical crusts, and he is confirmed in this observation by Dr. Taylor, of New York. Dr. Fox holds psoriasis rupioides to be psoriasis in a pyogenic or strumous subject, and as specially needing cod liver oil in aid of its cure.

Looking at the different phases of psoriasis as combined in one affection, the following points may be noticed:—The elbows and knees are the favourite sites of this disease, although every part of the body, including the head, may suffer: even the nails are at times invaded. Psoriasis confined to the palms of the hands or the soles of the feet is probably invariably of syphilitic origin. Psoriasis is a chronic affection: relapses are common, a permanent cure being an exceptional occurrence. Psoriasis is often hereditary. The causes usually assigned—stomach derangements,

*Skin Diseases: their Description, Pathology, Diagnosis, Treatment, &c. Third Edition. Renshaw. 1874. .
chlorosis, tuberculosis, rickets, pregnancy, lactation, change of life, amenorrhœa, &c., probably have no influence in exciting psoriasis. Yet where a predisposition to the disease exists, whatever lowers the tone of the system may suffice to call it out. In syphilitic psoriasis the general health is usually bad; while other traces of the poison—sore throat, distinctly copper-coloured patches of erythema, nodes, &c., will probably be present.

Were I asked to mention briefly the remedies for psoriasis, in the order of their efficiency, I should reply—arsenic, cod liver oil, and the local application of tar (the official unguintum picis liquidae). Usually, it is better to employ all three simultaneously. Doubtless there are very many cases where these, like all other remedies, fail. The practitioner may then, if it so please him, ring the changes with quinine, iron, phosphorus, the hypophosphite of lime or soda, tar capsules, cantilarides, colchicum, iodide of potassium, &c. In syphilitic psoriasis, however, arsenic proves useless; in such, a cure can only be wrought by mercury in some form or other, and notably by the mercurial vapour bath (F. 131). The local application of the iodine liniment is often very serviceable; and so is the use of the solid nitrate of silver. Also the iodine ointment. Where patches of syphilitic and non-syphilitic psoriasis are found to coexist, the triple compound of iodine and arsenic and mercury, known as Donovan’s solution (F. 51), can be cautiously given with the prospect of great benefit.

During an arsenical course (F. 52) all acidulated drinks, fruits, and most vegetables had better be abstained from. Moreover, the dose of arsenic should not be too large. I have so frequently found the liquor arsenicalis in five minim doses quickly disagree, that I generally prescribe only three minims, thrice daily, upon a full stomach; increasing this quantity after a few weeks, if there be evidence that the metal is well borne by the stomach and system generally. When, however, the edges of the eyelids become sore and irritable, when there is any sense of nausea or any tendency to fainting, and when the silvery coat upon the tongue which results from the use of arsenic becomes well marked, the dose should be diminished. Moreover, under such circumstances it will be as well for the patient to be seen every four or five days.

2. PITYRIASIS.

Pityriasis [from Pityriov = bran], or dandriff, or branny tetter, is a superficial and chronic inflammation of the skin, attended with redness and itching, and characterized by the production of minute white scales or scurf in great quantity. It may attack any region; but the scalp and parts covered with hair are the most common seats of it (Pityriasis capitis). The desquamation takes place copiously and incessantly. This affection is often very rebellious to treatment, and may be prolonged for several months; in which case it gives rise to much annoyance, with slight constitutional
disturbance. The disease may attack the entire surface, beginning in red and rough patches, in ten days or so invading the entire body, with chronic and deep inflammation of the true skin, and a profuse exfoliation of fine epidermic cells. This form is known as pityriasis rubra. Sometimes the exfoliation of the epidermis is so excessive that the branny particles or laminae of cuticle cast off in every twenty-four hours may be sufficient to fill a pint or more. It is rarely met with. It lasts for years, gradually spreading over the whole body. Although at first there may be little or no constitutional derangement, yet ultimately it causes great weakness.

Some tonic infusion, an occasional purgative, and the use of sedative or alkaline lotions to the affected part, are the measures usually relied upon. In obstinate cases, however, arsenic (P. 52) has appeared to me to be the only remedy to be depended on. Occasionally the nitrate of mercury ointment, or the ointment of ammoniated mercury, does much good, applied two or three times a week. Glycerine is an excellent local palliative. When the head is the part affected, the hair should be cut off close to the scalp, with a pair of scissors. Great cleanliness is, of course, essential. The diet ought to be nourishing, with plenty of milk; stimulants being forbidden unless they are required to aid digestion.

Dr. Tilbury Fox says that in the early stage of pityriasis rubra packing in oil, the use of diuretics to relieve the skin hyperæmia, to be followed presently by the exhibition of full doses of perchloride of iron, have in his hands cured most cases—a real triumph in therapeutics if, as there seems no doubt, true.

3. ICHTHYOSIS.

Ichthyosis [from ἰχθῦς = a fish], or the fish-skin disease, is characterized by the development, upon one or more parts of the integuments, of thick and hard, dry and imbricated scales of a dirty grey colour; these scales resting upon an uninflamed surface. The eruption is unattended by heat, pain, or itching. The scales, or shagreen-like flakes, when shed have sometimes been found to measure three-quarters of an inch in diameter. Ichthyosis is said to be a congenital disease, and to last during life. Examples of it are very seldom met with.

Simple warm and alkaline baths, or vapour baths, may be employed as palliatives; but no other treatment seems to be of any use, except the free injection of oil to keep the skin supple and soft.

ORDER VII. TUBERCULA.

The diseases belonging to the order Tubercula [from Tuberculum = a little protuberance], are elephantiasis Arabum, molluscum,
acne, framboesia, keloid, and vitiligo. They are all characterized by the formation of small hard tumours or tubercles; which are more or less prominent, circumscribed in form, and persistent. The tumours may become ulcerated at the summit, or they will perhaps terminate in suppuration. Tubercular diseases are slowly developed, and are very chronic; the most formidable are peculiar to tropical regions; and the symptoms of all are so characteristic that their diagnosis is free from any difficulty.

1. ELEPHANTIASIS ARABUM.

This disease is in no way connected with that terrible and dangerous constitutional affection known as *True Leprosy*, or the *Eastern Leprosy*, or *Elephantiasis Graecorum* (vol. i. p. 115).

Elephantiasis Arabum, or elephantiasis, or Barbados leg, or bucnemia tropica, or boucnemia, is characterized by great swelling and induration of the true skin or derma, producing marked deformity. The subjacent connective and adipose tissues are also implicated, being greatly hypertrophied and infiltrated with a homogeneous morbid secretion; while as the result of intermittent attacks of lymphangitis the lymphatic vessels are found obliterated. The disease may be not improperly compared to an aggravated and permanent form of phlegmasia dolens. Boucnemia may affect the face and neck, or the arms, or the pudendum, or the scrotum. Most frequently, however, it attacks the lower extremities, commencing about the feet and ankles. It causes swelling so great that the limb becomes double its natural size. There is also hardness, and a brawn-like thickening of the integument; so that the latter in its hypertrophied state almost conceals the foot, giving rise to an appearance resembling the leg of an elephant, whence the disease has derived its name [*Κλέφως* = the elephant]. There is a tendency to erysipelas and other unhealthy forms of inflammation in this affection. It is rarely met with in Europe, occurring principally in the West Indies, China, Africa, &c. Elephantiasis generally continues for life; it ultimately causes alarming constitutional disturbance; it is neither contagious nor hereditary; and it attacks males and females, rich and poor, indiscriminately.

The treatment of boucnemia has attracted much attention of late years. Formerly, when the disease was confined to one foot and leg, amputation of the limb was resorted to with considerable success. Milder measures, however, are now found to be efficacious. Complete rest, with elevation of the limb and compression by bandages having failed, surgeons were led to try the effect of obliterating the main artery of the limb. This has been accomplished sometimes by the ligature, sometimes by pressure. The rationale of this operation is not very clear. Probably, however, it acts by temporarily cutting off the supply of nutrient fluid to the diseased structures. Directly this is accomplished, these structures
begin to degenerate: while with such degeneration, the process of absorption goes on very quickly. For just as we know that absorption of the living elements of a healthy tissue is an impossibility, so the further a morbid structure is removed from a condition of health, the more efficient and speedy may be the action of the absorbents in getting rid of it. As this explanation will probably be deemed inconclusive, it is fortunate that we can fall back upon the results of the proceeding and assert that they appear to be generally favourable.

The main artery of the limb has now been tied in bournemena on several occasions, and with good results.

With regard to the treatment of this disease by compression some success has also been obtained. Thus, in the case of a girl 21 years of age, who had suffered from elephas of the right leg for seven years, while the disease was increasing, a cure was effected by digital compression of the femoral. This compression was used for five days, and on some days for as long as twelve hours. Three years after the treatment, the affected limb was the smaller of the two. The history is reported by Dr. Vanzetti of Padua. In a second instance, at the Royal Free Hospital, in a patient under Dr. Cockle and Mr. Hill, the cure of a case of fourteen years' duration seems to have been accomplished by pressure in combination with bandaging. The femoral artery was compressed, at Scarpa's triangle, by means of the horseshoe tourniquet (at first for a short time, and then permanently), but never to the extent of completely arresting the circulation through the artery. Simultaneously, the limb was, at first, encased in a starched bandage; later, three simple rollers were used. The reduction of size, when the compression of the artery was permanent, proceeded nearly as rapidly as in cases in which the main trunk had been tied.

Elephas of the genital organs is not uncommonly seen in various parts of India; the natives of Bengal appearing to be especially liable to disease of this kind, though the other residents do not altogether escape its influence. According to Dr. Allan Webb, there are two varieties of elephas; one being due to a peculiar intermitting fever, while the other is the result of the syphilitic poison. Hence, there is simple elephas, invading the scrotum in men and the vaginal labia in women; while there is likewise the venereal form, commencing in the prepuce in the male subject and in the nymphae with the female.

Dr. Fayer, of the Medical College Hospital at Calcutta, whose experience in this disease is very large, while of course believing that these growths are the local expression of a constitutional disorder, says that they consist of exaggerations of the natural structures—white and yellow fibre, unstripped muscle of the dartos, skin and areolar tissue—the whole being infiltrated with a quantity of jelly-like albumino-serous fluid. They are concurrent in their growth with repeated paroxysms of periodical fever; which fever
recurs in some cases once, in others twice, a month. During these attacks, the tumour is always described as increasing in size; becoming hot, turgid, painful, and sometimes fissured. It may also exude a sanious fluid. With the cessation of fever, there is a cessation in growth; but each attack leaves the morbid mass somewhat larger than it found it. The fever having entirely disappeared, the tumour either ceases to grow at all, or it increases slowly and insidiously. The scrotal hypertrophy is occasionally accompanied by elephas in other parts of the body, or of the limbs. But in the majority of cases that have come under Dr. Fayrer's observation, the disease has been confined to the genital organs. There also appears to be a tendency to fatty degeneration of the heart in these cases.

The size which these scrotal tumours may attain is most remarkable. Mr. Liston removed one which weighed nearly 50 lbs. and the patient did well. Mr. Aston Key extirpated one weighing 57 lbs., but the patient died. To within a short period Dr. Fayrer had operated on twenty-eight cases, with only six deaths (five from pyemia, and one from exhaustion). In all the genital organs were not excised. The lightest tumour weighed 5 oz.; the heaviest nearly 76 lbs. after the blood and serum had drained from it.

2. MOLLUSCUM.

This affection derives its name from the similarity of the tubercles characteristic of it to the eminences growing on the bark of the maple tree. Molluscum consists of one or more small tumours; these varying in size from that of a pea to that of a pigeon's egg, being occasionally of a brown colour, while sometimes they are found growing from a broad base and sometimes from a narrow peduncle. There are two forms: one is contagious, the other not. In non-contagious or false molluscum, the tumours are formed of fibro-areolar tissue; and may be treated as polypi are treated in other situations, viz., by removal with the scissors or scapel.

True or contagious molluscum is a rare affection. It consists of a kind of hypertrophy of a sebaceous gland, with an accumulation of sebaceous fatty matter. Whether the disease is really contagious has been doubted, but the frequency with which the affection is found simultaneously on the face of a suckling child and the breast of the nurse, seems to be conclusive on this point. A cure of these growths can only be effected by incising them, squeezing out their contents, and applying the nitrate of silver to their walls.

3. ACNE.

Acne [perhaps a corruption of 'Ἀκναί = pimpls on the face at the age of puberty; or, according to some writers, from 'Α =
priv. + κυτω = to itch, because there is an absence of irritation], or gutta rosaee, or copper-nose, is a chronic pustular affection; characterized by the presence of small isolated pustules, with deep red bases. These pustules, after suppurating and bursting, leave behind them minute hard red tumours, the seat of which appears to be the sebaceous follicles of the skin.

Willan describes three varieties of this disease—acne simplex, acne indurata, and acne rosacea; the characteristic distinctions of which are indicated by their names. Acne simplex and acne indurata are most common about the period of puberty, they appear on the forehead or sides of the cheeks, they are very protracted in their duration, and they frequently leave indelible cicatrices. Acne rosacea attacks the nose, is often connected with some stomach or liver disease, and is mostly seen in persons of advanced years—especially if they have been bons vivants, &c. In the treatment of either of these forms, the diet must be restricted, stimulants of all kinds abstained from, and mild laxatives occasionally employed. Pepsine and pother remedies to remove dyspepsia will aid the treatment. Arsenic (F. 52) is the only remedy which I have found of any service in obstinate cases. The uterine functions ought to be attended to in women. The iodide of sulphur ointment sometimes does good in acne indurata; and so does warm bathing. Hot water douches are also serviceable. A good lotion can be made with four grains of corrosive sublimate to eight ounces of the officinal almond mixture. Where the spots are small, the acid nitrate of mercury applied with a pipette can be recommended; care being taken only to touch the apex of the little swelling. Any excess of acid should be at once removed with blotting paper.

The acne punctata described by some authors seems really to consist of little black dots about the nose and chin, &c.; these dots being formed by the retention of sebaceous matter, with the presence of the acarus folliculorum or pimple mite. If from their excess these black specks are unsightly, they can often be removed by rubbing them with a little calomel on several occasions.

4. FRAMBOESIA.

Framboesia [from Framboise = a raspberry], or pian, or yaws, is a disorder rarely met with in Europe. It is, however, common in Africa, in parts of America, and in the West Indies. Without any precursory symptoms, portions of the skin (especially about the face, scalp, axillae, or genital organs) are found covered with small dusky-red spots, which gradually become converted into larger tubercles; these tubercles being isolated at their summits but collected together at their bases, and often resembling raspberries or mulberries in their colour and form. The tubercles are generally hard, covered with dry scales, and are sometimes in-
flamed. If the inflammation spreads, ulceration soon sets in; a yellow sanious discharge resulting, which forms scabs around the tumours. The disease continues for years, or even for life.

5. KELOID.

Keloid [according to some authorities from ἱλατθα—a tumour + ἱλος—like], kelis, cheloida, or cancroide, was first described by Alibert under the above names; owing to the disease presenting a flattish raised patch of integument resembling the shell of a tortoise [Xαλυς—a tortoise; terminal -ides]. This affection consists of small and nearly flat, tender, and cicatrical-looking excrescences; they often arise in cicatrices and are probably formed by a hypertrophy of the fibrous layer of the derma. The excrescences are one or more inches in diameter, are raised a few lines above the level of the skin, and have irregular forms with slight depressions in their centres, while they are covered with wrinkled epidermis. Sometimes the excrescence resembles a cicatrix left by a burn; which, though soft and velvety on the surface, communicates a sense of density and resistance on pressure. There may be only one tumour, but occasionally there are several. The disease is developed slowly; it rarely ends in ulceration, and sometimes disappears spontaneously merely leaving a cicatrix. Keloid is usually found on the chest between the mammae, and is very uncommon. It has no analogy with cancer. Arsenic (F. 52) seems to be the only remedy which exerts any beneficial effect upon it. Pressure has been recommended, but it will probably prove worse than useless if tried.

6. VITILIGO.

'This is a rare disease which received its name from Willan, owing to his belief that it produced a glistening veal-like appearance of the skin [from Vitulus—a calf; terminal -igo]. It is characterized by the formation of "smooth, white, shining tubercles, which rise on the skin, sometimes in particular parts, as about the ears, neck, and face; and sometimes over nearly the whole body, intermixed with shining papule. They vary much in their course and progress: in some cases they reach their full size in the space of a week (attaining the magnitude of a large wart), and then begin to subside, becoming flattened to the level of the cuticle in about ten days: in other instances, they advance less rapidly, and the elevation which they acquire is less considerable; in fact they are less distinctly tubercular. But in these cases they are more permanent; and as they gradually subside to the level of the surface, they creep along in one direction, as, for example, across the face or along the limbs, chequering the whole superfices with a
veal-skin appearance."* The eruption destroys the hairs in its progress: it never advances to ulceration.

Drs. Addison and Gull speak of two varieties,—the vitiligoida plana and v. tuberosa, which may occur separately or combined. In the former, irregular yellow patches are observed, slightly elevated and hard: in the latter, there are isolated or confluent tubercles, ranging from the size of a pin's head to that of a large pea. Vitiligoida (described by Mr. Erasmus Wilson under the name of Xanthelasma) is most frequently seen in the shape of yellowish patches, symmetrically arranged about the eyelids and their vicinity. In some of the cases which have been treated at Guy's Hospital there has appeared to be some connexion between this skin disease and derangement of the liver. So again, out of five instances observed by Hebra there happened to be jaundice in three.

ORDER VIII. • PARASITICI.

The order Parasitici must be divided into two groups—the dermatophyta and the dermatozoa; according as the parasite belongs to the vegetable or the animal kingdom. The cutaneous affections depending upon parasitic plants, or epiphytes, are Tinea thurans, Tinea kerion, Tinea favosa, Tinea decalvans, Tinea sycosis, and Tinea versicolor or Chloasma. Of the diseases produced by animal parasites, or epizoal, Scabies and Plithiriasis are the important ones. All these affections are contagious.

The fact is now generally admitted that both animals and plants are liable to suffer from diseases induced by parasitic fungi —plants of the lowest type. Some of the plants of this class are familiar to everyone; as, for example, yeast, mildew, rust, smut, mushrooms, toadstools, &c. The more minute fungi which find a suitable soil on animal bodies have only been discovered of late years. In all fungi there are delicate transparent filaments, representative of the root fibres of higher plants. These filaments or threads are known as "mycelium." If by excessive multiplication with repeated forking the filaments get matted together, they are


† This term [from Tinea = any gnawing or destructive worm] may be applied generally to all those cutaneous diseases which are due to the presence of vegetable growths. Hebra, of Vienna, believes that all the forms of tinea are produced by the same parasite: the different appearances produced by it depending upon the stage of development of the fungus, the exact nature of the soil on which it is implanted, &c. According to Dr. Tilbury Fox the fungi found on man are of "one and the same stock." On the contrary, this opinion is not that generally entertained.
spoken of as "thallus." The fruits of fungi are termed "spores" (sporidia, or sporules); and these round or oval, solitary or collected bodies, consist of granules floating in a fluid, enclosed in a case of cellulose. The spores may be carried by the air from one subject to another; though most frequently they are distributed by actual contact between the bearer and a healthy individual. Parasitic diseases are thus sometimes transmitted from animals to man. Dr. Tilbury Fox, who is one of our first authorities on all these questions, says that mice with favus can communicate the disease to the cat; while this animal subsequently gives favus, or even body ringworm, to the human subject. Certainly, favus is not an uncommon disease of mice and cats, as well as of horses and oxen and calves; so that consequently there is every reason for regarding Dr. Fox's views as correct so far as concerns the communication of favus from the cat to man. With regard, however, to contact with an animal with favus giving rise to ringworm in the human subject, there is room for a difference of opinion. As far as my own experience goes, I am no more inclined to think that tinea favosa can produce tinea tonsurans, than that the acarus folliculorum (or pimple mite) can give rise to scabies.

1. TINEA TONSURANS.

This is a chronic contagious disease, which is far from uncommon. It is recognised by the thickened and whitened, the brittle and broken condition of the affected hairs [whence the name from Toseo = to shave]; as well as by the furfuraceous or branny eruption, and the roundness of the diseased patches. It is called porrigo scutulata, or scalled head, by Bateman and Willan; herpes tonsurans by Hebra; herpes circinatus by Erichsen; trichosis furfuracea by Erasmus Wilson; and vulgarly ringworm. The parasite is the Tricophyton tonsurans; the sporules (about $\frac{1}{1000}$ of an inch in diameter) and mycelium of which infiltrate the texture of each hair, while they also spread among the epithelial scales.

Ringworm occurs not only on the scalp but upon other parts of the body, as the neck, trunk, &c. In children it attacks the scalp: in young adults it attacks the general surface. It is a local disease just as scabies is. In ringworm of the head, or tinea tonsurans, there is at first an erythematosus or else a vesicular eruption (rarely a papular or paputular rash), attended with moderate itching. Then the fungus is seen as a white or greyish powder, while the affected patch is slightly raised. The disease causes the hairs to break off almost close to the scalp; so that one or more somewhat circular patches are seen where the hairs look as if they had been cut short, and where small scales of dry epithelium are found. Moreover, the hairs just around the part appear dry and dirty. The hair-follicles seldom become obliterated in this disease, and consequently permanent baldness need not
be feared. The treatment will be described in the section on
sycoysis.

Ringworm of the body, or tinea circinata, consists of circular
and slightly raised patches, which take on furfuraceous desqua-
amation. They are situated about the face, or neck, or breast, or
shoulders, or arms. Their margins are more distinctly vesicular
or papular than their central portions. The disease spreads at the
circumference; while as the parasite is sometimes destroyed by the
inflammatory process which it sets up, rings are seen enclosing
portions of skin which have become healthy. Tinea tonsurans
and tinea circinata often coexist. The parasite is the same in
both instances.

2. TINEA KERION

Is tinea tonsurans in which each individual hair follicle
becomes prominent, being itself inflamed, and giving out a glairy
viscid fluid like mistletoe juice. The aggregation of these inflamed
follicles gives the appearance of a boggy quasi inflammatory
raised patch perforated by a number of foramina from whence
issues a discharge.

3. TINEA FAVOSA.

This parasitic disease is seldom met with. It most commonly
affects the scalp (Favus pilaris); whence, by scratching, it is apt
to involve the nails (F. unguium). Body favus (F. epidermidis)
is a very rare form. Favus as seen on the scalp, when the hair
follicles are attacked, is found in the form of small cup-shaped
and yellow crusts; each crust containing a hair in its centre, and
somewhat resembling a piece of honeycomb [Favus = a honey-
comb]. There is rather troublesome itching; the hairs become
brittle, and ultimately fall out; while the crusts have a mouldy
offensive odour, they are often surrounded with lice, and they
are usually small unless they coalesce so as to form a large dry
mass. The entire scalp may become affected if proper remedies
are not used. This disease occurs mostly in children, and es-
pecially in strumous subjects; while according to Hebra, it is due
to dirt and neglect in cleaning and combing the hair. In cases of
long standing, the disease will be found on parts of the trunk as
well as on the scalp, inoculation with the spores having taken
place. It may produce permanent baldness by destroying the
hair follicles. The synonyms for this contagious disease are
honeycomb ringworm, scall-head, favus, tinea lupinosa, and porrigo
favosa. The cryptogamic parasite causing it is the Achorion
Schönteini; the sporules of which are round or oval, and about the
\( \frac{1}{16} \) of an inch in diameter. There are also smaller tubes, with
much granular material. This parasite appears to find its most
suitable soil in the tissues of scrofulous, or of debilitated and
neglected children.
4. TINEA DECALVANS.

The fourth variety of these diseases is easily diagnosed. The hair falls off one or more circular or oval spots; leaving perfectly smooth bald patches which vary in size, being sometimes no larger than a pin’s head and sometimes extending over the entire scalp [*Decalvo* = to make bald]. Frequently the affected patches look as clean and polished as the surface of a white billiard-ball. The baldness is seldom permanent. I entertain no doubt whatever but that it is contagious, though less so than the other varieties of tinea. Almost always occurring on the scalp, yet in rare cases this disease spreads and destroys every hair upon the body, thus inducing considerable deformity. This affection is usually known as porrigo decalvans, or alopecia circumscripta, or alopecia areata. The parasitic fungus is the *Microsporon Audouini*, the sporules of which are round, and much smaller than those of the fungi previously described.

5. TINEA SYCOSIS.

The fifth species of tinea is characterized by spots of erythematous inflammation which involve the hair-follicles, causing successive eruptions of small acumminated pustules. These pustules have been fancifully thought to have a granulated appearance resembling the substance of a fig [*Σωκόμας* = to become like a fig]. Sycosis, or ringworm of the beard, is met with most frequently upon the chin and other parts occupied by beard: it seldom occurs on the scalp, and rarely affects women. In some cases it is at least aggravated by the excessive use of alcoholic liquors. It is called mentagra by Willan and Bateman, and sycosis by Cazenave. On extracting a hair it will be seen covered with a whitish powder—the parasitic matter. This is the *Microsporon mentagrophytes*, which is probably identical with the Tricophyton tonsurans.

*Treatment.*—This is the same in all these varieties of tinea. It consists in constant attention to cleanliness; separation of all scabs or incrustations by the application of oil and simple ointments and poultices; removal of the brittle hairs with the scissors, or careful extraction of them by the forceps (epilation); improvement of the general health by a generous diet, cod liver oil, and bark or steel; and especially by the destruction of the parasitic plant. By the latter proceeding, the disease will in all cases be cured. It may often be effected by the application of the undiluted sulphurous acid, or of this acid with water as a lotion (F. 272); or by creasote or carabolic acid (F. 270), or by the officinal glycerine of carabolic acid; or especially by a lotion of corrosive sublimate (F. 271). Sometimes ointments appear to succeed better as parasiticides than
lotions. A mixture of equal parts of calomel, creasote, and sulphur ointment is useful; or the nitrate of mercury ointment may be tried, or the corrosive sublimate ointment (F. 299), or the ammoniated mercury and sulphur ointment (F. 300), or the iodide of sulphur (F. 310), can be recommended. In ringworm the strong acetic acid is a good application, so is the official liniment of turpentine and acetic acid, and so is the glacial acetic acid provided the part be washed directly after its use with cold water; while there will seldom be any necessity for using these acids more than once, supposing the one selected be efficiently rubbed in, and that a small quantity of a pomatum containing some corrosive sublimate (F. 299) be employed for three or four weeks afterwards. Sometimes I have successfully painted the affected patch with a mixture of one hundred grains of iodine in an ounce of the oil of petroleum; by which a scab is formed that does not separate for a week at least. Two or three applications, at intervals of fourteen days, usually suffice. In advanced tinea decalvans good results are obtained from rubbing (or better still from brushing with a hard toothbrush) the glycerine of carbolic acid into the bald patches and surrounding parts twice or thrice a week; occasionally omitting this remedy and substituting a painting with good blistering liquid—the official liquor epispastici.

Finally, in examining and treating all the forms of tinea the practitioner should remember that by chance he may inoculate himself. Such an accident has happened; and it must, to say the least, have been very disagreeable.

6. TINEA VERSICOLOR.

This affection, commonly known as chloasma [from χλοάζω = to be of a greenish yellow colour], makes its appearance generally on the front of the chest or abdomen in the form of small patches of a dull reddish colour, which gradually increase in size, and assume a yellow tint. The eruption is often mistaken for a syphilitic stain. Chloasma merely causes a little itching; there is desquamation of small scales like fine bits of bran. Each patch gradually spreads. The disease may last from a few days to many months or years. It is contagious. Want of cleanliness, and the wearing of dirty flannel shirts, seem to favour the occurrence of chloasma by forming a fit soil for the parasite. This, according to Eichstedt, is a cryptogamic plant—the Microsporum furfur; the spores of which (about the size of an inch in diameter) can be detected in the branny scales by submitting them to a microscopic examination. The fungus may be completely destroyed by the use of the sulphurous acid lotion (F. 272); or by the glycerine of carbolic acid; or by the liniment of turpentine; or by a liniment of corrosive sublimate in water (F. 271), which ought to be rubbed
all over the affected part every night and morning. Mr. Startin
considers that it is apt to return, if an arsenical course be omitted;
and hence in obstinate cases this remedy may be resorted to
(F. 52). I have, however, cured a large number of cases by the
mercurial liniment alone, continuing its use for a short time after
the disappearance of the eruption. It is scarcely necessary to
add that the skin must be kept thoroughly clean; while the dirty
habit of sleeping in a flannel waistcoat ought to be abandoned,
or at all events the one worn during the day should be changed at
night.

7. SCABIES.

Scabies [from Scabo = to scratch], or the itch, is a troublesome
disease produced by the burrowing of the acarus in the skin, and
attended with great itching; the irritation being increased by
heat, so that it is often rendered intolerable at night by a warm
bed. Scabies consists of the acarus in its burrow with in addition,
the results of irritation and scratching. These results of irritation
being papular, vesicular, or even pustular, according to the state
of health of the patients; the vesicles or pustules becoming rup-
tured, and excoriations being produced, by the scratching with the
nails which is being constantly resorted to. This affection attacks
most frequently the front of the forearm, the abdomen, the inside
of the thighs, and the inter digits, where the acarus chiefly
burrows. It is often stated that scabies is never seen on the face;
but this opinion is probably incorrect.

The cause of the disease is an animal parasite called the Acarus
scabiei, or Sarcoptes hominis. * The young or larval acarus has only
six legs, four in front and two behind; while the full-grown insect
has eight limbs—four hind legs as well as four in front. The
acarus can just be distinguished with the naked eye: a one-inch
object glass shows it well. The female is considerably larger than
the male; and they copulate upon the skin. After impregnation
the female burrows beneath the epidermis, forming burrows or
cuniculi, in which her very small eggs are usually deposited at the
rate of one a day. Her life has a duration of about three months.
The males do not make these galleries, but wander over the surface
of the epidermis. The burrow produced by the female can be recog-
nised as a faint white streak, leading from the papule or vesicle.

Sulphur affects a cure by destroying the acarus. Hence, after
thoroughly washing the affected parts with hot water and soft soap,
the sulphur ointment is to be freely applied. In private practice
a soothing but efficacious liniment of equal parts of prepared
storax and almond oil may be advantageously substituted for the
sulphur ointment. Where this loathsome disease is extensive, sul-
phur baths (F. 125) prove useful. The patient had better sleep
without a shirt between sheets well dusted with the flowers of sul-
phur (sulphur sublimatum). The contaminated clothes should