heal. I generally observe that it heals sooner if you divide the cluster below than the cluster above. Then there are some cases where a varicose cluster is productive of an unusual quantity of pain, apparently in consequence of there being some nervous filament lying over it which is kept on the stretch. There you may relieve the patient from the pain of the particular cluster by the division of it. But these occasions are of rare occurrence; and under other circumstances I really do not think that it is worth the while of any patient to submit to the operation.

I ought not to take leave of the subject which is before us, without referring to a very ingenious method of obliterating varicose veins, which has been lately adopted by M. Velpeau, of Paris. He introduces a pin or needle through the skin, which is passed underneath the vein, and at right angles to it. A twisted suture is then applied round the two ends of the pin, so as to compress the vein sufficiently to produce its obliteration. I cannot, from my own experience of this practice, say any thing of its advantages or disadvantages; but must acknowledge that it seems not improbable that it may be preferable to the other methods of which I have given you a description. Still, the observations which I have made as to these other methods, apply equally to this. It may be useful in certain cases, and under peculiar circumstances; but I can see no reason to believe that you would be justified in having recourse to it on ordinary occasions.

LECTURE XIV.

ON CORNS AND BUNIONS.

It cannot be doubted that the physical condition of man is, on the whole, much improved by civilization; but it is not so in all respects, and the usages of society are productive of some evil, combined with much good. The evil affects the weaker more than it does the stronger sex; and among the former, those who belong to what are called the higher classes, suffer more than those who belong to the lower. Young ladies, living much in heated rooms, taking little exercise in the fresh air, over-educated as to the acquirement of accomplishments, and using their muscles too little, lose the beautiful figure with which they were endowed by nature, and become afflicted with curvatures of the spine, and weakness and distortion of the ankles. The same mode of life renders them liable to the innumerable varieties of hysterical disease, which in so many instances destroy the whole comfort, and I may say the dignity, of existence, enervating both the body and the mind, and making their condition altogether much less desirable than that of the poor peasant girl.

There is another order of diseases which we meet with more frequently among females of the higher classes than among other persons—namely, corns and bunions; and it is to this last humble, but not unimportant subject, that I propose to call your attention in the present lecture.

A corn is in the first instance a thickening of the cuticle. Whenever the cutis is habitually subjected to the influence of pressure, it secretes a thick and horny cuticle. We find examples of this in the hands of many mechanics, and in the soles of the feet in those who walk much. But every thickening of the cuticle is not a corn, and this name is applicable only to those cases in which the cuticle is thickened over a projecting portion of bone, on which the pressure is, as it were, concentrated. Corns may occur in any part of the body in which this combination of circumstances exists; but, for obvious reasons, they are met with in the feet much more commonly than anywhere else.

If shoes were constructed of the shape of the human foot, neither too large nor too small, and making an equal pressure everywhere, corns and bunions of the feet would never exist. But, unfortunately, shoes are seldom made after this fashion, and in ladies' shoes especially there are generally two signal defects: first, the extremity of the shoe is much too narrow for that part of the foot (namely, the toes) which it is to contain; and, secondly, for the purpose of displaying as much of the foot as possible, the whole of the tarsus and metatarsus is left uncovered, and the pressure of the shoe in front is thrown entirely upon the toes. The toes are thus first squeezed against each other, and then pushed out of their natural position; and all the projecting points, chiefly where the joints are situated, are pinched and tormented either by the neighbouring toes or by the leather of the shoe, and thus it is that corns of the feet are generated.

In order that you should understand the precise situations in which corns are most likely to take place, you must consider more particularly the effects which the pressure of the shoe produces on the toes. The little toe is pushed from its parallel position, so that it is in fact underneath the fourth or adjoining toe, and corns are generated on its outer surface over the prominences of its joints. A corn is also frequently met with in the angle between the little toe and the next toe, where the first phalanx of the former is pressed against the head of the metatarsal bone supporting the latter. Sometimes the consequence of wearing a very narrow shoe is, that one of the toes (and it is generally the second or fore-toe) is pushed upwards, so that it lies over the two adjoining toes, that is, over the great toe and the third toe, the extremities of which come in contact underneath; then the leather of the shoe is drawn tight over the upper surface of the second or displaced toe, and corns are produced over one or more of its articulations. At other times one of the toes (and in this case also it is generally the second toe), is displaced in another way. The extremity of it is pushed downwards, so that it lies beneath the extremities of the two adjoining toes, which come in contact over it. But this change cannot take place while the three phalanges of the displaced toe remain in a line with each other. The first and second phalanx make an angle, projecting upwards. The second joint of

the toe becomes prominent above, and a corn is formed over it. If the shoe, instead of being too narrow, be too short, for the foot which it contains, the last phalanges of all the smaller toes are kept constantly in a half-bent state, and a row of corns is generated, one being situated on the upper part of the last joint of each of these toes. I have endeavoured to enumerate what may be regarded as the most ordinary localities of corns; but of course they may be produced anywhere else, according to the shape of the shoe, the mode of walking, and other circumstances.

I have said that a corn is, in the first instance, a thickening of the cuticle secreted by the cutis, when it is kept in a state of constant irritation by the operation of external pressure squeezing it against a prominent surface of a bone. But a complete corn is more than this. A bursa, or bag of synovial membrane, similar to those bursæ which are of original formation, but of a very small size, is formed between the thickened cuticle and the cutis; and it is this combination of thickened cuticle, with a subjacent bursa, which constitutes a perfect corn. This is a fact which you may easily verify for yourselves, as the opportunities of dissecting corns are abundant in the dead-house of the hospital.

The thickened cuticle of those corns, which are situated externally, becomes dry, and hard, and horny; while that of the corns which are situated between the toes remains soft, and to a certain degree moist; and this gives rise to the distinction between hard and soft corns. I shall speak to you of hard corns first,—of soft corns afterwards.

A hard corn, when it begins to be formed, is productive of no other inconvenience than of a slight degree of pain and tenderness after much exercise. The pain and tenderness increase, so that the patient in the evening is glad to take off the leathern shoe, and put on a large slipper. Then the whole foot, after exercise, is hot and uneasy. These symptoms subside with rest, and the absence of pressure, during the night, but return with the wearing of the shoe and exercise during the day. By and by the bursa under the horny cuticle becomes inflamed, and distended with fluid, and the pain is much aggravated. But the sufferings are greatest in those cases in which the bursa suppurates. An abscess forms in parts which are incapable of distension, and you know how much mischief even a very small collection of pus, under such circumstances, may occasion. I was sent for to an old gentleman who was suffering excruciating pain in the whole foot, which was red, and much swollen, the swelling extending up the leg considerably above the ankle. In one toe, and in the neighbouring part of the foot, the tenderness and other marks of inflammation were greatest, and here I discovered an old neglected corn. He could scarcely bear the corn to be touched; however, I carefully removed the hard cuticle with a scalpel, and made an opening into the bursa under it. Not more than a drop of matter escaped, but this was sufficient to give immediate relief. On the following day he was well. I was desired to see another patient, a young lady, under the same circumstances, except that the symptoms

were more severe. The inflammation involved nearly the whole leg, and there was a frequent pulse, and much general excitement. I removed the thickened cuticle of a corn on one of the toes, and allowed a very small quantity of pus to escape which was collected beneath it. This gave immediate relief, and on the following day she was all but well. Several similar cases have fallen under my observation.

I have already mentioned that the most common seat of a soft corn is in the angle between the little toe and the fourth toe, over the head of the metatarsal bone which supports the latter. Occasionally, however, a soft corn occurs elsewhere—as, for example, on the inside of the little toe, opposite to the last joint of the fourth toe. Such corns are even more painful than hard corns, except when suppuration takes place in the bursa, and then the suffering is less in proportion, as the thickened cuticle of a soft corn admits of distension more easily than that of a hard corn.

Under ordinary circumstances, it is easy to give temporary relief to a patient who suffers inconvenience from a hard corn. The thickened cuticle should be removed, so as to lessen the pressure on the parts below; and this may be accomplished in various ways. *First:* If the corn be of long standing, and a piece of linen or thin leather, spread with some mild plaster (diachylon, for example), be applied, and worn over it, it will sometimes exfoliate or separate without further trouble. *Secondly:* The corn may be rubbed with the nitrate of silver, or (which is indeed preferable) the concentrated nitric acid may be applied by means of a probe armed with lint. The texture of the cuticle being thus destroyed, exfoliation will take place, so that in the course of a few days the corn may be readily peeled off. *Thirdly:* The corn may be reduced in thickness by scraping its surface with a very fine steel or fish-skin rasp. And, *fourthly:* The corn may be removed by means of a fine cutting instrument. This last is the shortest and simplest method; and the patient may keep himself in a state of comfort by procuring the assistance of a dexterous chiropodist at stated periods, who will perform this operation for him better than he can perform it for himself.

With a view to a permanent cure, however, it is necessary to have recourse to other methods of treatment. In some way or other all undue pressure must be removed from the part on which the corn is situated. *First*, the shoe must be made as nearly as possible to the shape of the foot, and it must cover the metatarsus and a portion of the tarsus, so that the whole pressure may not be thrown on the toes; or a boot made to be laced or buttoned may be worn instead of a shoe. In some cases it is advisable that the shoe or boot should be made, not of ordinary leather, but of very soft and flexible buckskin, or of cloth. A material for shoes and boots is sold under the grandiloquent name of *pannus corium*, which answers the purpose intended in these cases very well. It is really a kind of cloth, but it has the appearance of leather, and is very soft and pliable. *Secondly*, if any of the toes are displayed in any of the ways which I have before described, we must endeavour to restore them to their

natural position. In young persons this may be generally accomplished. A contrivance made use of by the bandage makers is very useful on these occasions. It consists of a thin plate of metal covered with thin leather, or a piece of strong leather, fitted to the lower surface of the foot,—not to the whole of the surface, but extending from the extremities of the toes nearly to the tarsus. Slits are formed in this plate of metal or leather, and tapes are passed through these slits, forming loops above, by means of which the toes are bound down and restrained in their proper places. In many cases the same object may be attained by simpler means. A stripe of linen, spread with adhesive plaster, about two-thirds of an inch in breadth, may be passed over the toes which are too elevated, and under the others, the extremities of the plaster being made to cross each other over the metatarsus. If this be neatly applied, it will keep the toes parallel to, and on the same level with, each other. Whichever of these methods be employed, it is necessary that it should be persevered in for a considerable time. In older persons, in whom the toes have been long displaced, they have sometimes become so adapted to their unnatural position, that it is almost needless to attempt to alter it. Under such circumstances we are sometimes compelled, in hospital practice, even to amputate one of the toes, in order that the patient may not be disabled from gaining his livelihood; and this may be occasionally necessary even in private practice. A young lady of rank suffered from a displacement and a distortion of the second toe, such as I have already described. The extremity of it lay under the extremities of the two adjoining toes; the second and third phalanges were nearly anchylosed at a right angle to each other, and a corn was formed on the second joint, where it made a considerable projection above. She applied to me to amputate this offending toe. I answered, "that I would do no such thing; that I might do it for a labouring person, but that her case was entirely different, as she had not to earn her livelihood by her bodily labour." She replied, "You seem to treat the matter very lightly, but this toe and corn make my life miserable: I can take no exercise, I am unfitted for society, and I have tried all other methods of relief without success." On inquiry, I was satisfied that she in no degree exaggerated her sufferings, and I therefore complied with her wishes, and amputated the toe at its first joint.

A very simple, but scientific, method of relieving, and indeed of curing corns, is practised by the chiropodists. A piece of buckskin leather, spread with some adhesive plaster, is applied on the toe on which the corn is situated, there being a hole in the leather corresponding to the corn. Thus the pressure of the shoe is taken off the corn, and thrown on the surrounding parts. If this be kept constantly applied, and proper shoes be worn at the same time, the corn will gradually disappear.

In some cases a hard corn is formed on the lower surface of the foot, over the head of one of the metatarsal bones. A corn in this situation is especially troublesome, rendering the patient absolutely lame; but it may be relieved or cured by the method which I have

just explained, only one slight modification of it being required. The hard cuticle being removed, a broad piece of buckskin leather is to be applied, having a hole in it where the corn is situated. But a thin piece of calico spread with adhesive plaster, and having no hole in it, is to be applied first; that is, between the leather and the foot. Without this last contrivance the flesh of the foot, when the patient walks, bulges or projects into the hole of the leather, so as completely to fill it up, and the patient's condition is rendered rather worse than better. The calico with adhesive plaster prevents this inconvenience, at the same time that it does not prevent the leather answering the intended purpose of taking the pressure off the corn, and throwing it on the surrounding parts. I may observe, by the way, that the same method is applicable to some other affections of the lower surface of the foot, as well as to corns.

When abscess is formed in the bursa under a hard corn, the treatment to be employed is very simple, although the relief it affords is immediate and great. You are to pare off the hard and thick cuticle, and open into the bursa, so as to allow the small quantity of pus which it contains to escape. Thus the corn is effectually destroyed, both the cuticle and the bursa; and it is very easy, by means of the expedients which I have just recommended, to prevent it being regenerated.

The treatment of soft corns is to be conducted on the same principle with that of hard corns; some modification of it only being required, on account of their peculiar texture and situation. The thickened cuticle may be removed by means of the concentrated nitric acid, applied so as to penetrate into its substance, but not to the parts beneath. This destroys its texture, causing it to become dry and shriveled; and in the course of a few days it begins to exfoliate, and is then readily peeled off. If an abscess forms in the bursa of a soft corn, it should be treated in the same manner as that in the bursa of a hard corn.

In some cases, even though there be no abscess underneath, a soft corn becomes exquisitely sensitive, so that the patient cannot bear it to be even touched; and he is made as lame as if he suffered from the gout or any other painful malady. Such a case fell lately under my observation, which I mention, not because it was peculiar, but because the sufferings of the patient were unusually severe. There was a broad soft corn on the side of one toe, where it came in contact with the side of the adjoining toe, and not in the angle between them. The patient could scarcely walk, even with a loose slipper, and the corn itself was so exquisitely sensitive, that the slightest touch could not be borne. This state of things had existed for many weeks, the corn itself being of a much earlier date. I applied the strong nitric acid until I had reason to believe that it must have penetrated through the thickened cuticle. An increase of pain followed the application, and continued for some hours. On the following day there was a manifest improvement. I was now enabled, without any difficulty, to remove the corn with a fine scalpel. The recovery of the patient was immediate and complete, so that, having been previously quite

lame, he was enabled in less than twenty hours to walk as well as ever.

The first thing to be done for the permanent cure of a soft corn is, that the patient should be provided with a shoe of a proper shape, and that the toes which are in any way displaced should be brought back into their proper position. Now I have already observed that the most common situation of a soft corn is between the fourth toe and the little toe, over the head of the fourth metatarsal bone, and that in this case the little toe, towards its extremity, is always pushed more or less underneath the second phalanx of its neighbour. You will sometimes succeed in bringing the little toe to its proper place by means of a stripe of adhesive plaster, applied round it in the manner of a loop, and then encircling the foot.

In other cases you will find the following method more convenient than that which I have just described:—A piece of *very thick* buckskin leather, spread with adhesive plaster, is to be applied on the inside of the little toe, so as to occupy the whole of the inner surface, from the apex to the second joint. The leather should be cut so as to be thin at its margin; and it should be sufficiently broad to admit of being doubled over a good part of the upper and under surface of the toe, as well as its extremity. This contrivance will keep the little toe at some distance from the next toe, and prevent it from sliding again under it. If both of these expedients fail, the patient must be content to wear for a time the metallic or leathern plate, with loops of tape for inclosing the toes, which I have already described.

The bunion, which is frequently formed on the inside of the ball (as it is called) of the great toe, differs in some respects from the disease of which I have hitherto spoken.

The great toe ought to be in a line with the metatarsal bone, by which it is supported. But a shoe which is too narrow at its extremity, causes it to incline towards the outside, displacing, in a greater or less degree, the toe next to it, as I have explained already. In some cases, the effect of pressure on the great toe is actually to alter the position of the joint between it and the metatarsal bone; a portion of the articulating surface on the extremity of the latter being absorbed, and a new articulating surface being made to supply its place more externally than the old one. The existence of these changes I have ascertained by dissection. Now, the consequence of all this is, that the head of the metatarsal bone makes an unnatural prominence, and is more acted on by the pressure of the shoe than it would be otherwise. The cuticle becomes thickened, not at one particular point, but over a considerable surface, and underneath the skin a large and very distinct bursa is generated between it and the bone. The difference between what I have now described and a common corn, may reasonably be attributed to the large size of the head of the first metatarsal bone, and to the consequent diffusion of the pressure over a broad surface.

When a bunion is once formed, the bursa belonging to it is liable to become inflamed after any unusual degree of exercise, or on it being subjected to the pressure of a more than commonly tight shoe.

Serum is then effused into the cavity of the bursa; the swelling is much increased, and it becomes at the same time exquisitely painful and tender. If the patient remains at rest, the inflammation subsides, the serum effused into the bursa becomes absorbed, and the additional swelling disappears without any further ill consequences. If, however, he continues to walk about, wearing at the same time a tight shoe, the inflammation proceeds further; suppuration takes place, and an abscess is formed. Such an abscess is slow in reaching the surface, and the patient generally suffers severely before it bursts externally; and when it has burst, as the synovial membrane of the bursa granulates with difficulty, the healing of the abscess is very tedious, the parts remaining all the time in a very irritable and painful state.

For the relief of this bunion, when it is free from inflammation, or inflamed only in a slight degree, the following plan of treatment should be adopted:—The patient should be provided with a shoe of sufficient dimensions, of a proper shape, and made of cloth or a soft and pliant leather. A piece of thin calico, spread with diachylon plaster, should be applied over the bunion, covering also some of the surrounding parts; and over this he should wear a piece of thick buckskin leather, spread with adhesive plaster, and having a hole in it, corresponding in size and figure to the bunion from which it is intended to remove the pressure. If the bursa be much inflamed, the patient should be confined to the couch, without a shoe; leeches may be applied in the neighbourhood, and warm fomentations may be employed also. If an abscess be formed, it should be freely opened with a lancet. For some time after the abscess has been opened, no other treatment is required than the application of a poultice, which may be changed afterwards for calamine cerate, or some other simple dressing. Perhaps the abscess may now gradually heal, and no other treatment may be required; otherwise it will be necessary to destroy the inner secreting surface of the bursa by means of some kind of caustic. The concentrated nitric acid answers this purpose very well. The end of a dressing-probe may be armed with lint, then dipped in the acid, and applied for a few seconds to the internal surface of the bursa. A thin slough will, of course, be formed, on the separation of which it may reasonably be expected that the remains of the bursa will contract and granulate: otherwise the application of the caustic must be repeated.

After what I have already said, it is needless for me to trouble you with any observations as to the means which should be adopted for the purpose of preventing the bunion being regenerated.

A case came lately under my observation, in which what appeared like a bunion on the inside of the ball of the great toe contained an albuminous substance, of the consistence of the vitreous humour of the eye, similar to that which is found in the ganglions, which occur in the neighbourhood of the wrist and in some other situations. Whether this was an ordinary bunion, in which the vessels of the bursa secreted this peculiar substance, or whether it was really a ganglion, I was unable to determine. The treatment which I adopted

was that of opening the cyst freely, and applying the concentrated nitric acid to its inner surface. It was necessary to do this with some caution, lest I should injure the joint or bone underneath; and therefore several applications of the acid were required. My object was to destroy the secreting surface, and obtain a granulating surface in its place; and when I last saw the patient, previously to her returning to the country, I had reason to believe that I had succeeded: but I have not heard of her since.

A tumour is occasionally formed on the instep, which, though not exactly a corn, bears a near relation to it. It is met with in young men who wear tight boots, and the usual situation of it is over the articulation, between the internal cuneiform bone and the metatarsal bone of the great toe. The tumour is under the skin, hard and immovable, so that it seems to a superficial observer to be an enlargement of the bone itself. The skin over it is in a natural state, except in cases of long standing, in which the cuticle becomes somewhat thickened. I have had no opportunity of dissecting the parts affected with this disease, and am uncertain, therefore, whether it be formed in the ligaments of the joint or periosteum, or in the ultimate fibres of the tendon of the tibialis anticus muscle, or in what other texture.

Such a tumour is productive to the patient of as much inconvenience as a corn, and it requires the same kind of treatment. He should, for a time, leave off boots altogether; or if he cannot do this, the boot-maker should be directed to provide a last with a projection in that part of it which corresponds to the situation of the tumour, so that the boot may not exercise any pressure on it. A piece of thick buckskin leather, with a hole in it to receive the tumour, will also give the patient immediate relief, and ultimately effect a cure: but the cure, of course, will not be permanent, if he continues to wear tight boots afterwards.

I have seen a tumour apparently similar to that I have now described, in school-boys, situated over the head of the tibia, at the insertion of the tendon of the extensor muscles, commonly called the ligament of the patella, and apparently the result of kneeling, or clambering on the knees: and a tumour of the same kind is sometimes met with on the inner condyle of the femur in those who ride much on horse-back. In either case the avoiding pressure is sufficient to relieve the patient of all the inconvenience which the disease produces. I have known cases, however, in which there have been some remains of a tumour over the head of a boy's tibia ever afterwards.

LECTURE XV.

ON POLYPI OF THE NOSE.

Under the name of polypus of the nose, although many affections have been confounded, I mean to include simply a peculiar excrescence of the Schneiderian membrane, which is not malignant. This simple polypus is much the more frequent among the higher classes of society, and is most common in *men*. It seldom occurs before puberty. I am not able to connect it with any particular habit. It is common among the Portuguese, and attributed by them to their snuff being adulterated with ground glass. It may be so, but I have not observed that snuff-takers in this country are particularly liable to it, though I believe that snuff is much adulterated here, as much, indeed, as medicine.

The tumour is generally attached by a thin neck to the Schneiderian membrane, or by a narrow pedicle, or a long, thin membrane, continuous with the Schneiderian, but less vascular. The polypus is very smooth, and but little vascular, though sometimes vessels burrow into it. It is gelatinous in density, and appears to consist of coagulated albumen. In a few instances there is but one polypus; but commonly there are two or three, and frequently clusters, so that you can scarcely count them. The colour, which it is essential to notice, is pearl-like, or white, mixed with brown, of an opal appearance. Soft polypi of this kind I have never seen attached to the septum nasi, the inferior turbinated bone, or any part of the nostril, but almost always to the cells of the ethmoid bone, though occasionally to the superior turbinated bone. A woman in this hospital some years ago, having symptoms indicating polypus in its early stage, died of another complaint, and after death, the cells of the ethmoid bone were found distended by a substance similar to polypus. The indications in the early stage that polypus exists, or is occurring, are merely an unnatural secretion of mucus; a great desire to blow the nose, such as may arise from common catarrh; but in catarrh the secretion lasts for a shorter period, whilst the discharge from polypus does not subside, on which account you may suspect incipient polypus. When bone, for instance, is affected, you have pain in the forehead, but there is none in polypus. The smell is affected, the patient fancying, perhaps, that he smells odours which do not exist; or the sense of smell may disappear, which is more common; the taste at the same time is injured, if not destroyed. These symptoms increase as the polypus gets larger, with obstruction of the middle meatus of the nose, and then of the inferior meatus. Respiration through the nose is imperfect, and at last the patient breathes only through the mouth; this is troublesome, especially at night, because the using the jaw in the day acts on the salivary glands; but at night