A treatise on corns, bunions, the diseases of nails, and the general management of the feet / By Lewis Durlacher.

A TREATISE

ON

CORNS, BUNIONS,

THE

DISEASES OF NAILS,

AND THE

GENERAL MANAGEMENT OF THE FEET.

BY LEWIS DURLACHER,

SURGEON CHIROPODIST (BY SPECIAL APPOINTMENT)

TO THE QUEEN.

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PREFACE.

In preparing the following Treatise for the press, it was not my intention to make it a work adapted solely for the perusal of the members of the medical profession; but rather, by the omission of all technical terms, and by employing popular language as much as possible, to induce the public generally to read and study its pages, as, by drawing their attention to the consideration of the diseases to which the feet are liable, could I alone hope to impress on their minds the importance of the subject of which I am treating, and thus in some degree prevent their having recourse to ignorant and impudent empirics.

It is much to be regretted that corns and other similar disorders incidental to the feet, to which more than half the population are subject, should be considered of such little importance by the regular practitioner, as seldom to merit his attention; and that the public should be equally guilty of neglect. Even

cleanliness of the feet, until within the last twenty years, was by many seldom considered necessary. It is a notorious fact that persons will cut their corns with razors, knives, and others unwieldly instruments, as if their toes were not of any importance to the general system; or put themselves into the hands of any man who, with plausibility, would promise a radical cure, without thinking for one moment how soon an accident would deprive them of the power of taking exercise, and disregarding the various results which might follow. I have seen cases where the patients would have consulted half the surgeons in London for complaints of one-tenth the consequence, if situated in any other part of the body, when I have seldom been able to confine them to their rooms for even one day, although the inflammation could be visibly traced by the absorbents, extending from the diseased part to the groin, thus confirming the observations I have made respecting the slight estimation in which the feet are generally held.

The information respecting the diseases of the feet which I have endeavoured to communicate in the following pages, is the result of many years' practice, and of the careful consideration of the cases which have fallen under my notice during that time, of the most important of

which notes were taken when they occurred. Several of these will be found recorded under their respective heads, and will, I trust, serve to illustrate the nature and treatment of the diseases which I have endeavoured to describe. To two species of the excrescences which are met with on the feet, I have ventured to give names, the "Vascular Excrescence," and the "Neuro-vascular Corn." These are fully treated of and explained in the chapters which are devoted to their consideration. The diseases of the nails are also described, and directions are given respecting the operations I have for many years performed with success in the treatment, both palliative and curative, of "the nail growing into the flesh;" such as I believe will be found sufficiently clear and intelligible to enable a competent practitioner to understand and perform them. Copious instructions are contained in a succeeding chapter for the general management of the feet; and these, I have reason to anticipate, will be found of service, and likely to prevent many of the diseases to which the feet are liable.

A description of their anatomical structure, and of the minute anatomy of the integuments, would be out of place in a work professing to treat chiefly of cuticular disorders, and designed as much for the use of the general, as of the

professional, reader. These subjects are fully described in general treatises on anatomy and physiology.

It may, however, be as well to observe, that throughout the succeeding chapters of this work, whenever the toes are mentioned, they are described as consisting of the great toe, and the first, second, third, and little toes, with their corresponding metatarsal bones.

Although I have devoted nearly thirty years' practical experience to the investigation, and have tried various chemical and other remedial agents, yet I have never been able to discover any certain cure for corns. Nevertheless, men are occasionally to be found bold enough in their ignorance and presumption, to assert by public advertisement, that they possess an infallible nostrum, capable of thoroughly eradicating corns; and others, who pretend to extract them, seek to aid their trickery and charlatanerie by exhibiting small spiculæ as the roots of the corns they have extracted, although it is a positive fact, from the structure of the skin, that such an assertion must be false, and the whole proceeding the veriest imposition imaginable. From such men the public, being unable of themselves to distinguish between the competent practitioner and the empiric, ought to be protected either by legislative enactments,

or by the licensing medical bodies making the diseases of the feet a part of the regular medical education, and also by examining those persons who wish to practise as chiropodists, and to whom, if found to be possessed of the requisite surgical information, a kind of sub-diploma, or certificate of qualification, for its practice as a special branch of science, might be granted.

I hope the time will soon arrive when the chiropodist will rank with all other members of the profession, and that no infirmity, however trivial it may seem, will be considered beneath the attention of the surgeon; for, although corns and other disorders of the feet may not be regarded as properly coming under his notice, the operations for their relief require as much skill and dexterity as are necessary for the performance of those of greater importance; and fatal consequences have frequently occurred from the want of proper treatment and attention.

I fear the public will be somewhat disappointed at the paucity of the remedies I employ, and still more at not finding a certain panacea for corns. For the latter objection I have already assigned a cause; and with regard to the former, I can only say that, from the similarity that exists between the different

diseases of which I am treating, my experience has led me to prefer the use of nitrate of silver, cold water, spirit lotions, and soap plaster, as the most efficient remedies, except in peculiar cases, to which reference will be made in the body of the work.

Very little information can be obtained from the few authors who have written on the feet and its diseases, to nearly the end of the 18th century, as they have principally copied each other; and the few scattered papers that have appeared since contain merely details of isolated cases. Lyon's work on "Spinæ Pedum," which was published nearly half a century ago, is founded on practical observation; and if his theories and other extraneous matter were omitted, it might be regarded as the best book in the English language upon these diseases. It is certainly the work from which every writer since his time has borrowed.

The lower classes, and especially servants, suffer severely from all these diseases. They are generally unable to pay for professional assistance, and at the same time are not eligible as hospital patients, until the disease has proceeded so far as to cause serious mischief, and perhaps even to have produced permanent lameness. It is very astonishing that hitherto there has not been established any dispensary for the

treatment of these disorders, when it is considered that there is a special institution for the treatment of every other ailment to which the human frame is liable. This reproach I trust will be shortly removed, as, at the suggestion of many friends, I am preparing proposals for the establishment of a dispensary for the diseases incidental to the feet, which I hope will soon be in actual operation, and where, also, medical students and practitioners will have an opportunity of acquiring general information regarding these complaints.

I have much reason to be grateful for the very fortunate circumstances under which my early professional career commenced, having been favoured by the recommendation of the late Sir Astley Cooper, and also of the late Sir Henry Halford, besides being patronised by the succeeding English sovereigns. I am at present under many obligations to the members of the medical profession, by whom I have been, and still am, strongly recommended. I am desirous to return my thanks to them generally for their kindness, and more especially to Sir B. Brodie, Bart., Dr. Chambers, Sir Charles Clarke, Bart., Sir James Clarke, Bart., Mr. B. Cooper, Sir Charles F. Forbes, Dr. Hume, Mr. Keate, Mr. Lawrence, Mr. Liston, Sir Mathew Tierney, Mr. Travers, Dr. Tweedie, and Mr. Wardrop.

In conclusion, I would beg to recommend myself to the indulgence of the public, who, I trust, will kindly overlook all errors in this my first literary effort.

P.S. From various letters which I have received, and from advertisements that have been forwarded to me from the foreign newspapers, I am informed that there is an individual travelling about the continent assuming my name and address, and representing himself as being in possession of recommendations from several distinguished and titled personages in this country. I deem it therefore advisable to caution the public against this impostor, and to state most explicitly that I have never at any time practised my profession in any part of the Continent.

15, Old Burlington-street,
January 1, 1845.

INTRODUCTION.

The disorders of which this work treats are those of the integuments of the feet, arising principally from compression or friction, and most generally affect the cuticle or scarf skin, which, in a healthy state, is imperceptibly wearing off, either as fine powder, or in minute scales, and is continually being regenerated. It is, therefore, necessary to mention some of the various opinions that have been brought forward as to the structure of the skin, in order in some degree to explain the formation of corns, &c. The recent investigations of German anatomists and physiologists have given rise to new views respecting its production by what is called "the cell formation." I do not consider it necessary to do more than allude to their researches, contenting myself with observing, that some at least of their discoveries have been anticipated by Leuwenhoek, the Dutch anatomist, and by our own countryman, Dr. N. Grew.

The papers in which these writers promulgate their views were published in the "Philosophical Transactions" some time in the seventeenth century. They are remarkable for containing some very curious statements respecting the structure and formation of the epidermis, founded on actual investigations under the microscope. Leuwenhoek, whose letter is dated the 17th Sept. 1683, describes the cuticle as composed of round scales overlapping each other, like those of a fish, and so minute that a single grain of sand would cover from two hundred to two hundred and fifty. They are very thin, he says, their breadth being about twenty-five times greater than their thickness. He considers that there are not any pores in the cuticle, but that the perspiration oozes from between the scales, though they adhere never so closely together. He reckons that there are one hundred openings in the space of a third part of a scale, and that these are so small that a grain of sand will cover two hundred of them. It will follow, then, that the body may exhale out of twenty thousand openings in a space not larger than may be covered by a grain of sand. The scales, unlike those of fishes, are not permanent, but come away in clusters; if, however, they are separated before they are loose, blood either follows, or at least there remains a red spot. Those on the

hard and callous parts of the hands and feet, are of the same nature and shape as are those on the body, but the latter are clear and transparent, while the others are so full of lines, and so thickly beset with globules, that they seem to be composed of nothing else. These scales are more adhesive than those which are situated elsewhere, and by this means, especially when the hands are employed in hard labour, the skin, though it be nothing but scales, comes to be of an extraordinary thickness, the scales being more packed and clotted together.

Dr. Grew principally contends for the existence of pores in the hands and feet, which, he says, are to be found under the microscope on the top of numerous ridges, and not buried in the furrows, and of a sufficient size that their structure may not be injured by compression.

Winslow's description of the skin is equally curious. He says the skin is a very extended tissue, composed of many tendinous, nervous, and vascular fibres, its formation being as wonderful as it is difficult to develope, it being in every sense like the texture of a hat. Several other quaint and singular theories were put forth about this period, by English and continental writers, respecting the origin and formation of the skin, some of them deriving it directly from the blood, after the evaporation of

the serum, and others, again, considering it to be essentially produced by the effusion of a gelatinous fluid from the circulating medium. These theories, while they may be regarded as amusing, are not altogether void of interest. In this state our knowledge as to the anatomy of the skin continued up to the end of the eighteenth century. A new impetus has, however, of late been given to investigations respecting it, by the discoveries made with the microscope.

The friction and pressure to which all prominent parts of the extremities are exposed, cause, by the local irritation they produce, the effusion or secretion of a larger quantity of epidermis than can be got rid of by the ordinary processes of nature. The scales consequently accumulate, and lie layer upon layer, forming indurated masses of larger or smaller size, constituting corns, callosities, or other diseases of the part, according to their situation, and the severity of the pressure or friction.

Very few adults possess that manly gait which should distinguish "the human form divine," in consequence of the confined and compressed condition in which their feet have been placed by the unyielding material and bad shape of their shoes, and thus the natural spring and muscular action of the foot are lost, and they

are deprived of the assistance that would be rendered by the action of the toes in progression. This is not the only instance in which the artificial restraints of society affects the health and comfort of individuals. The springing gait of the Highlanders mentioned by Sir Walter Scott, depended on their possessing the full command over the muscles of the feet: which proves they had not been deprived of their power by tightly-made and ill-fitting coverings.

It is most extraordinary, that in the present age of invention no real improvement should have been made in the external covering of the feet.* If a section of the sole of the shoe be applied against the sole of the foot, it will be found to be totally different from it in shape; seldom does the leather extend to the little toe, it being either much narrower across the fore part of the foot, or else inclining too suddenly inwards to form what are called "rights" and "lefts," so that in rising on the toes when walking, the whole weight of the body is thrown upon the little toe, and sometimes on the joint of the great toe. It is remarkable that after this kind of shoe has been worn from youth to manhood,

* Whenever, in the course of the following pages, the word "shoe" is used, it must be understood to mean all the external coverings of the feet, and to correspond to the French generic term "chaussure."

the muscles and tendons become contracted, and the toes distorted in a manner corresponding to the form of pressure to which they are subject, so that the attempt to expand the foot when it is placed on the ground without the shoe becomes a source of pain. I have seen the toes contracted inwards and downwards, like birds' claws, and prove a cause of much inconvenience in walking.

In taking a retrospective view of the form of shoes to the nineteenth century, we shall find that fashion invariably dictated their peculiar shape. In the reign of Edward the Fourth they were worn so exceedingly long-pointed, that a proclamation was issued to restrain their length, and in the reign of Queen Mary their breadth at the toes was equally preposterous, so that she was compelled to enact a sumptuary law to repress them within ordinary bounds. Still, amid all these changes, no mention was ever made of alterations in the sole of the shoe until the time of Elizabeth, when, as may be gathered from the writings of Shakspere, they were worn rights and lefts. Launce, in the "Two Gentlemen of Verona," says—

"This shoe is my father;—no, this left shoe is my father;—no, no, this left shoe is my mother."—Act 2, scene iii.

And again, Hubert, in "King John," while

describing the popular rumours of a French invasion, speaks of a tailor who—

> "Standing on slippers, which his nimble haste
> Had falsely thrust upon contrary feet,"
>
> Act 4, scene ii.

Shakspere further alludes to corns as a sort of reproach—

> "Cap.: Welcome, gentlemen! Ladies that have their toes
> Unplagued with corns, will have a bout with you.
> Ah, ah, my mistresses! which of you all
> Will now deny to dance? She that makes dainty, she
> I'll swear hath corns! Am I come near you now."
>
> Romeo and Juliet, act 1, scene v.

In the time of the First Charles and of Cromwell, high heels were in vogue, with broad toes in proportion; square-toed shoes were much worn in the reign of George the First, but afterwards became a term of reproach. In the "Penny Magazine" there is a clever article on shoes in general, from the earliest records, illustrated by woodcuts.

Feet are occasionally met with in which there is a malformation of the toes, arising from hereditary predisposition, and not from the distortion produced by wearing ill-made shoes. This has been very properly called by Lyon, "the family toe." It is remarkable that the first toe is the one principally affected, and it is either curved

so as to project considerably above the others, or else it becomes much elongated. The entire foot, in after life, will participate more or less in the distortion. It is developed very early, notwithstanding the utmost care is used to prevent it. Corns frequently form on the projecting part of the distorted toe or toes, giving rise to the idea that the corn is itself an hereditary formation. This, however, I do not consider to be the case. The shape of the feet is certainly the same in families, generally speaking, and there may be an innate disposition in the skin to take on the action requisite for the production of corns, if exposed to the usual exciting cause; but I do not think, when proper attention is paid to the make of the shoe and stocking, that, however much the toes may be distorted, corns will grow for no other reason than that the parents or other relatives were troubled with them.

I saw, some time since, a remarkable illustration of the hereditary nature of the distorted toe in the person of a gentleman of the name of O'Caghan or Caen. While in attendance on him, I observed that he had a singularly-formed toe, and remarked that the distortion was peculiar to different families. He smiled at my observation, and told me that medical men were not alone aware of that fact, for that when

travelling near the Giant's Causeway, he stopped at an inn kept by a man named Dick Caen, and claimed his hospitality on the score of relationship. The man stared at him, and said, "Then by my shoul, sir, if you are an O'Caghan, you must have Prince O'Caghan's crooked toe."

Various means have been devised to straighten the curved toes, by the use of ligatures and the application of strips of plaster, and more lately by the operation of dividing the contracted tendon, but I am not aware that this proceeding has proved successful in all cases. I saw one case eighteen months after the operation, and the toe was then as much bent as before. Whether this was owing to a diseased condition of the bones, or to the tendon having reunited without elongation, or to a failure in the after treatment, I am not prepared to say. Amputation of the toe has been occasionally performed, on account of the inconvenience which the distortion causes. There are other malformations affecting the hands and feet, of which some curious cases are related.

It is necessary to remark, that corns, warts, and other excrescences of the hands and feet, which were for a long while regarded as diseases of a similar nature, must in all probability have been known long before the Christian era, as may be gathered from such portions

of the writings of the ancient Arabian and Greek authors as have descended to our times. Some very curious information on this subject will be found in the recently published works of Paulus Ægineta, edited by Mr. Adams, in which, also, are given a number of very extraordinary recipes for the cure of chilblains, corns, and whitlows. Those who are curious in these matters should consult the works of Hippocrates, Celsus, Scribonius Largus, Oribasius, Octavius Horatianus, Aëtius, Actuarius, Nonnus, Avicenna, Haley Abbas, Phases, and Alsaharavius.

A TREATISE,

ETC. ETC. ETC.

OF THE CAUSE AND GROWTH OF CORNS.

The term corn is indiscriminately applied to every cuticular thickening or excrescence, incidental to the feet; the name is derived from the horny, insensible structure of the epidermis, but is not strictly applicable to every induration. The synonyms in the Latin and German languages are, *clavus*, the head of a nail, and *hühnerauge*, the eye of a fowl; names which are far more descriptive of the appearance of a fully developed corn.

Although all corns are similar in structure, they present varieties according to the parts upon which they are formed, or the tissue that becomes involved. They are classed under the following heads:—hard, callosities, soft, festered, and neuro-

vascular; by which names they will be respectively described in the succeeding chapters.

Pressure and friction are unquestionably the predisposing causes of corns, although in some instances they are erroneously supposed to be hereditary. Improperly made shoes invariably produce pressure upon the integuments of the toes and prominent parts of the feet, to which is opposed a corresponding resistance from the bone immediately beneath; in consequence of which, the vessels of the dermis are compressed between them, become injured, congested, and, after a time, hypertrophied; a larger quantity of lymph is thrown out than is required for the formation of the normal cuticle, so that layers are generated considerably sooner than the outer lamina is worn off, thus forming layer upon layer, which become interwoven, and adhere together.

If the cause be removed, the inflammatory action ceases, and the result is simply an external induration of superficial irregular scales or laminæ; if continued, the irritation keeps up the increased action of the papillæ, more epidermic

secretion is poured out upon the under surface of the already thickened cuticle, where it coagulates, producing bulbs or projections, generally of conical shape, descending into corresponding cells or follicles of irregular depths, according to the injury caused upon the immediate parts where the external pressure is most severe. In this manner the process continues to the full development; the surrounding congestion ceases, lymph is thrown out, which becomes organised, and forms a protective sheath or sac round each bulb to its apex, and thus the formation of the corn is completed.

These bulbs are composed of layers, decreasing more and more in size as they approach the secreting point in the dermis, where they become condensed and opaque by compression, visible as white or yellowish specks, according to the colouring matter of the skin, when the outer portion of the induration has been removed.

These irregularities, or projections, are what have been incorrectly called stems, or roots.

The rapid reproduction of the corn after extraction in chronic cases, is owing to the sac, or

sheath, filling in a very short time with a fresh quantity of epidermic secretion, which is soon converted into a corn by the continuance of the exciting cause. By destroying the sheath, the secreting vessels fill up the space, and a healthy skin is produced. If the external pressure be then removed, the corn, probably, will not form again. The presence of the sac will explain the reason why the operation of extraction can be performed without giving pain or drawing blood.

The point of the corn will frequently press on, and rupture some minute blood-vessel, producing extravasation, of a red, brown, or black colour, the depth of tint depending on the length of time the blood has been effused. This will be absorbed into some of the contiguous layers, by the process of imbibition, and be visible through the thickened cuticle, although it very seldom rises to the surface.

If the pressure should be very severe, and the apex of the corn descends near the articulation of a joint, the bursa beneath will become inflamed and enlarged.

Corns which grow between the toes are of the same structure as all others, but become soft from condensed perspiration, their position, and the approximation of the toes. Persons of gouty diathesis, and subject to what are called chalk stones, have frequently a discharge of carbonate of lime follow the extraction of a corn.

When corns are produced by friction and slight pressure, they are the result of the shoes being too large and the leather hard, so that by the expansion of the foot, the little toe, or any prominent part, is constantly being rubbed and compressed by its own action. This may continue on and off for months, or even years, before any inconvenience is experienced, but progressively the cuticle increases, and is either detached from the dermis by serum being poured out between them, similar to the common blister, and a new covering produced, or the epidermis thickens into layers adhering to each other.

Corns produced by friction alone are generally superficial, and seldom very painful, or cause much inconvenience.

I have seen some cases, principally upon the little toe, where a spherical-shaped excrescence has grown to a considerable length; it consists of regular laminæ or ridges at unequal distances, similar to the human horn, and springs entirely from the cuticle, in which it is but slightly imbedded, not having any connexion with the dermis, excepting its nutrition. It frequently lies across the next toe, or else is flattened and forced wherever the pressure of the shoe directs.

Corns cannot strictly be considered a disease; they are only the exciting cause by their pressure and effect upon the sensitive skin.

The pain caused by corns during their formation, arises from compression of the nerves by the shoe, and the congested state of the vessels, and usually ceases as soon as the shoe is removed.

In the chronic state it is influenced by the different atmospheric changes, varying in intensity according as the barometrical pressure is exerted upon the sensitive parts surrounding, or involved with the corn. It is well understood that these changes act more or less upon the

living body without causing pain, except on diseased parts; and as the corn itself is perfectly insensible, and not at all affected by the atmosphere, it forms a resisting body to the contraction or expansion of the surrounding skin; and thus becomes the cause of the pain which is experienced on these occasions.

It is difficult to state the precise weather that mostly produces pain, and equally so to account for its influence; whether it be cold with an easterly wind, which by its contractile action diminishes the calibre of the vessels, drawing the skin from the corn; or extreme heat, which by increased expansion forces the sensitive dermis against it. The shooting pain most commonly complained of, is certainly experienced during that state of atmospheric change from heat to humidity which causes the barometer to fall, indicating rain, or when the clouds are surcharged with electricity prior to a storm.

Hypochondriacs and delicate females are very liable to be affected by all atmospheric changes, and frequently experience pain in their corns, even from the heat of the bed: strong and

robust persons, on the contrary, seldom notice, or are affected by the weather.

I have observed a kind of epidemic in some peculiar states of the atmospheric temperature, when every patient at the same time has been complaining of more pain than usual, and I have found the toes inflamed, and a small quantity of serum under each corn.

It is a general remark with persons resident in the country, that they suffer most from their corns when in town, owing probably to the flat surface of the pavement causing an equal degree of pressure, which they have not been previously accustomed to.

CHAPTER II.

HARD CORNS.

This is the general term by which all corns are commonly known, and constitutes that chronic thickening of the cuticle which is met with upon all prominent parts of the feet. It is the common corn which persons are in the habit of arranging for themselves with the least chance of doing mischief; and, in many cases, with as much relief and advantage as can be obtained from the generality of corn-cutters. I shall, therefore, only notice those corns which cause the greatest pain, from the particular situations they occupy.

The little toe, from its position, is constantly subject to injury, and corns are produced upon the whole of its outer surface. When deformed, either by being bent or pressed back upon the foot, so that the first joint stands higher than the others, there usually forms upon it a deep-seated corn, of a conical shape, the outer or external

surface consisting of irregular scales, and the point penetrating toward the joint.

In those cases where the apex of the toe is forced under the next, a ridge of small corns lying close to each other, in the shape of a crescent, is formed upon the first phalange, near the articulation with the metatarsal bone.

The corn which is seated close to the nail is acutely painful, and, to the unaccustomed eye, difficult to discover, being long and thin in its form, and concealed under the pellicle, near the root. This species of corn more frequently attacks very young people, as soon as they commence wearing stout shoes, which are usually more pointed than the foot, so that the pressure is thrown exactly on the outer angle of the toe. If a corn is not developed, part of the nail will be destroyed, leaving in its place an equally painful thickened cuticle.

Sometimes one of the other toes stands much higher than the next, causing the outer parts near the nail, and the apex, to be exposed to the same degree of injury, and to a similar formation of corns.

In very dry, harsh skins, corns or scales form in great numbers on the soles of the feet, in the hollow or arch, and on the under part of the heel.

They arise from constitutional disease of the skin, and produce little inconvenience, unless they are allowed to grow higher than the surrounding integuments; they then become troublesome, by producing irritation.

These scales (for they are not, strictly speaking, corns,) are easily picked out, when the foot has been previously soaked in hot water.

Cases occasionally come under notice, where the patient complains of considerable pain and tenderness on some of the toes, generally the little one, but no appearance of a corn can be detected. The toe, on examination, is found to be red and inflamed, and presents that state of irritability of the dermis which precedes the formation of a corn. It is produced by friction, which is continued for a length of time before it causes sufficient pain to excite attention; it is very soon relieved, and requires nothing more than the alteration of the shoe, and the applica-

tion of cold water-dressing for a few days, when the inflammation will subside. I sometimes draw the nitrate of silver across the parts most complained of. Pressure will produce the same kind of irritation, but in a much shorter time.

A very troublesome corn is found under the great toe-nail. It is generally the result of accident, or from the nail having been allowed to grow to too great a length, so that it becomes compressed, or otherwise injured, against some hard substance, bruising the soft parts beneath, and thus producing a corn from extravasation. The patient is seldom aware of the period at which the injury was inflicted, as the corn is slow in its growth. When fully developed, a black or deep red spot is clearly visible through the nail, and is the seat of severe pain. As this corn increases in size it gradually loosens the nail, which is easily removed as far as the seat of the disease.

Another form of corn is produced inside the inner fleshy flap of the great toe, extending in many cases under the edge of the nail. It is caused by the nail having been improperly cut,

or by the first toe pressing against the flap, and pushing it up higher than ordinary, so that the inner cuticle becomes thickened in layers, as a protection against the sharp edge of the nail. The corn is formed under these layers, several of which must be removed before it can be brought into view, or extracted. Until it is fully developed, no pain is experienced.

In elderly people a small tuft or cuticular excrescence frequently forms, in the centre of the apex of the toes under the nail to which it adheres. It is generally unattended with pain or any other inconvenience, except it be incised when the nail is cut. It then becomes acutely painful, and bleeds freely. No particular treatment is required beyond loosening the excrescence from the nail with a blunt-pointed instrument.

The treatment for the common induration is exceedingly simple. It requires only to be carefully removed by scraping, or cut off with a small instrument made like a scalpel, and afterwards covered with any mild gum or soap plaster.

Those corns which are formed on the projecting points require to be more carefully attended to, and should be extracted by dissecting round them between the sac and the corn, following its form until the whole of it is detached, avoiding injuring the sensitive skin beneath.

In cases where the corn is of a conical shape, while dissecting it out, the instrument should be inclined so much inwards that the point shall closely follow the diminishing circumference of the corn to its apex.

The corn which is situated at the outer edge of the nail, and is imbedded in the semilunar pellicle, demands great dexterity in its removal, as it is very thin and deeply seated, without any surrounding thickening.

In operating on corns growing under the great toe-nail, the first thing to be done is the removal of as much of the nail as is loose, which can be effected with very little pain, with an ordinary nail-knife, pair of scissors, or nail-nippers, by first slitting it up on each side with the nippers or scissors, and removing the portion of nail thus partially separated with the knife,

so as to expose the corn, which is then to be extracted in the usual way.

This form of corn, being produced by accidental causes, when properly extracted seldom or never returns.

In those cases, where there is a corn situated in the inner flap of the great toe, it is necessary to remove several layers of the cuticle, previously moistening them, until the corn is exposed, when it should be extracted. If it extends beneath the nail, a part thereof must be cut away, until the corn is distinctly seen, and then it should be taken out.

It would be difficult to give more explicit instructions for the performance of these operations. Dexterity in the use of the instrument, in these as in every other operation connected with surgery, can only be obtained by practice and experience. This remark applies generally to the extraction of all kinds of corns.

If there be inflammation present in any of the cases which have just been described, it would be advisable, particularly for young practitioners, to subdue it by the usual local treatment, such as

the application of cold-water dressing, &c., prior to the performance of an operation.

After the extraction the part should be dressed with any simple cerate, or plaster, which the patient may have been in the habit of using, or has derived benefit from. It will be necessary in every case to have the shoe so made as to remove all undue pressure.

I do not consider it necessary to illustrate these observations by the detail of any cases, because all kinds of hard corns are so very similar to each other, their respective differences being caused principally by situation, that a history of one case would serve for all. Neither could any additional information be afforded, since their description and appropriate treatment have been already fully given in the preceding remarks.

CHAPTER III.

CALLOSITIES.

Callosity is the term applied to the thickening of the cuticle in large layers upon the soles of the feet. They are principally situated on the metatarsal bones, according to their projection; and also form upon the ball of the great toe, around the edge of the heels, and on all broad prominent surfaces of the feet.

No material alteration takes place in the cuticle beyond the thickening, for the numerous lines and furrows of the skin can be seen in continuation with those of the normal integuments.

In very dry skins the whole of the callosity appears rugged, and covered with irregular scales, having in various parts small corns, and frequently hypertrophied papillæ rising in single points or small clusters, which, on cutting,

generally bleed, without giving pain, or producing any inconvenience.

These indurations are more frequently caused by long-continued friction than by pressure, although they are occasionally produced by the latter only. When they are the result of friction, they arise from wearing an improperly made shoe,* which allows the foot too much expansion or room to move about and rub upon some irregularity or prominence on its inner sole. In this case they are generally very large, extending all over the part subjected to friction.

When they are produced by pressure alone, a corn corresponding in situation to the projection

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* In the making of shoes, pieces of leather are pasted between the outer and inner sole, to fill up the space caused by the welt: these in time get loose, and form into unequal lumps. In many instances, the pegs which are driven to hold the shoe to the last, are not properly pared down when taken off, leaving points sticking up on the inside, or irregularities from the holes. I understand there has been a patent obtained lately by Mr. Hutchings, of Bath, for a solid sole, manufactured upon the principle of filling in between the welt, at the same time making a complete sole. It is said that it will always keep its proper shape, and be waterproof.

in the shoe forms about the centre of the induration.

In most feet subject to this complaint, the bones at the articulations of the great and little toes are very prominent, and the integuments covering them form thick projections, so much so that the intermediate space constitutes an arch. In flat feet, thinly covered with flesh, the bones are distinctly visible, so that the finger can be placed between each. In this case callosities not unfrequently form on their under surface.

In moist fleshy feet, a corn forms about the centre, between the inner and outer metatarsal bones; it is deep seated and is shaped like a cone, the apex pointing inwards, and extending down to the dermoid tissue beneath. I have seen them occasionally of an extraordinary depth.

Callosities are also sometimes produced by pressure upon the ball of the great toe, and then require especial attention, for when neglected, and the pressure continued, a corn forms upon the articulation with the metatarsal bone,

which is the part most subject to compression, and an enlarged and inflamed bursa, with its usual consequences, will be the result. When a callosity is produced in this situation, the toe is distorted and retracted, either from original deformity, injury, or the distortion produced by rheumatism.

In dry feet, the skin will thicken very rapidly round the edge of the heel, and constitute a callosity. If the stocking be drawn up in plaits, or if there be any irregular surface or seam on the inside of the boot, by which pressure can be exerted against the heel, it will also prove an efficient cause of callosity, in which a corn will frequently be found. A rough, ill-made binding round the upper edge of the shoe will also cause a similar diseased condition of the part against which it presses. In some instances the same result will be produced by the drying up of a blister, if the cuticle does not come away freely.

I have had frequent opportunities of seeing very severe cases of callosities, which have been sent me by medical friends, from infirmaries and dispensaries, and which have generally been

caused by the thickened cuticle having been improperly cut, want of cleanliness, or by wearing badly made shoes. I have also seen servants and many poor labourers who have been entirely prevented from following their usual occupations from this and other diseases of the feet.

The first indication of a callosity is a slight redness of the part, which remains for some time unnoticed; but if the friction is continued, by wearing the same description of shoe, the dermis ultimately becomes irritated, and a larger quantity of lymph is thrown out than is required to produce the cuticle, so that layers form progressively one upon another, stratum super stratum, until the induration is fully formed.

A callosity is sometimes of but little consequence, and can be removed by scraping or rubbing off the cuticle. In some cases where it is smooth and of equal thickness, it proves beneficial as a protection to the sensitive skin beneath, and in this state does not cause any pain.

When it is allowed to become of such a thickness (for it sometimes grows exceedingly rapidly) as by its pressure upon the dermis to produce

effusion into the cellular tissue beneath, the extravasation can be seen through the skin in large patches, adhering to its under surface.

When improperly treated, inflammation followed by suppuration is the result; the matter causes the skin to crack, leaving deep fissures with thickened edges, and often a dry unhealthy ulceration. This is very frequently the case when, from malformation of the foot, the diseased part cannot be sufficiently protected. I have seen many such cases, of very serious inconvenience to the patient.

In simple cases, all that is requisite is to remove the thickened cuticle with care, and apply a piece of soap plaster. In the more severe instances, after the callosity has been removed, the ulceration must be treated according to the plan detailed in the succeeding cases.

It is of course absolutely necessary to remove the cause by which the induration has been produced; and when it arises from malformation or distortion of the feet, to have boots so made as to avoid pressure upon the diseased parts. Where the complaint is upon the first or fourth

metatarsal bone, it will be of great service to have a hollow made in the sole of the shoe opposite to it, so that the pressure may be thrown more upon the centre of the foot.

In many cases great benefit will be derived by having an extra inner sole laid in the shoe, made of buckskin, with pieces cut out corresponding to the situation of the projecting callosity. The inside of the shoe should be carefully examined, and all irregularities and prominences removed. Many severe cases of callosities have been produced by the pegs being left in the under sole.

Case I.—I attend an elderly gentleman, who has callosities on both feet. That on the right foot is on the inner side, covering the whole surface of the metatarsal bone of the great toe, which is very prominent; the others are less important. The peculiarity of the skin of the feet in this case is its excessive dryness, so that they are covered in many parts with thick cuticular scales, which are easily picked off by merely using the nail. When I first attended him, the callosities were but of little consequence,

and, by slightly cutting them and applying a plaster, no inconvenience was felt for a month or six weeks after; then the skin again became thickened, and required to be removed.

It has grown with much more rapidity latterly, and has become sensitive and painful, particularly in walking, so much so that the gentleman is fearful of placing his foot to the ground.

The callosity is rugged in appearance, and in unequal ridges; some of the isolated papillæ of the dermis project into various parts of the thickened cuticle, and corns have formed in small clusters in the intermediate spaces. When cut, blood follows from the divided papillæ, but no pain is felt by so doing.

My patient is satisfied with the relief he obtains by my extracting the corns superficially, and removing a part of the callosity: he objects to have any other remedy applied, and will not even allow a plaster to be kept on beyond the day after the operation. This I perform about every three weeks. He is under medical treatment for his general health, and is advised to have as little as possible done to his feet.

Case II.—A noble duke met with an accident some years since, by which the under part of the great toe was so injured, as to cause it to be drawn back, throwing the pressure in walking exactly upon its articulation with the metatarsal bone.

This was of very little inconvenience for many years, but without any additional cause it became very painful. When I first saw the case, the whole projecting surface was covered with thickened cuticle, and there was a whitish soft spot in the lower part over the articulation, indicating an inflamed bursa. The whole of the toe was so exceedingly sensitive, as to prevent his grace from walking.

I extracted the corn, and in doing so penetrated into a deep-seated bursa, causing the fluid it contained to be discharged freely; instantaneous relief was obtained.

The duke was obliged to leave town immediately afterwards, and, as a poultice was absolutely necessary, it was applied to the toe, and his grace travelled with the foot resting horizontally in the carriage, changing the poultice

on the road. In a few days he returned to town, when I found the toe much better, but the bursa was again closed. On opening it in the usual manner, a small discharge of serum followed, and by touching the edges with caustic, in a short time a perfect cure was effected.

This occurred upwards of four years ago, and I have been in the habit of seeing his grace frequently since. The toe has still a callosity on its under surface, but has never been the seat of any inconvenience.

Case III.—A gentleman, lately returned from India, was recommended by Mr. Lawrence to consult me about his feet. They were affected with a most peculiar malformation, the toes being drawn back upon the dorsum, so much so as to compel him to walk entirely on the metatarsal bones and heel, without bringing the toes to the ground, and the hollow or arch of the feet was remarkably high. The cuticle covering the metatarsal bones was much thickened, from the pressure to which it had been so long subject, and on being removed, an offensive

sloughing ulceration was exposed. His general health was by no means good.

I immediately removed as much of the diseased skin as was in parts detached, and ordered the whole of the anterior part of the foot to be covered with a linseed meal poultice; and I further directed the feet to be soaked in hot water whenever the poultices were renewed.

Great improvement was manifest in a few days from this treatment, and the whole of the diseased cuticle was very soon removeable with facility. I then applied the nitrate of silver daily over the ulceration, the poulticing being continued; the slough separated, the sores assumed a healthy aspect, florid firm granulations sprung up in a short time, and a cure was effected within the fortnight.

My patient left town for some time, and on his return to London I found the cuticle again thickened, and extravasation commencing on certain prominent points. All that was necessary in this instance was to remove the thickened cuticle, and apply soap plaster over the entire sole of the foot.

To prevent a recurrence of the original complaint, a boot was so constructed as to support the arch of the foot, and to take off the great pressure from the metatarsal bones. In this it fully succeeded; and he returned to India quite capable of walking without pain: nor did he suffer any further inconvenience. He had a supply of these boots made by Mr. Gullick, of Warwick-street.

Case IV.—A brewer's drayman suffered severely from a callosity extending over the whole under surface of the great toe, from the apex of the first phalanx to the articulation with the metatarsal bone. The toe was very much enlarged, and the pain so severe that he was incapable of walking. He applied to be admitted into a hospital; but was sent to me, for my opinion. He had, in addition to the callosity, a disease of the nail of the same toe, caused by a butt of beer having fallen on it a few weeks before I saw him.

The toe was unusually swollen, and (from the continual moisture of the poultices he had himself been applying) the cuticle had cracked

in different parts, and emitted a disagreeable fœtor from the ulcerated surface beneath. Great pain was likewise experienced from a fungus rising from under the nail.

I removed the thickened epidermis as far as possible, exposed the ulceration (which was not deep seated), and at the same time took away the part of the nail that was diseased, so as to enable me freely to cauterise the whole of the surface, both of the callosity and the fungus. Cold water dressing was then applied over the whole of the toe, and an extraordinary change was produced in three days: the pain ceased, and the man was at work again in a week.

The application of the nitrate of silver was repeated on three more occasions, when the swelling was perfectly reduced, after which the toe was well wrapped up in soap plaster; the cure was effected in about three weeks.

Case V.—A young woman was recommended to me by a medical friend at the Marylebone Dispensary, for a disease on both her great toes. She had some malformation or distortion about

her limbs, which twisted her toes so completely out of their natural position as to cause her to walk on their sides. Extensive callosities had formed, occupying nearly the whole length of the toes; and which, when excised, exposed two tufts of hypertrophied vascular tissue on the right foot, about one inch from each other, and three distinct meshes on the left, in a state of high irritation, so that the slightest pressure could scarcely be borne. The poor girl had to walk some distance every morning in following her occupation.

I made a support to the feet with very thick buckskin plaster, cut in the form of a half circle, and placed in such a manner as to protect the diseased parts as much as possible from pressure. The treatment was the same as in the former case, and the disease was soon removed; but unfortunately, from the manner the girl walks, namely, dragging her toes along the ground, great care will be required to prevent its re-curring. She at present does not feel any inconvenience, so long as the leather does not become compressed.

I have supplied her with pieces of leather to apply from time to time, as its renewal gives her immediate ease; and have desired her to call on me about once a month, that I may remove any thickened cuticle which may form, and thus prevent a recurrence of the disease.

CHAPTER IV.

SOFT CORNS.

These cuticular excrescences are always situated between the toes, and derive their name from being constantly in a state of moisture, occasioned by the perspiration or exhalation which collects between the toes, and is condensed within the cuticle on some prominent point where pressure has produced a corn.

Soft corns are not deep seated, and do not project much above the surface, on account of the structure of the parts, and the compression they are subject to.

They are generally caused by the bone of one toe being pressed against the opposite joint, or by the second phalanx or joint of the little toe being forced down upon the metatarsal bone of the third. All prominent parts on the inner side of the toes are liable to this formation.

Compression, which is unquestionably the primary cause of the corn, is commonly produced by wearing very narrow soled shoes, by which the toes are closely pressed together; so great is the pressure on the little toe, that it is often wedged down into the space against the lower part of the next, and causes the most painful species of soft corn. *

The nature of a soft corn, and the acuteness of the pain experienced, depend greatly upon the position it occupies. The degree of compression to which the part affected is subject, has a great influence in the production of inflammation. Suppuration is soon caused, owing to the thinness of the integuments, and the injury the dermis or true skin receives between the outward pressure and the resisting power of the bone.

The first symptom is a burning sensation be-

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* Ladies are most subject to soft corns, and are more frequently afflicted by wearing French shoes with soles rarely exceeding two inches across the tread, when of the largest size. All shoes manufactured upon the same principle are equally injurious.

tween the toes, as if the parts were scalled, frequently followed by the formation of a blister, which is seldom observed, until the serum irritates the true skin, and occasions pain. If the serous fluid is not evacuated or absorbed, a gelatinous concretion forms which ultimately becomes a corn; or if the serum is discharged, and the new epidermis be not healthily reproduced, it thickens into layers, and a corn is generated.

The primary indication may likewise be known by a sensation as if gravel or a small stone was between the toes, attended by itching and smarting pain, and sometimes by a slight cracking of the skin.

In severe cases the symptoms commence by inflammation—the skin being but slightly thickened—on some prominent point or articulation, and a corn is soon developed in the centre of the induration. It is recognised by being of a circular form, and of a yellowish brown or dirty red colour.

If it be not soon extracted, ulceration will take place, the foot become swollen, and the

inflammation will extend along the absorbents up the leg, sometimes even to the glands about the groin. Great pain is experienced in the part affected during the formation of matter.

The corn, which is situated on the web between the third and little toes, shows itself as a white, spongy, moist thickening of the epidermis, it being occasioned by pressure, heat, and confinement of the perspiration, and in many instances by the want of sufficient care in keeping the parts properly cleansed and dry. It will sometimes fill up the whole space or surface of the web between the phalanges at the articulation of the metatarsal bones; in other cases, the cuticle or skin will be simply thickened, tough, and moist, with a corn fully developed in the centre.

A soft corn will sometimes appear as a circular white spot only, like a split pea: it is then generally situated on the middle joint, with a corresponding corn on the opposite toe. This is usually the case when the corn is situated on a prominent articulation.

It also commences as a small circular white thickening of the skin, rising similar to a pustule, having an orifice not bigger than a pin's point in the centre, and which is frequently concealed by a thin layer of cuticle, the removal of which permits the exudation of a small quantity of serum. This corn is easily separated. It is painful when the toes are pressed together, and its formation is always preceded by slight inflammation.

A very troublesome corn is formed on the inner side of the great toe, there being a corresponding one on the opposite phalanx of the first toe. It is usually broad and flat, and the centre is bruised, with extravasated blood occupying either its entire extent, or else effused partially in small spots only.

A corn is occasionally to be found seated near the apex of the first toe, corresponding in position to the edge of the nail of the great toe, the epidermis being indurated, as an effort of nature to protect the sensitive parts from pressure. Pain is not experienced under these circumstances, unless there is a corn within the indurated cuticle.

In elderly persons whose feet do not freely perspire, and who have suffered for a length of time from this complaint, the corn is more strongly developed than in recent cases; the centre is harder, and appears of a darker colour; the layers are flat and much broader than in the ordinary corn, and surrounded by a whitish cuticular thick ridge or fringe.

The treatment of soft corns varies in accordance with their position, and symptoms.

A variety of remedies have been recommended for this painful and annoying complaint—escharotics, acids, alkalies, gum plasters, &c.—each of which has its own specific action upon the skin, to a certain extent, but their application is generally inefficacious, as no permanent relief can be afforded until the corn, or exuberant growth, is first extracted, and afterwards mechanical means applied to prevent the pressure.

In ordinary cases the thickened cuticle should be removed to as great a depth as it presents a whitish appearance, and, if a corn has formed, it should be extracted. The nitrate of silver may then be slightly rubbed over the parts, and the

toes kept as much apart as convenient, so as to prevent the cause of its re-formation.

The spongy substance, or moistened cuticle, which grows on the web between the third and little toes, may easily be removed by scraping or cutting it out, until the integuments beneath appear red, when the pain will immediately cease. In this early state there is but little inflammation, and by removing the thickened cuticle as it forms, and touching the parts with nitrate of silver whenever required, a cure may be effected. A pledget of sponge or leather should be constantly worn between the ends of the toes, to keep the metatarsal bones at their articulations from compressing the intermediate integuments.

When the disease has been of long standing, although relief may be afforded from time to time, its complete eradication is exceedingly difficult, as the spongy cuticle is very liable to become a regular growth.

Case VI.—A lady suffered some years from a diseased state of the cuticle on the web between the toes. It required to be removed about once

a month,—the neglect of this operation causing its rapid increase in size and thickness, and the supervention of severe pain. I had recourse to various measures to prevent its re-formation, as the lady was very anxious to be radically cured, but without success. At last I determined to destroy the entire of the diseased surface by escharotics, trusting that when the new skin was formed, it would be of a healthy character, and in this to a certain extent I succeeded. Suppuration followed the application of the caustic, and the thickened cuticle came away, leaving an irregular under surface with corresponding indentations in the true skin.

It was dressed daily with the ung. hydrarg. nitrico oxidi to prevent its healing too rapidly, and all went on very favourably until the sore cicatrised, when, to my great astonishment, the cuticle as soon as it was formed presented a white appearance, although not thickened so much as formerly. It remained for a long while free from pain, and by the patient wearing a pledget between the toes, so as to relieve the lower parts from pressure, it

did not require cutting for many succeeding months.

In severe cases, if the corn has not been properly attended to, an abscess will form, which should be opened as speedily as possible by the extraction of the corn. This will give instant relief, and the contents of the abscess will be discharged. In some cases the contents of the abscess are evacuated by the process of ulceration, leaving a fistulous opening communicating with a cavity beneath the indurated cuticle, constantly discharging an ichorous fluid. The removal of the diseased epidermis is sometimes effected by the efforts of nature, producing an ulcer, but with irregular thickened edges, which always requires an operation.

The treatment in the worst cases consists in opening the abscess from the centre, removing all the thickened cuticle, poulticing, and, when the matter is thoroughly discharged, pencilling the edges of the ulcer with nitrate of silver. Dressing the parts afterwards with Turner's cerate, or red precipitate ointment, and keeping the toes asunder, is essential. If there be much

inflammation and swelling of the foot, perfect rest is requisite, and the limb should be well and frequently fomented. The application of leeches is occasionally necessary.

Case VII.—I was requested about seven o'clock one evening to see a young lady, who was very desirous to go to a ball, but was suffering so much pain between the toes, that she could not put on her shoe.

The foot was much swollen, and slightly inflamed under the toes, and also on the upper part of the foot. There was very little thickening perceptible on the web between the toes, but there was a small black speck in the centre surrounded by a white ridge. Pressure caused great pain. I extracted this, and enlarged the orifice by removing the thickened ridge, commencing at the centre and cutting towards the margin. A large quantity of pus was thus evacuated, and immediate relief afforded. I ordered the foot to be kept in hot water for twenty minutes, a linseed meal poultice made with poppy decoction to be afterwards applied, and the foot rested horizontally until my next visit.

The foot was very much better by ten o'clock, but still not in a state to permit her dancing; but as the lady was determined to go to the ball, I put a bit of lint spread with cold cream over the orifice, and placed between the toes a pad made with folded pieces of linen, sufficiently thick to take off pressure from the lower part, and the shoe was cut open on the top with the same view, the opening being covered with a rosette.

The next day, to my great surprise, I found that the foot was not in any respect worse, and by continuing the poultice for that day, and resting the limb for two days more, a cure was effected, by applying the usual remedies.

The rapid success in this case was obtained by removing, in the first instance, the exciting cause, getting the foot rested for a few hours, and avoiding all pressure when the shoe was obliged to be on.

It is requisite to caution persons suffering from these complaints to avoid applying violent remedies,—such as nitric acid, aromatic vinegar, &c.—as they may do themselves serious mis-

chief. The following case will illustrate this observation:—

Case VIII.—I was requested to attend a lady who had by the advice of a friend applied aromatic vinegar to a soft corn. I found her sitting on a sofa, with her foot (which was enormously swollen) resting on a pillow.

The acid had destroyed part of the thickened cuticle, the skin around and beneath the toes was denuded, and all the surrounding parts were in a high state of inflammation, and discharging an ichorous fluid: the patient was quite feverish.

I ordered leeches to be applied on the dorsum of the foot, as near to the toes as possible, and hot fomentations to be constantly used. I further advised her to send for her usual medical attendant, that the general constitutional derangement might be attended to.

I was enabled by the third day to remove all the detached epidermis, there remaining an orifice presenting a funnel-like appearance running down between the toes. Poultices were applied for two days; the swelling of the foot

subsided, and the cure was completed with a mild unctuous application.

When the cuticle is thickened on any prominent point between the toes, to such an extent as to admit of its removal, it should be carefully scraped off, and the parts rubbed with nitrate of silver.

In all cases where nitrate of silver is recommended after the removal of the cuticle, it must not be applied at that operation, if the parts have been made to bleed.

When the inner sides of the toes appear inflamed, and the patient complains of much pain, although little is to be seen on examination, cold applications should be made use of, a piece of lint soaked in cold water being placed between the toes, and enclosed by a strip of oiled silk passed round them both. This will remove the inflammation, and if there be any latent disease, it will become visible by the contraction and shrivelling of the skin.

Case IX.—I was consulted by a gentleman who complained of a continuous pain between the toes, his sufferings being so great as to

prevent his walking. Although otherwise in perfect health, he was becoming very unwell from the constant annoyance to which he was subject. I examined the toes, but could see little to account for his complaints. The skin was certainly redder than usual, and on the third toe the cuticle was white, but not much thickened. Pinching the skin upwards caused severe pain.

The history which he gave me of his case was as follows:—About a twelvemonth previous to his applying to me, he had a soft corn which gathered and discharged for some time, but under the treatment of his surgeon, the whole of the skin came away, and the sore healed, leaving, however, behind it for months a degree of uncomfortable feeling which, since his arrival in London, has become absolute, severe pain.

I removed as much of the white cuticle as I could, and put a thick leather guard over the spot to protect the part which I conceived to be the seat of pain. He came to me again the next day, quite incapable of walking, the leather having caused him more pain than he

had ever yet suffered. I accordingly removed it, and directed the application of lint soaked in cold water between the toes, and a piece of oiled silk to be wrapped round them both; the application to be renewed every morning for three days.

When I saw him again, the toes were considerably less painful, and the skin was shrivelled up. I removed the cuticle by peeling it off, and then I found a small hole or sinus running round under the third toe, oozing a serous fluid. This I touched daily with the nitrate of silver until it healed.

After this he could bear pressure on the sides of the toes, but the pain became as severe as ever if they were pressed against each other, so that I was convinced that the pain resulted from pressure on the nerve passing over the second phalanx of the third toe. I, therefore, ordered a weak solution of the nitrate of silver to be applied every morning with a small brush, and the toes to be kept apart by a pledget, placed as near to their points as would prevent pressure below. He was also directed to wear a soft

leather boot, large enough to prevent the toes from touching each other as much as possible. In a few days a very great improvement was visible; he could walk with ease, but still could not bear the toes to be pressed together.

He left town after this, still following my advice; and when I heard from him a fortnight afterwards, he was free from pain, but did not intend leaving off his easy boot, or the dressings he had been using.

In all cases where there is any induration or thickening of the cuticle, it should be removed in the same manner as for a corn situated on any other part of the foot. It is requisite afterwards to prevent pressure by mechanical means, either by a pledget placed under or over the part affected, or else by a piece of leather extending the length of the toes, and placed between them, with a hole cut in it opposite the situation of the corn.

I have met with a peculiar form of soft corn, where chalk has been secreted beneath it. This disease is of rare occurrence, and attacks those persons only who are subject to gout;

it is attended with considerable pain and annoyance.

Case X.—I attended a gentleman some years since who was suffering from a soft corn, nearly as large as a sixpence, of a dirty pale yellow colour, situated on the inside of the great toe, and pressing on the opposite articulation of the first. When I removed the excrescence, a small quantity of serum followed. I placed a small piece of lint, secured with adhesive plaster, on the part. On the third day he called on me, complaining of great pain. When the dressing was removed, to my great surprise, the lint was covered with chalk mixed with the serous discharge, the oozing of which continued to contain the same substance at each dressing. This patient was subject to three or four severe fits of gout annually, but during the discharge from the corn, which continued upwards of six months, he was perfectly free from any attack.

The only treatment required is to keep up the discharge as much as possible whilst it contains chalk, for, in fact, during that time the ulcer cannot be made to heal.

There is another disease affecting these parts of the toes, which, although not absolutely a soft corn, should be noticed here, as it may be mistaken for that complaint by persons who are subject to it. It is a kind of neuralgia seated between the toes, but which fortunately is not very common. It constitutes a most troublesome and severe complaint, and one very difficult of removal.

The patient complains of a severe pain between two of the toes, along the inside of one or the other, generally the second and third, he can seldom tell which; it extends up the leg, and is increased when the toes are pressed together, more particularly after walking. Notwithstanding the most careful examination of the part, no obvious cause can be discovered for the pain, and like all similar affections of the nerves, there is not any remedy to be depended upon, as it appears to defy all medical treatment.

There is, however, sometimes a little redness and swelling apparent, or perhaps the bones forming the middle joint project in a slight

degree, but not so much as to be noticed, unless the attention be especially drawn to them.

The disease is not permanent, but continues for a time, and then either ceases altogether, or else disappears for a longer or a shorter period. It is in all probability connected with some constitutional derangement. The only remedies which I have found to be beneficial are counter irritants, and the elevation or depression of one of the toes by mechanical means, to take off pressure from the affected nerve.

Case XI.—I attended a gentleman, about eighteen years ago, who was suffering from this affection of the nerve between the third and little toes, the latter being malformed and pressed down upon the next to it. This he assured me was not caused by the pressure of the shoe, but had been the same from infancy.

Upon the under part of this deformed toe was a thin scale of cuticle, which I at first looked upon as a common soft corn, but the pain which was felt, and the fear which the patient had of putting his foot to the ground, proved it to be neuralgic. After trying all the remedies I could

think of, unavailingly—the pain sometimes ceasing for awhile to recur with greater violence—I applied pressure upon the under part of the foot, close to the toes, by means of thick adhesive plaster, and drawing up the little toe with a strip of thin plaster, at the same time depressing the third, I succeeded in altering their position; a combination of mercurial plaster with soap cerate spread on leather was placed between the toes at the same time. This plan of treatment succeeded admirably; my patient became free from pain, and could place his foot with confidence to the ground.

Two years afterwards similar symptoms reappeared, but were soon subdued.

A few months since the gentleman called on me again, and said he had occasionally suffered from his old complaint, but could always, by one or other of the remedies which I had recommended to him, obtain relief.

It had, however, when I saw him, returned with all its former severity, and he attributed the relapse to the state of his health, being a great sufferer from rheumatism. Nothing

having done him any good, he was then on his way to Germany to try the baths, and I have not seen him since.

Another form of neuralgic affection occasionally attacks the plantar nerve on the sole of the foot, between the third and fourth metatarsal bones, but nearest to the third, and close to the articulation with the phalanx. The spot where the pain is experienced can at all times be exactly covered by the finger. The pain, which cannot be produced by the mere pressure of the finger, becomes very severe whilst walking, or whenever the foot is put to the ground.

The complaint appears to me to be very similar to that which I have just described, and I cannot assign any cause for its occurrence. Relief can only be afforded by the application of lateral compression, a strip of plaster about an inch wide being drawn tightly over the foot and round the sole. I believe this application acts by drawing the metatarsal bones closer, and thus affording protection to the affected nerve, which, when the parts are capable of expansion, is more exposed to pressure.

Case XII.—I was requested by Sir James Clarke, Bart., to call on a lady who was suffering from this complaint. She was of delicate health, and appeared to be labouring under hysteria. She had so great a dread of the pain, that she dared not place her foot to the ground, and was consequently prevented from taking any other than carriage exercise. I placed a piece of adhesive plaster firmly round the foot, and then stated to Sir James Clarke that my further attendance was not necessary, as the disease was entirely constitutional.

Great pain, attended with inflammation, but without any thickening, is sometimes experienced along the ridge or edge of the inner side of the little toe, running downwards from the nail. It is the result of pressure upwards against the next toe, and is easily removed by changing the shoes, and applying a weak solution of nitrate of silver along the part.

CHAPTER V.

FESTERED CORNS.

In many cases of deformity, where the toes are by contraction drawn from their normal position downwards and inwards upon the metatarsal bones, the joints of the middle phalanges become very prominent, and the skin covering them thin and tightly stretched. Whenever severe pressure or friction is exerted on these projecting points, a very painful and troublesome corn is produced.

The first appearance of this complaint is indicated by redness of the skin over the joint, and the whole toe being sensitive to the least pressure; as the disease proceeds, the epidermis becomes slightly thickened, semi-transparent, and less laminated than in any other species of corns.

In some cases inflammation supervenes, and matter forms under the thickened cuticle to the whole extent of its circumference.

As the inflammation increases, a corn is fully developed about the centre of the induration, seldom exceeding in size the head of a large pin, and decreasing inwardly to a thin thread-like point. This excites vascular irritability of the dermis, and rapidly causes suppuration to take place in the bursa beneath, which has been inflamed by the pressure of the point of the corn, which, when extracted, has generally a part of the sac adhering to it. Sometimes the bursa is diseased without any thickening of the epidermis, and the only external appearance is the redness and swelling of the toe, with a very small white spot having a minute speck in the centre, usually situated upon the most prominent part of the joint.

When the corn is in this state, and not properly attended to, the serous fluid which is effused will cause great irritation, with excruciating pain and violent inflammation, not only in the toe but over the whole foot.

The inflammatory action may sometimes be traced by the course of the lymphatics, in red streaks or lines running along the foot and up

the leg, and not unfrequently extending to the femoral and inguinal glands. In the worst cases, where the contents of the bursa have not been evacuated in proper time by the removal of the corn, the irritation extends to the structures of the joint, ulceration soon commences, and frequently involves the periosteum, and in some instances causes caries of the bones.

The treatment must commence by the removal of the cause; and if the corn is fully developed it should be extracted, so as to give issue to any serous fluid that may be extravasated beneath, and to prevent its re-collection. The greatest difficulty in curing this disease is to keep the opening of the sac or bursa from closing too rapidly. This can only be effected by rubbing an escharotic on the edges of the orifice, and dressing the toe with lint dipped in cold water, and covering it with oiled silk. The application of the caustic must be repeated every second or third day, with the same dressing, until the oozing ceases, after which soap cerate may be applied. It will be necessary for the patient, while this treatment is pursued,

to rest the foot, and if that should be impracticable from the nature of his avocation, a hole must be cut in the shoe opposite to the corn, so as to prevent its being subjected to pressure. If the absorbents should be inflamed, absolute rest is then imperatively necessary.

In some cases, when the disease has become chronic, the inflammatory action being quite local, and where it is impossible to keep the bursa open, so as to prevent any accumulation of the serum, I have succeeded in destroying the lining membrane by inserting a minute particle of potassa fusa into the cavity, which has afterwards granulated, and the cure has been readily effected.

When the inflammation is severe, and extends over the foot, leeches may be applied in addition to the other treatment; cold spirit lotion should also be used; and the patient should be strictly prohibited from walking, and directed to keep the leg in an horizontal position until the inflammation subsides. In the more severe cases, where the bone or periosteum is affected, the strict antiphlogistic regimen must

be enforced, in addition to the usual surgical treatment.

Case XIII.—A gentleman called on me, suffering acutely from a corn on the first toe, which was bent, and the middle joint projecting; the toe was much inflamed, and I discovered a small speck or corn on the top, without any cuticular ridge. I extracted it, and allowed about a drop of fluid to escape from a small hole, not larger than would admit the point of a common sized pin, and which appeared to pass through the skin. I applied a small piece of plaster, and recommended the application of a poultice as soon as possible.

He had great difficulty in putting on his boot, which was much too small. I therefore requested him to take it off again and ride home, or his foot would become swollen and more inflamed. This he refused to do, as he had not far to go, and promised to attend to my instructions as soon as he returned home.

About six months afterwards, the same gentleman called on me again for the removal of another corn, and then reminded me of his

previous case. He stated that soon after leaving me, he could bear the boot better than he expected, and meeting with a friend, he was tempted after dinner to spend the evening at Vauxhall. When he returned home, he could not get his boot off without the greatest difficulty and with excruciating pain; he put his foot into hot water without receiving any benefit, and was restless the whole night. The next morning his foot was swollen as big as his head, as he expressed it, and the whole leg appeared red and shining. He sent immediately for an eminent surgeon, under whose hands he continued six weeks.

I mention this case to caution persons suffering from corns on the joints, attended with inflammation, from persisting in wearing a tight shoe, or subjecting the part to the least pressure, whilst the inflammation and pain continue. I am sorry to say few patients think any corn of sufficient consequence to confine themselves for even a day, and continue going on in violent pain, until the impossibility of walking compels them to have recourse to surgical advice.

Case XIV.—Some years since I was requested to see a young gentleman, who was confined to his room by illness, and was likewise suffering from a corn on the second joint of the third toe; he was desirous of having it removed, thinking it a good opportunity, as he was wearing slippers and unable to go out. On examining the toe, I found the usual appearance of an inflamed bursa or festered corn, attended with inflammation, and the foot swollen, red streaks being distinctly seen running over the foot towards the leg.

I asked him if he had any pain in the groin; the question appeared greatly to astonish him, as he was confined solely on that account, and the swelling was attributed by his medical attendant to a cause which he considered could not possibly be the case. I eased his mind upon the subject by stating that such complaints frequently arise from the irritation caused by corns, as in his case.

I immediately extracted the corn, and a quantity of fœtid serum followed; the edges were touched with caustic, hot fomentations were

applied to the foot, and a linseed meal poultice over the toe. The orifice of the bursa was kept open as long as any discharge could be obtained, and then the hot application was discontinued. The inflammation subsided on the second day, and the swelling in the groin gradually decreased; it was still necessary to touch the edges of the sac with caustic, to prevent its closing. This was continued for some days, after which soap plaster was applied over the toe, and a hole cut in the shoe to prevent the least pressure. The patient got quite well by continuing this treatment for a few days.

Case XV.—Some years since I was requested to see an old gentleman, who complained of pain in his toes on both feet. On examination, I observed that the skin covering them was of a dark reddish-brown colour, shining and very tense, without the least perspiration; two toes on one foot slightly bent and one on the other, on each of which were superficial ulcers. The tendons were rigid, and the toes appeared as if anchylosed; the feet had some resemblance to an anatomical preparation. On passing a

probe in the centre of the ulcer, which was filled with an unhealthy thin pus, the bone could be distinctly felt, denuded of the periosteum.

The history I obtained of this case, was that that the gentleman was subject to corns, and in the habit of cutting them at regular periods. About ten years previously to my seeing his feet, they had progressively become stiff and uncomfortable, and whenever he attempted to cut his corns, they bled. They had been in the state in which I saw them for the last four or five years, occasionally very painful, but at other times of little inconvenience, and the discharge had never been in any large quantity.

I considered that very little good could be done by the ordinary treatment, but that greater mischief might ensue. I recommended Turner's Cerate, as a simple dressing, and, if no benefit was derived from its use to consult an eminent surgeon whom I named.

Since the foregoing case I have had several opportunities of seeing feet in a similar state of rigidity in elderly people, with the common corn

on the toes (without ulceration), which I have invariably treated by wetting the induration with hot water, then carefully removing the layers of cuticle as they became detached by saturation, and afterwards applying soap plaster. There is no doubt that if the corns were improperly treated, or cut so as to cause hæmorrhage in this peculiarly languid state of the circulation, serious consequences would follow.

Case XVI.—I attended a gentleman who had been suffering for some years with an inflamed bursa on the little toe of the left foot, in whom the disease was entirely local. The toe was much swollen, with but little induration, but the speck or corn was very discernible.

It was at once extracted, and a discharge of fluid took place, affording considerable relief. The edges of the opening were touched with caustic, as usual, and the cold water dressing was applied. The swelling of the toe was removed by these means, but every third or fourth day, when the cauterised part was picked out, an oozing of serum from the cavity followed; and when all treatment was suspended for a

few days, the disease returned as severe as ever.

Finding this to be the case, I inserted a very minute particle or atom of potassa fusa into the cavity of the bursa, and repeated the application every second day. The bursa sloughed away after the potassa fusa had been used for the third time, and the ulcer granulated, and cicatrised. Soap plaster was afterwards placed around the joint. While the treatment with potassa fusa was employed, the cold water dressings were assiduously used. Pressure was removed from the part by a hole having been cut in the shoe.

I have lately seen several other cases of a similar kind, in which I employed the same plan of treatment with equal advantage.

CHAPTER VI.

NEURO-VASCULAR CORNS.

This peculiar and painful species of corn is frequently met with in persons of fair complexion, with very fine and moist skins, in whom the dermis is consequently more than usually vascular, and more likely to take on inflammatory action from pressure.

It forms upon the projecting parts of the toes, according to their position or deformity.

When fully developed, the epidermis covering the affected part is slightly thickened and semi-transparent, having villi or nervous fibrillæ clearly visible, running in zigzag whitish lines within the induration, and small corns appearing between them like white specks, corresponding in form to the cells or follicles they occupy.

Although these corns are as insensible as any other cuticular thickening, the intermingled

nervous filaments are so exceedingly sensitive to pressure, that the softest leather of any shoe can scarcely be borne, and the least touch in attempting to remove any part by an operation, gives the most excruciating pain.

No other cause can be assigned for its formation than the thinness of the epidermis covering the joints, and the severity of the pressure to which they are exposed.

The peculiar character of this corn is the result of a more severe degree of pressure on the part than that by which the ordinary thickening of the cuticle is produced, and consequently a more intense inflammation is caused, so that the whole of the portion of dermis subject to compression participates, and its vascular structure, together with the nervous fibrillæ, becomes hypertrophied, and to such an extent that, when the inflammation has been partly subdued by the removal of the shoe, by poultices, or by any other means which have been employed by the patient himself, the enlarged structures do not return to their normal condition, but constitute a network, within whose meshes is deposited the

adventitious matter produced by the thickening of the cuticle that is continually going on, and which becoming condensed, forms the small corns situated between the nervous fibres.

By the time the inflammatory action has entirely ceased, the nervous villi are completely matted, as it were, within the epidermis.

Persons seldom apply for professional assistance in the acute state of the complaint, for, when first attacked, the pain indicates the necessity of removing the pressure, and the inflammation is generally allayed by some simple application, which gives relief for a time, but does not remove the corn. When the same kind of shoe is again attempted to be worn, the severity of the pain produced obliges the sufferer to seek professional assistance.

I am fully of opinion that this is the species of corn which, when cut unskilfully, or improperly treated in persons of inflammatory constitution, and particularly in aged people, has been productive of very serious consequences, and even in some instances of death, from the resulting mortification. This latter termination occurs

more especially with persons advanced in life, in whom the lower extremities have already less vitality than other parts of the enfeebled frame, and, consequently, are unable to resist the effects of the additional irritation caused by an unskilful operation.

The first treatment should be by palliative remedies, particularly during the inflammatory state: the application of lint dipped in cold water, covered with oiled silk, will generally be found sufficient for the purpose, together with rest, directions being given to avoid all pressure.

When the irritation has ceased, the thickened cuticle may be carefully removed without giving much pain, if the nervous fibrillæ are not touched by the instrument, after which soap plaster may be applied, at the same time guarding the projecting joint from the pressure of the shoe by mechanical means.

In the chronic form, which is always unattended with inflammation, but where the epidermis is much thickened, it should be scraped off, until the white lines and inter-

mediate specks are visible. The corns should then be very carefully picked out from between the filaments, great care being taken in the operation to avoid pricking them or producing hæmorrhage, as it would be attended with excruciating pain, and might cause great irritation and inflammation; the wetted lint should be afterwards applied for a few days, or until the soreness and pain cease, and then a small piece of soap cerate plaster should be placed over the corn, and worn continually.

With the usual caution against pressure, perfect relief will thus be obtained.

When the corn has existed for any length of time, and pain is only produced by pressure, the same treatment must be followed, and nitrate of silver lightly rubbed on the part after the small corns have been extracted. The application should be repeated from time to time, as much of the cauterised skin being first scraped off as possible, previously to its being re-applied.

Although a radical cure cannot be insured, relief will certainly be given, and in many cases

the nervous filaments will disappear, leaving the epidermis slightly thickened; this, however, seldom causes any pain.

Case XVII.—I attended a gentleman who suffered from a corn of this description on the middle joint of the third toe, and by regularly scraping off the cuticle about once a month, and applying caustic, always gave him considerable relief.

I was once summoned unexpectedly two days after my attendance, as he was suffering very great pain. I found the corn risen in the centre, puffy, and of a whitish colour; by slightly scratching the skin, a small quantity of serum escaped, such as is usually produced by the application of the nitrate of silver; this I considered arose from my having scraped off too much of the cuticle, so that the caustic penetrated deeper than on any previous occasion.

I ordered a warm poultice, which brought away the whole of the cauterised cuticle, leaving a small ulcer, which was healed in a few days with Turner's cerate, and a cure was thus accidentally obtained.

A very short time after the usual shoe was again worn, a corn of the same character formed, and required my usual treatment.

I mention this case to prove that, although a corn, of whatever species it may be, is perfectly cured, no dependence can be placed on its not being reproduced, particularly when depending upon a peculiar action in the skin.

Case XVIII.—I attended a gentleman from the country for a similar complaint; he informed me that he was deprived of exercise from the pain he suffered, and the difficulty he had in walking.

Previously to his applying to me, he had been roughly treated by a person who promised him a perfect cure. The pain he laboured under whenever it was touched, was so intense, and his dread of any operation was such, that large drops of perspiration hung on his face from anticipation. Although I assured him that there was not any cause for fear, nothing could allay the excited state of his mind.

I extracted those corns which were the most superficial, without giving any pain, and applied

the compound soap plaster, which I desired to be changed every second day. A piece of buck-skin leather was placed over and under the corns, so that no pressure could come upon them, and by having a proper shoe made, this gentleman remained free from pain for many months.

When he again required my assistance, he had not overcome the fear of having them extracted.

Case XIX.—A gentleman who had tried every professed remedy for the cure of corns, applied to me to know if anything could be done without cutting, as he did not feel disposed to have an instrument used, but would try any application I should recommend.

On examining his feet I perceived, on the middle joints of the first and third toes, corns rather thickly covered with layers of cuticle, and the villi clearly developed. He had a similar corn on the outer edge of the sole, just under the little toe, and both feet were affected.

As he was determined not to allow me to remove the cuticle, I recommended him to use a corn rubber made of fish skin, or a very fine

wood rasp, and advised him to rub off as much of the cuticle as could be done without causing hæmorrhage; then to apply with a camel's-hair brush the nitrate of silver dissolved in water (two grains to the drachm), two or three times a week, the rubbing to be repeated previously to its being re-applied.

This treatment gave relief, the extra thickening of the epidermis being removed by the rubbing, and the irritation allayed by the solution of caustic. The form of shoe was altered to avoid pressure on the affected parts as much as possible.

Case XX.—I waited upon a lady who had been prevented from walking by a corn of this kind, situated upon the joint of the second toe, which was very prominent. The nervous fibrillæ formed a small cluster on the top of the corn, and the lines were so superficial as to form visible ridges. The irritation was so great, that the pressure of the finger could scarcely be borne. The cuticle covering the corn was of a pale straw colour, and there was not any surrounding inflammation.

It was impossible to attempt to remove any part with an instrument; I therefore applied the nitrate of silver freely, and thus was enabled to remove the cuticle on the third day without causing pain.

This treatment was repeated every third or fourth day, and at the end of a fortnight the cauterised skin came off (without any suppuration), and I had the satisfaction to observe that the filaments had totally disappeared. No other treatment was necessary, as a perfect cure was the result.

I had occasion to see the lady about a twelvemonth afterwards, for another complaint of the foot, and I found that this corn had never returned.

CHAPTER VII.

VASCULAR EXCRESCENCE.

A VERY painful vascular excrescence is occasionally met with, situated on the soles of the feet, upon the plantar, or under side of the heel; also on the little toe, and sometimes on the sides of the great toe, close under the nail. It is easily distinguished from a common corn, as it has more the appearance and character of a wart, but cannot be so considered, as they come principally on the hands and fingers, and on parts where there is no pressure; are seldom painful, and grow without any apparent cause: but this excrescence is always painful, and never produced without previous pressure. It may probably be the "Verruca Formicaria," or "Myrmecia," described by ancient medical writers.

This disease is a deep-seated spongy or vascular substance, forming a circumscribed tumour,

not projecting much beyond the level of the thickened cuticle; when fully developed, the whole of the surface is studded with red and black specks, and the surrounding integuments are inflamed and swollen.

In some cases the minute extravasations are not distinctly defined; the excrescence then appears as a softened tuft, the vascular fibres composing which, seem to be of unequal length. When an attempt at extirpation is made with the knife, hæmorrhage to a considerable extent immediately follows, all the minute vessels pouring forth their contents very profusely.

This disease has never yet, as far as my reading extends, been correctly understood. Lyon, in his work on "Spinæ Pedum," mentions a "Spina Fibrosa," which no doubt was this complaint, although not clearly described by him, nor by subsequent writers who have adopted the account given by that author, from their not having any real knowledge of the disease. They supposed the complaint to be the "Clavus Pedum" of Celsus, but I am by no means satisfied with such a supposition, for in my

opinion it has not the least claim to the term. The word "Clavus" can only refer to the common cuticular tubercle, or external corn, which resembles the head of a nail (as the name implies), in the same manner as, when the stems, or what were called the roots, could be distinguished as white specks, the term "Oculi Gallinaciæ" was given, from the resemblance to the eyes of fowls. Had this vascular excrescence been known to the ancients as a species of corn, no doubt they would have named it according to its appearance.

This disease has been noticed as connected with a cancerous diathesis, but I am perfectly convinced that there is nothing malignant in its character, never having met with a case which did not yield to the application of nitrate of silver, and in which an effectual cure was not obtained in a very short time; it is likewise satisfactory to know that the disease never returns.

In the generality of cases the patients are young, and have what is usually called fleshy feet, moist and clammy, abundantly supplied

with adipose tissue, and the epidermis thin. It is seldom met with in children under ten years of age, nor in aged persons; women are less liable to it than men.

The principal symptoms are a burning sensation in the part affected, which is very sensitive to the touch, attended with aching and throbbing pain, particularly after walking, when the shoe has been removed, and on lifting the foot from the ground. I have never been able to ascertain satisfactorily the cause of this complaint, none of the patients recollecting any previous indication before the pain became so intense as to require medical aid. Some persons have observed the skin to be somewhat thickened on the part, but did not experience any pain or inconvenience.

I consider the disease to be produced by walking unequally on some prominent part of the foot, where the adipose tissue is compressed between the external and internal resisting forces, and by a continuation of the pressure, the vascular structure becomes highly irritated, and, with the papillæ, ultimately hypertrophied.

When the disease is fully developed, the minute vessels of the diseased part of the skin are ruptured, and their contents extravasated into the cellular tissue, forming clusters of black and red specks.

The general treatment is simple, and requires but perseverance in the use of the requisite applications to effect a radical cure. The excrescence should be incised superficially in the first instance until the vessels bleed, after which nitrate of silver in substance should be freely rubbed on the part, until the hæmorrhage is arrested. This plan of treatment is to be pursued every other day, for a few days, and then repeated at intervals of three or four days, according to the depth or extent of the disease, until the pain has entirely ceased, and the part where the superficial layer has been removed does not bleed. It will be found that after several applications of the caustic have been made, when the blackened covering of the diseased growth has been taken away by the knife, that the surface which is then exposed, presents the appearance of a congeries of white dots,

interspersed with black ones, beneath which lies the hypertrophied vascular tissue.

Additional applications of the nitrate of silver will ultimately effect the destruction of this tissue, but as long as any oozing of blood follows the removal of the part which has been acted on by the caustic, even if it occur only in isolated points, those parts must be subjected to its destroying influence.

In some instances there is a disposition to suppuration after the application of the caustic, in which case a linseed meal poultice may be applied to bring it forward, but not otherwise, as I have observed, if the foot be soaked in hot-water or poultices applied, the excrescence rapidly increases by reason of the heat and moisture bringing the blood more freely into the hypertrophied vessels of the part.

In persons whose skin is thinner, or more irritable than usual, on whom the nitrate of silver consequently will act more freely, the whole of the diseased growth will slough, and may be removed piecemeal. This is desirable, as the cure is sooner effected, and the picking

out of the pieces is unattended with pain or bleeding; should, however, the whole not separate freely, the nitrate of silver must again be applied to the remaining portion, and in a few days the cure will be completed.

Case XXI.—About twelve months since, I was recommended by Sir J. Clarke, Bart., to see a gentleman attached to the Belgian embassy, who had been confined to his room for nearly three months with a disease on the under part of his heels.

I observed about the centre, more particularly on one heel, an irregular oblong substance, about an inch long and three-quarters of an inch wide, with a hard, thickened, callous edge, and two similar, but smaller ones, towards the side of the heel, exceedingly sensitive to the touch, and having all the characters of the excrescence just described. The gentleman's health had suffered from long confinement and want of exercise.

When I first saw the foot, it was covered with profuse perspiration, the skin relaxed and flabby. I caused the abnormal growth to bleed in the manner which I have just mentioned,

and applied the nitrate of silver freely, repeating it on the second day, when the pain was somewhat diminished. I cut out a quantity of the excrescence until every vessel bled, and then filled the orifices with the caustic until the bleeding ceased.

On the fourth day the same operation was repeated, and continued at intervals of three or four days for about a fortnight. At every operation the hæmorrhage was less than on previous occasions, and on the tenth day the gentleman could bear pressure on his heel, and take moderate exercise. I now perceived that some small clusters were detached, and could be lifted up, but, not being sufficiently loosened, the attempt gave great pain.

After picking out as much as I could, I covered the whole as before with the nitrate of silver, and ordered at night a linseed meal cataplasm (in hopes of inducing suppuration), which was to be repeated at stated intervals for two days. On my calling at the appointed time, I found the patient had suffered considerable pain, and as soon as the cauterised

surface was removed, serum followed, and I was enabled to pick out the whole of the growth by detached pieces. The appearance was very similar to honeycomb.

I touched some of the remaining points with the nitrate of silver, and covered the parts with diachylon plaster. In a few days the complaint was completely cured.

The disease has not since returned, nor caused the least inconvenience.

I received the following history of the case:— The gentleman had occasion to travel from the Continent at a very short notice, and put on a new pair of boots, which gave him great pain in his heels whenever he put his feet to the ground, but having no opportunity to remove them, he bore the pain until his arrival in England, when, on examining the boots, he found wooden pegs projecting to about the eighth of an inch in the heels, which, from the pressure, had produced inflammation with great soreness, and gave rise to the disease. He had been under medical treatment from the time of his arrival.

Case XXII.—I attended a gentleman with this complaint, situated below the great toe, on the plantar or under part of the metatarsal bone, which was prominent and thickly covered with adipose tissue. The excrescence was exceedingly painful, and of serious inconvenience to the patient, as he could only walk on his heel.

As he was engaged in a public office for some hours daily, and was very desirous not to be prevented from attending to his business, I ordered him to have a shoe made fully as wide as his foot, with a thick inner sole, and a circular piece cut out sufficiently large to admit the ball, so that the pressure would be taken off, and fall more on the other part of the foot. This succeeded remarkably well, and he was able to walk with very little annoyance. The treatment was similar to the former case, and every time the caustic was applied the pain became less. In about a month the disease was perfectly cured.

Case XXIII.—A gentleman from the country applied to me to remove a corn or warty

excrescence on the little toe, from which he had suffered severe pain for some years. It was so sensitive to the touch that he could not bear the least pressure. When I informed him it would require some weeks to cure, and must be cut until it bled, and then caustic applied, he refused to have any thing done to it until he had consulted his surgeon, under whose care he had been for many years; he did so, and was advised, as he could not remain in town for any length of time, to use nitric acid as a quicker remedy. He, therefore, put himself under his care, to have the acid applied, and regularly called on me to watch the result.

A fortnight passed; but as no benefit was derived, and the soreness increased, he at last consented to have it treated according to my method. I followed my usual practice, yet in this instance avoiding the bleeding, only scraping off as much of the cuticle as was destroyed by the caustic, and re-applying it until the cure was completed. It was much longer getting well than usual, for I could not remove at each operation as much of the excrescence as was necessary

because the patient had an exceeding dread of hæmorrhage.

Case XXIV.—I saw a singular case of this excrescence some years ago, the disease commencing on the outside of the great toe, and passing under the nail: it was a troublesome and painful complaint of some duration. The young lady was of delicate health, and under treatment for a spinal affection. Her physician and medical attendant had great objection to the nail being removed, and to the application of caustic; but, as I had no other remedy to propose, a few days were taken for deliberation. At the end of a week I was again sent for, and, my proposed treatment being approved of, I cut the nail off rather beyond the diseased part, without giving pain. The usual means were then adopted, and the excrescence was perfectly removed in less than a month: the nail grew again without any deformity.

A similar affection is occasionally met with in the fingers, the diseased growth generally extending under the nail. It is not so vascular as the excrescence in the foot, and presents a

greater resemblance to the verruca or common wart. It is a source of considerable pain and inconvenience; the treatment required is precisely the same as for the disease in the foot.

I attended a surgeon of eminence about four years ago, who had a growth of this kind at the apex of the index finger, by the side of and under the nail. It was, however, more inconvenient than painful. He could hardly assign a cause for its production, but most probably it might have been produced by local violence, or by the presence of some foreign body, which had been forced under the nail, and removed at the time, without causing sufficient pain to attract notice.

The treatment pursued was, as in the preceding case, by the removal of the nail beyond the diseased structure, and the repeated application of caustic. Many months elapsed before a perfect cure was effected, owing to the care with which small portions of the excrescence were taken away upon each occasion. Up to the present time there has not been any return of the disease.

Since writing the above I have seen an essay by M. Bouchacourt, of Lyons, which was published in the "Bulletin Général de Thérapeutique" for November, 1843, entitled, "Note sur une espéce particulière de Tumour Erectile et son Traitement," wherein he describes two cases of a similar disease occurring in the finger, treated by excision and the application of caustic.

He has also published two other cases, in which the inside of the apex of the great toe was the part affected, and which he mentions as instances of a more advanced stage of the disease, with a deposit of the calcareous phosphates in the areolar tissue of the excrescence, but I am rather inclined to regard it as the form of exostosis, described by Mr. Liston in the number of the Edinburgh Medical and Surgical Journal, for July, 1826. The treatment adopted by M. Bouchacourt for the removal of these growths was unusually and unnecessarily severe.

CHAPTER VIII.

BUNIONS.

The word bunion, which has been almost indiscriminately applied by the public to any hard and painful tumour or corn on the feet, should be restricted in its use to designate an enlargement over the first joint of the great or little toe, at the articulation with the metatarsal bone, produced by pressure, or by some other cause, effecting a change in the joint, or in the position of the phalanx.

The derivation of the term is somewhat obscure, nor do any of our lexicographers allude to it. It is probably a modification of the word "Oignon," which was formerly, and is still, used in France to designate the disease. The term, although not a scientific one, can scarcely be regarded as altogether inapplicable, as the enlargement does in a measure resemble a

skinned onion in smoothness and roundness, while the plexus or knot of superficial corns, so frequently seated upon its upper surface, is represented in the bulb by the remains of the closely cut roots.

Boyer says it is called "oignon," or "onion," as well from its rounded shape as from the thin scales of thickened epidermis which form on the upper surface, and can be removed separately, like the layers of an onion.—("Traité des Maladies Chirurgicales.")

Lyon, in his work on the "Spinæ Pedum," gives it the name of "Spina Projecta" (a projecting corn), a title totally at variance with the real nature of the disease, or, at all events, indicative only of the state of its upper surface.

Very little information can be gathered from the works of the early writers on surgery respecting bunions. They do not mention any disease which, from the description, can be considered as the complaint in question, and even later authors have thrown but little light upon the subject, as they have generally chosen to adopt the opinions of those who have preceded

them, in preference to investigating for themselves. They speak of a bunion merely as a species of corn, without reference to the diseased condition of the joint which follows.

Wiseman, in his Chirurgical Treatise, published in 1676, speaks of a case under his care, which he supposed to be a soft corn, but according to his description, it presented the principal symptoms of a bunion. He mentions especially pain felt in the joint of the great toe, and under the foot. His treatment was "caustic stone rubbed on the thickened parts until he obtained an evacuation of extravasated blood." He does not seem to have had any idea that a bursa was diseased over the joint, or, indeed, of the real nature of the disorder.

One of the most frequent and certain causes of a bunion is the wearing of shoes made too short, and with a narrow sole, so that the feet are subjected to an undue degree of pressure, both laterally and longitudinally, and the whole weight of the body is thrown upon the articulation of the metatarsal bones with the great and little toes, there not being sufficient room

for the foot to expand, nor for the great toe to extend itself, so that the proper motions of the joint and the regular action of the muscles are impeded, whereby excruciating pain is produced, followed by inflammation, malposition of the great toe, and the ultimate formation of a severe bunion.

When a bunion is produced by distortion, or hereditary malformation, the great toe, which should be in a straight line with the metatarsal bone by which it is supported, lies transversely over or under the next, causing a projection of the joint, which is subjected to continual pressure on the most prominent parts, gradually increasing in severity as the swelling enlarges, until a bunion is fully developed.

Constitutional derangement, producing a relaxation of the system, may also act as an occasional cause of bunion in persons predisposed to that complaint, by inducing a feebleness in the joints, principally of the great toe, with pain after walking, which frequently continues after the shoes have been removed and the feet are at rest. This cause is influenced by a peculiar

state of atmospheric temperature, affecting the feet in particular constitutions.

Among the other constitutional causes may be ranked rheumatism and gout, which induce progressive deformity of the feet, distort the toes, and carry, by the contraction of the flexor tendons, the point of the great toe obliquely across the others, and thus produce that state of the foot by which the enlargement of the joint, constituting a bunion, is caused.

As persons advance in age, the fluids of the system are not supplied in the usual abundance; and this is especially the case with regard to the secretions lubricating the joints, which, in consequence, become stiff, and the toes may even become partly anchylosed, from the want of sufficient synovia. This is not an unfrequent occurrence in the joints of the great toe of aged persons, and of course does not admit of relief. Little inconvenience, however, is experienced therefrom, unless from the pressure of the shoe, and the want of elasticity in walking.

A bunion consists of an enlargement or thickening of the common integuments over

the first joint of the great toe, seldom affecting both feet at the same time, caused either by compression, or by an unnatural obliquity of the great toe outwards, by which the position of the joint between it and the metatarsal bone is changed. When the disease is first noticed, it is attended with trifling pain and inconvenience, but from the continued and increasing pressure, and the non-removal of the cause that originally produced it, inflammation is set up, the cuticle covering the joint becomes involved, thickens in layers or scales over a considerable surface, and is studded with clusters of small superficial corns.

If the disease, in this advanced stage, be neglected or improperly treated, or if the patient take an unusual degree of exercise with a more than ordinarily tight shoe, the inflammatory action will be renewed or increased, the bursa beneath will become enlarged between the skin and the bone, and serum will be effused, causing considerable swelling over the articulation, attended with exquisite pain and tenderness, which will be felt, not only in the joint

itself, but also extending to all the surrounding parts.

If the disease still proceeds, the pain and swelling continue to increase, and suppuration takes place within the cavity of the bursa, which, on account of the depth of its situation and the abnormal thickening of the integuments, is very slow in bursting externally. Sometimes the ichorous fluid burrows into the adjoining cellular tissue, undermining the periosteum, and in some cases causing caries of the bones, with ulceration and exfoliation of the joint.

A protuberance is occasionally met with on the corresponding joint of the metatarsal bone of the little toe, and may be regarded as a species of bunion, which, from its position, is not subjected to the same amount of pressure in walking, but the pain and inconvenience otherwise are not less severe than in ordinary cases in which the joint of the great toe is affected. The symptoms and appearance are precisely the same, but in the worst cases, although attended with great irritation, the inflammation rarely extends further than the

bursa, and is more amenable to proper treatment.

When this tumour is caused by the little toe being forced obliquely out of its position, and under the next, it will sometimes enlarge to a great extent, so as to project considerably; the cuticle will be thickened without inflammation, and unattended with pain, except when pressed upon. The chief complaint in this case arises from the unsightliness of the joint.

Boyer describes a species of encysted tumour which is occasionally met with on the inside of the articulation of the great toe, and is sometimes mistaken for a bunion. It is of a round shape, circumscribed, rather flattened by the pressure of the shoe, soft, and indolent, and not causing any inconvenience unless inflammation has been excited, which occasionally happens, but is readily subdued by emollient applications and rest, leaving behind a degree of sensibility in the part, which is annoying to the patient, and causes him to wish to be freed from it. It may be removed by caustic or by the knife. Boyer only saw it twice in the course of his

practice. He considers the use of the caustic potass preferable, as the cyst adheres so closely to the ligaments of the joint, as to cause a risk of opening into the cavity if the knife be used.

Before any operation is performed, however, it is necessary to be certain that the tumour is not formed by the synovia of the joint, in which case an operation might be followed by most serious consequences.

Sir B. Brodie, in his Clinical Lectures, relates a case of tumour, somewhat similar to the cyst described by Boyer. The contents of the sac were albuminous, and of the consistence of the vitreous humour of the eye, similar to that which is found in ganglions. It was freely opened, and the inner surface touched with nitric acid repeatedly, to destroy it, and obtain a granulating surface. This, he remarks, he was obliged to do with some caution, lest the joint should be injured.

From the great similarity of symptoms presented by bunions, from whatever cause arising, the same remedies may be employed in nearly all cases, excepting some especial indication

arise, or is present to prevent it. The medical attendant will of course in every instance be guided by the general rules of surgery in adapting his mode of treatment to the exigencies of the case.

Although a radical cure of a perfectly-formed bunion can seldom be promised, yet in most, if not in all cases, relief from the pain and other inconveniences may be afforded by proper treatment. The time required for this purpose will vary very much; in many cases palliatives must be used for a length of time before a cure can be effected, and even then the enlargement of the joint does not entirely disappear. In all cases it is advisable not to have recourse to violent modes of treatment, more especially when the bursa is inflamed, as very serious consequences have been caused by so doing.

The most beneficial and proper local remedies I generally use are cold water dressings, spirit lotions, and the application of diachylon and soap plasters; in the more severe cases, linseed meal poultices, made with decoction of poppies, the nitrate of silver, potassa fusa, and also nitric

acid, but these latter remedies must be employed with the greatest caution.

When a bunion first forms it appears inflamed, but is not attended with much swelling; the pain in the joint is mostly felt when the shoe is worn; it continues for a few days and then subsides, re-occurring, however, at intervals for many months, without increasing in severity, so as to require medical advice. If it be caused by wearing a short, badly-made shoe, it will be immediately relieved by removing it, and a cure effected by bathing the foot night and morning with a spirit lotion.

Even if the shoe should not appear afterwards to press injuriously on the foot, it ought not again to be worn, for if the patient persist in doing so, the pain and irritation will gradually increase in proportion as the foot is used, and be felt more especially in the joint, under the ball, and along the toe. Inflammation will extend in an equal degree, and proceed over the instep; the integuments covering the joint will be thickened, the cuticle form scales, or layers, and corns be generated, either on one

elevated point, or else in small superficial clusters on various parts of the bunion.

The best mode of treatment in such a case would be to reduce the inflammation by rest, and by the application of cold lotions, after which the corns may be carefully extracted, and a plaster, made with soap cerate and adhesive plaster, applied over the joint. If the great toe is inclined obliquely inwards towards the others, a piece of sponge, or a pledget made with tape or linen of sufficient thickness, should be placed between the first and the great toe, so as to bring the latter in a parallel line with the joint and metatarsal bone. In this manner, the patient wearing a properly-made shoe, a cure may be soon effected, but the plaster must be retained over the joint for some time after the pain and inflammation have subsided.

A similar class of symptoms will frequently occur, without any external cause, from constitutional derangement; the joint affected and the foot are very painful, giving rise to great inconvenience in walking, the natural action of the foot from heel to toe being impeded, so that

sufficient exercise cannot be taken. The pain does not always cease when the shoe is taken off, but often continues for several hours afterwards. External remedies are of but little service, the disease being influenced chiefly by the state of the atmosphere, improving as the weather becomes more favourable, and getting worse with an opposite state of the temperature. As the general health is affected, so in a manner are also the bunions which arise from symptomatic derangement.

The pain and inflammation in these cases come on sometimes so suddenly, that the patient is apt to mistake the attack, and attribute it to gout, from which, however, it may easily be distinguished by the external tenderness of the joint, and the persistence of the inflammation in the latter disease, whereas in bunions the part is not painful to the touch, and the inflammatory symptoms soon subside with the removal of the shoe, and the adoption of the usual treatment.

A small tumour is occasionally found on the top of the instep, caused by the pressure of the boot. It is situated under the skin, and

is hard and immoveable. When the accompanying inflammation has subsided, and the pressure that produced it has been removed, the cuticle is occasionally found to be thickened, and a corn, which is superficial and easily removed, is the result. In many cases it presents a strong resemblance to a ganglion. Sir B. C. Brodie (vide Clinical Lectures), says he is uncertain whether this tumour is formed in the ligament of the joints, in the periosteum, in the ultimate fibres of the tendon of the tibialis anticus muscle, or in some other texture.

Case XXV.—I was consulted by a gentleman, who had a bunion which he said caused him severe pain, not only in the joint, but over the whole foot, with an aching, throbbing, and burning sensation so unbearable, that he was obliged to take off his boot two or three times a day.

On examination I found the foot and integuments of the joint very red and swollen, but the joint itself not much enlarged, and was inclined at first to suspect he had been wearing a tight new boot, or else that the foot had been sub-

jected to an unusual degree of pressure: but this he assured me was not the case; he had worn the same boot for months previously without the least inconvenience.

I was therefore obliged, in the absence of any local cause, to refer the complaint to a constitutional origin, and this I was the more ready to do as my patient was subject to pains in his knees, shoulders, &c., and the weather was cold and damp at the time. In this belief, anticipating that the complaint would be removed by the change of weather, I merely advised him to wear a very easy boot made of buckskin leather, from which he experienced great relief; and by care in preventing undue pressure, with a favourable change of weather, he soon got well. No other application was used to the foot than Eau de Cologne diluted with water.

When the disease occurs in persons of plethoric temperament, predisposed thereto from constitutional derangement, the inflammation soon extends to the bursa, and requires the adoption of the treatment usual in such cases. It is sooner cured when arising from this

cause, than when it is produced by the progressive symptoms of direct pressure.

Case XXVI.—A lady, who was occasionally under my care for corns, called on me in great alarm about the joint of the great toe of the left foot, on which there had been a bunion as long as she could remember, but it had never been the seat of any pain or other inconvenience until recently, when, without any apparent cause or alteration in her shoes or habits of exercise (her health not permitting her, indeed, to take quite so much as usual), the joint and foot became so painful as to prevent her walking.

The usual symptoms of inflammation of the bursa being present, I ordered a bread and water poultice, and the foot to be kept at rest in a horizontal position. The next day two corns, which were near each other on the surface of the bunion, were extracted, when the albuminous contents of the bursa oozed out, affording much relief; the orifices were touched with the nitrate of silver, and a piece of lint wetted with cold water, was applied to the joint, and covered with oiled silk.

The next day some small pieces of cuticle peeled off in scales; the same treatment was continued, and the nitrate of silver applied until the oozing ceased, after which cold water dressings only were used. The cure was completed in about ten days.

Persons in very delicate health sometimes suffer from severe pain in the joints, without enlargement or inflammation, and no appearance of disease can be traced in the joint. The skin is tender to the touch, and the foot feels clammy and moist.

Case XXVII.—I was requested by a physician to visit a lady in ill health, who complained of pain in her right foot, particularly in the joint of the great toe. I examined the part very carefully, but could not discover any cause for the pain; it was sensitive to pressure, and the foot was swollen, but there were not any signs of inflammation. An anodyne spirit lotion used for a few days diminished the sensitiveness of the skin; but the pain still continuing in the joint, I directed a plaster prepared with belladonna and soap, spread on thin leather, to be

applied, and drawn tightly over and under the joint, so as to cover half the foot. From this remedy great relief was experienced, and in a few days the pain was entirely removed.

When the inflammation over the bunion is very extensive and severe, attended with excruciating pain, and the corn or thickened epidermis presents a small circular white appearance on any part of the joint, a diseased bursa may be expected to be fully formed. The first treatment should be to remove the insensible cuticle by carefully picking it out, by which means an opening into the bursa will be obtained, and the discharge of its contents effected. The bunion should then be poulticed with linseed meal as long as there is any oozing from it, the foot kept quite at rest, the orifice touched every morning with nitrate of silver, and kept open until the sac of the bursa has come away. This treatment is safe, but uncertain as to the time required to effect a cure; the nitric acid would much sooner destroy the sac, but the extent of the sloughing produced by its use is so uncertain, and generally so much more than

expected, that I should in preference recommend the nitrate of silver or the caustic potash.

If the contents of the bursa are not evacuated early, great constitutional irritation, with febrile symptoms, will supervene, requiring proper medical treatment.

Sir B. C. Brodie, Bart., recommends, when the abscess has discharged its contents, if it be indisposed to heal, the destroying the inner secreting surface of the bursa by means of some caustic, and advises that a probe, armed with lint dipped in concentrated nitric acid, be applied to the internal surface of the bursa for a few seconds. A thin slough will be formed, on the separation of which it may reasonably be expected, he says, that the remains of the bursa will contract and granulate; otherwise the application of the caustic must be repeated.

Mr. Liston, in some brief observations on bunions, recommends in these cases the caustic potass.—("Elements of Surgery.")

Case XXVIII.—The lady of a medical gentleman consulted me respecting a bunion presenting the usual symptoms of an inflamed bursa.

The joint was very much enlarged, and fluctuation was evident. I extracted the corn, and let out the contents; it was poulticed as long as there was any discharge, and during the continuance of pain. The pressure of the shoe was removed; but, notwithstanding, the corn formed again over the bursa, and was from time to time extracted, which always gave relief. The edges of the opening were touched daily with caustic, and soap cerate plaster worn over the joint.

This treatment was pursued for three months, without my patient being able to bear the pressure of an ordinary shoe. She then went to Brighton for some time, where various remedies were tried ineffectually, and on her return I found nearly the same state of the joint, with the exception that the corn was much larger. This I extracted, and repeated the operation as often as it was required, touching the part with the potassa fusa on two or three occasions, instead of using the nitrate of silver. This plan of treatment was much more successful; the part became quite free from pain, and the dis-

charge ceased. The joint was not, however, much smaller, and was covered with layers of indurated cuticle, which required to be removed occasionally. By wearing a plaster over the joint this lady remains perfectly free from pain.

Case XXVIII.—I was sent for to Lord C—, then residing at Thomas's Hotel, Berkeley-square, in consequence of his having struck his bunion against a table, from which accident he was suffering much pain. The tumour was swollen, the centre hard and white, and fluid could be distinctly felt under the thickened skin or corn, which was extracted, giving issue to about a teaspoonful of albuminous fluid.

I ordered a linseed meal poultice with decoction of poppies, which his lordship (being a nervous man), did not immediately apply, waiting for the sanction of Sir Astley Cooper, who did not arrive until late at night.

The orifice closed (as is usual in these cases) and was re-opened daily, a small quantity of fluid, the contents of the bursa, escaping upon each occasion. Escharotics of various kinds, zinc lotions, and other astringents were em-

ployed, with Sir A. Cooper's sanction; but neither these, blisters, nor leeches, seemed to have any effect. Thus the case went on for nine or ten months, with an occasional attack of inflammation following the too free use of caustic.

His Lordship then left London for a short time, and on his return the bunion presented the same appearance as prior to his departure. There was not much pain, but still, on removing the skin, the discharge continued, although in smaller quantities, and I could distinctly hear the bones grate against each other, shewing that the joint itself had become involved in the disease.

The treatment next adopted was touching the orifice with the nitrate of silver, the skin having been removed prior to its application, and the use of a spirit lotion over the joint. By pursuing this plan, at first every other day, then at longer intervals, a cure was effected in a few months, but the joint became anchylosed. His Lordship afterwards walked rather lame, not having any motion in the joint, but did

not suffer any further pain. The disease continued in this case about eighteen months from the commencement.

Case XXIX.—Another interesting case of inflammation of the bursa occurred in a middle aged woman, housekeeper in a lady's family.

She had been afflicted with a bunion for some years, and when I saw her was suffering such pain, as to be incapacitated from attending to her business, or getting a night's rest. The joint was very much inflamed, tense, and shining, and fluctuation could be distinctly felt. The absorbents of the foot and leg were also highly inflamed.

The patient was in a state of great excitement, and positively refused to have any operation performed, although I represented to her the consequences that might result, if the matter remained much longer confined about the joint. I therefore ordered the foot to be fomented, and a linseed meal poultice to be applied over the joint. The abscess broke on the third day, and discharged about an ounce of ichorous putrid matter. The bursa had been so long inflamed

and suppurating, that when its contents were thoroughly evacuated, there was a cluster of concretions adhering to each other, like a bunch of small grapes, covered with minute blood vessels, and surrounded with lymph. No injury had been done to the joint.

The sac and edges of the opening sloughed, but there was very little pain: the inflammation soon subsided, granulations sprung up, and the whole was healed in a fortnight. The local applications were at first poultices, the edges of the opening being occasionally touched with nitrate of silver, until the surface became healthy, after which the red precipitate ointment was applied.

Case XXX.—The consequences of the injudicious application of nitric acid are shown by the case of a lady, whom I attended for a diseased nail. Perceiving the leg and foot much reduced in size, with several deep cicatrices, I inquired the cause, and was informed that she had suffered from a bunion for several years, and that her medical attendant, after trying various plans ineffectually, determined to apply nitric

acid, which, unfortunately, he used so profusely that excessive erysipelatous inflammation was produced, which ended in sloughing, not only on the joint, but even of parts of the leg and foot; nor did she recover from its effects, until after twelve months' suffering and partial confinement.

In cases of rheumatic or gouty distortion of the feet, but little benefit can be expected from external applications. The disorders should be treated on general principles, those remedies being used which are employed for the removal of the same diseases when attacking other parts of the body. Very easy shoes should be worn to prevent pressure on the joints.

Case XXXI.—His late Majesty, William the Fourth, suffered severely from rheumatic and gouty affections in the hands and feet. His fingers became very contracted and painful, and at last he could scarcely hold a pen without inconvenience. His Majesty's toes were also deformed and tender, so that he was continually complaining of them, but nothing could be found to afford relief. Boots were made of buckskin,

and afterwards of chamois leather, which caused but little pressure, and they were so large, that in walking his Majesty had an unseemly shambling gait. The deformity, however, continued to increase, and the feet were occasionally painful to the time of his decease.

When the enlargement or bunion at the outer side of the foot, at its articulation with the little toe, commences with itching, heat, and pain, increased by the pressure of the shoe and by walking, the seam of the stocking will most probably be found to have made an indentation along the joint by being pressed against it. To remove the pain, the part of the stocking where the seam is must be drawn under or over the foot, and a spirit wash applied to the joint, either as a poultice with bread, or else by means of a piece of rag properly folded and wetted with it. The redness will soon disappear and the pain cease: a cure will be effected afterwards by wearing a soap plaster.

If the bursa becomes inflamed, it must be treated in the same manner as the similar affection of the bunion on the great toe.

The exciting causes must in all cases be removed.

If the bunion has been some years in existence, is covered with thickened cuticle, and studded with corns, the cuticle should be removed, the corns extracted, and soap plaster worn constantly over the joint. Much benefit will be derived from wearing laterally, between the little toe and the projecting point, a piece of buckskin leather spread with adhesive plaster, and cut in the form of a semi-circle, of sufficient thickness to keep off the pressure of the shoe from the part.

Case XXXII.—I was consulted by a student at St. George's Hospital for an enlargement on the lower part of the little toe. The integuments were very much thickened, and the joint projected so much higher and beyond the foot, that no boot or shoe could be worn without causing exceeding pain. He had applied both leeches and blisters, the effect of which had been to render the part more tender to the touch.

Cold water dressings were used by my directions, and the pressure removed by cutting a

large hole in the boot. On the third day a great quantity of the cuticle peeled off, and I then rubbed the nitrate of silver over the whole, continuing the same dressings. In a few days more cuticle was removed, the tumour became greatly reduced in size, and he could bear pressure on it without pain. He was then directed to wear a piece of soap plaster drawn tightly over the part, each end being brought over and under the foot, so as to exert an equal pressure. This he continued to use for some time, without the least inconvenience or pain, after which he could again wear his usual boots.

Case XXXIII.—A gentleman complained of great pain at the articulation of the metatarsal bone with the little toe, experienced principally in riding, from the pressure caused by the stirrup iron. There was very little swelling, but part of the bone was very prominent: the skin was much inflamed, and the cuticle somewhat thickened on the part that projected. The pressure was removed from the joint, and cold water dressings ordered. In three days the inflammation had abated, and there was less

pain. A piece of plaster was applied over the part, and a thick leather guard placed between the toe and the joint sufficiently high to protect the projecting bone.

Case XXXIV.—A colonel in the Guards suffered for some years from a similar cause, except that there was not any projection of the bone, but more enlargement and inflammation. On the surface of the bunion there were three distinct corns, with very little thickened cuticle, requiring extraction from time to time, each operation being followed by the discharge of a little serum, which afforded instant relief. Poulticing for a night or two removed the inflammation, and he remained free from pain for several months, when the same operation was again requisite.

Case XXXV.—A lady from the country consulted me for a swelling on the joint of the little toe, which was painful to the touch, presented signs of fluctuation, and had a corn in the centre as large as a pea. This was easily extracted, and a considerable discharge of matter tinged with blood followed. By poulticing, rest,

keeping the orifice open for a while with the nitrate of silver, &c., the foot was cured in a few days.

When the unsightly deformity of a distorted joint is the sole cause of complaint, some mechanical means must be invented for its concealment.

Case XXXVI.—A young lady desired my advice for an enlargement of this description which was principally caused by the distortion of the bones. She had always been very delicate, and subject to great relaxation of the joints, so that she could force her feet into shoes of almost any size, and had been unconsciously wearing those that were too short for her, and had thus produced distortion. She did not suffer from pain, and her object was merely to get rid of the deformity, and to have a better shaped foot.

By pressing laterally on the metatarsal bones, I could bring them much closer together, and doing so seemed to me to give the toes a spring outwards; I therefore applied a strip of adhesive plaster, an inch and a half wide, over the joint,

and over that again a piece of crape tightly sewn (which latter the young lady had herself been in the habit of using before I saw her). The support thus afforded was very comfortable, and, by a little alteration in the shape of the shoe, the distortion was scarcely perceptible.

When the joint is merely distorted, without any inflammation or induration of the cuticle, the only inconvenience experienced being from the pressure of the shoe, a mechanical means of relief may be had recourse to, by filling up the hollow between the joint and the upper part of the great toe with a piece of adhesive leather sufficiently thick to take off the pressure.

CHAPTER IX.

ON THE NAILS, AND THEIR DISEASES.

The nails are placed at the extremities of the fingers and toes to cover and protect from injury, the numerous sensitive nerves of touch. They are composed of a horny, insensible structure, arranged in laminæ or layers of longitudinal fibres, similar to whalebone, and running from the root or lunula to the apex. They adhere upon the under or concave surface by rugæ or grooves to the papillæ of the dermis, by which they are maintained in their situation. These papillæ are covered by an intervening thin layer of epidermis, extending from the root to the apex of the nail, to which it closely adheres, and gives increased thickness.

Beyond the root or semilunar substance the dermis is much more vascular, and imparts a degree of redness, which is visible through the

diaphanous structure of the nails, varying in intensity according to the temperament of the individual, and also according to the existence of certain diseases.

The nails are generally fully developed at birth, and continue to grow, under various modifications, until death. Their growth is rarely obstructed by fever or disease of the skin.

The toe nails are liable to many disorders from accidents, and to peculiarities in their growth, taking on different appearances according to age and altered secretions. They are somewhat thicker than those of the fingers, although similarly constructed, and, consequently, are better calculated to protect the toes from many serious injuries they might else be subject to in walking.

There are some nails, however well formed, which after a time begin to thicken, and acquire in a few years such a degree of thickness and deformity, as to render it exceedingly difficult to cut them with the instruments generally in use, and consequently they are allowed to grow until they cause inconvenience and pain. In

this state the assistance of the chiropodist is required to cut the nails, which can only be done with a strong pair of nail nippers.

The operator must commence by wetting them with hot water, then loosen the skin to which they adhere by passing the steel probe around and under the nails; cut pieces off with the nippers, following the form of the thickened layers, and afterwards file the roughness as smooth as possible without going quite through the horny part of the nail. When it is much thickened, and of a pyramidal shape, it will require to be sawed off with a fine small saw, beginning on the upper surface and gradually cutting towards the sides, the instrument being held rather obliquely, and care being taken not to cut through the nail at once, for fear of wounding the tuft of enlarged papillæ, which is frequently found under it: the occasional dropping hot water into the cut will assist the operation, by softening the nail. No pain is felt during this proceeding, if carefully performed, unless the papillæ are injured. As soon as the nail is sawn through, the piece must be

loosened from the point downwards towards the cut, by moving the blunt-pointed instrument in various directions until it is separated; a strong nail knife may be occasionally employed, when the nail is not readily removed.

The nails are capable of being bent or curved by heat, moisture, and pressure, and very frequently, when allowed to grow to a great length beyond the point of the toes, are compressed by the shoe into various shapes, in the same manner as heat and pressure act upon the common horn.

At this period the fibres or longitudinal lines are not strongly marked, and the nails are much more supple and thin than at a later time of life. As we advance in years they appear more opaque, and, without any particular disease, become harder and thicker.

In some persons a spongy substance forms under the edge of the great toe nails, unattended with pain; it adheres to the nail itself, and is an exuberant growth from the secreting surfaces beneath. It is easily picked out, leaving a

hollow between the nail and skin, according to the quantity removed.

This increased secretion appears to be thrown out for the protection of the sensitive parts beneath, and ought not to be removed unless, by being concreted under the edge of the nail, it causes pressure, and consequently pain. It is softer on the inner side of the nail, particularly if covered by the first toe; it is then of the consistence of pomatum, and causes a permanent stain on the nail.

There is frequently a peculiar spongy substance under and about the centre of deformed nails, of honeycomb appearance, very different from that just described, from which oozes a disagreeable ichorous discharge, loosening the nail as far as the disease extends. It is not very painful unless the nail is lifted up by sticking to the stocking, but requires to be attended to, as it is sometimes followed by ulceration. The cause is difficult to ascertain, as persons are generally not aware of having met with any accident by which the complaint could have been produced. By cutting

away the loose nail, and desiccating the part with nitrate of silver, the oozing soon ceases, and the toe gets well.

A very severe accident occasionally arises from persons scraping the centre of the great toe nail, in the belief that it will grow thicker where it has been scraped, and thinner at the sides, so as to prevent its growing in. This, however, is an erroneous practice, and, by continuing this method upon the same places, the nail will become broken with irregular edges, which press against and inflame the cutis: the irritation soon produces a fungus, which rises through the opening, and is exceedingly painful. The necessary treatment is to raise and remove the rough and depressed edges, and apply the nitrate of silver freely, so as to destroy the exuberant growth or proud flesh, after which a small piece of lint should be placed on the part, and secured by adhesive plaster.

At times the side of the nail will curve inwards without any thickening, so as to enclose the flesh; it is not painful unless when pressed upon, and only requires the nail to be kept

closely cut. I have seen a case, however, where the curvature extended nearly to the centre of the toe; it was exceedingly painful, for which I could not account, until I removed the upper part of the nail, when a corn was discovered beneath it, which had not been visible externally. Immediate relief was afforded by its extraction, but when the nail grew again, it resumed its curved form.

A trifling complaint often happens to the outer side of the great toe nail by the splitting of a longitudinal fibre or thin edge from the top to very near the root: it does not cause any pain, unless it becomes entangled in the stocking, so as to be torn further down into the quick. The piece must not be pulled out, but should be carefully separated from the skin by first wetting the part with water, and then dissecting it out with a small cutting instrument, taking care not to wound the flesh.

In cases of accidents from violent collision of the toe against a stone or any other hard substance, extravasation will immediately follow the

blow, and be attended with great pain; if the injury is very severe, the nail becomes loosened and falls off, and a new and perfect nail will be again produced. If the whole of the nail is not detached, and the loosened part requires to be cut away, it frequently follows that a deformity is the result, particularly if the injury extends to the semilunar fold. Immoderate exercise will likewise cause the nails to fall off without any apparent local cause, excepting an uneasy sensation in the toe, around the insertion of the nail, together with a slight degree of swelling and redness.

The most severe and painful injury to which the great toe nails are liable, is that caused by the fall of a heavy weight, or from the tread of a horse. The soft parts of the toe are generally very much bruised and inflamed; and the extravasation commonly extends to the secreting vessels at the root of the nail, so that a larger or smaller number of the layers of which the nail is composed lose their adhesion to the matrix, and become incapable of assisting in its further nourishment.

When the inflammation has subsided, the nail which has been injured, together with the epidermis, very soon falls off, leaving the part covered and protected only by a new cuticle. Nature, however, endeavours to supply a new nail; but as the secreting glands at the root have also suffered from the accident, their power is greatly diminished, and an imperfect nail is the result. The laminæ of which it is composed are generally formed of large thickened scales, lying over each other in the shape of bulbs or nodules not extending beyond the lunula, dipping down laterally, and curving upwards under the integuments, producing considerable pain by their pressure on the soft parts. The nail is thus unable, by the disunion of the laminæ, to continue its horizontal or flattened position, and, as the nutritious matter is partly cut off, it ceases to increase in length, but becomes bulbous, thickened, and enlarged, frequently of a pyramidal figure, to such an extent as to require the use of a small saw to remove it. In other cases it grows arched from the matrix to the apex of the toe, without adhering to the epidermis, and

decreases in size until the point presses on the flesh, where it causes a depression; it sometimes passes beyond the point of the toe, and becomes so curved, as often to lie over the next.

Under the diseased nail the papillæ frequently become erectile and enlarged, are covered with sheaths of thickened epidermis, and project as high as its concave under surface will admit of.

The peculiar shape is produced by the projecting or overlapping of the thickened scales upon each other, commencing with that which is growing at the root of the nail, whence the nourishment is derived, each new scale thrusting forward the one previously formed.

When the nail does not extend to the apex of the toe, a very thick yellowish cuticular substance supplies its place. After this state has existed for several years it becomes dry and brittle, as if it contained a large proportion of the earthy phosphates.

I have known some persons who have shed their nails periodically, without suffering any inconvenience, and being, in fact, scarcely aware of it at the time of the occurrence.

Sometimes, in putting on a tight boot, the stocking is drawn up at the heel, by which the tops of the nails are compressed downwards, producing severe pain, and, if long continued, it may cause them to fall off.

The usual time for the growth of a new nail is from four to six months, much depending upon the healthy state of the secretions.

The similarity which exists between the reproduction of nails after their destruction, and the reproduction of skin, or what is termed cicatrization, after ulceration or injury, is very evident. If the nail should be destroyed, or come off from the effect of any cause or accident not involving the matrix or secreting apparatus, it will be reproduced as before; but if the secreting power is injured, the nail will never be restored to its original state; it will, on the contrary, become brittle and deformed, according to the extent of the injury incurred. In the process of cicatrization a modification of the same effect is observable; the epidermis becomes irregular and corrugated, and the parts assume an appearance quite different to the healthy

structure. On the contrary, when the injury is merely superficial, as after the application of a blister, the parts are again, after a time, perfectly restored to their original state, a new epidermis having been re-secreted.

The most formidable disease connected with the toe nail is that which is called "the nail growing into the flesh." It is met with most frequently in the great toe, but all the other toes are liable to the same complaint, but less severely. It is caused by an improper manner of cutting the nails, or by the flap of flesh being forced up against the edge of the nail, from wearing shoes too narrow, or badly made across the toes, or from the edge of the nail being curved, or taking some other vicious direction.

Persons, when they first feel pain in the sides of the toe, are apt to regard it as caused by the nail having been allowed to grow to too great a length, and accordingly commence cutting it, thence deriving temporary relief. In consequence of the pressure of the shoe, which is still continued, the flap is forced more against the remaining rough edge in walking than

before, and there is consequently more pain and uneasiness experienced, but lower down, nearer the matrix. The flap thickens, is pushed upwards still further, and partially covers the nail, which, as the pain continues, is again and again cut, until the scissors can no longer reach the part which is supposed to cause the suffering. The consequence is that a point is left which penetrates the flesh, keeps up and increases the previously-existing irritation, produces severe pain and ulceration, and, if neglected, fungus sprouts forth from the part most affected.

In other cases the nail forms such a decided curve under the flap, that its edge, along the whole length of the toe, is imbedded in the soft parts, which become inflamed and so much swollen, that not above one half of the nail can be seen. Walking will increase the inflammation, and ulceration will take place in the whole length of the furrow. Under improper treatment or neglect, this state will continue with many persons for months, until the whole is covered with fungus, or what is denominated proud flesh. The pain will then be so severe,

that the weight of the body cannot be sustained upon the toe, and the patient is compelled to rest the limb.

In the more severe cases, those, for instance, which are known by the name of Onychia Maligna,* the ulceration extends round to the soft parts at the root of the nail, which become swollen and inflamed, of a deep red or purple colour; and a thin ichorous discharge, possessing an offensive odour, is secreted. The ulceration presents a very unhealthy appearance, and after a time the secreting glands become involved; the nail is consequently loosened, and even partially detached.

Various remedies have been recommended for preventing the nail growing into the flesh, and many severe operations have been performed for the cure of this painful and troublesome disease.

Of the preventive or palliative measures, I shall only notice those which have been most commonly in use, or have been recommended

* This disease has been ably described by Mr. Wardrop, in a paper published in the fifth volume of the "Medico-Chirurgical Transactions."

from their peculiarity. Cutting a notch in the upper surface of the nail, and scraping the centre with a knife or a piece of glass, is one of the most ancient operations that have been employed; cotton or lint has also been pushed under the edges of the nail, for the purpose of raising the corners; and then followed the use of tinfoil or silver plate, with the same intention of preventing the nail penetrating into the flesh. Another plan was recommended a few years since, which consisted in scraping the nail very thin along its upper surface, and afterwards applying a square piece of cork on the part, and retaining it there with a bandage tightly applied, so as, by the pressure on the centre, to elevate the sides of the nail.

These mechanical means have seldom succeeded, because the substance placed under the nail is pressed by the thickened curvature more severely upon the flesh, and, consequently, can seldom be borne for any length of time. Another objection applies to the method last alluded to, because no common shoe will admit the foot with the cork and bandage.

The most general application used by the profession for this disease (without having recourse to instruments) is nitrate of silver freely and repeatedly rubbed between the nail and flap, with the intention to destroy both. This sometimes succeeds, when the disease does not arise from a point or sharp edge of the nail penetrating into and irritating the flesh, and the ulceration is not very extensive.

I have seen a case, however, where this plan of treatment was pursued to such an extent, that a piece of caustic was absolutely laid in between the nail and the flap of skin, its corrosive action exciting very violent irritation and constitutional derangement, without being of any benefit, so that after the incidental inflammation had been removed by appropriate treatment, the excision of the nail was requisite.

The preventive method which I adopt, when the nail is rather thick and the curved edge has not injured the integuments, is as follows. I scrape the top of the nail where the curve commences, and divide the inner part which lies in the fold of flesh, by carefully slitting the nail on

the upper surface from the apex, to as near the root as possible, with a properly made instrument, taking care not to cut through it so as to cause hæmorrhage; the piece thus divided is not to be removed, so that the flesh, by its pressure upwards, forces it gradually to lap over the body of the nail in such a manner, that it cannot penetrate the soft parts. As the nail grows forward to the apex of the toe, it becomes of sufficient length to be cut across with the other part; then the slit must again be carried lower down, and the nail scraped below the part which had been previously operated on. If this operation be properly performed, it can be done without giving pain; and I have known it frequently succeed when every other means have failed, and even prevent the nail from penetrating, when cutting out the piece has been ineffectual.

When the nail has penetrated into the flesh, and ulceration has commenced, these palliative measures prove of but little service, even when practised before the appearance of fungus, and relief can only be obtained by the excision of the diseased part of the nail. This has been

effected in various ways; the operation in general use in this country is that practised by the late Sir Astley Cooper, and consists in passing one limb of a strong pair of scissors under the nail, slitting it up to the root, and then pulling out the piece when detached with forceps.

This disease was known to the ancients, and was treated in a similar manner by Hildanus and Fabricius ab Aquapendente, who first had recourse to desiccatives and escharotics, by which they destroyed the fungous growth, and then performed an operation for its removal.

Similar operations, of more or less severity, were in use for many years, and were afterwards improved by Desault, Richerand, Guillemott, and others.

Dupuytren used a straight pair of scissors, which he forced beneath the nail, near the edge of the fungus, and divided it longitudinally from the top to the bottom; the part of the nail to be removed was then laid hold of with forceps, and turned suddenly back, by which manner it was separated from its connection with the parts beneath, and removed at its base

with scissors. The operation thus performed is said not to be so painful as might be expected, but the after treatment can scarcely be so described, as Dupuytren was in the habit of touching the fungous excrescence with the actual cautery to complete the cure.

Under the head of curious surgical cases the following unnecessarily severe operation is described in the "Medical Times," as having been performed in the Hospital Val de Grace by M. Baudens, the chief surgeon. The diseased part was held like a pen about to be mended, and the bistoury like the penknife, its edge being placed perpendicularly a little beyond the matrix of the nail; it was then brought rapidly forwards, cutting off the matrix, nail, and fungous flesh in one fell swoop: the wound was then dressed simply, and covered with compresses steeped in cold water, to prevent the consecutive inflammation!

I have also seen an operation performed, by thrusting a double-edged scalpel through the flap of skin, and thus excising it, the edge of the nail being afterwards removed with scissors.

I believe this operation has never been repeated, because, in this case, the toe continued exceedingly tender and irritable, and was a very long time before it cicatrised.

The operation which I have practised for many years consists in the dissection of the horny structure of the nail from the epidermis to which it adheres. I commence by firmly laying hold of the lateral and under parts of the ball of the toe with the thumb and fore finger of the left hand, so as to draw the flap away from the nail; I then pass a steel probe, made for the purpose, between them, and round the epidermis at the root, so as to loosen the skin from its adhesion to the nail; then, with an instrument made similar to a cataract knife, but much thicker and shorter, I dissect the piece of nail from the skin by small incisions following each other. This part of the operation must be done very carefully and slowly, beginning at the top of the nail beyond the point that is imbedded in the ulceration, the edge of the instrument being inclined outwards. As soon as the part can be laid hold of with a pair

of sliding forceps, it should be enclosed, held firmly with the thumb and finger, and then turned gently outwards, in order that the dissection may be carried on to the semilunar fold; the piece may then be pulled out, but if it should adhere to the skin, the knife must again be used to detach it. If the skin is loose and rises with the nail, it may be cut off. In many cases this operation can be performed without inducing hæmorrhage, and if the disease has existed for any length of time, the nail will be more easily removed, as the ulceration will have destroyed the soft parts to which it adheres, and the nail is much sooner separated.

The after treatment consists simply in the application of caustic until the fungus is destroyed, and of lint, wetted with cold water, round the parts. The relief is so instantaneous, that the patient can always walk about immediately after the operation.*

* I performed this operation several years ago at the Hospital of Surgery in Panton-square, in the presence of several eminent members of the profession. The proceeding was favourably noticed in the current number of the "Lancet."

Case XXXVII.—His late Majesty, George the Fourth, was under my care, on account of the nail of the great toe on the left foot pressing into the flesh. It was much curved and thickened, principally towards the root. When walking, the pressure of the soft parts against the edge gave pain: by its being properly attended to every fortnight, but little inconvenience was experienced, nor did it produce ulceration, nor any kind of sore.

From the state of his Majesty's health, instead of cutting away a portion of the nail, I only thinned it occasionally. This did not at all times satisfy his Majesty; he said there was a fullness about the lower part of the nail which he wished to have removed, and would frequently force one of my instruments under it, to show me what he considered ought to be cut away. This I always, by some excuse or other, avoided doing.

At one of my operations I was treating the nail in the usual manner, when his Majesty asked me if I had got the piece out. I gave an evasive answer, when he rather pettishly

remarked, that I did not understand, or would not perform, what he required; and with that his Majesty took the thin or handle part of a dressing comb, which was lying before him, and thrust it violently under the nail, forcing the piece upwards and outwards, so that the nail was lifted from the matrix or fold of skin to which it adhered. The rough manner in which this was done caused him great pain. The piece remained sticking out beyond the flap, so that I was compelled to detach and remove it from the surrounding soft parts. The next day the toe was much inflamed, and erysipelas had commenced on the foot; it was therefore proper that Sir Astley Cooper should be sent for. The case remained under his hands for some time.

His Majesty, with his usual kindness and urbanity, being apprehensive I was uneasy about his foot, desired Sir Astley to send me a letter (the copy of which is annexed),* stating there

* Sir Astley Cooper presents his compliments to Mr. Durlacher, and assures him that his mind may be perfectly at ease respecting the inflammation of his Majesty's foot, which has arisen from no fault of Mr. Durlacher's. His Majesty expresses entire satisfaction at Mr. Dur-

could not be any blame attached to the operation I had performed.

As soon as the inflammation had subsided, I waited on his Majesty as usual, and followed my previous practice. His Majesty then gave his word that he would not touch the nail again, and this promise he strictly adhered to. I had the honour to arrange his Majesty's nails until six days previously to his death.

Case XXXVIII.—A sailor was recommended to my care, who was suffering severely from a diseased state of the great toe, caused by the nail being deeply imbedded in the flesh on each side. It was the most formidable case I ever saw. The toe was so swollen that it measured one inch and three-quarters across its upper surface, and the sprouting fungus met nearly in the centre. On the under side of the toe there were two fissures or gashes as if cut with a knife, immediately under the edges of the nail. The

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lacher's conduct on all occasions: and Sir Astley Cooper is happy in being able to bear testimony to the dexterity and judgment of Mr. Durlacher.

New-street, May 9th, 1823.

inflammation did not extend much beyond the first phalanx, but there was very extensive ulceration on each side, the root being but little involved, and the discharge was extremely offensive. On passing a probe under the fungus, the nail, which was much curved, could be felt as far as the probe could be forced. There was less pain than might have been expected from the state of the disease. The case was altogether so remarkable, that I requested Mr. Liston to see the patient.

The only information I could obtain from him was, that the toe had been in its present state about nine months. He had been in the habit of cutting out the nail frequently, until the proud flesh prevented his doing so; he never laid up, and did not know how the fissures in the under surface occurred, but he had not been in so much pain since they formed, owing probably to the diminished tension of the part. The man was in excellent health.

The treatment I first adopted was intended to allay the inflammation, and subdue the fungous growth, which was effected by the application of

linseed meal poultices and the free use of the nitrate of silver; so that on the fourth day the inflammation and exuberant flesh had greatly diminished, and the discharge from the ulcerated surfaces was much more healthy, but still rather fœtid. I now ordered the toe to be covered with lint soaked twice a day in a weak solution of chloride of lime; on the second day after this application, the size of the toe was so much reduced, that I could pass a blunt instrument under the edges of the nail. The following day I performed my usual operation of removing the nail, by dividing it on each side from the top downwards to its adhesion with the semilunar fold, causing little pain, and very slight hæmorrhage. Nitrate of silver was rubbed on the fungus, and a piece of lint, wetted with cold water, was placed on the toe; in a few days by this treatment there was a very great improvement, the fissures healed, and in a fortnight the patient was quite well.

About twelve months after, I received a jar of preserved ginger and a few cocoa nuts; the man who brought them waited to see me, and I

had the pleasure of again meeting my patient, who to shew his gratitude had brought me this present. He sailed for Jamaica soon after his last visit to me, and he had never suffered the least pain in his toe since. I was surprised, on seeing his foot, to find that the toe nail was not in the least deformed. This may be accounted for, in as much as the matrix was not materially involved in the disease.

Case XXXIX.—A young woman of delicate appearance, who was suffering severely from a diseased state of her great toe of the left foot, was desired by Mr. Samwell to call on me. The toe, which was nearly deprived of its nail, was much inflamed, and had a dirty red, unhealthy look at the sides and lunula, where only a small portion of the nail could be felt, deeply imbedded in the soft parts. The appearance which they presented, and the presence of an ichorous fœtid discharge oozing from the whole of the ulcerated surface, led me to believe that the bone itself was involved in the disease, which on a more careful examination was found not to be the case.

As her occupation prevented her resting the foot as it required, I was obliged to content myself at first with directing the application of poultices for a few days, after which I removed the pieces of imbedded nail, and gave considerable relief. After this the poulticing was continued, and caustic applied occasionally, but no permanent benefit was derived; the part did not in any way improve, nor was there any appearance of the growth of a new nail. The pain was mostly felt at night, and was so severe as to prevent sleep; the part where it was principally experienced being at the sides of the toe, I removed the fold of skin whence the pieces of nail had been previously extracted, and which kept up the irritation. Cold water dressings were afterwards continually applied, and the pain was considerably eased. The upper surface of the toe was then pencilled with creasote, and ultimately cicatrized, but no new nail grew over it, while she remained under my care.

The non-formation of a new nail in this case appeared to me to depend on the feeble state of her health, and I believe the ultimate healing of

the ulceration on the toe was produced by her having undergone a course of steel.

Case XL.—I was requested by the late Sir Astley Cooper, Bart., to see a lady who was in the habit of scraping the great toe nail with a razor, and who had accidentally let the razor slip through it. The pain at the time was very severe, and instead of using adhesive plaster, she applied poultices; the splintered portion of the nail was pressed down upon and into the flesh, and caused considerable irritation, which was followed by the growth of fungus, springing up through the wound. In this state the lady consulted Sir Astley, who advised her to see me, that I might remove the small pieces of nail which were pressing on the sensitive parts beneath. The toe was so excessively irritable, that I could not lift up the penetrating points of nail without giving great pain; I therefore applied the caustic daily, in the hope of reducing the fungus; but as the exciting cause remained, very little progress was made.

The lady being obliged to return into the country, I advised her to have the nitrate of

silver applied daily by her surgeon, and the spiculæ of nail which would be destroyed carefully picked out. In a very short time after she left town, I received a letter requesting my attendance in Sussex, as the toe had become so very painful as to prevent her walking. I found it very much inflamed, and the splintered portion of nail sticking in the fungus, which had risen much higher than when she was in London. I immediately perceived that unless the broken nail was removed, the disease could not be cured, and I accordingly ordered poultices to be applied regularly until the next day, to cleanse and soften the part; after which I commenced dividing the nail below the disease, near to the semilunar fold, and gradually dissected it upwards: very small pieces only were removed at the time, for the lady dreaded the least pain. The fungus was also freely rubbed with the nitrate of silver. This treatment was pursued for upwards of a fortnight, until I had cleared away the nail from around the fungus. The application of caustic, followed by pressure, was continued daily, until the exuberant growth

was entirely reduced, and the pain and inflammation were subdued. The part was afterwards protected by strips of adhesive plaster drawn over the toe, and in about five months' time a new and perfect nail was produced.

Case XLI.—A lady who had been frequently under my care for different complaints of the feet, one day requested my immediate attendance, as she had perceived a stain upon her stocking, and a yellowish oozing from the side of the left great toe nail; it was not attended with pain, nor could she account in any way for its occurrence.

This lady was at all times very nervous, having a dread that lock-jaw, or something else, would one day or other happen to her from her feet. She was at first in great fear of my touching the toe, and until I had positively assured her that no harm could result, I was not allowed to remove any part of the nail to ascertain the cause. I divided a thin strip of nail from the top downwards, which was easily removed, being loosened from the epidermis by a small quantity of serum effused

beneath, and I continued to remove the nail as far as it was detached, when I discovered a cluster of pustules, some of which were broken. I ordered a zinc lotion to be applied with lint, and covered over with oiled silk, and in a few days the oozing ceased. I then protected the part with common plaster, and the nail continued its regular growth.

I am at a loss to know the cause of this complaint, never having met with any such case previously, but I have since seen two others which presented similar appearances, and occurred without any known cause.

CHAPTER X.

THE MANAGEMENT OF THE FINGER NAILS.

The nails of the fingers, when well formed, contribute greatly to the symmetry of the hand. They constitute in the lady an important feature of personal attraction.

According to European fashion, they should be of an oval figure, transparent, without specks or ridges of any kind; the semilunar fold, or white half circle, should be fully developed, and the pellicle, or cuticle which forms the configuration around the root of the nail, thin and well defined, and, when properly arranged, should represent, as nearly as possible, the shape of a half filbert.

The proper arrangement of the nails is to cut them of an oval shape, corresponding with the form of the fingers; they should not be allowed to grow too long, as it is difficult to

keep them clean ; nor too short, as it allows the end of the fingers to become flattened and enlarged, by being pressed upwards against the nails, and gives them a clumsy appearance. The epidermis which forms the semicircle around, and adheres to the nail, requires particular attention, as it is frequently dragged on with its growth, drawing the skin below the nail so tense, as to cause it to crack and separate into what are called ag-nails. This is easily remedied by carefully separating the skin from the nail by a blunt, half-round instrument. Many persons are in the habit of continually cutting this pellicle, in consequence of which it becomes exceedingly irregular, and often injurious to the growth of the nail. They also frequently pick under the nails with a pin, pen-knife, or the point of sharp scissors, with the intention of keeping them clean, by doing which they often loosen them and occasion considerable injury.

The nails should be cleansed with a brush not too hard, and the semicircular skin should not be cut away, but only loosened, without

touching the quick, the fingers being afterwards dipped in tepid water, and the skin pushed back with a towel. This method, which should be practised daily, will keep the nails of a proper shape, prevent ag-nails, and the pellicle from thickening or becoming ragged.

When the nails are naturally rugged, or ill-formed, the longitudinal ridges or fibres should be slightly scraped and rubbed with lemon, afterwards rinsed in water, and well dried with the towel; but if the nails are very thin, no benefit will be derived by scraping; on the contrary, it might cause them to split. If the nails grow more to one side than the other, they should be cut in such a manner as to make the point come as near as possible in the centre of the end of the finger.

The biting or picking of the nails is an unfortunate and pitiful habit, which can seldom be prevented, and frequently continues for life; in many cases they are so disfigured as to be scarcely visible, and that which remains is covered with skin, so that the top of the fingers appears clumsy and unsightly.

My general practice is to remove as much as possible of the thickened skin which confines the nails, and cover one or two of them with black sticking plaster, so that the person, on looking at the black spots, may think and recollect for what purpose they were placed there; at night gloves should also be worn. With young people I have for a time succeeded by promises of rewarding them with that for which they are most anxious.

The most remarkable case with which I am acquainted was that of a young gentleman, who was very much addicted to this disagreeable propensity; various plans were tried without the least effect, but as he was very desirous of learning the flute, a master was obtained, upon his promise to forego the habit. He continued learning for upwards of a twelvemonth, and certainly, during that time, did not touch his nails; they grew to the apex of his fingers, but rather flatter than they ought to have been. About this time he became dissatisfied with the little proficiency he had made, and declined flute playing. In less than six months afterwards

his nails were as bad as ever, although he never was caught in the act of biting or picking them.

It is a most remarkable fact, that middle-aged persons who are addicted to this pernicious habit, seldom or ever refrain from it, and, when in thought, have their fingers to their teeth, as if they were gnawing a bone.

The finger nails are liable to but few accidents that require notice, excepting extravasation from violent pinches or severe contusions, which often cause them to fall off. If cold applications are used immediately after this accident has occurred, the pain will soon be relieved, and the mischief which generally follows may be prevented. If the bruise be very severe, and the pain should continue, the addition of a few drops of laudanum and Eau de Cologne to half a wine-glassful of water, will form a very useful lotion. Dipping the finger into it, or applying wetted rag or lint, will materially assist in the absorption of the extravasation.

The nails are sometimes accidentally torn across, the laceration running down laterally, one

side or the other, in the direction of the fibres, part of the nail being detached from the integuments. The necessary treatment consists in the removal of the loose part as speedily as possible, and then dressing the top of the finger with spermaceti, cold cream, or any other emollient ointment, after which it should be properly protected with a finger-stall of soft kid leather. The pain soon ceases, and in the course of time as the new nail grows the deficiency is filled up. It may be proper here to remark, that nature does not remedy any injury to a nail, such as the elision of a portion thereof either in the centre or at the sides, by filling it up; the removal of the deficient part is effected only by the progressive growth of the layers at the root, by which it is ultimately carried forward beyond the apex of the finger or toe, where it is cut off in the ordinary way.

When a splinter of wood, or any other substance, has been forced under the nail so far that it cannot be laid hold of with the forceps or tweezers, and yet is visible, the readiest means for its extraction, and that which is attended

with the least pain, is to cut down upon it, by carefully removing a narrow wedge-shaped piece of the nail until the end of the substance can be taken hold of with the forceps. Cold water dressing should then be applied for a few hours, and the part afterwards protected with a piece of black caoutchouc sticking plaster.

The nails are in many persons very liable to split longitudinally, when they have grown to a certain length, particularly if they are of thin texture, and the individual has a dry skin. There is usually a line or fine ridge running along the nail, indicating where the splitting takes place; it is exceedingly disagreeable and annoying, as the nail, if not properly cut, is apt to catch in almost everything the finger takes hold of, and sometimes is torn downwards, producing severe pain. The tendency to splitting is very seldom perfectly cured, but by proper management may be prevented to a certain extent. Very little is required to keep them in order; they must be cut as short as possible, and if the split extends below the part which is

usually cut, it should be covered with the caoutchouc plaster, and the nail kept cut down as close to the finger as possible.

The most painful disease is an inflammatory swelling around the nail, called paronychia or whitlow. It sometimes extends to the root, and is followed by suppuration and ulceration under the edge of the nail. In the worst cases, deep seated abscesses frequently destroy the soft parts and injure the periosteum. The disease has been divided into different species, according to the situations which it occupies. It is not always a local complaint, but is connected with constitutional debility, and many young persons are subject to it periodically. The treatment consists of poultices and the use of escharotics, but it is a disease for which medical advice should be always taken, as it will when neglected continue for many months, and ultimately prove of serious consequence.

On all occasions where the nails have been lost by accident or disease, or have been only partially destroyed, it will be advisable to apply cold cream, spread on a piece of lint or

cambric, on the end of the finger, and to protect it by wearing a stall made of soft kid leather, until the growth of the nail is completed.

CHAPTER XI.

WARTS.

Warts (in Latin, Verrucæ,) are generally small, hard, indolent tumours or tubercles, situated on various parts of the body, but principally on the hands and fingers. In their structure they differ altogether from that of corns, as they arise directly from the true skin, and appear to be composed of an elongated bundle of its papillæ, enclosed in sheaths of cuticle, whereas corns are a disorder of the epidermis alone.

Hunter observes, warts are radiated from their basis to their circumference. The surface of the radii appears to be pointed or granulated, like the surface of healthy granulations, with the exception of being harder and rising higher.

Warts are described by authors as of three kinds, the division into varieties depending solely on their shape. The round, which are the most common, have a head like that of a young leek, and are accordingly called "porreau" by continental writers. The flat warts are broader and longer, but not so prominent as the preceding; they are termed sessiles, or verruca formicariæ or myrmecia. The name "ant-wart" has been applied to them somewhat fancifully, from a presumed resemblance between the pain caused by cutting them, and the stinging of an ant. The third variety (the pendulous) are designated by some authors verrucæ pensiles, and by others achrocordon, or achrocorda.

Besides these, which are the most ordinary and most known species, others are described by different authors. Among them we find the fic, merisca, crete, thymus, and other kinds of condylomata. All these are more or less connected with a constitutional origin, and as such are more appropriately treated of in systematic works on surgery.

Those common, well-known warts which arise either from some local irritation of the skin, or without any known cause, and which are altogether independent of the constitution, are alone treated of in this chapter. They occur much more frequently on the hands of children and young persons, than on those of the more advanced in life, and occasionally persist or return in spite of every treatment that can be adopted, yet are known to disappear spontaneously.

Innumerable popular remedies have been from time to time recommended for the treatment and cure of warts. Some of them are of a most singular and extraordinary nature; others presenting a great likelihood of success from the character of the remedy itself: many of them still hold possession of the public mind, and are occasionally had recourse to.

Etmuller seriously mentions as a certain remedy the green moss gathered from the skulls of persons who have died a violent death; this is to be exposed to the air and made into a

paste; and Juncker states that a thread drawn from the shirt of a dying criminal from near the arm-pit is equally valuable: as many knots are to be tied in the thread as there are warts to be destroyed, and each knot is to be rubbed on the corresponding wart, after which the thread is directed to be buried in a moist place. As the knots rot away, so, says Juncker, will the warts consume and disappear. He adds, he has never known it to fail. A piece of stolen raw beef is also occasionally employed for the cure of warts, by rubbing them with it and afterwards burying it; its decomposition will be attended by a similar process in the warts. Many more such absurdities are to be found in the works of ancient writers on surgery. Warts are sometimes even charmed away. It is almost needless to observe, that these and other superstitious observances, which are now confined to weak-minded and uneducated persons, are totally incompetent to effect the desired purpose.

The general methodic treatment consists in the application of caustic, alkalies, acids, and

escharotics, or else their removal by the ligature or the knife.

The pendulous or sessile wart, which is connected with the integuments by a small foot stalk, is readily removable by the application of a ligature of horse hair or waxed silk thrown around and drawn tight, and secured with a surgeon's knot. When deprived of the access of blood, by which its vitality is sustained, the wart will gradually shrivel up and separate. If there should afterwards appear any remains of a root, it must be touched with nitrate of silver until destroyed, for if any portion remain, the wart is certain to be reproduced.

The caustic alkalies may be frequently applied for the removal of the round and flat warts, but they will not always be successful. The best treatment is to cut the wart as close as possible without giving pain, and, while yet bleeding, freely to rub the lunar caustic on it. This operation is to be repeated until the whole is entirely destroyed. In some cases nitric acid may be used instead of the nitrate of silver, but

great care is requisite in using either of these escharotics, when the wart is seated near or upon a joint, where the skin is thin, as considerable mischief may follow their indiscriminate application.

CHAPTER XII.

CHILBLAINS.

Although chilblains come more directly under the notice of the surgeon than of the chiropodist, yet as they affect the integuments of the feet, it will not be considered inconsistent with the nature of this work to offer a few observations on them.

A chilblain is the result of exposure to severe cold, followed by the too sudden application of heat, and is produced by the rapid distension or congestion of the blood vessels, which had been previously contracted. It presents the appearance of an inflammatory swelling of a lurid red or deep purple colour, and is accompanied with intense itching and pungent pain, which frequently become intolerable. Persons of a weakly or scrofulous constitution, and the young and aged, are much more liable to the formation of

chilblains than are the robust and healthy. They sometimes arise from constitutional causes, more especially such as impede or diminish the circulation, and are met with principally on the hands and feet.

When neglected or improperly treated, the colour of the affected part deepens; it vesicates and becomes ulcerated, sometimes even producing caries of the bone beneath, or, in bad constitutions, terminating in gangrene or mortification. There is, however, but little danger to be apprehended, when proper care and attention have been used.

As preventive measures, the best plan to adopt is wearing warm coverings to the feet, and taking moderate exercise, walking rather briskly, being particularly careful not to approach near the fire whilst the feet are excessively cold and painful. Gentle friction with a flesh brush, or a coarse towel, may be frequently used with advantage, taking care not to abrade the skin; wearing oiled silk socks to come up above the ankles has also been found useful.

The remedies recommended are innumerable, but the benefit to be derived from any of the recipes will depend upon the state of the local disease and of the general health of the patient; those most in use are sea water or brine, stimulants of every description, such as camphorated spirit, vinegar and spirits of wine, turpentine, soap liniment with cantharides, &c. These applications must, however, only be used previously to ulceration.

When the chilblain breaks, and becomes what is termed a "kibe," it should not be tampered with, and the ordinary medical attendant should be consulted, as delay cannot but be injurious. Attention to the general health also becomes indispensably necessary.

CHAPTER XIII.

ON THE MANAGEMENT OF THE FEET.

The proper management of the feet is of the greatest consequence to health and comfort, nor is there any subject connected with medical science which requires more attention. However trivial the instructions I am about to offer may appear, their value will be appreciated when the necessity of keeping the feet in proper order is taken into consideration, as there is no part of the human frame of more importance to our well-being, or which requires more personal care.

From the first wearing of socks and shoes, great care and attention are requisite. In the first instance, the socks in summer should be made of fine cotton or silk, in cold weather of a woollen fabric, and of sufficient length,

that every toe may have room to extend itself.*

The feet should be washed evening and morning, the same as are the hands, and wiped thoroughly dry, particularly between the toes, and the nails should not be cut too often, nor at any time shorter than to be on a level with the tops of the toes. It is also advisable that the shoes be a size larger than the foot, and made of soft kid leather.

When there is a tendency to hereditary malformation, it generally begins to show itself in the toes of one foot, but sometimes of both, from the age of four to seven years. The deformity commences particularly in the first toe, which lies over or under the second, or the upper part of it is confined between the great

* If a stocking could be made in the same manner as a glove, that each toe might have a separate stall, so as to prevent their coming in contact with each other, the toes of children might, I think, be kept in their proper places, and with attention to the make and fit of the shoes, the formation of corns be prevented. The difficulty would be in obtaining a good form of the toe-stalls, as they should be made with only one seam, and that under each toe.

toe and the second, so that when they are all pressed together, the middle joint of the first toe is elevated higher than the others. This hereditary development or malformation is very remarkable, and I have had many opportunities of observing it.

If the malformation is very considerable, it may be advisable at this early age to endeavour to straighten the toes, to effect which, I should recommend a piece of stiff pasteboard, padded with wadding, covered with silk, and cut to the shape of the under surface of the foot, to be applied from the waist or hollow to the tips of the toes, so that they may rest firmly on it; at the end of the pasteboard, holes or slits should be cut on each side of the toe requiring to be compressed, and a piece of narrow ribbon crossed over the toe, and passed through the holes, the toe being properly pressed down before the ribbon is secured to the under part of the pasteboard.

A more simple plan consists in the application of a narrow strip of adhesive plaster, turned round the toes which require to be kept in their

proper position, passed under the others, then crossed over the instep, under the foot, and brought over again. It must be drawn sufficiently tight, to prevent the toes from slipping. The plaster should be changed once a week, or oftener, if it does not adhere.

Whilst attending a lady who had been under my care for many years for bunions, caused by a deformity of the left foot, and for a corn at the end of her little toe, she showed me the feet of her son, a child about four years of age, as a specimen of perfection, and extolled the care she had taken in ordering his shoes and socks. The next year I was requested to see the child, as he complained of pain in his left foot, and to my great surprise I found his little toe bent under the next, and a corn in the same situation as on his mother's foot. The first toe was also more raised than the great and second toes. In fact, the whole foot was an example of hereditary deformity, notwithstanding the same attention had been paid to his feet as when I first saw him. The right foot was of a natural shape.

I recommended a narrow strip of adhesive

plaster to be passed once over and around the projecting toe, and under the others, so as to keep each in its proper position. The strap was afterwards to be crossed over the instep and once round the foot. I directed it to be renewed once a week, or more frequently if necessary. I have not yet heard the result in this case, as the family live in the country; but I have seldom known much advantage derived from this plan in less than twelve or eighteen months.

About this period of life, from four to seven years of age, and in some instances earlier, corns which are easily removed are apt to form superficially upon the projecting joints, and should be picked out, after the feet have been bathed, by the nurses or those who have the care of the children, as soon as the thickening is visible. If the corn soon returns and gives pain, it should be submitted to a competent practitioner, for by proper management and attention, many years of suffering and inconvenience may be prevented. It matters not whether they are caused by hereditary or constitutional predisposition, or mere friction; they cannot be too soon attended to.

From the age of seven years and upwards, in consequence of the child taking more exercise and wearing stronger shoes, corns are of more frequent occurrence, and more developed. Female children are more subject to the soft species between the toes, occasioning great pain, which they endeavour to remove by walking on the inside of the foot, and throwing the weight of the body on the edge of the great toe and inner side of the heel, thus causing the ancle to turn outwards, inducing great weakness in the feet, and producing an unseemly gait in walking.

Nurses should watch children when at play or walking, to see that they place their feet firmly on the ground, and if any irregularity is perceivable in either or both feet, such as rolling from side to side, or walking on the inside of the foot, the toes should be carefully examined, as most probably a soft corn will be found on the web between the third and little toes, and frequently in a state of suppuration, for many children have a dread of anything being done to their feet, and endeavour to re-

lieve the pain in all manner of ways, rather than complain.

If the inner ancle appear much larger than natural, and in walking presses much inwards, as if the child had not any support for the foot, it generally proceeds from relaxation of the ligaments, produced by delicacy of constitution. Under these circumstances no time should be lost in seeking medical advice, because, if neglected and allowed to proceed for a length of time, a confirmed awkward gait will be the consequence.

If resulting from corns, they should be carefully and properly removed, and every means adopted to make the child, when walking, bear on the outside of the foot, the nurse being first assured no cause of pain remains. If it be produced by weakness of the ancles, well-adapted laced boots should be worn, with an extra thickness of sole on the inner side, so that the ancles may be supported, and at the same time kept in a natural position.

These complaints must not be confounded with the diseases of weak and sickly children,

for weakness of the ankles is often produced by constitutional debility, and may also be caused by an affection of either the loins or knees, requiring proper surgical treatment.

The children of a nobleman whom I had under my care for some years, had in infancy their feet exceedingly well formed, but being of delicate constitutions, their skin was predisposed to corns. I gave strict orders to the nurses to take great care with the shoes and socks, which I found occasionally too short and narrow.

When I first attended them, two of the young ladies had very troublesome corns between the little and the third toes, which I had great difficulty in keeping free from pain, as they grew again, and became as painful as before within a month after they had been operated on, causing them to walk very unevenly, and bear particularly on the inner side of the foot.

The eldest complained of great weakness in the ankles, and took exercise with reluctance, being easily fatigued. I directed laced boots

to be made so as to fit tightly round the ankles, with strips of Indian rubber on each side of the holes, broad treads, and an extra thickness of leather at the inner sides of the soles and heels, so as to raise that part of the foot. These boots gave great relief and support in walking, and the young lady, in the course of a few months, derived considerable benefit from their use.

Young persons should be strictly cautioned not to tear off the toe nails, which they are very apt to do to save trouble, from the facility with which it is effected. Much mischief, however, may be caused by such a practice, especially with the great-toe nails, which, being formed of longitudinal fibres, the laceration is more likely to be continued laterally towards the glands or matrix, than completely across.

Children in the nursery should be watched when they put on or take off their socks; and boys, when sent to school, should be instructed to cut their nails in a proper manner, and impressed with the evil consequences of tearing

them. They should be taught that cleanliness is essential to health, and directed either to sponge their feet, or wipe them with the end of a wet towel, every morning, rubbing them afterwards thoroughly dry, particularly between the toes.

Children, when at school, should not have more than two pairs of shoes in wear, as otherwise they would become too small, and then be the source of much mischief, and prevent that exercise so essential to their health and pursuits. If the shoes are too short, the toes are pressed back towards the instep, or otherwise deformed, and are subject to corns; and if too narrow, the toes are pressed together towards the point, the joints at the articulation of the metatarsal bone with the great and little toes become painful and inflamed, and give rise to that malformation of the foot which is called bunion.

When the shoes need repairs, because they are burst at the sides, or require soleing, the school shoemaker not unfrequently takes in the upper leather, or lays a new piece badly

sewn on the broken part, so that the seams are likely to bruise the toes. When such is the case, and the boy experiences pain or difficulty in walking, or the feet are chafed and bruised, they should no longer be worn.

A youth passing through London on his way to Scotland from Eton, called to consult me about a soft corn on his right foot. He limped into the room, and drew off his boot with some difficulty.

On examination, I found the little toe completely wedged down upon the next, and sticking to it: separating them gave great pain. The corn had suppurated, and the discharge was offensive; there was a deep ulcer with thickened edges, and the foot was much inflamed. All this was entirely owing to the severe pressure of the boot.

I did what was necessary, and desired him to rest his foot; this, however, I was given to understand was impossible, as the carriage was waiting at the door to convey him to the railway station. On looking at his boots I could not conceive how he had walked in them, or even

got them on, as they were in every way considerably too small. It appeared that he had not been provided with any other since the last vacation, and would not purchase a new pair until his return home. He had never had corns, or anything else the matter with his feet previously.

I ripped open the boot between the sole and upper leather, and when he put it on afterwards all the toes projected completely over the side of the sole, and in this manner he commenced his journey.

This case clearly shews how careless boys at school are about their feet, and how needful it is to caution them against the consequences of neglect.

The employment of foot baths, either hot or cold, must depend greatly on the difference of constitution and habit. For persons advanced in age, the tepid bath is preferable, particularly if they are subject to gout or rheumatism. Any sudden change of temperature in such cases might do harm, and the feet ought not to be put into water of any kind, while the patient is

actually suffering from either of those disorders, except by the direction of the medical attendant.

The proper time for bathing the feet is at night, when retiring to rest.

In advanced age persons do not generally bathe the feet; they would, however, derive great comfort from sponging them once or twice a-week, or oftener, with soap and warm water, wiping them thoroughly dry immediately afterwards, then using the flesh brush, and rubbing off the loose cuticle or scales with a coarse towel. When there is an accumulation of the cuticle between the toes, a fine cloth, wetted with Eau de Cologne or any other spirit, may be drawn backwards and forwards between them two or three times a week.

These rules will be of great use to persons in feeble health.

Adults in good health may bathe their feet every morning with cold water, wipe them thoroughly dry afterwards, and then rub Eau de Cologne freely over them with the palm of the hand. When dressing for dinner, the feet

should be washed with soap and water in the same manner as the hands.*

Care should be taken when putting on the stockings that the seams do not press against the little toe, such being (from the pressure of the shoe) one of the most common causes of corns, and also productive of severe pain from those already formed.†

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* A paste may be made, and kept in pots ready for use, by scraping Windsor or other soap into flakes, and beating it up with hot water to the consistence of pomatum. A small quantity of this may be put on the end of a wet towel, and the feet washed with it. The towel must afterwards be rinsed, and the superfluous water wrung out, then Eau de Cologne poured on the damp part, and the feet well rubbed with it.

This paste, thus used, will be found to be very serviceable by travellers who have not time for general ablutions.

† I am convinced that continual pain and annoyance are produced by the pressure of the shoe against the seam, however trivial it may appear to those who have not felt the inconvenience. This becomes evident on taking off the stocking immediately after walking, when a corresponding indentation will be seen along the side of the foot to the point of the toe. I knew a gentleman who frequently in walking was compelled to stop in the streets and twist his stocking round, to remove the pain he suffered from a corn on his little toe. There will be

When a hot foot bath is required previously to cutting the nails, &c., it should be used in the morning, and made with bran and water, but if the skin is naturally soft and moist, salt may be substituted for the bran. The temperature of the water should be from 90° to 96° Fahrenheit, and the feet should not be kept in the bath more than fifteen minutes. As soon as they have been dried, the callosities (particularly those about the heel) and excrescences of all kinds should be scraped or rubbed off with a coarse towel, pumice stone, a fine rasp, or corn rubber.

If the cuticle about the heel is very thick and chapped, it must be rubbed until it becomes smooth, after which a little cold or Circassian cream may be applied. If the fissures extend through the skin (as is sometimes the case), after the thickening has been removed, a piece of soap plaster should be drawn tightly round the heel, to keep them in apposition.

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less difficulty in keeping the seam off the toes by wearing the stocking inside out,—that is to say, the smooth surface next the foot.

When a bath is used medicinally, or in consequence of fatigue, the evening is the most proper time.

Ladies, for general use, should wear silk or fine thread stockings, and spun silk in the winter; even when the feet are naturally cold, the usual under stocking will be sufficient for additional warmth. If they are liable to swollen feet, particularly about the ankles, support may be obtained by wearing boots with openings over the ankles, or Sparkes Hall's patent elastic boots will be found exceedingly comfortable, as the ankles will be supported and freed from the usual pressure of lacing, the boots being made with an elastic spring over each ankle, which yields equally in all parts to the swelling. Walking shoes should be made of kid or French prunella, and if the feet are affected with bunions, the elastic spring let into the centre of the vamp will be found very beneficial, as, while affording support, it will yield with the same facility to the feet as the boots do to the ankles.

Silk and satin dress shoes are made upon the same principle, but whatever boot or shoe is

worn, comfort in walking chiefly depends on a correct fit.

Sportsmen, during the shooting season, ought to wear woollen stockings, and change them daily; the shoes should be made right and left, and to fit firmly over the instep and round the ankle, so as to prevent the foot from slipping about in them; the soles ought to be considerably thicker than are usually made, with a full tread, and the waist narrow; the outside should not be too much twisted, but be made straight until above the little toe, and then shaped to the foot; the upper leather should be very pliable and soft, lined throughout (instead of the usual narrow pieces pressing on the toes), and properly fitted, so as not to have any ridges or uneven surface. If the shoes can be depended on as waterproof, it would be preferable.

The foot of the stocking, as far up as the ankle, should be well rubbed over with common yellow soap, to prevent the feet from being chafed or galled. Stockings thus prepared ought to be worn constantly during the season. Half

a dozen pairs may be prepared at once, so as to have them always in readiness. When the stockings are changed in the evening, of course the clean ones should be worn without soap.

After the day's fatigue the feet should be kept for ten or fifteen minutes in hot water, in which two large handsful of salt have been previously dissolved; then wiped thoroughly dry, and well rubbed with Eau de Cologne, brandy, or other spirit.

A celebrated sportsman told me, that when using the soaped stockings thus prepared he has seen a lather forced out above his shoes, from the heat of his feet, and the continual friction in walking. He also informed me that he has been frequently obliged to change his stockings during the day without catching cold, or suffering any other inconvenience. He never neglected the hot bath in the evening, and always rose quite refreshed the next morning. During the whole season his feet were never chafed nor blistered.

I have heard of the feet having been rubbed with tallow, previously to a day's sporting, for

the same purpose, but I cannot speak in favour of the plan, as I have never met with a person who had given it a trial. The action of the soap upon the skin in keeping it moist and supple, can be readily accounted for by the quantity of alkali it contains.

Pedestrians who take immoderate exercise, or undertake a walking tour on the continent, should wear woollen stockings and shoes with broad thick soles, and take particular care of their feet, washing them every morning with soap and water. If the feet are tender, and they are accustomed to use cold water, they may be sponged, or bathed for a few minutes in salt and water, and then thoroughly dried. In the evening the feet should be bathed in hot water for ten or fifteen minutes, wiped with a coarse cloth, and placed in a horizontal position by lying on a couch, or resting them on a chair; after having been exposed to the air for some time, they should be well wetted with spirits, and clean stockings put on.

If annoyed with corns, after the bathing they may be picked or scraped with a small, blunt-

pointed knife or instrument made on purpose, or rubbed with a corn rubber, a fine rasp, or any other safe means, but a razor or other sharp instrument should not be used on any account, as an accident may soon occur, and by drawing blood, however slightly, the next day's journey may be prevented, or, if persisted in, inflammation may come on, and put an entire stop to the traveller's anticipated pleasure.

I knew a gentleman who left London for a pedestrian tour through Switzerland, previously to which his feet were put in order. When he arrived at Geneva, finding his corns not so comfortable as he could wish, he was recommended by the waiter at the hotel where he was staying, to a German corn-cutter, and, contrary to my instructions not to apply to any person abroad who was unknown to him, he placed himself under his hands.

Unfortunately he did not know the language, and while he was endeavouring to explain that he only wanted his corns carefully pared, the waiter held his foot, the operator ran an instrument round the corn, and then tore it out. The

operation gave him great pain, and his toe bled freely. The next day the foot became so inflamed, that he was obliged to send for a surgeon, to remain six weeks at the hotel, and ultimately to return to England, without accomplishing his journey.

I mention this case to caution others against employing persons who are not professionally recommended to them, and that they should, if possible, become their own operators, in preference to having recourse to unknown empirics.

If there are blisters on the toes, and in situations where the skin is likely to be broken, they should be punctured with a needle, at the part where there is most serum collected, and the contents pressed out with a cambric handkerchief or a piece of lint. This should be done in the evening after bathing the feet, so that they may be rested afterwards. If the blister is situated on the point of the little toe, or on any other part that is not very painful, it is better not to interfere, but to allow the serum or fluid to be absorbed, and when the cuticle is dried up to remove it.

The same plan should be adopted if the feet are inclined to be chafed, as was directed for sportsmen.

Short shoes must not be worn on any account, especially when sporting or taking exercise, as they press on the tops of the toes (particularly on the great one, which is more sensitive than the others), causing in them and at the root of the nail a degree of uneasiness which is seldom noticed, unless attended with pain and inconvenience.

Whenever blood is found on the foot of the stockings, the toes and nails should be carefully examined, and if by pressing on the nails blood oozes out or collects around the root, attended with redness and swelling of the toes, it may be inferred that the shoes are too short, and the toes are driven against their points.

The cause of the mischief should be at once removed, when a piece of lint wetted with zinc lotion, and applied around the nail and toe, will be sufficient to restore the parts to a healthy state. If the nail feels loose, it must be cut as closely as possible to the top of the toe, all

pressure should be avoided, and the lint continued until the oozing has ceased.

The perspiration of the feet seldom requires medical interference, unless it is either to such an excess as to be annoying, or the odour so very disagreeable as to be offensive. This latter is a source of exceeding discomfort to many persons who are otherwise in good health. The odour is most perceptible in warm weather or in hot rooms, and in many cases is so fœtid, that the society of the afflicted person is avoided.

No effectual cure can be expected, but cleanliness is absolutely necessary; changing the stockings frequently, washing the feet with rose water, and rubbing them with scented oils twice a day, is all that can be done. If the perspiration is profuse, an astringent lotion may be used after bathing, and before employing the scents. A solution of the chloride of lime or sodium may be also used with advantage.

I was requested by a gentleman to see his valet, as the odour from his feet was so very offensive, that he could not stay in the same room with him. He was, however, desirous to keep

him in his service, if anything could be done to make him less disagreeable.

I recommended the servant to wash the perspiration off his feet with plenty of soap and water, and change his stockings twice a-day, before he went into his master's room. After bathing, he was directed to rub a strong scented oil over his feet, and to use a solution of the chloride of lime twice a-week. I also advised him to wear scent bags from the perfumer's about his person. By following these instructions, he went on very well, and will no doubt continue to do so, as long as he takes care to follow my advice.

The most extraordinary case I have met with was that of a gentleman, whose feet perspired so profusely, that he changed his stockings whenever he had an opportunity during the day. The cuticle was white and shrivelled, like the hands of a washerwoman who had been at work during the whole day; the odour was not remarkably offensive, but sufficiently so to be a nuisance. His health was not much affected, but the complaint was a constant annoyance, as

he could not go far from home, nor take sufficient exercise, and at times was compelled to debar himself the society of his friends. If in hot weather he had been from circumstances prevented from attending to his feet as usual, his stockings would be so saturated as to cause the skin to peel off in large thick layers, leaving the feet very sore for many days. At the time I saw him, although his stockings had been put on only two hours, they were quite soaked through.

When the skin breaks into fissures between the toes, the cracks extending around and under them, it is caused by an acrid condition of the perspiration, or the want of sufficient ablution. In either case it is easily cured by washing the parts with warm soap and water, and applying a piece of lint or rag, wetted with camphorated spirit or tincture of myrrh; or, if there be much moisture, by dusting between the toes every morning with a muslin bag containing hair powder, chalk, or Fuller's earth, dried and rubbed into a fine powder, the parts being first well washed and dried.

When the toes adhere together from the pressure of the shoes, a piece of new silver or tissue paper, folded and cut to the shape of the top of the toes, placed as far down between them as it will go, absorbs the perspiration, and frequently prevents the formation of soft corns. It should be changed every day, and kept perfectly smooth.

The want of perspiration, with a dry and burning skin, arises more from constitutional disturbance than from local disorder. Dyspeptic and rheumatic persons are particularly liable to it, and suffer more or less as the stomach is deranged. To relieve the harsh, hot skin, the feet should be bathed in warm water mixed with oatmeal or bran, and should be frequently rested, especially after walking; but the greatest benefit will be derived from the restoration of health under judicious medical advice. A foot bath, containing the bicarbonate of potash in solution, is frequently very beneficial.

Cold, clammy feet are indicative of debility, and little relief can be obtained from ex-

ternal applications. Camphorated spirit, or any stimulating preparation, well rubbed over the feet, will, however, be found extremely serviceable.

THE END.

LONDON:
S. TAYLOR, 2, GEORGE-YARD, DRURY-LANE, STRAND.

Plate 1.

Fig 2

Vascular excrescence.

Fig 1.

Callosities

Alex.r Darlachar del.t

Scotford, sc.t Lith. 276 Strand

Plate 2.

Fig 1

Fig 2

Fig 1. Neuro vascular Corns.
Fig 2. Festerd. Corns.

Alex.r Durlacher del.t

Swaborn Bro.s Lith. 276 Strand.

Bunions.

Swinford Brothers Lith 276 Strand

A. Durlacher del

Plate 4.

Fig 1.

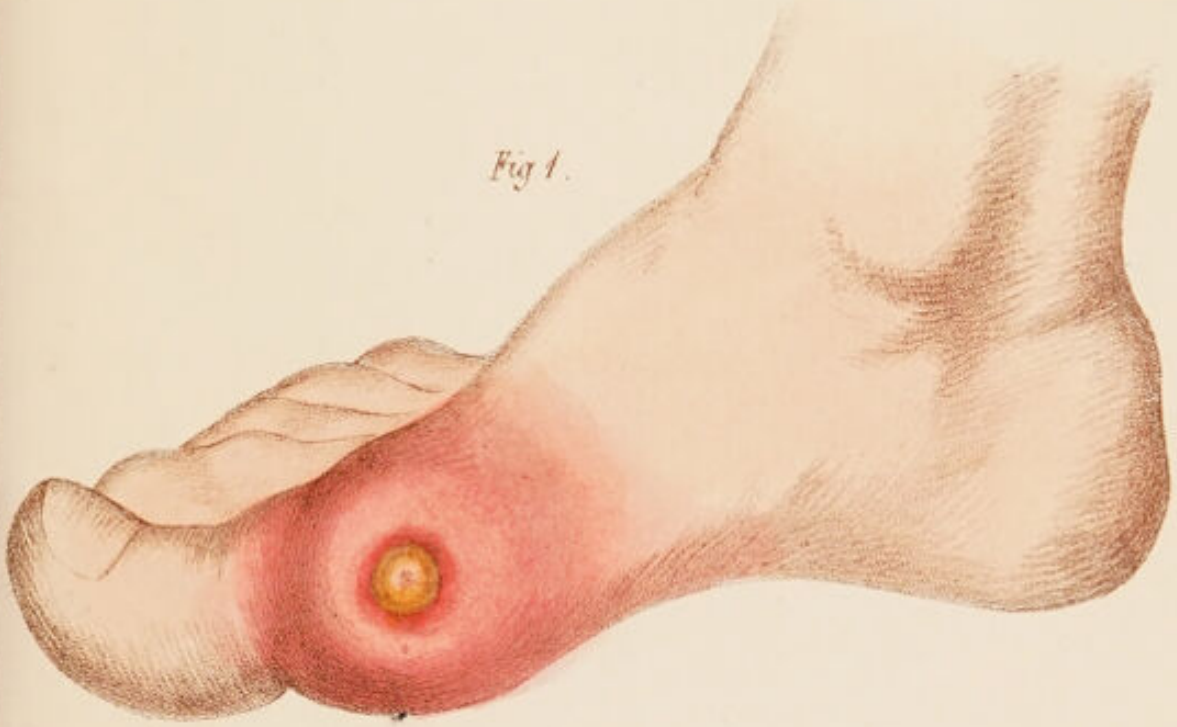

Fig 2.

1. Festered Bunions.
2. Ulcerated Bunions.

Swinford Broth.s Lith. 276. Strand.

A. Darlacher del.

Diseased growth of Nails.

Alex.r Dworiacher ad.b

Swanford, Bros. Lith. 216 Strand.

Nails growing into the Flesh.

Alex.r Dorlacher del.t

Swinford Bro.s Lith 276 Strand