The art of preserving the feet ; or, practical instructions for the prevention and cure of corns, bunnions, callosities, chilblains, &c.; To which are added, directions for the better management of the hands and nails / By an experienced chiropodist.

Contributors

Experienced chiropodist.

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THE

ART

OF

PRESERVING THE FEET;

OR,

Practical Instructions

FOR

THE PREVENTION AND CURE

OF

CORNS, BUNNIONS, CALLOSITIES,

CHILBLAINS, &c.

WITH OBSERVATIONS ON THE

DANGERS ARISING FROM IMPROPER TREATMENT,

ADVICE TO PEDESTRIANS, &c.

To which are added,

Directions for the better Management

of the

HANDS AND NAILS.

BY

AN EXPERIENCED CHIROPODIST.

LONDON:

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1818.

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CORRECTION.

P. 147, for *Delphinium*, substitute *Pulvis Sabinæ*, or *Savine Powder.*

PREFACE.

IT has been too much the fashion, ever since the commencement of the modern school of medicine and surgery, to consider certain ailments of the human body as beneath the dignity of science; in consequence of which the neglected extremities of the system have been either consigned to the care of ignorant quackery, or to the absurd and often dangerous remedies of vulgar prejudice and tradition.

In the following treatise I have therefore two objects in view—one, to shew the importance of good medical and surgical advice under certain ailments of

the Feet and Hands, thereby inducing patients to apply to regular practitioners, making such complaints appear more worthy the notice of the graduated and licensed operator—the other, to present my readers with such rules as will enable them to judge when scientific advice may be necessary; and, if not, to avail themselves of the simple remedies which nature offers with a liberal hand, but avoiding such deleterious applications as ignorance might recommend and inattention might adopt.

Under the general head of CHIROPODY, is contained whatever relates to the Hands or Feet; but the latter members, being most frequently affected will occupy the greater part of the following sheets. It might indeed, be ranked under the new title of *Podology*,

embracing the whole ART OF PRESERVING THE FEET, and of preventing, or properly treating, the maladies which may be considered as almost peculiar to them: amongst which must be enumerated every species of cuticular affections, whether known under the name of Corns, Callosities, Bunnions, Chilblains, Warts, Distortion of the Toes, Diseases of the Nails, Immoderate Perspiration of the Feet, &c. &c. all of which merit the attention of the Podologist.

Such a title however, or something very similar to it, has been usurped by an ignorant set of individuals whose sole stock of knowledge consisted in cutting Corns, shaving off Callosities, or selling their *infallible* corn-plasters, infallible only in ever failing to cure. Nor is it

surprizing; when we see the most ignorant of mankind, men who cannot even write plain good English in their advertisements, assume the appellations of dentists and oculists, on the mere plea of their selling some silly, if not dangerous, dentifrice, some collyrium or unguent whose effect is to ruin those eyes which it cannot cure.

It is true indeed that extensive knowledge, or great surgical practice are not absolutely necessary for the Podologist—the simplicity and easy intelligibility of the rules laid down in the following sheets, must render that perspicuous to every reader. But unfortunately this has tended to induce regular practitioners to neglect the art entirely, so that it has fallen to the lot of ignorant men, who try to live by making a mystery

of that which every individual may daily perform and accomplish. Thus does the cause of the evil operate as a preventive against its own cure; for the art has now sunk so low that those best qualified despise it as much as they would veterinary practice; and nothing is left for him that wishes to benefit his fellow creatures, but to render every man his own podologist.

Empirics however will still exist. The natural indolence of a great portion of mankind must always prompt them to rely upon the pompous professions of the quack, rather than trust to their own exertions; yet my labours will be amply repaid if I can only prevail upon a few liberal minds to think and to act for themselves. Should the quacks of the day take a lesson also, it will be

better both for themselves and their patients.

I am aware that there is a small, a chosen few, in this metropolis, to whom these remarks do not apply; but the *Public* have no means of ascertaining the difference between the rational and skilful practitioner, and the soi-disant corn doctor. If such men cannot be dignified with a full diploma from Surgeon's Hall, it would be well if some species of sub-graduation could be adopted, which should serve to distinguish them from the herd of impostors that prey upon the sufferings of mankind. Such a sub-graduation, grounded upon a well conducted examination of each candidate respecting the knowledge of the foot alone, would stamp respectability upon the successful, and enable

the Public at large to avail themselves of those talents which too often repose in the shade, whilst ignorance and impudence brave it in the face of day.

During the course of a long general practice, this part of anatomical medicine has always appeared to me to be one of most serious consequence. If trifles make the sum of human bliss, they too often produce the sum of human misery; and it will generally be found that the most serious results have proceeded from circumstances apparently of little importance at the outset. The feet, indeed, are most out of sight; but they ought not therefore to be most out of mind. They are, both literally and metaphorically, the stay and support of the human body. Deprived of their use, man at once loses one of his most important

powers—the power of locomotion, and he can no longer be said to live, but only to vegetate, since the want of necessary exercise must soon impede the due developement of every other faculty, whether bodily or mental!

How fortunate then for man, how wise and benevolent in the arrangements of nature, that the foot is so formed as not to be generally liable to serious accidents from external causes; for the smallness, as well as the spongy softness of the bones of the feet render fractures of them extremely rare: even dislocations are by no means so frequent as might be feared from the complicated mechanism of their arrangement. In fact, though the disorders that do attack the lower extremities are not precisely under man's guidance in all instances, yet their cure

always, and their prevention very often, are completely within his power, call daily and hourly for his care and circumspection, and seem as if calculated and intended to excite the exercise of his rational faculties in a due attention towards them.

Again, if we examine the construction of the foot, its extraordinary varieties, and itscom plete and involuntary adaptation to all circumstances, we cannot help feeling both gratitude and admiration towards Him who made us. A moment's observation will shew us that when we walk upon a smooth surface, the floor of a room or hall, or the flagged ways in the streets, the foot always flattens itself to its position. If walking over a place which is uneven and full of holes, the sole of the foot constantly assumes

a convex shape; or else adapts its concavity to the projections that it passes over.

In some cases we rest involuntarily, but judiciously, upon the toes, in others upon the heel, or perhaps upon the side of the foot; so that in every possible case, the shape of the foot varies according to circumstances; but, however apparently irregular that shape may be, still do the numerous bones and cartilages, the toes and other parts of its conformation, preserve such a connexion and arrangement that the foot itself is always in a state of the most perfect firmness and solidity.

Having made these general observations, I shall now proceed to the body of the work, premising that it is not my object to produce a scientifically didactic

book, filled with theories and terms of art; but a plain, practical guide to the world at large, enabling every person of common sense and plain understanding to act for himself, to avoid what is dangerous, to prevent much that threatens, and to cure by a simple process what ignorance, obstinacy, and self-interest too often convert, from trifles, into evils of the most serious magnitude.

I offer no theory to amuse and delude. Practical observations have been the basis, and practical experiments have erected the superstructure. My object has been, not to persuade, but to convince. The truth and accurary of every part are open to the test of experience by every reader; for there is perhaps scarcely an individual in the kingdom who does not suffer more or less from

the complaints here treated off. But in putting my lessons to the test, they incur no risks; here are no nostrums, or panaceas requiring faith and secresy to ensure their efficacy. A child may read and understand; and even a child, unless he is wayward indeed, may practise without risk or error—but the work is now before the Public, and to their tribunal I appeal.

SECTION I.

GENERAL OBSERVATIONS ON THE HUMAN FEET, THEIR DISEASES, IRREGULARITIES, DEFORMITIES, &c.

THE HUMAN FEET, often the most neglected in a medical point of view, though perhaps the most exposed part of our system, are probably the seat and also the cause of as many complaints as afflict MAN in his civilized or savage state. To treat of all these is not my intention. Such a plan would be too extensive for a popular essay applicable to every day practice; but as amongst all the infirmities to which the LOWER EXTREMITIES are subject, excrescences on the epidermis, and other divisions of the skin, including also the diseases of the nails, are the most common, the most troublesome in their first development, and often leading to others of dangerous consequences, I shall dedicate the following pages to them, though not ex-

clusively. The three most important points of our research, are CORNS, CALLOSITIES, and BUNNIONS; but other subjects connected with a due preservation of the feet shall not be neglected.

How essential a work of this kind must be to the public at large is manifest from the well authenticated fact that four-fifths of mankind, from infancy to old age, are more or less afflicted with complaints in the feet, dependent upon the state of the skin. It is well known that from the earliest periods these complaints have existed; and though hitherto medical writers seem not to have considered the subject worthy of investigation, yet surely the acute sufferings, often most extreme, occasioned by cuticular excrescences, ought to have long since engaged the attention of the medical world. To this observation one partial exception may be adduced in the case of Sydenham; but then his notice of the subject is solely confined to the expression of a wish that surgical ope-

rators would pay some attention to this interesting though neglected department of their profession.

CHAPTER I.

Of Corns in general.

In medical writings the corn is technically termed "clavus pedum," and considered as a tubercle without organization, proceeding from the substance of the epidermis, and originating in the tightness of shoes or boots. How far this is correct shall be presently examined; at present it is sufficient to observe that this tubercle in general resembles a carpenter's nail driven into the flesh, whence the latin name of *clavus*, a name under which it is designated by Celsus, and other early Roman authors, though latterly *spina pedum*, as resembling a thorn. In all corns there is a marked distinction between the outer

part or the *crown*, and the *stem* or internal part, which is generally, though improperly, called the *root*. This crown generally juts out from the surface, but a little flattened, and is roughest towards the centre. The stem is hard like a piece of horn, and is, for the most part, conical and pointed. Each corn has one, two, or three, or more divisions of surface, according to its number of stems; and in the centre of each may generally be observed a brownish spot, sunk deeply in, or else a horny and transparent substance which penetrates to different lengths, advancing by degrees to the synovial capsule of the joints, or perhaps even to the periosteum, the membrane which covers the bone.

Such are the general phenomena of a corn; yet still there exist apparent differences in them, so great as to have led to chemical analysis in order to ascertain if any real difference existed in their nature. But they have all been found alike to be insensible, unorganized

matter, not differing much in their own nature, though totally distinct from all other callosities of the cuticle. In their nature there seems something almost imperishable, for the vitriolic acid has very little effect upon them ; and the nitrous acid merely softening them, but seldom producing any change in their substance. In aqua regia, which almost instantly dissolves gold, it requires three days to make any impression upon them. Even boiling them merely softens the callous part, without producing any change in the stem.

Though bearing such a general resemblance in their substance, yet distinctions have been made in their classification, and evidently with great propriety. One species has been asserted to be hereditary ; two others are classed as compressed and projected ; and a fourth the most troublesome and dangerous, but happily the least frequent, termed fibrous.

CHAPTER II.

Corns, where seated.

THE toes and fingers are generally the seat of corns; but they often occur upon the soles of the feet, and sometimes between the toes. Those which appear between the fingers resemble a flattened wart, and are considerably softer than those upon the toes or soles of the feet; but then the pain arising from them is often most excessive, and sometimes almost insupportable, in consequence of their proximity to the nerves, which they contract, and sometimes adhere to. When in the great toe they are sometimes found under the nail, sometimes in the fleshy part on the outer joint, and not infrequently on the inner side of the inner joint. On the three smaller toes they are either found at the points of the nails or on the inner joint, but never on the under part. The most common

position for them, however, is well known to be on the little toe, where they sometimes extend over the whole upper surface of the outer joint, throwing out branches towards the next toe, or forming one large mass upon the very joint itself, surrounded by an extensive callosity, and penetrating even to the articulation.

Sometimes, from their situation, the term "concealed" has been applied to them, because their occuring in those spots is so very infrequent, in proportion to their usual appearance, as seldom, if ever, to excite the suspicion of the patient as to the true cause of his or her suffering until the disease has acquired considerable progress. One of these situations is on the inner side of the little toe, generally close to the nail, and subjecting the patient to the most excruciating torture, often accompanied by fever, and most detrimental to the health, nay subjecting the unhappy sufferer to a

course of medical regimen for supposed sources of disease which have no existence.

Corns sometimes appear between the toes; they are then of a softer texture than when on the toes, arising from the natural moisture of the part.

Again, though the outside of the joint is the general place of their appearance on the little toe, yet instances are not rare of their forming close to the outer side of the nail: and these are both troublesome and dangerous, since, the existence of a corn in that place not being suspected, the sufferer is often induced to apply a pen-knife to it is as a common excrescence, thereby inflaming it even to a degree of mortification that has endangered life itself. These have been known, without any external appearance of hardness or inflammation, to excite the severest pain, destroying the rest, and even preventing the usual degree of bodily exercise; a circumstance that of

itself must be detrimental to the constitution, and therefore requiring particular care and management.

Another most painful situation for corns is on the soft skin at what is generally known as the *root of the nail.* Such a corn is commonly superficial; seldom sinking to any great depth; and by no means so painful as in some other situations: yet it is often more apparently troublesome, swelling the toe to a great extent, and producing very considerable inflammation. It has the peculiarity also of spreading over the skin at the insertion of the nail, and even over the nail itself. When such a corn takes place on the little toe, it is often found at the corner of the nail, inwards, not growing on the integuments, but between them and the nail, and liable to become very painful by pressure on that very tender part of the toe. Fortunately it is not very frequent.

The heel is also sometimes, though

not very frequently, the seat of these troublesome excrescences.

CHAPTER III.

Causes which produce corns.

On this subject there has been great diversity of opinion, both amongst surgical operators and also their patients. When any person has a complaint he becomes naturally inquisitive about the cause of it, and finds a hope of cure even in that investigation. It is a happy principle of the human mind that the buoyancy of hope should often soften the evils of the body, and ought to be cherished where it does not lead to error. Again, when a corn is formed, and the person feels considerable pain from the pressure, of a shoe or boot, he removes the pressure, and a partial relief from pain takes place, whence the radical cause of

the complaint is often attributed to that which perhaps merely exacerbates the pain after the corn has come to maturity. Tight shoes are therefore instantly asserted to be the cause of the complaint—and so they may be in many instances, but not in all; and it therefore becomes necessary to go a little deeper into the subject, since a correct knowledge of the producing causes may often lead to prevention as well as cure.

It perhaps cannot be denied with justice, that shoes, if too tight, or too short, often produce corns; at least they aggravate the complaint, and, therefore, ought sedulously to be avoided. Even large shoes, if they are rough and hard, must be noxious, as are all inequalities in the inner part of the sole, arising from the ends of iron or wooden pins not sufficiently flattened or covered; nay the wrinkles that take place in the soft leather attached to the inside of the shoe may have the effect of producing corns in the heel; and the seams, if not suffi-

ciently flattened, may produce the same effects.

This is not undeserving the notice of those who, during their country excursions, may have occasion to purchase shoes or boots, where fashion has not as yet sufficiently predominated to insure a strict attention to neatness; especially on continental tours.

Allowing all these causes to have their effects with respect to corns, it is also contended that these excrescences often arise from some particular constitutional predisposition, totally independent either of the natural or artificial circumstances connected with the feet or toes. In this there seems much truth when we consider that a great number of persons of both sexes are in the habit of wearing tight shoes, or shoes of extreme hardness, without any disagreeable consequences; whilst others have their feet almost literally covered with corns, even whilst they pay the strictest attention to the care of their feet. It must also be taken

into consideration that corns grow both on the toes and heel, and yet there are instances of persons who, although they wear easy shoes, have corns on the toe where there is no pressure, and none on the heel, where pressure must necessarily exist. In such cases, if pressure were the only cause, we should naturally expect to find corns on the lower part of the heel, where they sometimes appear in other subjects; whereas if they do appear it is on the posterior part where pressure does not exist at all. Even when buckles were in fashion, though they certainly produced callosities on the upper part of the foot, yet corns were never seen to arise from their pressure: but perhaps the most convincing proof, that causes exist independent of tightness or pressure, may be found in the fact that many persons have corns solely upon one foot, whilst the other is perfectly free from them, although precisely exposed to the same circumstances.

It has been ascertained that persons whose skin is very thin, and possessing much sensibility, are most subject to cuticular excrescences, and feel most inconvenience from them. If we look at sedentary persons and compare them with those who are in the constant habits of pedestrian exercise, we shall find that the sensibility of their feet is so much greater, that not only will a short walk fatigue them, but the slightest irritation in the feet will produce pain, whilst those accustomed to general walking scarcely suffer from the most protracted exercise. This readily accounts for another well known fact, that persons residing in town are much more subject to corns than those who live in the country; nay it has been known that persons who in their youth have, during a town residence, been afflicted with corns, have actually been cured of them simply by retiring to the country, and taking the usual amusements of fishing and shooting with their feet often

wet; whilst on a subsequent return to the ease and indolence of a fashionable metropolitan life, they have found their former complaint return with redoubled violence.

Though it is not meant here to be absolutely asserted that none but people with tender feet are afflicted with corns, yet it may be assumed as a truth, that in those whose skin possesses most sensibility, corns, and indeed other excrescences, will develop themselves with the greatest rapidity, and become painful even in their earliest stages; whilst with others they increase very slowly, and are seldom painful until they have acquired considerable size. But this is a sufficient reason why they should be carefully attended to even by the latter in their early progress, as they are then most easily eradicated; whilst if permitted to grow until they become actually painful, a kind of predisposition is acquired by the affected part which can never be removed.

In the preceding observations it is not intended unnecessarily to terrify the fair sex out of that neatness about the feet which is so becoming. They certainly are in the habit of wearing tighter shoes than their male friends; and yet it is a well authenticated fact, that even taking into the account the tenderness of their cuticle, they do not seem to be more afflicted with corns than the male part of society. Perhaps this was not the case when high-heeled shoes were in fashion. In the present style the pressure upon the foot is certainly more equal, and therefore perhaps, if not absolutely acting like a compress, the less likely to produce excrescences of any kind: for it is not unfair to suppose that a partial pressure may be injurious even though not extreme.

If once corns are known to proceed from constitutional causes, there can be very little difficulty in believing that they may be hereditary. That they are so has been proved in many instances

beyond the possibility of a doubt; as they have been found in infants on the same parts of the foot as they have afflicted the parents, and on the same foot when only one foot has been affected. In such cases, though partial relief may often be given, even in advanced life, yet it were better if parents were careful to have them eradicated in infancy, before an hereditary taint becomes decidedly constitutional.

CHAPTER IV.

Symptoms and Development of Corns.

Numerous surgical and chemical experiments have clearly proved that the formation of corns, whatever may be the cause, consists of an absolute alteration or change in the substance of the epidermis on the spot where they exist. It is easiest to trace the progress of this change where previous irritation from pressure has been the predisposing cause, in

which case, however slight the irritation, yet, being confined to that specific spot, it has sufficient power to disturb the usual progress of the laws of vitality, so that the division of the skin, called technically *corpus muscosa*, whose duty is to nourish the epidermis, is prompted to secrete in the irritated part a greater proportion of its humour, and which thence often manifests itself in the form of a small blister or pimple. This, if not carried off by abrasion, or by artificial means, is seldom absorbed into the system, especially if the irritation is renewed, and it therefore condenses and concretes, grows harder daily, and most rapidly so when there is no moisture to keep it in a milder state. Thence the difference, as already noticed, between a corn on the outside of the little toe joint, and one between the toes.

When persons wear shoes or boots too tight, or too short, or which have a pressure in one specific spot, the toes become pressed and rubbed at those arti-

culations which are most prominent, and a slight inflammation takes place. But this is generally attributed not to the pressure upon that spot, but to the extra exercise which the person may have been taking. No notice or care is therefore taken of the circumstance, until the inflammation manifests a decided redness, with or without raising of the skin, though sometimes it even advances to a blister. If that blister is pierced with a needle (but not with a pin, which is dangerous) then there exudes a yellowish serous fluid, which if left to itself would grow hard and concrete, and be again more readily stimulated by the customary pressure; for a new irritation takes place daily, determining a new afflux of the serum or muscose humour, which thus accumulates insensibly, in layers more or less circumscribed in proportion to the extent of each successive irritation, each layer concentrating itself under the preceding one. In process of time the corn advances even to a more

complex nature, by an absolute union with the fibres of the flesh itself; for having, as it were, devoured the skin and usurped its place (not pierced downwards as has been erroneously supposed), it comes in contact with the muscular substance, so that whenever perspiration shall be increased by exercise, or other causes which excite the impetus of the blood, the corny substance becomes soft and spongy in the inner surface, so as to admit the entrance of the muscular fibres, whose nature is to press on where there is least resistance. But this accelerated heat and perspiration not being always kept up, the corny substance returns repeatedly to its former hardness, by which means the entered fibres are retained in their place and prevented from contracting, as they would otherwise naturally do upon the first sensation of pain, and thus one of the most painful species of corn becomes formed, and infinitely more difficult to eradicate than any other.

The growth and concentration of the

layers, already mentioned, as it were growing upwards like the stem of a tree, not shooting downwards like the root, are proved by the dissection of numerous extracted corns, in all of which the stem was found to be lengthened and pyramidal, sometimes in a vertical, and sometimes oblique direction ; generally single, but sometimes double, treble, and upwards, especially in that species known by the name of bunnions. It is supposed that the number as well as the direction of these stems depend in the first instance upon the manner in which the first concretion is formed ; but this part of the subject is necessarily obscure and, indeed, superfluous in a popular essay ; for if the patient could be taught to regulate the progress of a corn, he may be taught the more useful art of stopping that progress, preferring future ease to present experiment.

It is, indeed, always of importance to eradicate them as early as possible ; for though those which are technically

classed as *concealed corns* do not make any outward appearance until they are sufficiently advanced to become painful, still those that do appear, and are not very troublesome at first, may yet be acquiring part of the character of the concealed ones, inasmuch as though they do not actually come in contact with the muscles and thence become *fibrous*, they may nevertheless find their way into the deeper integuments, where, meeting with little resistance, they soon acquire greater extent than the orifice occupied by the stem, and will require the parts to be laid open before they can be extracted.

These hints respecting the mode of development may often lead to the discovery of a corn before it announces itself by any painful sensation ; but let it be remembered that there are other symptoms of their approach, which becoming troublesome, though not supposed to be from corns, much unnecessary

pain often ensues from hasty interference or improper treatment.

This is a point that requires attention; as it often happens that a sensation of considerable pain takes place at the inner edge of the great toe nail, and which is commonly attributed to the *growing of the nail into the flesh.* Too often, however, this is a mistake; and the mode of cure taken by the sufferer, paring it often into the quick, only aggravates the disease in its very nature, without affording even the wished-for temporary relief. In such a case let the patient have his toe accurately examined by means of a good magnifier before he attempts to cut; he will thereby avoid the chance of irritation, and may have the incipient corn removed without pain or trouble. Even where the skin or flap, as it is called, is grown so far over the nail as to afford, apparently, a palpable cause for believing that the nail alone is the cause of the pain, it often happens that a corn is concealed within it. Careful examination

is therefore an act of prudence which ought not to be omitted; and let it be added that careful extraction is then equally necessary.

This system of development certainly differs from some modern theories; yet as it has been proved by actual experiment and investigation as far as such a subject will admit, it seems to prove incontestably that the ancients, in giving the name of *clavus*, or a carpenter's nail, to this disorder, afforded a clearer idea of its process than is given by modern writers, who apply the name of *root* to that part which is inserted into the skin. Even if no absolute meaning were intended by the use of that term, it is still improper; for the abuse of words always produces a confusion of ideas. In short, if once we actually consider that part as a *root*, we naturally conceive the thing itself to be a species of cuticular vegetation, drawing nourishment from its root, just as the human nails, or vegetables operate; an opinion which must be er-

roneous of this theory if the increase of corns by aggregation be correct. Can we indeed believe otherwise when we find that the substance which composes a corn is really inorganic, and that the matter of which it is formed is merely a dried mucus? When it is dry we see that it becomes hard like a stone and is even friable; whilst, when penetrated by water, perspiration, or any unctuous body, it assumes different degrees of consistence from the softness of jelly to the hardness of a cartilage. It is here necessary to add, that if, in extracting corns any point, however small, shall be left, a new corn will immediately spring up from this spot, which thus becomes the centre of a new aggregation of the humours. But if several pieces are left, these immediately produce each a new corn, and the disease becomes proportionably aggravated. This is seldom noticed until too late; for although when a corn begins to grow, it is accompanied with pain, yet as it sometimes becomes

stationary, the pain is then no longer felt; but in these cases, the parts of the stem that are left may grow considerably before they rise high enough to receive any pressure, so that the hole caused by extraction may be nearly filled up before the upward growth is checked, forcing the corn to extend itself downwards upon the subcutaneous vessels, irritating them, and producing a most pungent pain.

In the development, and in the suffering from corns, the weather is often not only an index, but also an active agent. Every body is aware that a corn will come to maturity sometimes in three months; whilst at other times it may proceed for a year or two before it becomes a constant disease. Some persons merely feel pain from them for a few hours at intervals, suffering no particular inconvenience in walking, though sometimes affected by the pain when in bed. Some again suffer no pain in dry weather; but on the approach of rain, or blowing weather, experience

what is called a shooting of the corns—a sensation oftener felt, or at least oftener noticed by the old than the young.

This requires some explanation: modern philosophical and dilletante lectures have made the fashionable world and the fair sex sufficiently acquainted with the fact that there is at all times a great, though not always equal, atmospherical pressure upon the human body, and that the human frame would thereby be crushed, were it not that the resistance from within is always equal to the pressure from without. Now when the air is dry and heavy, pressure is greater, and resistance is greater. This produces elasticity in the human frame; all the surface is extended, the integuments swell and raise the skin from the muscles, and the corn no longer presses upon the very sensitive surface below it; but when the air becomes lighter, as it always does before rain or wind, the elasticity diminishes, the skin contracts, and the corn is not only brought into contact with

the tender surface of the muscles, but is actually pressed upon it by the contraction of the skin, so that the pain is still felt even though external pressure be taken off, to the great surprize of the sufferer, who fondly hopes that the removal of a shoe must afford him immediate ease. But the fact is that a shoe which presses in dry weather, ceases to do so in damp weather, owing to the actual sinking of the corn itself; which at once solves the enigma.

Another circumstance to be attended to in the development of corns is the appearance of a small speck, at first scarcely larger than the point of a pin, but increasing in size, at first a little darker only than the cuticle, and which it has been found impossible to eradicate, except by extraction of the corn itself. The reasons for this will appear obvious in a few words.

We have already seen that the corpus muscosum, or reticular substance which supplies matter for these tubercles, does

it in successive layers, most extended at the surface but diminishing into the interior, forming an inverted pyramid. Hence it follows that the centre of the tubercle has a greater number of layers under it than any other part of the surface; and though at first the whole extent appears pellucid and of a pearly colour, yet by the successive aggregation of layers it becomes yellow, red, brown, and at last in the centre a complete black. In some cases this change is rapid, but slower in others. When attempts are made to cut this central point in its early stages, it seems like cutting a softened corn; but when it is so advanced as to oppose some hardness to the knife or scalpel, then the hard part which is cut shows a whitish and floury surface. The attempt to cut the point after it has acquired complete blackness, is like that of cutting a piece of hard wood; yet sometimes it is found perfectly friable, and may be brought off in the form of a coarse powder.

As long as the matter of which the corn is composed continues accessible to the natural moisture of the surrounding parts, the centre always preserves a portion of transparency; for it is only as it becomes dry that it acquires hardness; and it is agreeable to the degree in which it becomes so, that the stem becomes gradually impenetrable to the influence of the surrounding juices; whence we may justly attribute to the alteration produced by its compactness, the colour more or less dark of the central point.

SECTION II.

ON THE PAINFUL SENSATIONS ARISING FROM CUTICULAR EXCRESCENCES; VARIOUS OPINIONS RESPECTING THEM; DISTINCTIONS REGARDING THE SPECIFIC COMPLAINTS; PROGNOSTICS, OR GENERAL FEELINGS ON THE APPROACH OF EACH; DANGERS OF IMPROPER TREATMENT.

CHAPTER I.

Effects of Pain arising from Excrescences on the Feet; Opinions respecting that Pain.

Even on the well flagged streets of the metropolis, persons troubled with corns often experience such acute pain from the most trifling accidents in walking, that they are obliged to proceed with a degree of caution totally incompatible with a crowded thoroughfare or promenade.

But it is much worse with them at a summer watering place where the paved streets seem formed to interdict them from any attempt at locomotion How many must recollect not only the pain they have felt, but also the extreme inconvenience when they have placed the affected foot on a jutting stone, so that without a cane or friendly arm to support them they must have fallen to the ground. To spectators this was evident; but none except themselves could be aware of the acute pain, exciting even to a cry difficult to be repressed, whilst the whole system felt deranged by the shock, and a cold sweat burst forth from the temples, accompanied by sickness inexpressible.

Such inconveniences, even if unattended by worse consequences, would of themselves render some care on this subject absolutely necessary. But let not the strong and robust think that this caution applies to the invalid solely; for even the young and hearty, who may

be afflicted with this malady, too often experience very disastrous results from injudicious negligence. It often happens, after considerable pedestrian exercise, that a very ardent inflammation takes place in those parts of the foot which immediately surround the corns; an inflammation which, if too potent to yield to cooling and dispersive medicines, may come to a suppuration whose consequences, without the strictest care, and best habit of body, may be productive of future lameness, if not of death. It must also be remembered that violent exercise is not the sole cause of this species of inflammation, as it sometimes appears without any evident reason except the irritation of the corn itself, when the results are too often lamentable in the extreme.

This disposition to an inflammatory state sometimes results from the weather alone; hot weather affecting some patients, whilst cold weather produces the same effect upon others. It is proper,

however, that the patient should not be too easily alarmed in either case; and also not too careless, if ease to his corn should take place suddenly and unexpectedly. External and artificial causes often produce both pain and ease; especially with respect to the shoes which the patient wears. It has been repeatedly remarked by sufferers under this complaint, that even a tight shoe, if some time worn, ceases to give pain, whilst a looser shoe, if new, can scarcely be admitted on the foot. The reason of this is simple: in the former case the corn, if a careful examination takes place, will be found to have worn a groove for itself in the shoe, when the new shoe presses on the corn, and the pain is attributed to the *drawing* quality of the new leather.

This is indeed a strong inducement to all persons troubled with corns to adopt the custom now so general of having the shoes specifically fitted for each foot, by which means the shoe will become easy

in half the usual time. A worn leather shoe thus becomes easier than a cloth one, as the latter has no elasticity, but presses on the corn, unless made so large as to be otherwise inconvenient.

The fact has already been slightly touched upon that the pain arising from corns is more or less acute, agreeable to the state of the atmosphere. When the air is warm and humid it often seems to awaken all the sensibility of the parts connected with these excrescences. But if the weather is approaching the change to rain, then there are many sufferers who experience such acute paroxysms that they can correctly predict, twenty-four hours previously, the probability, nay certainty of such a change.

How far this symptom may be aggravated of later days, with respect to the complaint, it is difficult precisely to ascertain. All medical writers seem to join in opinion that the most general malady of the present day is an extreme sensibility to every atmospherical change,

and a constantly sensible relation of all complaints to its influence. Nor is it in the fashionable circles alone that this is felt. It pervades all ranks of society, especially in town, all of whom are more or less affected by currents of air, or by changes from heat to cold, whilst many have acquired such delicate sensations, that even in close apartments, or in their beds, they act as living barometers to tell the state of the weather, and as anemometers to ascertain the direction of the wind, especially when it is easterly.

But it may be said that these observations apply only to the nervous and hypochondriac. Generally speaking it is so. To those, however, who are troubled with corns, and who are neither hypochondriac nor nervous, it is a truth too well known to be contradicted. Amongst the great variety of sufferers, of all sexes and ages, some are most violently affected by hot weather or by cold; others again, except in easterly winds,

have comparative relief; whilst many are susceptible of every change of the weather. Some again merely feel the effects of warm weather, whilst easterly winds blow in vain. But perhaps the most remarkable fact is that of individuals who, having corns upon both feet, have felt some changes of weather in one foot only, and some changes in the other: nay have experienced this variety of pain in different corns upon the same foot.

To explain these circumstances it has been urged that a corn is actually a species of living hygrometer, and that when swelled by humidity it thus commences a pressure upon the extremely sensible parts beneath it, and also which surround it; but this is by no means satisfactory, for corns it is well known are just as hard and as compact in wet as in dry weather. Independent of this it is known and experienced, that even when the feet are in high perspiration, the pain is not always increased, no more than it is in bathing the feet when not only the

corn itself, but also the circumjacent parts are swelled with the hot water, without any additional pain whatever.

Another system is in some measure connected with the theory of atmospheric pressure noticed in a former chapter; but its mode of reasoning is rather at issue with the well ascertained principles of philosophy upon the atmospheric effects. It assumes that the variations which produce the greatest pain are solely from dryness to humidity, when the barometer always falls, and so far, according to general feeling, is generally correct; but incorrectly states that the general effect produced in our bodies by humidity and diminished pressure is a reaction of the small vessels and fibres especially in the external part, which relaxation occasions their yielding too much to the pressure of the fluids within. For it has been shewn in the former chapter alluded to that reaction meets the increase, not the diminution of pressure.

Thence the correct theory seems to be as there laid down, that pressure of the atmosphere produces consequent elastic reaction in the body, when the integuments raise the skin from its closer contact with the muscles, lifting up the corn along with the skin, so that it no longer irritates the sensible surface of the muscles; on which it falls again when the diminished pressure calls for diminished resistance.

Some, who compare the extent of the atmosphere with the size of a corn, may perhaps smile at this theory; but, without going into the generalization of the subject, which is fit only for a treatise on natural philosophy, such cavillers may be reminded that the pressure upon a moderate sized man is equal to fourteen tons weight when the atmosphere is heaviest, which he can only support by the elastic resistance of reaction. Now if fifteen feet be taken as the superficial content of the surface of a human body, every square foot of that body will sus-

tain, in dry weather, a weight equal to 2,660 pounds. But the difference between the whole pressure on the body in a heavy or light atmosphere, being calculated at 3,902 pounds, that sum divided by 15 will give the difference of pressure upon a square foot, equal to 26 pounds, or 3 ounces per square inch for difference of pressure only. The total pressure per inch, however, even when at the lowest amounts nearly to 19 pounds; and if we suppose that the space occupied by a corn only bears the same proportion to an inch that an ounce does to the whole weight, it is still a sufficient pressure to produce pain when the reaction of the surrounding integuments is so considerably reduced. Those who have experienced acute pain from a touch even of the softest finger upon a tender corn, will be fully aware of the nicety of this calculation, where the aggregate difference of weight is one ton and a half upon the whole body. For we must recollect that although the pain

is least when the pressure is greatest, owing to the reaction, yet when the change of pressure produces a rapid change of elasticity, still does a great portion of that diminished pressure act more forcibly upon the corn, inasmuch as the general relaxation takes away its surrounding counterpoise, whilst the corn itself and the dead matter around it can offer no reaction. In fact the whole weight of the atmosphere acts then upon it, like a hammer driving a nail into the tender integuments: so that nothing but stimulants to excite the whole system into increased action, can offer any hope of relief to the sufferer.

CHAPTER II.

Of the Distinctions that exist in the various Excrescences of the Feet with the Prognostics of probability of Cure.

The frequency of a complaint too often renders mankind indifferent to it;

when in fact that very frequency presents additional stimulus towards its counteraction. It is not sufficient to say that corns are so common that few persons can make mistakes respecting them; nor is it a sufficient safeguard against danger, or even inconvenience, that they can only be confounded with bunnions, callosities, or warts, and therefore any attempts at classification must be useless.

Let it be remembered then, that a simple *Callosity* is nothing more than a thickening of the epidermis, which of itself is never productive of pain. It is never found to extend itself downwards towards the flesh; and even when pared with a penknife it never displays any thing resembling the granulation of a corn.

The reason of this may be found in the skin itself, which consists of three distinct and separate layers, different in their nature as in their functions. The outermost, called the epidermis or scarf-

skin, is the thinnest, and when raised up is found to be nearly transparent. It is nearly, if not quite, destitute of sensation; may be rubbed off, or lost without pain, and is always speedily renewed. Beneath it lies the *rete mucosum*, mucous and reticular, whence its name signifying a mucous net; and which though in general not much thicker than the epidermis, acquires additional substance in the human heel, and in the body of the foot where the pressure is under the great toe, as well as in the palm of the hand, where such additional thickness is necessary. Below these two layers, is the true skin, or *cutis vera* as it is technically designated. This is the immediate covering of the muscles where there is no fat to intervene, and is the seat of the nerves, or rather the place where the ends of the nerves manifest themselves.

Hence we see that a corn commencing in the *epidermis*, and nourished by the *rete mucosum*, becomes painful the

moment that its increased length of stem enables it to press upon the *cutis vera*, even though it shall not absolutely press upon the muscular fibre.

The *Bunnion* is a corn possessing numerous stems, seated upon a spot where the surrounding flesh seems tumefied, bulbous in its nature, flabby and inflamed; and where the epidermis detaches itself in flakes like the coats of an onion. Its stems are generally small, and bear a great resemblance to millet-seed, sometimes roundish, sometimes conical, sometimes pellucid like horn, though often having in the centre a black line which resembles a horse-hair or small thorn.

Warts are a species of excrescences which make their appearance on all parts of the foot. In general they are not very hard; for when they are exposed to the pressure of a shoe or boot, they readily become compressed and flattened: yet they sometimes acquire such a hardness in the centre as to cause them to be confounded with corns. A just distinction

may, however, be discovered in their surface, consisting of granulations which resemble a tuft; besides their greatest hardness is never equal to that of a corn. They also have a number of little ramifications, like the stringy roots of an onion, from which blood will flow if they are cut too closely.

Having drawn a just distinction between these excrescences and the absolute corns, it may be proper to examine their state with regard to the probability of a cure. Now it has been defined that a corn is not, properly speaking, an absolute disease, but rather a local irregularity, painful indeed and difficult to eradicate totally, but not coming under the specific range of medical treatment, though often claiming the best care of the surgeon, with whom it has been too much the fashion to neglect them, leaving them to self dubbed chiropodists or corn-doctors, or to the too often dangerous tampering of the sufferer himself.

But much blame also often rests even

with the sufferers, who are negligent of the complaint in its progress, and often indocile and careless in applying and persevering in the prescribed mode of cure.

As a stimulus, therefore, to attention, and to an early care on the part of the sufferer, the following hints may suffice :—

1. The more recent a corn is, the more easy and certain is the cure.

2. But whenever placed upon a prominent articulation or joint, it is always very subject to a relapse.

3. Sometimes these excrescences disappear without any means of cure having been employed ; but then these spontaneous cures seldom take place except with sedentary patients, and who, at the same time, are in the habit of wearing easy shoes, and which are adapted, without particular tightness, to the form of the foot.

4. Those corns in which the black point makes an early appearance are al-

ways the most painful and the most difficult to cure.

5. Corns seated between the toes are accompanied at intervals with very acute pains, and generally with a swelling in the surrounding parts. In many cases these sensations and appearances have been mistaken for symptoms of the gout.

6. Corns which grow on the sole of the foot are always the most painfully troublesome, owing to their peculiar situation, in respect both to the general pressure and to chance of accident.

7. However radical the extirpation and apparent cure of a corn may be, wherever seated, yet if we expose the feet to the same operative causes that produced the corns, we may always be certain of a relapse, or return of the complaint. In short there is no complaint in the whole human system so liable to relapse.

CHAPTER III.

Insufficiency, as well as Danger of certain modes of Treatment. Cautions and Advice.

Unfortunately for numerous individuals now suffering under the ill effects of injudicious treatment, or the accidents which have resulted from their own injudicious tampering with the complaint, especially in using the pen-knife or razor—corns, and other cuticular complaints of the feet have been considered as below the notice of the medical and surgical faculty, and have therefore been left in the hands of self-dubbed corn-doctors, and quacks, whose ignorance could only be equalled, and indeed concealed, by their effrontery.

Hence the natural consequence has been that a disorder, so extremely common, and therefore presenting the most frequent opportunities for experience, as

well as legitimate surgical experiment, has actually become the lowest in the scale of medical opinion and remains lagging behind in the progress of medical science.

If indeed we should give credit to the bills with which the walls of the metropolis are loaded, to the notices thrust officiously into the hands of every passenger in the public streets, and to the advertisements which crowd the columns of our daily and sunday papers, our wonder must be excited how such a complaint can possibly find existence, when attacked in its most secret recesses by so many infallible and never-failing remedies. One pretender starts up with his plaister, another with his eradicator, a third with his attritor, all radical cures for corns and every species of cuticular excrescences. One boasts his green ointment, another his of yellow; then they obtrude themselves upon us of all the colours of the rainbow, besides red, black, and brown. Next come the medical

volunteers who offer us infallible cures from their grandmama's recipe-book. One recommends a fig-leaf; a second boasts the infallibility of ground-ivy; and a third ensures you a happy relief from purslain poultices chopped up with vinegar—but then, each of these has a grand charm—it is a *secret*, and therein lies its efficacy!

The credulous, or the anguished sufferers try these panaceas, and are fortunate if their disorder is not augmented.

New advisers appear, who, like the mock-doctor, trust to extirpation alone for a radical cure; or perhaps the patient himself is tempted to use the pen-knife or razor—let him beware! The latter instrument is an awkward one in the steadiest and most skilful hand, even if it were judiciously applied; the pen-knife indeed is more manageable, if used solely for cutting off the projections of the corn; but the seat of the complaint seldom presents any facility to a self-operator for eradication with that instru-

ment. If therefore the patient merely wishes at the moment for such temporary relief as would ensue from cutting off the prominent part of the corn, he may attain his purpose, and more, by sitting down with his foot in a tub of hot water, pouring in more hot water as it cools, and *continuing the process half an hour by his watch*, when in most cases a rough towel will extract the corn without pain or trouble, but not so radically as to prevent it growing again to the same extent as before.

But let the knife be avoided; for though there are some corns which cannot be hurt by it, unless the operator makes a false cut, or proceeds after acute pain has given him an indication that it is time to stop, there are many others which give no indication of danger until an injury, perhaps almost irreparable, has actually been committed, when regret can be of no avail, as it is then too late for it to enforce wisdom by experience.

But if there are those who, in spite of caution, will persist in tampering with the pen-knife, let them instantly desist upon the appearance of blood; for there are corns, which, even without deep cutting, will bleed and become not only exceedingly troublesome but highly dangerous.

One of these is called a black corn, because on extirpation, it is found to have a black clot of blood at the lower extremity of the stem. This corn, as it approaches maturity, forces an entrance into the true skin, or cutis vera, where there are immense ramifications of small blood-vessels, and also the papillæ of the nerves; and, as it has sufficient power, through accident or injudicious treatment, to lacerate these vessels, a coagulation of the blood takes place, adding much to the inconvenience arising from the corn itself. Should the knife penetrate to this substance, a bleeding may arise which cannot easily be stopped—

but if a nerve is wounded, a lock jaw or mortal convulsions may instantly ensue.

A second species, from its frequent bleeding, even without external force or injury, is called the bloody corn, and it is apt to yield blood on the first touch of the knife, not from vessels belonging specifically to its organization, as has been hastily supposed, but involved, as it were, in its ramifications from specific causes. The existence of these blood-vessels, so very near the surface of the corn, is accounted for upon the simple principle that this corn, when it first begins to grow, has two or three stems, or perhaps more, increasing unequally, and therefore pressing unequally upon the blood-vessels below ; and as one of these stems is generally predominant, such small vessels as it disturbs instantly endeavour to rise upwards where there is less pressure, by which means they enter into the interstices of the other stems, which also increase, and thus the blood-vessels exist in the very body of

the corn, exposed to all the dangers of the knife, yet totally unconnected with any organic modification of the excrescence. These circumstances render it a dangerous corn to eradicate, even under the most favourable circumstances of surgical skill.

In the course of a long practice I have had frequent opportunities of witnessing not only the fatal effects resulting from injudicious self-treatment on the part of the patient, but also the insufficiency of the numerous advertised remedies, which, by promising too much, take away even from the little merit which some of them may possess in affording temporary relief. But I have purchased specimens of almost the whole of these, at least of all those where the extreme ignorance so often displayed in advertisements did not at once manifest the impudent absurdity of the empirical pretender. Nor have I disdained, in the search after truth, to put these remedies to the test of experiment, both on myself and on my

patients who have been willing, nay sometimes anxious to adopt any thing which promised speedy relief. But never in the trial of any of them have I observed any better effects than would have resulted from the application of a plaister of pitch or of diachylon. Some in fact would have produced the most pernicious results from irritation and inflammation, if I had not instantly allayed them by cooling cerates, and embrocations of goulard.

Finally, some of these pretended remedies never answered their mighty promises, even in the slightest degree; whilst all have fallen far short of them.

Even those from which I have ascertained that some relief ensued, may be considered as merely of a secondary nature operating only when I had previously taken away, at least, the outer surface of the corn.

Never, indeed, has any operation or experiment fully succeeded in the whole course of my practice except that of ex-

traction accompanied by subsequent care and attention: and though thousands of empirics may start forward with their mighty promises that each specific will cause all excrescences to dissappear, will eat and radically consume all corns, bunnions, callosities, &c., surely no person possessed of common sense can for a moment give ear to the imposture! How, in fact, is it possible, that any topical application shall be found that will eat and consume such extremely hard excrescences, without, at the same time, eating and consuming not only the surrounding epidermis, but also the subjacent parts?

Yet, in regard to myself, since it is the duty of a medical man to seek truth in experiment as well as in reasoning, I did not yield even to the suggestions of my own observation, but continued my researches and multiplied my experiments. At various times, and with every species of corns, I have tried garlick, the shell of the cachew nut, the juice of milk

thistles, gum ammoniac, lapis infernalis, or nitrate of silver, &c. But by a spirit of contradiction that seems irrevocably hostile to quackery in all its branches, I never obtained even from the most active caustics, any results but what were totally at variance with the boasts of superior efficacy. Often, after using the lunar caustic, I have found that the corns have re-appeared with increased intensity; in all cases indeed they have returned, and generally with a violence in proportion to the means used to destroy them. In fact, the very principle on which the hopes of efficacy in these remedies are founded, is a false one; for the use of the word *root* in the description of the disease has implanted an idea in the mind that they spring, like a vegetable, from the root, which being destroyed must *eradicate* the complaint. Such are the effects of figurative language upon our imaginations and our reason; and in the treatment of corns, as in higher branches of science, that which is used

merely in illustration is gratuitously assumed as a proof.

Finally, the result of all my experiments with these caustic eradicators has been to convince me that their certain consequence is to bring back with double force that disorder to which they afford apparently a temporary check; and that irritation resulting from them, if applied where no corn had previously existed, would be of itself more than sufficient to produce the very complaint against which they are offered as specifics.

SECTION III.

ON THE EFFICACIOUS CURE OF CORNS; AND THE CARE TO BE ADOPTED AFTERWARDS TO PREVENT THEIR RETURN.

CHAPTER I.

Mode of Cure.

This is a subject which requires the cool consideration of all sufferers from cuticular excrescences; because that, impatient of pain, they grasp at the first circumstance likely to afford them ease, without reflecting that a too hasty cure is often worse than their former sufferings. To cut a corn to the quick, is not to cure it; and yet how many pretenders are there in this vast metropolis whose whole stock of skill extends no further? By such a partial remedy it is

true indeed that relief from pain for a few days may be obtained; but sometimes it happens that a quack doctor may cut very deep and yet produce a very different sensation. Even extraction of the corn, if the medical care extends no further, is by no means a radical cure. True indeed their extraction, for the moment, produces a partial solace, provided it is skilfully performed; but then it is very far from sufficient; and in all cases where the mode of cure is solely confined to that, we are always certain, in a very short time afterwards, to find a new tubercle, as bulky and as hard as its predecessor, develope itself in the very same spot.

Of the truth of this, few will doubt, who reflect for a moment on the manner in which corns are produced; above all, if they have observed the rapidity with which the substance that composes them acquires hardness when exposed to the air.

If, after the extraction of a corn, we

examine the little roughnesses thickly sown over the surface of the hollow whence it was drawn, we may soon perceive how rapidly these acquire a morbid hardness. In their early stages indeed a single drop of water will soften them, and they will become tender and sensitive; but as soon as the water evaporates, an increased hardness takes place. On the contrary, if instead of water we apply any unctuous substance, the softness superinduced will be longer in taking place, but then its effects are always more lasting.

Here then we have a fact to serve as a basis for fair reasoning and experiment; and hence we are justified in concluding that the extraction of a corn, and the application, to the wound, of some unctuous and balsamic substance, must be the readiest mode of obtaining a perfect cure.

No doubt can exist that it is always the most gentle mode of treatment, and the most exempt from consequent in-

conveniences; nay the whole course of my practice has clearly demonstrated that it is the course most certain of success. Indeed it has never, or at least very rarely, failed in its effects, where patients have been willing and sedulous to submit to the medical directions and to practise the necessary cautions, all of which merely require a little attention and perseverance.

In slight, nay even in more advanced cases, I have sometimes observed the cure to follow the careful extraction of the corn, with a single application of the plaister—not a secret plaister, concealed and vaunted as by interested empirics, but a simple recipe, which shall be detailed—such a happy cure, however, must not be too sanguinely expected, and I therefore recommend most strongly to all sufferers that they will not give way in the first instance too strongly to the buoyancy of hope, which is too apt to lead to a despairing carelessness at the very moment that a little perseverance

alone is wanted. In fact, as much depends upon the patient as upon the operator. The latter, having his character at stake, will naturally exert his utmost abilities; but this is a complaint in which he requires all the assistance of his patient, whose own good sense ought to point out the propriety of a never ceasing attention to guard against the omission of any thing which may tend to deliver him from the acute pangs of so very troublesome a disease.

The patient ought to recollect that there are many apparently little cares, which the operator has not always time to explain the necessity of—nay that there are some which he will strenuously recommend, as the result of observation though he cannot any further explain the principle, and some of the efficacy of which he cannot be morally certain, though they have become so connected with his system of treatment that he is unwilling they should be omitted. This caution applies perhaps more particularly

to the cure of corns, than of any other malady to which the human system is subject; for a corn is what every body can feel, and what every body thinks they can cure, whilst in other complaints, though all mankind think themselves more or less physicians, they will still submit to medical caution, modestly acknowledging that the physician or surgeon may perhaps know a little more than themselves.

Let them then apply even their own medical experience to the case in question. Let them ask themselves whether, in other complaints, they ever promised themselves a certain and speedy cure, even though the disorder was a slight one, from one saline draught, one embrocation, one healing plaister, one bilious pill, or one surgical dressing? If they did not, let them apply their experience to the case before us. But to assume even simpler grounds, let them ask themselves, if their teeth have been crusted with tartar, and the dentist has been sent

for? Did they content themselves with the operation solely, without taking precautions to prevent its return? If they did, they will honestly answer that they were disappointed. Indeed it must be totally unnecessary to prove, a fact as clear as the sun at noonday, that very considerable care and precaution must be used to prevent the renewal of that unpleasant and unhandsome encrustation; how much more necessary then, after the principles already developed, that the same assiduous care should be extended towards corns — that they should not only be extracted, but that means should be taken to prevent their reproduction.

It is too frequent a practice for patients to tamper with their own corns. When one of these substances is in its infancy, it is, generally speaking, but superficial; it may even be brought away, if softened, by rubbing with a coarse towel, or extracted by the nails, or by the application of a pen-knife. If very young,

these means may perhaps be sufficient to check its growth, perhaps even to destroy it totally: but those who have a regard for their own comfort ought not to be satisfied with a probable chance of escape, when they may ensure final and future relief by a little care and application.

The object of this work is not to obtain patronage for corn-doctors, but to render their services unnecessary; though still holding them up as a most useful class in the surgical world, in extreme cases. To accomplish this object it is then necessary to offer a few plain directions even for manual operations; useful to such sufferers as chuse to have an operation performed where the most approved corn-doctors cannot be procured, and not useless even to corn-doctors themselves. In short, by a careful attention to these directions, any village apothecary may acquire a facility in operation, leading him to a species of practice of which he need not be asham-

ed, and taking it out of the hands of those who are too ignorant, and therefore often too obstinate, either to improve from the observations of others or their own experience, and whose bungling attempts too often subject the unhappy patient to present pain and future suffering.

Whenever, therefore, such an attempt is made, even by a person who has never practised it, let the operator seat himself with calmness and without flurry, with his right side to a window, where the clear day-light comes in freely. He may sit upon a common chair, but his right foot should rest upon a low stool; whilst the patient seats himself opposite, with his left side to the window, and turned a little to the light.

If the corn is on the sole of the foot, the patient ought to be in a common arm chair; but in all other cases he ought to be in an arm chair at least three feet from the ground; if that is not at hand he may then sit upon a table firmly

placed at a proper distance from the window.

It will be proper that the operator should have a towel upon his right knee, on which will rest the foot subjected to his examination ; and on his left hand, he will place a chair on which his instruments may be laid in the order in which they shall be wanted.

If the corn, upon examination, appear to be of considerable thickness, the first part of the operation will be to reduce it with the bistoury, scalpel, or cutting knife; after which the extraction may commence. It is then necessary to go round the corn, scraping it, or rather scratching it with the point of the quadrille or squared bodkin, pointed like a lancet. With this instrument he must work carefully upon the same principle as wood-cutters dig round the root of a tree before they attempt to bring it down. After having thus got a little footing by opening it on the side next the light, the

operator must lay hold of that side of the excrescence with his forceps so as that he may dissect and separate it from its lowest epidermic bed; to effect which he must work under it by slow degrees, sometimes with a small square punch whose point is blunted, shaped like a barley-corn, sometimes with a round one, whose point is blunted also.

Let it be remembered that the quadrilles, or punches ought to be mounted upon small handles, so that the operator may hold them between his thumb and two fingers like a pen, whilst the remaining fingers act as a support to the hand. It is difficult to give directions for the further use of the instrument. Let the operator proceed cautiously, and then practice, exercise, and observation will do more for him in five minutes than any description could possibly accomplish.

A good magnifier will also be of use in order to distinguish the lowest layer of the epidermis from those parts which

form the tubercle itself; but, in fact, no person ought to attempt the operation who is not favoured with good and clear sight, even without the magnifier.

The hand ought also to be light and steady; so as to follow, without unnecessary pain or danger, all the ramifications of the corn throughout its deep and unequal cavities, thence to detach it, to raise it without injuring the under skin, or even producing the slightest degree of pain, as a skilful operator will always accomplish.

Experience has proved that it is always a misfortune to be lamented, if the patient should be put to any pain whatever, or if the under skin should be injured in the slightest degree, so as to emit even a single drop of blood. One inconvenience of this, and the smallest, though troublesome at the time, is that the blood prevents the clear sight of the operator, and therefore often puts a stop to the extraction; but the most to be lamented is, that a corn in this case al-

ways returns with more rapidity and with greater vigour—to say nothing of the effects to be apprehended from the wounding of the nerves or tendons, or the opening of the synovial capsules,* pro-

* The synovial glands are small bodies placed in small cavities in the articulations of the joints, and are capable of being compressed by the motion of the joint which expresses that liquid, provided no improper discharge has taken place, in proportion to the degree of friction, and to the necessity of the case. Their exact composition is not precisely known; but they are supposed to be of a glandular structure, with a considerable degree of vascular formation; and they secrete a fluid of a clear mucilaginous nature, alluded to in the text. If any deficiency of this synovia takes place, or if it becomes too thick and glutinous, the joint immediatly feels stiff and incapable of action, as under the pressure of temporary fatigue; but when the disease becomes permanent, it is termed anchylosis.

I would enforce more strongly the absolute care necessary in respect to this fluid, by informing those readers who have not made anatomy their study, that the bones are firmly bound together to prevent distortion or dislocation, which is attained by means of ligaments, but then the extremities of the bony pieces, when they move upon one another, must have smooth and slippery surfaces for that purpose, in order to render motion easy, which is most happily provided for by means of the cartilages moistened by the mucus of the proper vessels. In fact the inter-

ducing consequences whose results are incalculable. It is true indeed that these accidents may be even mortal to some persons, whilst towards others they will be comparatively harmless, with the exception of the trouble of a protracted cure; since much of this must depend upon the constitution of the sufferer, especially if he should be of a bad habit of body, with any predisposition to particular complaints, whether hereditary or acquired.

To guard more particularly against such accidents, a few directions will be serviceable, both to skilful operators, and to those who may wish to attempt the

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stices of all these parts must be filled up with some soft and ductile matter, which may keep them in their places, unite them, and at the same time allow them to move little upon one another, which is answered by the cellular membrane or adipose substance; but the moisture of all this extraordinary mechanism is totally dependent upon the good state of the synovia.

Take this away then, and you give rigidity to the toe, whose pliancy is absolutely necessary to the just equilibrium of the body in walking, which must be destroyed if one foot is unequal in its powers to the other.

affording relief to a suffering patient. In the first place, I recommend that, if possible, no other person should be on any account admitted to see the operation, unless they possess strong nerves. If circumstances shall cause the admission of one or two spectators, let them be carefully and previously cautioned not to obtrude themselves between the operator and the light; nor to speak to the operator, nor to the patient, nor to each other, nor to shake their heads, nor look extraordinarily wise, as all these things tend to alarm the patient and to disturb the attention of the operator, perhaps at the most critical moment. Again, let both the patient and the friends admitted remember, that if any thing like an accident should occur, as may happen to the most skilful extractor, the readiest way to render that accident irremediable, is to start, or to exclaim—If an operator cannot be trusted to for presence of mind in case of an accident, it is best not to employ him at all.

Again, if the operator takes care to have two seats prepared for him, it may be of considerable advantage. One of these, a common chair, as already noticed; the other a lower seat, in case it shall be found requisite: in many cases the lowest seat or stool will be found most convenient, but let him try that he can sit steady upon it, and a music stool ought therefore of all others to be avoided, as its seat is not only small but insecure. It may indeed be always more advantageous to lower the operator than to raise the patient, as the latter, if placed in an unusual position, feels less confidence in his or her own powers, and may even be flurried by that circumstance alone.

Let the operator also make as little display as possible of his instruments. There are many persons who, even in perfect health, shudder at the sight of a surgical instrument, but when they may be rendered irritable by fever, that irritation is not likely to be allayed whilst their eyes

are cast in expectancy upon a well assorted range of instruments fit for a military hospital, or a man of war's cockpit.

None but ignorant pretenders will make such a display of preparation, as if a fashionable boudoir was to be changed into a modern Golgotha.

A judicious operator will also be particularly careful with his female patients; as the slightest alarm to delicacy will render the patient less steady and the foot more tremulous. But in all these cases, the operator, even with a due regard to his own convenience, will always take care to place his patient in that position which is least different from the ordinary mode of sitting at ease, and so that the foot may be raised and kept in its proper position, without any extraordinary exertion.

Let the patient also be told that the foot must be planted firmly on the operator's knee, as it will then remain steadily and without further exertion, or trembling.

Previous to the actual dissection of the corn, the operator's hand will rest upon the patient's foot; but when that takes place, the elbow ought to rest upon the right thigh, and it may sometimes be better, during the dissection, to raise the corn with the nail of the first left-hand finger than with the forceps, as it causes less alarm to the patient. After separating the stem of the corn from all the environing integuments, except at the very point, the operator will be careful not to cut through, but to direct the point of the instrument so as to pass under the point, yet without hurting the under skin, when he will soon loosen it from the sub-integument, and must then raise it gently with the instrument, a procedure that will cause less pain, than if he were to attempt to pull out the loosened corn.

If he find that there are several stems, then each must be treated in the same manner. It is needless to point out, what is an every day observation, that

some corns are merely inserted in the epidermis, whilst others are surrounded by indurated skin to which even vessels are found adhering. The first species are very simple; their extraction being little more than the drawing of a thorn; but with regard to the latter much nicety is necessary, by dissecting, not downwards, but upwards, whenever he suspects that the instrument is close to these vessels, as may be known from their white colour. Should he not be able to distinguish them by sight, he may be certain of their occurrence when the patient shrinks or complains of pain.

The operator may sometimes be called in where the corn and its surrounding region are much inflamed and swelled; but to a careful hand this is a matter of little consequence; in fact rather an advantage, for the corn is thereby generally loosened of its hold and more easily extracted. These directions apply principally to corns seated on the outside of the toes; but different positions must be

taken in other cases. If the corn is between the toes, the operator ought to sit with his face to the full light, and the patient behind him; then taking the diseased foot under his right arm and resting it upon his right thigh, whilst his own arm rests upon the patient's leg.

Sometimes when the corn occurs between the fourth and little toe, it is placed so far in that the patient's foot must rest upon the heel, when the operator, holding the little toe aside with his second finger, lifts up the corn with the nail of his first, provided the corn is not much sunk within the epidermis; but if so he must then loosen its edges and seize it with the forceps before he can proceed to the extraction. It is certainly the most awkward mode of operation of any; but a good operator will always succeed better without any assistance than if he permits a stranger to hold the toes open for his instruments.

In extracting those corns between the toes, it often happens that it is sufficient

to loosen them from the epidermis at the edges, when they instantly come out, having no other hold whatever upon the integuments.

When the corns are on the sole of the foot, a slight change of position, rather sideways, becomes necessary; but the principal objects are light and *elbow-room*, and those the operator can arrange to his own liking. But in this latter operation there is certainly considerable difficulty in keeping the patient quiescent; as the natural ticklishness of the sole of the foot exposes the patient to frequent irritation followed by trembling. To obviate this, the operator should seize the foot boldly, grasping it firmly, and thus the sensation is generally to be guarded against.

Above all things, in every operation, let hurry or eagerness be avoided; as that is the surest method to prevent pain, and the chance of an unnecessary wound. Before ever an instrument is touched, let the corn be carefully examined; and if

it appears very thick, let it then be cut down carefully, by which means its ramifications are more distinctly seen, and time and trouble saved. Never hasten the operation beyond the facilities which the corn itself presents. Always detach the stem gently and tenderly, rather loosening than immediately separating the adherences. On arriving at the base of the stem, if it does not yield easily to the upward pressure of the instrument, it may then be suspected of adhering to the synovial capsule on the joint; or to the periosteum,* (membrane covering the bone;) to some tendon, or perhaps to

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* The periosteum is a fine membrane of a compact and cellular texture, reflected from one joint to another, and serving as a common covering to the bones. Its tenderness and susceptibility of injury may be drawn from a contemplation of its sanguiferous and lymphatic vessels, and the nerves with which it is supplied from the parts in the vicinity. To injure it will give rigidity to that which by its natural smoothness facilitates the motion of the muscles; to say nothing of the diminution of that support which it affords to the vessels that are distributed through the substance of the bones, by which the articulation is strengthened.

a nerve. The moment that there is the slightest cause for this suspicion, the operator, even if most skilful, must be cautious in proceeding, and will hesitate before he attempts to penetrate any deeper.

In fact it will be much better and safer to wait at least a week to give nature an opportunity of exerting herself; since the irritation produced by the previous operation will often superinduce a separation of the parts without pain or difficulty.

If, however, the operation shall be successfully performed at the first trial, it will be unnecessary to examine the seat of the corn for a fortnight, when it must be narrowly investigated in order to complete the cure. In all cases where the eradication shall be as complete as such a corn is susceptible of, it will be seen that nature herself is repairing the vacancy created, and is filling it up with sound flesh, pushing forward to the surface any parts which may have unavoid-

ably been left by the first operation, whether from the deepness of their situation, or from a suspicion of their being connected with the tendons or nerves. A second and very careful extraction of all these parts must then take place; since these remaining spots would otherwise become the stems of new corns, and thus render all the former pain and trouble useless, nay produce even more troublesome consequences than if the original corn had not yet been eradicated.

In all cases, but especially after the first operation, let the foot, from whence the corn was extracted, be placed in hot water, keeping it up to a bearable temperature for about half an hour. This will produce the best effects, as all the parts which are left behind will instantly swell, forming a spongy whitish projection, which must be rubbed with a coarse towel, and may then be cut away, either with the scalpel, or reduced with a file.

As soon as this is completed, nothing remains but to drop into the hole a small

quantity of any healing balsam, over which must be applied a small plaister of diachylon, tempered into a softer consistency, and rendered more glutinous, more emollient and balsamic by the addition of a small quantity of essence of turpentine.

Let both patient and operator here remember that it is always useless, and too often dangerous to apply the various coloured ointments offered for sale, whether red, yellow, or green, the bases of which vaunted medicines are always more or less corrosive. Some of them are coloured and rendered active, but dangerously so, by means of verdigris, or green oxide of copper; some by means of cinnabar, or sulphurated oxide of mercury; and others by preparations of lead or arsenic.

To mention the bases of these medicines must be alone sufficient to prevent any, but the most self-willed, from risking their health, nay their life perhaps by an improper use of them; but I can

strengthen this caution by a solemn averment that I have experimentally examined the claims of all the advertised medicines, some of which may certainly be allowed to be harmless, and that I have never found any of them to answer so well as the diachylon plaister and bandage, when the ointment is spread upon a piece of goldbeater's skin. This skin ought to be nearly as thin as an onion peeling, so that it will apply exactly to the spot on which it is laid; forming no bulk whatever upon the painful place, and, at the same time, by its impermeability, preventing the stocking from sticking to the plaister, and disturbing the process which nature is silently carrying on.

In recommending the previous application of a balsam to the seat of the corn, it is rather from experience than from reasoning; for it is impossible to assert that the epidermis which was wounded in the operation really requires a balsamic application. But as experience has

always shewn that this mode of treatment was attended with better consequences than where the balsam was omitted, it is merely a proper precautionary notice that a sensible advantage seems always to have proceeded from that specific mode of treatment.

In all medical operations the simplest proceedings are always the safest, and generally the best; I therefore especially recommend the diachylon plaister with a small quantity of essence of turpentine: but as many patients may be anxious for a more complicated plaister, they may be very harmlessly gratified with one made of equal parts of bees-wax and black pitch, diluted with one fourth that quantity of olive oil. Let this be slowly and carefully melted and spread upon goldbeater's skin, and applied as previously directed.

Both patient and operator may congratulate themselves upon the result when, immediately after the dressing, a total absence of pain is experienced, especially if the foot feels as easy and as

easily serviceable, as if no corn had ever existed upon it. But when shooting pains are experienced, however slight they may be, it is invariably an indubitable warning that a second operation will be required at the end of a week, or at least that a careful examination will be indispensable, lest the corn should by that time have manifested itself a-fresh, and thereby laid the foundation for a speedy operation of equal magnitude.

Let the patient, however, keep up his spirits, assuring himself that the first operation, when proper care is taken, is always the longest. It must be confessed indeed that it is the one which possesses most difficulties—if any difficulties can be supposed to present themselves to skilful operators. But that operator must be very inexperienced or very awkward, who shall cause a wound or even produce the slightest pain.

To a skilful hand, nothing is easier than the extraction of a corn; but simple as it is, common sense will point out

that it ought not to be entrusted to mere quacks or pretenders who too often cover their ignorance by a self-willed impertinence and obstinacy that would rather persevere in error and risk the patient's welfare, than allow it to be thought that they even hesitated in their operation.

I cannot too often repeat that when these excrescences are seated deep, or in the way of the nerves, the dangers connected with them are of serious importance, so that inexperience, to say nothing of obstinacy, may cause the most irreparable injuries. Indeed, if the patient has any just grounds for doubting his operator's ability it will even be preferable to make the experiment himself; for though it must be acknowledged that the patient cannot from circumstances discern, with sufficient distinctness, the smallest particles of his corn, so as to make an extraction as perfect as under the hands of an able operator, yet that is almost counterbalanced by the consi-

deration that he can renew his operation whenever he thinks it necessary.

This is a greater advantage than many will at first suppose, or professed corn-doctors will acknowledge; but the fact is ascertained that reiterated extractions, if performed with due care, even though each should in itself be imperfect, will at last be crowned with success, by a total disappearance of the complaint. Perseverance, as well as patience, are indeed required; but these are faithful allies, and he who chuses to be his own operator, who has fortitude to perform the attempt calmly, and good sense to know when to pause, may thus guard himself securely from the risk of suffering or danger, and will always be finally successful, unless some unusual and perhaps unknown cause should operate against his exertions—a difficulty which even the cleverest operators have sometimes to contend with.

Speaking from my own personal experiments, I can state that I was long a

victim to the complaint, having both feet almost literally covered with these excrescences; yet by a patient but sedulous attention to the subject, frequently bathing my feet, extracting each corn when I could do so easily and without pain, and then applying either of the plaisters already mentioned, I at last succeeded in obtaining a complete release from these very troublesome inconveniences. It is true that my first attempts were not accompanied by that rapid and evident change which I too hastily expected; but when the impression was fairly made, the corns began to disappear as if by sympathetic enchantment, and even when scarcely regarding their progress, I found myself totally relieved from them.

Then surely that which one person has done may be done by others. In fact many others to whom I have given these directions have been equally fortunate with myself; and though, as they acknowledged, their patience and attention were taxed for a few days at the com-

mencement, yet habit became so familiar, that the examination and operation on their feet, became merely a part of the morning routine of dress, and all difficulties vanished.

It has sometimes happened, indeed, that a little more care was necessary; especially where the corns were in an inflamed state, or became so by the operations. In those cases, as it must have happened also, even with a skilful operator, it becomes necessary for the patient to avoid walking as much as possible, to keep the foot in a due degree of heat by means of flannel, and sometimes to attend to the state of the constitution itself, especially in regard to diet, following what has been termed the antiphlogistic system, in which case the family apothecary may with great propriety be consulted.

Whenever a patient has been cured of corns, whether by an operator or by his own hand, and even when the cure shall appear complete, let him recollect that

some weeks must intervene before he can assure himself of this happy result. Care and attention, subsequently, are therefore necessary—but of that, and some other points connected with the cure, I shall speak in the next chapter, closing this with one or two cautions.

Let the patient avoid all tampering with his complaint, by means of secret medicines, whose ingredients are unknown, or by *charms*, which every old woman, of either sex, has always at hand. One, for instance, will assure them that it is needless to hope for success in any operation on their corns, except during the wane of the moon! Now that the system which I have laid down will be successful during that period, I have no doubt, and the patient may try the experiment; but as I have often seen my remedies successful during the former half of the lunation, I would recommend a careful trial from change to change; and if the sufferer will only per-

severe until he his cured, I shall cheerfully allow the moon all the credit without jealousy or envy.

I do not mean to assert however that diseases of the skin may not be affected by the moon operating on the atmosphere ; for that there is an ebb and flow of the atmosphere through the moon's attraction, as in the sea, thereby increasing or diminishing the height of a column of air in each specific place, is a theory considerably strengthened by meteorological and medical observations, and I have already shewn and explained why a difference in atmospheric pressure shall affect the human corns.

Here some of my readers may smile, and be half inclined to rank me amongst the ancient damsels already alluded to. If that smile should alleviate their corns they are welcome to it; but a real philosopher will never despise even the opinions of apparent ignorance and superstition, since popular opinions, though

sometimes apparently absurd, are not always unfounded, and their investigation has often led to truth.

This consideration induces me, whilst on this part of the subject to notice two specific facts that deserve to be made generally known, though not of sufficient importance to form the basis of a huge unliftable quarto, or to serve as the thesis for a diploma.

The first is in regard to the moon's influence upon the atmosphere, founded upon analogy of reasoning from her influence upon the ocean; an influence completely proved by the Newtonian theory of the tides, though some would-be modern philosophers have ventured to deny it. The question, however, is set at rest by the following fact, which is also a case in point in the theory of corns :—

In the West Indies, from Barbadoes to Tortola, there is no perceptible rise or fall of regular tides, but there are very strong currents, setting sometimes to

windward, and sometimes to leeward, and that with a degree of regularity which enables seamen who know how to avail themselves of them, to make quick passages to windward, even against the strongest trade winds. The rule is that the moment the moon appears in the eastern horizon, at rising, the current begins to set in that direction, the waters being evidently attracted by her; as she ascends the heavens the current becomes stronger, until she crosses the meridian, when the weather current instantly ceases and follows her to leeward, or to the west, until she sets. A weather current, but slight in comparison, again commences and continues until she is on *her* midnight meridian below the horizon, happening of course at different intervals of solar time, immediately on which a strong lee-current begins, and continues until her next rising. Now if the moon's attraction can operate so forcibly on a dense fluid like the ocean, how much more probable is it

that she must raise the atmosphere highest in a right line between her centre and the centre of the earth, or, in other words, wherever she is on the meridian.

Thus far for her meteorological influence—her medicalinfluence, as connected with it, is fully proved by the fact that the endemial fevers of Bengal have been always found, by a long course of experiments, to vary their symptoms with her phases, and to be most affected when she raises the waters highest in the river Ganges.

These facts thus established, I submit my own theory to their test—future experiments may lead to future truths.

A second caution, and which I can specifically and seriously recommend, is that however patients may without danger or inconvenience cut the projecting part of a corn with a knife, razor, or scalpel, it still must be recollected that to *cut* deeper, but with only a partial extraction, merely acts towards the increase of the

evil, unless followed up by care and attention as directed in page 88: for the steadiest hand, especially of a self-operator, can never be master of the absolute direction of a knife or razor-blade, or even a surgical knife or scalpel, when it has to do with a substance so hard and unmanageable as corns are in general, consequently irritation must ensue, and if blood is once drawn the consequences may be fatal. Again, the proposed methods of destroying corns, whether by lunar caustic, or by aqua-fortis, or actual cautery, can have no results but the adding to the number of victims that suffer from improper treatment. Such proceedings absolutely lead to the most serious accidents, the very least of which is the raising of a violent inflammation with great present pain and much future inconvenience.

I am aware, notwithstanding all these cautions, that there are individuals who, from an unwillingness to adopt the due exertion for their radical cure, will still

tamper with palliatives. If I cannot persuade such to pursue the best method, I may at least induce them to avoid improper remedies by pointing out what will really palliate though it never can cure.

In this view of the subject then, I may state that houseleek, or sedum murale, which spreads its succulent leaves on ancient walls and roofs, and may be found cultivated in some gardens, has certainly the property of softening corns, and of affording some temporary relief. But then, unfortunately, this is its sole advantage; and if the softened excrescence is not instantly reduced by cutting, the juice of the plant actually becomes a stimulus, and the corn, soon after it is left off, becomes larger and harder than it was before, and conséquently much more troublesome; nay is prompted to extend itself, whilst more stems are formed, and the risk is incurred of a *simple* corn becoming a *fibrous* one, the most difficult of all to eradicate.

In former times the practice was very general, and is even so at the present day, to seek relief from plaisters in which Roman vitriol, or blue-stone, with calcined mercury and turpentine were mixed up in equal proportions, except the latter which was merely used to amalgamate. Some again placed all their reliance upon equal quantities of acidulated galbanum and bees-wax made up with turpentine.

Some others attempted to improve upon the common diachylon and turpentine plaister which I have recommended, by adding galbanum and sal ammoniac.

More venturous empirics have sold their potent and dangerous plaisters of crude antimony, mercurial amalgama, and corrosive sublimate; or else, ceruss of lead, litharge, minium, and bees-wax, all deadly poisons, except the wax!

Even more cautious practitioners have added verdigrise to the diachylon plaister; but this may with greater safety be omitted than added—the diachylon and

turpentine will always be sufficiently efficacious. If however any incautious sufferers should be pressed to use the verdigrise, let them remember that all military or naval impostors, who wish to procure their discharges for bad limbs, all mendicants who wish to excite compassion by their sores, are quite acquainted with this part of the secret, and can, in three or four days, produce the most alarming appearances by scratching their shins and applying an halfpenny moistened with vinegar.

Burgundy pitch is another remedy often recommended for corns. It certainly is more adhesive than diachylon, and may perhaps tear a corn out by the *roots*, according to the common expression; but the patient is thereby put to much unnecessary pain, which may be avoided by using the diachylon in preference.

It has even been said that the application of a wafer will cure a corn—those

who choose may try it—it can do no harm.

It is not an infrequent thing for persons troubled with corns to seek relief from warm bathing; and in many cases with temporary advantage, whilst in others they only increase their subsequent pain: for as heat and perspiration have often the effect of making some corns swell and thereby extend themselves and press more forcibly upon the true skin, whilst their increased volume externally renders them more vulnerable to outward pressure, so may the same consequences result from the hot bath. Whenever that is the case, the patient, if not gouty, may try the cold bath, and thereby receive that temporary relief which hot water denied him: but if the increased pain is the consequence of heated feet by exercise, he must be cautious in using the cold bath until the increased perspiration is reduced. Perhaps in such a case, where tem-

porary relief is necessary, and the sufferer has no immediate means of cutting or eradication, the safest mode will be to pull off his shoes and stockings and expose his foot to the action of the cold air. Should that not operate, cold water may be applied, not to the foot generally, but to the corn and its immediate vicinity.

There is another cure, and a radical one too, which nature herself sometimes administers: but it is a cure that will have few voluntary practitioners. In the *gout*, it frequently happens that corns drop out without any manual operation: and the same result has been experienced from violent fevers or other inflammatory complaints.

It is a curious fact however, that corns which have been apparently cured by those diseases, have again returned—perhaps, however, the preventive treatment, which I shall presently describe, might have been efficacious if applied in such cases afterwards.

There is an experiment which I have

several times thought of trying ; but it is difficult and expensive in a single case, and could only be conveniently tried where a number of patients were all to be treated in the same way. I allude to the effects of the *gastric juice*, which it has been proved will act as a most powerful, yet not painful, destroyer of *dead flesh*, without any inflammatory excitement upon the living skin or muscle. I have seen an instance of a broken leg with a compound fracture, where the usual caustics could not reduce nor even keep down the fungous flesh, so that amputation was determined on to prevent mortification ; yet even there the application of the stomach of a new killed calf every morning, for a few successive mornings, completely eradicated the fungous flesh, leaving the sound muscle to granulate, and the callus to ossify, so that the fracture became cured in a fortnight.

How far the application of a portion of a calf's stomach, with its gastric juice, may be equally efficacious in regard to

corns, is certainly deserving of experiment, where the practitioner has a convenient opportunity.

At present I shall close this chapter by impressing on the mind of the reader that the only radical cure, of which we have any certainty, is extraction, followed by the prescription already noticed and by the preventive treatment which shall be noticed in the succeeding chapter.

CHAPTER II.

Treatment of Corns after Extraction—Their recurrence prevented.

Having extracted the corn, and applied the diachylon plaister, already described the toe must be examined twice, or at least once a week, in order to renew it; and at each dressing the precise state of the seat of the corn ought to be carefully examined. This care must extend through several weeks, sometimes months, to re-

alize the cure. At first the corn itself seems superseded by a thick fold of the epidermis, and which is kept by the plaister in a constant state of softness. In this case it is always considered as a good sign if this skin will bear the pressure of the fingers without any acute or shooting pain ; and finally this skin disappears and the whole spot becomes of a similar texture with the surrounding parts. If however the patient merely contents himself with the application of one dressing of the diachylon, and leaves the issue to chance, he will soon begin to experience inconvenience ; for the soft skin, no longer kept in a proper state by new dressings, acquires speedily a degree of hardness that acts under the pressure or rubbing of the shoe, or boot, and forms a point of irritation which is infallibly followed by a new tubercle. It appears clear then that the most important point of treatment is to preserve the parts, whence corns have been extracted, in a state of preternatural softness. It will be of no

avail to the patient to flatter himself that he can produce this by frequent hot bathing; for the softening of the epidermis by hot water is only a momentary effect, and in truth is attended by results directly in opposition, since the hot water subsequently renders the new skin much harder than it would otherwise have been, in consequence of carrying off the unctuous matter which exudes from excretory vessels. But let me not be misunderstood—it is not my wish that the usual habits of cleanliness ought therefore to be avoided. Warm ablution for the feet may still be used, as often as judged necessary: it will be a sufficient safeguard against the consequences, if care is taken, after wiping the feet, to apply a new plaister.

When the corns have been seated on the sole of the foot, it will be found extremely convenient to have a false sole to the shoe cut from the thickest felt of which hats are manufactured, in which it is proper to cut holes that will corre-

spond exactly with the places of the recently extracted corns. This sole may be tacked on to the shoe with a few stitches, or a little gluten, so as not to shift its place in walking; and the precaution will not only have the effect of producing great present ease, but will also operate most advantageously in preventing the pressure of the whole frame upon those tender spots—a circumstance that will not only delay the cure, but perhaps cause fresh corns to arise in the same spots whence the extraction has taken place.

When a corn makes its first appearance, or has returned from want of care, it is of no service for the patient to content himself with palliatives, even in the earliest stages of it. He may perhaps chuse to confine himself to the house, but that is only partial solace and may injure his health, for want of exercise and air. His next resource may be to place his foot over the upper leather which is certainly a convenient tempo-

rary expedient, if he cannot get an operation immediately performed; but it is only conveniently practicable in fine weather, whilst cold or wet may be variously detrimental, to say nothing of the exposure of his corn to accidental friction or pressure. Large shoes are equally useless, since the foot, by slipping in them, oftener exposes the corn to pressure than when tight ones are worn. Holes cut in tight shoes also avail but little; unless indeed a small cap is fitted on the spot: this however is merely a work of supererogation, if the patient means to have his corn extracted; and it also has the disadvantage of inducing him to postpone the operation to a period when both the pain and inconvenience will be greater than in the early stage.

At all events, if the patient, from any peculiar circumstances, is forced for a time to have recourse to palliatives, his safest plan will be to procure a pair of shoes fitting tightly on all parts except

immediately over the toes, by which means he will guard against pressure, and avoid the inconveniences of exposure to external accident, or to the bad effects of the weather. Let him also wear those shoes without shifting them to different feet, for by this means he will avoid the chance of irritation whilst putting them on, and the leather itself will form a lodgement for the corn, as the leather contracts by change of temperature.

Still however do I wish to guard the patient from trusting to palliatives, as it often happens that a neglected corn will assume the most dangerous symptoms, whilst the sufferer is attributing his increased pain to local or temporary causes. One of the most dangerous of these is a putrid affection that manifests itself by inflammation and swelling accompanied with a degree of pain that deters him from attempting to reduce it by a self operation; and if, for immediate solace, poultices or cataplasms are applied, the ten-

derness which they superinduce on the surrounding parts, renders the remedy almost as bad as the disease.

Let it then be examined in due time, else no other resource will be left but suppuration, in which indeed the corn may drop out, and the orifice finally close; but the risk of the consequences from a suppuration, on the joint is always great, indeed even amputation may sometimes be found necessary—besides which the closing of the orifice, even after a protracted cure, is by no means a cure of the corn itself, since that disease often returns, with greater pain, and with an increased tendency to fester, so as almost to bid defiance to eradication by surgical operation.

During the concluding part of a cure, after extraction, the patient will often find himself so completely free from pain, as to experience no immediate inconvenience from walking. Nay he will smile at injunctions which would confine him to a couch or chair, a few days

longer. But let him not despise such medical caution; for the operations of nature cannot be carried on and completed, if she is interrupted in her progress; and a corn, not perfectly healed, requires just as much care as a broken limb even after the callus has been formed and indurated. There is another inconvenience attendant upon a neglect of the corn operator's advice; for if walking is indulged in, and kept a secret from him, he may be induced to refer the attendant symptoms to some other cause, and thus not only mistake the nature of the disease, but put the patient himself to much pain and inconvenience that might have otherwise been avoided.

In many cases, both before and after extraction, diet and regimen are most important considerations, especially with persons of delicate constitutions, who will often find great relief and a speedier cure by a total abstinence from fish and from ardent spirits. In short the antiphlogistic system, as it has been styled,

will be found the best; in pursuance of which the family apothecary may with great propriety be consulted. Even after a cure has been apparently perfected, the patient must be careful in attending to the directions already given in regard to shoes or boots; in addition to which I shall briefly point out how both shoes and boots ought to be treated and managed in order that they may not become the cause of disorders in the feet. Fashion, it must be confessed, reigns too often with sovereign sway, sacrificing to its dictates, to its caprices, not only ease of motion but even firmness of position, whether walking, dancing, or riding. The slaves of fashion may smile at those rebellious sentiments—let *them* smile and suffer!

In the first place then, let all persons troubled with corns, whether proceeding from constitutional bias, or from exterior or temporary causes, avoid sharp pointed shoes or boots, or which are too tight over the toes. Let the shoe be, as nearly

as possible, fitted to the shape of the foot and the upper parts formed of soft, supple, and well tanned leather. This latter caution is of vital importance at the present day, when rapid chymical processes have been substituted for the ancient system of bark tanning; in consequence of which the leather is not only pervious to damp, but often also acquires hardness and wrinkles that are extremely pernicious to the foot of the wearer. If shoes of well tanned leather cannot be procured, they ought to be well oiled at repeated intervals, not only to fill up the pores of the leather, but also to soften any asperities that may arise from contraction through wet, &c.

Even the best tanned leather will become hard and unpliable, especially in the dirty weather of the winter, if when covered with mud or dirt they are thrown by for the night without cleaning, or perhaps laid aside and forgotten by careless servants. To sportsmen, whether in the fishing or shooting seasons, these hints

will be extremely useful. Many persons have had reason to date their corns from fishing parties on the Wye, or shooting excursions on the moors, when sport was the only object in view, and the non-necessity for a spruce appearance operated so as sometimes to prevent the usual attention to neatness in all parts of the dress. At the time, these consequences were not thought of; but the sufferer has afterwards recollected his shoes that were suffered to grow hard whilst drying, and the pain and difficulty which he experienced in pulling them on hastily, whilst the pointers were at the door, or his brother fishermen were calling him to the river's side.

An extraordinary harshness is often imparted, even to the best leather, in the winter season, by an injudicious use of the fire, for the purpose of warming the feet—a thing that ought sedulously to be avoided, for other reasons also which shall be explained when we come to speak of chilblains. Due carefulness in this

respect will enable a person to avail himself of a very judicious plan of procuring two pair of lasts for his own use. One pair of these may be made to a close fit, for summer shoes, when cotton or silk stockings are worn; the other pair, for winter shoes, which then admit of the change to woollen stockings, and socks also, if they are found necessary. Let not the sound and healthy smile at and despise these simple cautions, however minute they may appear—let it be remembered that a person troubled with corns is a walking barometer, and that he whose feet give meteorological warnings must not despise minutiæ connected with extraneous circumstances.

Before I sum up my observations specifically in regard to corns, I must call the reader's attention once more to the subject of inflammatory symptoms, whose consequences are too often of the most fatal nature. Whenever these appear, they must be instantly followed by due care and caution; and it must never for a

moment be forgotten that all disorders in the feet, however slight they may, at first, appear, are always liable to serious results; since the bones of this part of the body, being in general of a spongy texture, are the most liable to become carious.

Whenever inflammation appears, the most essential, and always indispensable measure is repose. If the inflammation is not very violent, repose will often, of itself, produce a cure. But if it manifests extreme and rapid progress, accompanied by shooting, pulsatory pains, then there is always reason to fear the formation of an abscess under the corn in which case the affected part ought immediately to be enveloped in a linseed poultice, boiled in a decoction of marsh mallows, accompanied by cooling drinks and a strictly temperate diet. If the stomach is out of order, an emetic will also always be useful.

In the course of a long practice, I have often seen inflammations of a threatening

nature, yield to this simple process: but I have also seen many others (which were at first neglected, and perhaps affected by some constitutional taint, whether scrophulous, scorbutic or otherwise,) followed by a cariousness which has rendered the amputation of one or more toes absolutely necessary and unavoidable; nay, even when the ablest practitioners have been called in, though only a few days after the appearance, they have uselessly applied their various remedies, and have been obliged to have recourse to amputation to save the patient's life; a process too not always successful, unless performed before the inflammation has even come to its height.

The result of all my observations then is, that in all cases of corns, the patient ought instantly to have recourse to a rapid yet safe and salutary mode of treatment. Let him if possible consult a skilful operator, or medical man, whether physician, surgeon, or apothecary; but avoid most carefully the dangerous and

often contradictory prescriptions of advising friends, whose advice, though doubtless dictated by the most laudable motives, must be always at random, as they cannot have the means or the power of examining the complaint critically, nor of appreciating either its effects or those of their medicines, in regard to the cause of the disorder, the actual circumstances of the patient, whether in age, temperament, habit of body, or constitutional bias.

Hitherto my advice has been offered to grown up persons with respect to their own complaints. Let me add one with respect to children. It is not an uncommon thing to find children, even in the first twelvemonth, with corns on their feet, whose effects are too often attributed to worms, or constitutional convulsions. But a careful mother, even if she does not generally attend to the state of her child's limbs, ought instantly, on the appearance of convulsions, or restlessness or crying, to inspect its little feet, as there she may

often find the cause of its disorder, instead of drenching its bowels with nauseous drugs, and increasing the symptoms which she is most anxious to remove. It ought also to be a caution to all nurses to abstain from administering the usual sleeping potions to restless infants, until they have examined the state of their feet.

But a sensible mother, or a careful nurse ought not to wait for the appearance of disease before they make the proper investigation. They will examine their infants even in the earliest months of their existence; and will attend to this point sedulously until they are at least ten or twelve years old, and able to ascertain the cause of their own suffering. On the first appearance then of any spot which may bear the slightest resemblance to a corn, the child's foot ought instantly to be bathed, nay, well soaked in hot water, after which the use of a coarse towel will often be sufficient to remove the incipient disorder; but if not, then the

judicious use of the finger nail will seldom fail to have the proper effect.

If either of the parents is troubled with corns, it will always be proper to examine the correspondent parts of the child's foot most carefully; since the probability is, that on those spots will the infant's corns be discovered; but all parts of the foot ought to be examined at least once a month--a proceeding which will amply repay the mother and the nurse by the certain relief which it will afford them from anxiety and labour, and the child from suffering.

SECTION IV.

ON CALLOSITIES; BUNNIONS; WARTS; AND CHILBLAINS: THEIR SYMPTOMS; MODE OF CURE; AND PREVENTIVES.

CHAPTER I.

Of Callosities; their Origin, Causes, and Situation; Modes of Cure, and Palliatives, &c.

SOME callosities, on the human feet, are extended over a considerable surface; others again bear a striking resemblance, at first sight, to corns. There are few persons who are not troubled with them; but those who experience no immediate pain or inconvenience, seldom think them worth notice, whilst others who, in the early stages, were equally negligent, find them painful, troublesome, and difficult of cure.

Where the sufferers are almost universal, it is useless to expatiate on the

particular occupations of those who are most subject to them: especially as, even when they proceed from the same predisposing cause, they have different results with respect to the attendant, or consequent, pain and inconvenience.

Whatever are the causes, however, it is generally found that they are confined to specific parts of the foot: principally round the outer part of the heel, or on the outer part of the ball of the great toe; and sometimes on different spots in and under the little toe.

It has been observed by many intelligent chiropodists that those who are most sedentary, and wear the easiest shoes, are generally the most subject to them; also that the aged have them more frequently than younger persons.

Those who are in the habit of frequently using the hot bath, and rubbing their feet with a coarse towel, actually check them in their growth, even where predisposing causes exist; but where peculiar circumstances have led to negli-

gence, the callosity will extend itself, harden, and at length fall off, or be easily picked off, but leaving a considerable hole in the epidermis where it was seated.

Many people cut or pare them periodically, after they have acquired considerable growth; and others, for years, suffer them to grow, without notice and without immediate inconvenience, abstaining from eradication under the idea that to remove them would produce a difficulty in walking from the exposure of a tender skin to accidental pressure. Thus they go on until the induration becomes extreme in some particular spot, and a pain is felt equal to that proceeding from a corn, requiring constant paring and attention to keep the foot in good walking order, even upon the flagstones of the streets of the metropolis.

From their extreme similarity to corns, in some of their later stages, it has been supposed that they originate in the same causes; but it is difficult to lay

down any absolute rule upon that subject. This much however is certain, that although callosities often exist, where there is no specific pressure, yet there are few instances of persons subjected to pressure by their particular professions, trades, or habits, who are not troubled with them on the very spot where the pressure is most violent, especially if combined with a certain degree of irritating friction. In those cases, the hands, shoulders, and other parts of the body, are not exempt from them.

One of the most painful and troublesome that takes place upon the feet is at the sides of the great toe nail, beginning first with a thin edge which scarcely attracts the notice of the patient, until it proceeds to destroy the flap of skin in that spot, becoming thin and almost transparent, often affecting the nail, and generally accompanied by considerable swelling and inflammation. In this stage it often operates completely as a preventive to any kind of pedestrian

exercise, nay, becomes so irritable as to destroy the nightly rest, whilst it produces considerable fever through the day.

There are many complaints of the human system to which people seem to think it is only necessary to give a name, and then that the cure is half performed. This is one of them; and many a sufferer, trusting to the apparently insignificant name of a *galled toe*, permits it to arrive at a pitch when cure becomes extremely difficult, and protracted to a degree which might previously have been avoided. I mean not, however, to alarm my readers with unnecessary fears; for I am aware that many of them could assure me that they have had callosities for several years without any inconvenience; as these, even in their thickest state have been unattended by pain, and easily removed, after hot bathing, by the nail, or at most by the application of a penknife. It happens, indeed, in almost every body's experience, that those callosities will sometimes disappear of

themselves, or at least without any apparent cause for their disappearance; but it is false philosophy to submit to pain or inconvenience, trusting to chance for a cure, when a little care and trouble will either prevent the evil, or cure it in its earliest stages.

It is an ancient maxim in philosophy, that when the cause is removed, the effect will cease. This however, does not always hold good in diseases of the feet, though it must be acknowledged that in this particular species of diseases, the removal of the cause will tend to prevent the effect. In the first place, with respect to youth, it is a bad system to give them shoes that are too wide, as is often done, from a mistaken idea of economy to those who are growing rapidly. In this case, the shoe is often permitted to sit loose upon the foot, to the manifest injury of a graceful walk, and to the production of considerable friction upon particular parts of the foot. If additional socks are worn to guard

against that, then the unnecessary warmth given to the foot becomes another evil; so that although a partial saving may be made at the time, yet the future saving would be worth more than the price of a pair of shoes.

Let not the rich and fortunate smile contemptuously at this advice—I write for all ranks, and the economy which the distresses of the time have forced many genteel families to practice, will fully justify me in this very minute view of the subject.

An easy mode of prevention exists in adopting the custom of not only bathing the foot frequently, but also scraping those parts where callosities are likely to arise, even if they should not yet have commenced their appearance. This will always remove the slight thickening of the epidermis; but if the callosity is once fairly formed, even cutting off the surface will avail but little; indeed general experience shews that it will not only grow again, but will also grow

deeper into the foot than if it had not been pared at all.

People, however, too often vary the proverb, "out of sight, out of mind," and contenting themselves with hastily bathing their feet for cleanliness only, they suffer those complaints to increase, as it were unconsciously, until they arrive at a height which forces them into notice.

When arrived at that stage, they often require the treatment already prescribed for corns; absolute extraction becoming necessary; though in their progress it may be sufficient to reduce them by cutting or pareing from their projected surface, which is unattended with pain; whilst in the more advanced stages, the pain of extraction is sometimes equal to the operation of a corn, especially when seated on the inner edge of the heel, where a self-operator ought to be very careful of cutting too deeply, as he may not only subject the tender skin under it to painful pressure, but may seriously

injure a very delicate part of the human frame.

In all cases, after pareing or extraction, it becomes necessary for the patient to fit himself with shoes or boots that come as near as possible to the form of the foot, without being too tight, so as to prevent friction ; for that, and not pressure, is the most active cause in producing those complaints.

If the patient has perseverance, he may adopt a mode of cure, less dangerous in the hands of a self-operator than the knife, by the application of pumice-stone, or cuttle-fish bone, or sand paper, or a steel file ; all of which may be used with success where the disorder is not come to a head, so as absolutely to require extraction ; but he must still adopt careful precautions to prevent the return, as friction is only a temporary relief, but leading sometimes to a perfect cure.

CHAPTER II.

Of Bunnions; their Phenomena, and Cure.

I have already treated of this species of cuticular excrescence, in a preceding section, where the bunnion is described as a collection of corns of a peculiar nature, forming a large and very troublesome projection on various parts of the foot.

It is fortunate, however, for the sufferer that the bunnion is seldom so hard or so deep seated as the single corn, though its situation often makes it more troublesome, especially when seated on the great toe, where it is more liable to accidental shock or pressure than in any other place.

In the first approaches of this complaint, persons have supposed themselves to be afflicted with the gout, in consequence of the inflamed appearance of

that joint of the toe, though the pain is at first scarcely perceptible. At intervals, this inflammatory symptom goes off, but returns again at irregular intervals, and may thus continue to do for a year or two, before that the disorder really manifests its specific phenomena, in several small spots, each of which becomes the stem of a corn, hereafter to be collected in one focus.

These symptoms evidently point out pressure with friction as the cause of the complaint, at least of the inflammatory process; and they also point out that to prevent pressure and friction must always be a prime object in leading to the cure. Fortunately for the sufferer this complaint seldom appears in both feet at the same time; perhaps owing to local circumstances affecting one foot differently from the other. It is well known that the size of the two feet is never precisely the same; if therefore, a person shifts his shoes from foot to foot daily, it must always happen that the largest foot,

every other day, will be exposed to a greater pressure than usual in some specific part, and therefore will then acquire a greater tendency to disease. Where the length of the shoes differ, this disease is more likely to arise than when they are merely too tight across the toes. The cure has been already noticed, when speaking of corns—that is, extraction is the only positive cure; palliatives however are frequently used, and may indeed be so with considerable advantage when the inflammation is so great as to render an operation particularly painful.

In this case the best application is a cataplasm of oatmeal and ground linseed, renewed twice a day, until the inflammation subsides; and which will also prepare the bunnion for a more convenient extraction. Should the poultice bring on a suppuration there is no cause for alarm, provided it is judiciously treated, kept clean, and not exposed to irritation by premature exercise.

CHAPTER III.

Of Warts, their Causes, Prevention, and Cure.

Under the general head or name of *wart*, we rank excrescences, more or less hard, and which have a rough surface, without being so hard and impenetrable as corns.

Warts are known to develope themselves on all parts of the skin; at present we shall speak of them only as connected with the feet: as for specific description, they are too common to require it. It may be necessary to premise, however, that some of them are attached to the skin by a broad basis, whilst others seem to rest upon a little foot-stalk. Each of these species are, indifferently, large or small, according to circumstances; but they seldom exceed the size of a filberd.

It was for a long time supposed that

they were actually excrescences of the epidermis, on which they are seated; but it is now ascertained that their substance is of a totally different nature; as is evident from the simple fact of the blood which flows from them, and the pain which ensues from their being accidentally cut.

Though the corn has only a stem, these have *roots* which extend themselves sometimes to a great extent in the substance of the skin.

It has been asked, "What is the cause of warts, and whence do they come?"—but these are questions certainly difficult to answer.

Some writers have asserted that they spring from a morbid prolongation of the papillæ of the skin, in consequence of an acrimonious acid lodged therein and irritating them, or else from want of cleanliness. Some of the ancient physicians supposed them to be buds or pustules which appeared upon the skin, in consequence of being pushed out by

some internal force, in order to get rid of some heterogeneous or morbific matter.

Another medical author has asserted that warts are extraordinary excrescences of the nervous fibriles of the skin; that the principle of all these excrescences proceed from a humour, either gross, melancholic, or saline phlegmatic converted into a melancholic bias, which disturbs the circulation and insensible perspiration, thickens insensibly, and finally forms the callosities now under consideration.

But this manner of explaining the origin or the cause of warts bears too much the mark of that age in medicine when the system of acrimonious humours was in its full vigour; at present we must trust only to a better and more accurate mode of philosophizing. Experiment and observation must be the two stilts on which we proceed in search of truth through the mud of ignorance and conjecture. According to the most accurate observations, it is clearly ascer-

tained, that children and young persons are much more subject to warts than people advanced in years.

For the most part, they are merely a local malady ; sometimes indeed they are known to spring from specific diseases, and are even in a few instances to be of a cancerous nature.

Whenever they are easily removed, without relapse, there is no cause for uneasiness ; but if they come out in great quantities, and return rapidly after being destroyed, it may be fairly assumed that there is something morbid in the system which requires investigation and cure.

It is well known that warts are sometimes contagious—but that part of the subject I shall leave for professional treatises ; but here it is sufficient to say, that there is little danger attending them except when they are cancerous. Their appearance, when placed in sight, is always disagreeable ; but they seldom give much inconvenience, except where

awkwardly seated, or when of a large size.

Perhaps the most painful situation for them is on the sole of the foot, when acute pain, even to agony is unavoidable; but on the toes their effects are both painful and troublesome, for whenever they are irritated, either by bruises or by improper tampering, they often occasion not only a violent inflammation but sometimes degenerate into ulcers of the very worst kind.

A moment's reflection must shew that their treatment invariably requires to be regulated by the predisposing cause; whether the malady is merely local, or dependant upon some constitutional disease.

In certain cases when warts proceed from morbific habits of body, they must be treated gently when their constitutional cause is attacked by a regular system of medicine; after which they generally disappear of themselves. But when they proceed from local disease

alone, then they may be at once assailed by external remedies.

One simple plan, when the wart hangs by a little foot-stalk, is to tie a waxed silken thread round the basis, so as to suspend the circulation of the blood into the wart, thereby depriving it of life, when it slowly decays, and finally drops off. To perform this operation with accuracy, the silken thread must be passed twice round, and tied in what is called a *surgeon's knot.* The waxing of the thread is solely for the purpose of preventing it from slipping; and the knot ought always to be drawn sufficiently tight in the first instance.

This mode of treatment is not however applicable to warts which spring from a broad basis. In such cases then, the most certain and expeditious method is either cutting off, or extraction, if sunk below the skin.

In extracting them, the same operation must be performed as in the extirpation of corns, already described; that

is to say they must be gently and carefully dug out all round, either with a cutting knife, bistoury, or scalpel, or with a pair of very sharp pointed scissars. The operation, either way, is always painful, and, though not absolutely dangerous, ought if possible only to be performed by a person of some surgical skill.

Whenever it happens, as is often the case, that the malady will not yield finally to the cutting knife, or when circumstances prevent the use of it, the patient must than be content to avail himself of the best remedies which can be applied so as to operate at once upon the seat of the disease.

There is no complaint perhaps, for which vulgar remedies are so numerous; some of them founded in silly superstition, or ignorant prejudice, and others certainly considerable palliatives, even when they do not effect an absolute cure.

To these remedies it sometimes ac-

tually happens that a wart will yield on the first application; at other times I have known the greatest part of them to be tried successively without the slightest benefit. I shall first enumerate a few and then specify those which have the best chance of being really efficacious, with some observations on their mode and effect of application, and next advert to such as I would recommend for safe experiment, being perfectly innoxious if they should not be efficacious.

Some have succeeded by rubbing their warts with salt dissolved in vinegar, with the juice which exudes from the stalks of celandine, of milk-thistle, of the fig tree, and wart grass, with various others. Some again have proposed to cure those excrescences by inserting them in a hole cut in a piece of tin, and then covering them with a coat of brimstone to which they set fire and thus burn them off. This method is certainly effective in one point of view, that is absolute eradication; but it is painful, always dangerous,

and may be fatal—it is therefore more "honoured in the breach than observance."—

Some again make use of arsenic and corrosive sublimate; but the whole train of caustic medicines, as well as the actual cautery, ought to be avoided, or very carefully used; being often productive of the worst effects. It must be acknowledged, however, that there is one slight exception to this general rule—as in certain cases people have derived considerable advantage from using the point of a knitting needle made red hot, and used tenderly and judiciously. I have also often found benefit in applying the lunar caustic to the seat of warts which I had previously cut off with the scalpel or bistoury.

But there is another mode of treating warts after cutting off the excrescence, which must be less painful and even less dangerous than the lunar caustic. It is however less certain; yet I have been assured by numbers that they have de-

rived great relief, indeed a perfect cure, from the application of a cobweb to the part, after having, without the slightest success, tried all other commonly prescribed remedies.

Aquafortis, or the nitrous acid, has been strongly recommended by several writers; and in particular cases, I have certainly given it the preference to other medicines: but the utmost care and circumspection are necessary in the exhibition of it, since it has often led, when injudiciously administered, to inflammations of the most violent nature, and even to cancerous ulcerations. I therefore strongly recommend to my readers to abstain from the use of this caustic remedy for warts that are subject to irritation from their situation, particularly when seated on the articulations of the joints or the sole of the foot. In short, if patients, in those cases, are unwilling to apply the cutting knife, let them use a caustic slow in its progress, and

whose irritation may be easily checked, if necessary, in the first instance.

If, however, any patients are anxious to try the nitrous acid, the safest way of using it is to form a piece of wood into the shape of a pen, with which a certain portion of the aquafortis is taken up. Shake the pen until the first drop flows off on the ground, and then apply what remains to the centre of the wart, which will speedily assume a yellowish appearance; repeat the process twice a day, until it is perceived that the roots of the wart are beginning to separate from each other, and, if the warts do not proceed from any taint in the system, they will soon fall off, without any probability of their return.

Be careful, however, only to use the aquafortis upon the largest warts and never to those that are immediately upon the articulations. It has been ascertained that when the large warts have been removed by this mode of treatment,

the smaller ones have spontaneously followed them; a consequence evidently arising from the principle that these excrescences draw their nourishment from the skin, which acquires a healthy state from the use of this powerful stimulant.

It is perhaps only on this principle that we can account for cures which certainly have ensued after the use of various herbs and kitchen vegetables, such as the stems of leeks, leaves of sorrel, kidney beans, &c, where considerable friction has been adopted.

It is needless to notice the various mysterious remedies recommended by ignorance and superstition, except to shew their absurdity. One person will recommend the stealing a small piece of beef from a butcher with which the wart is to be rubbed; the beef then buried in a dunghill, and its gradual decay followed by that of the disease. Another advises the rubbing of the wart with the inside of an apple cut in two, which is then to be rejoined and placed in a situation to rot

speedily, when the warts are to be cured in the same manner.

In Catholic countries, some will rub their hands in the holy water at the entrance of the church; without reflecting that the same operation may be equally efficacious at home.

Perhaps some conjuror advises that he shall be permitted to pronounce a few unintelligible words whilst breathing on the warts; to which some more experienced necromancer will add a thread drawn from the left sleeve of the body linen of a dying person, on which he ties as many knots as there are warts to remove, rubs each wart with one knot, and then buries the thread in some damp place, most sagaciously expecting that the warts will waste away as the knots decay.

However ridiculous these prescriptions may appear, yet it is a fact that many persons place an implicit faith in them. Most certainly they are innocent in the strict sense of the term, and those who

chuse may try them without danger; but if by any good fortune the warts should afterwards disappear, and they attempt to persuade me that these means were the active causes, I must confess that it requires either much credulity, or much good humour, for any rational man to say "I believe it."

If the patient is really unwilling to submit to excision and extraction, there is certainly a simple method of cure, which I have often prescribed, and seldom observed to fail of success where it was carefully and sedulously applied. But then it requires more perseverance than many are disposed to exercise; and without perseverance and care, it can be of no avail.

Dissolve the muriate of ammonia in some water; wash the warts with the solution, frequently through the day, without drying them, and at night bind them up with cloths in folds dipped in it; continue this for some time, and the

warts will at length be found to disappear.

I have already recorded an extraordinary case where fungous flesh, on an extensive wound, was destroyed in a few days by the application of a calf's stomach, covered with the gastric juice. It is extremely probable that this remedy may not only be found beneficial for corns, but also for warts. It is, indeed, both expensive and troublesome; but the principle upon which it acts has been known to be successfully employed with respect to warts, by rubbing them with *fasting spittle*.

Some readers may smile at this recipe, and rank it with the absurdities already recorded; but it must be recollected that on waking in the morning the mouth is filled with saliva free from all extraneous substances, and that the gastric juice of the stomach has actually found its way to the fauces where it unites with and is perhaps augmented

efficaciously by the saliva. Now as the gastric juice has the property of dissolving all animal substances that are not in a living state, it is easy to conceive that the solvent property of the fluid may operate upon these excrescences.

I have certainly known cures to ensue after a careful trial of this remedy; but cannot vouch for its being always efficacious.

In certain cases, where warts have grown with a rapidity that bid defiance to lunar caustic, and when their situation rendered them peculiarly liable to irritation, the happiest results have ensued from covering them with the powder of *Delphinium* vulgarly known by the name of *Stavesacre*, — but this falls more peculiarly under consideration in other branches of medicine.

It sometimes happens that very large warts appear on the soles of the feet. These, if of a very fungous nature may often yield to the power of the Staves-

acre; shouldthey not, andgentlermethods afford no relief, or should they arise from some constitutional cause which restores them after eradication, the sufferer may then apply the caustic potash, provided it is done very carefully. The best method of doing this is to take a piece of cere-cloth, in the centre of which a hole is to be made large enough to admit the passage of the wart, and thus fix the cere-cloth close to the surrounding skin. Drop on the wart a small portion of water to which add a small quantity of the potash, about the size of a barley corn, and cover that with another piece of cere-cloth, fixing the whole with a bandage and compress, and, if possible, giving the foot sufficient rest. In a short time the wart will be converted into a dry scab or cicatrice and will soon fall off, leaving a wound that will come to suppuration; but this remedy is one that ought never to be applied carelessly, nor unless the patient can give to the foot

the most perfect repose, whilst the suppuration is going on, and indeed until the cure is perfected.

In all wounds, particularly of the feet, the utmost repose is always necessary; and with respect to the artificial wound, in particular, produced by this method of cauterization, there is often danger of its assuming a very bad character, if the constitution and habit of body are not very sound—nay in any case, if the cure is not favoured by due attention to repose, to the cleanliness of the wound, and a total abstinence from all inflammatory food or potations.

CHAPTER IV.

Chilblains; their Cause, Development and Cure.

Chilblains have been defined to be a species of erysipelas, arising partly from

constitutional causes, partly from external circumstances of weather, &c.

Their appearance is always that of an inflammatory swelling; generally manifesting themselves after exposure to severe cold, especially if dampness has been connected with it. The pain attendant upon them is not only pulsative or shooting, like that of a boil, but also burning as an erysipelas. Their name of chilblain therefore is not derived from the sensation produced by them, but from their cause; a blain, or boil, arising from cold. It has been remarked, however, that they never take place in dry frosty weather; unless it happens that the feet, from particular circumstances, have been exposed to wet or damp. Sportsmen therefore, in snipe or grouse-shooting on the moors, may always avoid them by a careful attention to the dryness of their feet, both during the period of their day's sport, and after their return: but let them remember that the feet, if damped only by

perspiration, are as liable to the disease as if the wet were to penetrate through their shoes or boots; care must therefore always be taken to dry the feet on return from shooting, before any refreshment is taken, and most especially before the feet are placed near a fire. Indeed I have no doubt that the most pernicious practice of drying the feet at a fire, or of warming them by close application to the grate, or to a warm hearth, is oftener the cause of chilblains than the mere exposure to cold alone.

They often make their appearance on the hands, the elbows, nose, lips, and ears; but their principal seat is on the feet, either on the toes or on the heel.

Infants; females; young men of a slender fibre, with a soft and tender skin, and but little used to cold; and persons of a scrophulous or scorbutic taint, are always most subject to them: and, generally speaking, they are oftener met with in temperate climates where the weather is unsettled and inconstant, than

in colder countries where the frosts are steady during the winter, and the vicissitudes of weather are infrequent; unless indeed that persons then expose themselves to sudden changes from heat to cold and vice versa.

Our English travellers therefore who chuse to spend their winters in Flanders, or the northern parts of Italy, &c. should always be on their guard against the use of feet-stoves, and other artificial modes of raising the temperature which they may meet with in those countries; and should rather excite the blood to circulation, on returning to a warm room out of the open air, by walking up and down the apartment, than by placing their feet close to a stove, or vessel filled with warm water, as I have seen too frequently practiced.

When once the tendency to chilblains has taken root, their development is more or less slow, so that it is easy to observe their progress, and even to guard in time against their exacerbation: for

in the spot where the chilblain, if neglected, will assuredly make its appearance, may be discovered a slight reddish inflammatory tint, becoming deeper coloured every day, and speedily accompanied by a burning heat and a slight swelling.

If very gentle friction with a flesh-brush on the surrounding parts, together with cooling embrocations, should now be applied, the symptoms may diminish; but if not, then a troublesome itching begins to manifest itself, towards which the sufferer involuntarily applies his hand in order to afford himself some relief, but in fact he only aggravates the complaint, the itching sensation increases, and in a short period becomes almost intolerable.

In this stage of the disorder, the sufferer is too apt to have recourse to violent and opposite remedies in hopes of obtaining instant relief; but he only aggravates the symptoms: for if he exposes

his foot to a powerful heat, he soon feels all the sensations of an inflammatory boil, and if he adopts the plan of laying it open to the cold air, or of throwing cold water upon it, though at first he may experience some relief from his anguish, yet that is only for a moment, since the pain speedily returns with redoubled violence, the disorder itself spreads more extensively and rapidly, the swelling increases even to most painful extension, and the motion or use of the foot becomes almost impossible.

After this, and even without this if the chilblain is merely neglected, the skin surrounding and covering the seat of the disease, changes from red to purple, then to a violet colour, and finally becomes livid and of a marbled appearance. The pain now assumes a new character; the itching diminishes, but the throbs or pulsations are burning and most acute; after which the epidermis is raised up by little vesicles like blisters,

filled with a reddish acrid liquor, which form rapidly and spread themselves on all sides.

These break, and form irregular ulcerations of a very morbific appearance, extremely painful, and intermingled with pale, greyish, fleshy excrescences. The ulcerations soon reach the tendons, and affect even the substance of the bones, often producing cariousness that demands instant amputation; and under the most favourable circumstances give the most acute pain, discharging an ichorous and very fetid humour which irritates the surrounding flesh and tends much to retard a cure.

Such is the progress of neglected chilblains. Even in this stage they are amenable to the powers of medicine: but should they be further neglected, the consequences are gangrene and death!

After this true, but fortunately not very frequent picture, it must be totally needless to enforce the importance of an

early attention to this species of disorder; for even though it may not have very dangerous symptoms in its early stages, yet it is always attended with very great pain, never goes off but by a very slow process of cure, and always leaves behind it very disagreeable traces, independent of its tendency to relapse.

The treatment to be recommended for chilblains is either that of prevention or cure. The first is always the best, and ought in some measure to be adopted even before the manifestation of a morbid affection. The most certain method of prevention is to habituate those parts of the human body to cold which are the most susceptible of the disorder: but there exist many reasons, in our present state of society, why this cannot, or ought not, easily to be done.

I say nothing to those daring dames and damsels who expose their persons with so much nonchalance, to a burning sun, to the morbid atmosphere of a ball or crowded drawing room, to the aërial

drafts of a theatre, to the change from a warm apartment to the chilly hall or more chilly steps, whilst waiting for their carriages to draw up, or sometimes perhaps to the damp fumes of a church: but to the more prudent part of my readers, I wish to inculcate that as every sudden transition from heat to cold or from cold to heat is the commonest cause of chilblains, so ought they to take especial care to shun those changes, since circumstances do not permit their assuming the principle of general and constant exposure to cold, and to all atmospherical changes.

To accomplish this is not very difficult, by a slight attention to dress, and to the substances of which dress is composed; for by that means they may preserve the body in the general habit of existing in a medium temperature, not easily to be affected by common atmospherical changes, unless their succession is rapid and in some measure extreme: though even then the conse-

quences may still be avoided by a little care and forethought.

In the first place to avoid the effects of extremes in dress, I recommend that furs, however necessary in very cold climates, ought here to be dispensed with about the feet, since they have the property of exciting an artificial degree of heat which keeps the pores of the skin open, rendering those parts of the human system more susceptible of the impression of every sudden change of our changeable atmosphere. During winter, the greatest care ought to be taken to throw off wet shoes or boots, even when the wet does not appear to penetrate. The feet ought always to be kept dry with a rough towel; and, when bathed, the operation ought to be before going to bed, instead of the morning, as the feet, during the night, will thereby perspire sufficiently and recover their proper temperature before morning.

To those whose feet are very susceptible of the effects connected with the state

of the pores of the skin, it will become a matter of the first necessity always to keep them in due exercise when exposed to cold. It may even be found beneficial, but under medical guidance, to fortify them against cold and humidity by bathing in cold water in preference to hot on the approach of winter, but with the precaution of rubbing them afterwards with a little brandy or eau de Cologne.

But gouty patients must avoid cold water; and my female readers will be careful of adopting this mode, unguardedly or unadvisedly.

During the winter, immediately after bathing the feet, or after their being exposed to damp, or under peculiar circumstances to perspiration, or when suffering under the complaint vulgarly called a *whitlow*, the immediate vicinity of a fire ought to be avoided, as the *rapid* return of warmth is always pernicious.

Due attention to these directions will,

in general, operate in the prevention of chilblains; but will not operate as a cure when they have made their appearance, though still useful in guarding against the exacerbation of the complaint.

For cure then, the treatment must be very different.

When the chilblains have not reached the point of ulceration, and indeed when the inflammation is just beginning, great relief will be experienced from a cooling embrocation. This may be formed of spirits of Mindereri and vinegar; or of the boasted secret vegeto-mineral water, consisting of a glass of brandy, two drachms of extract of saturn or acetate of lead, and about half a pint of water. These produce a white lotion in which linen compresses ought to be dipped and applied to the part, renewing the cold fomentation repeatedly through the day.

Should this not produce immediate effect, the sufferer may plunge the affected part into a bason of very cold water, keeping it there seven or eight

minutes, repeating this operation for a considerable time, after which the part ought to be well rubbed dry, and then wrapped up in a piece of oiled or gummed silk (taffety is best), in order to keep it from all contact of the atmospheric air.

It has often been found efficacious to rub the affected part repeatedly with snow, continuing the operation for some minutes; taking care immediately afterwards to dry the part well, and to wrap it up, as before, in the gummed silk.

If the chilblains should have advanced so far that the violence of the inflammation brings on fever, then the application of leeches to the immediate seat of the complaint, will always be attended with the best effects.

I have known, in simple cases, considerable benefit derived from bathing in sea water, or with that which is deposited in opening oysters; as each of these, from the salt contained in them, acts as a powerful stimulant to the affected part.

Salt also, in a dry state, is sometimes

used, but will be more efficacious in the shape of salt brine.

Decoctions of radishes or turnips are sometimes recommended. I have known them to be used with slight success ; but I have found more benefit from embrocations of cold wine, mixed with a little brandy to increase the evaporation, and consequent cold. Where evaporation is advantageous, it may be produced even more rapidly by the application of ether.

Lotions made of essence of turpentine are often very useful; but the strong and peculiar odour is offensive to weak nerves. There is, however, no other objection to the application of it in any stage of the disorder.

Electricity has, also, sometimes had the happiest effects.

But I have never found such certain success from any application, as from the following fomentation, applied by means of compresses dipped in it repeatedly, or freqently wetted whilst they lay on the

affected part:—To a drachm of common white soap put two drachms of liquid ammonia and two ounces tincture of cantharides, mix it well, and apply it carefully.

All or any of these modes may be adopted in the early stages of the disorder, during which exercise, if not too violent, will always be proper. But when the chilblains become ulcerated, the first point of consideration is a perfect repose to the injured foot; to accomplish which the patient ought to remain in bed, or lie upon a sofa, so that the foot may rest without motion as much as possible: but in either case it must be completely secured from the influence of cold air.

Even where the ulceration has acquired a livid hue, and there is also a tendency to gangrene, much benefit may be derived from the use of the cantharides lotion; along with which, if fungous flesh has begun to appear, may be applied the lunar caustic, or the slower, yet

equally certain powder of calcined alum. But if the fleshy parts of the ulcer appear lively, then a very good application will be found in pledgets of lint spread with a little cerate, to which may be added a few drops of extract of saturn, under which name it may be got from any apothecary, notwithstanding the repeated changes of medico-chemical nomenclature. In Paris this remedy is so popular as to be prepared in all the apothecary's shops under the name of cerate of Goulard.

During this part of the process, it will be very proper, at every dressing of the ulcer, to bathe it with a lotion of a cooling nature. For this purpose the vegeto-mineral water, already described, may be applied luke-warm: but, whenever, in order to appease the violence of the pain, it is necessary to have recourse to emollient cataplasms, they should always be applied quite cold.

It is an important point of consideration that whenever the chilblain be-

comes ulcerated, it is then not only proper but, indeed, necessary, to adopt a careful regimen, as a most powerful means of seconding the effects of the remedies, and also the efforts of nature. In recommending this, I must not be misunderstood as directing a severe and absolute abstinence; but merely the disuse of all aliments hard of digestion, and more particularly of such as may be called incendiaries by their effects on the habit and on the disease. Some diminution of the quantity of food is also necessary, if it were only on account of the patient being obliged to preserve a state of repose; for every body must be aware that the stomach, in that case, will not digest so rapidly nor so powerfully as when using the customary exercise. Prudence and common sense, of course, direct a more moderate gratification of the appetite: but even when exercise can be taken, a careful regimen is necessary, both in quantity and quality, to those who are subject to complaints of

the bile, or whose constitution is affected by any peculiar taint. In short, in such cases, the patient, if not very willing to submit to rule, must be reminded of the observation of Hippocrates, that "*the more you nourish an impure body, the more you hurt it.*"

At all events it is proper that the internal treatment should be in unison with the external applications; otherwise the most salutary process will be counteracted. If there is any bilious affection, the patient ought for two or three days at least to live upon barley gruel; and it may be proper also to administer a vomit, to be followed by gentle cathartics, keeping the bowels soluble. If, however, there is reason to suspect any constitutional taint, that must be instantly taken care of. In a word, if there is any thing in the system which may have a constitutional connection with the chilblains, it will deserve the most serious attention.

If it shall happen that the chilblains, thus ulcerated, neither yield to the remedies prescribed, nor to the change of weather from the advance of spring, there will always be reason to suspect that the ulcers, though originally proceeding from the chilblains, have now acquired another principle. In such cases, they not only seem to be slow in curing; but, even when they do cicatrize, it often happens that they break out afresh, and develope symptoms which strike at some organ essential to life. It then becomes necessary to use cathartics, and to open an issue, or insert a seton, either in the arm or thigh; and to adopt a general plan of alterative medicines for clearing of the system from all taint—a proceeding that may occupy several months.

To enlarge on that, however, would be to go beyond the popular and simple plan of this little work, I shall therefore proceed to describe the last symptom of

a chilblain, and the most unfortunate that can accompany it—the gangrene, or mortification.

Even this does not come on unexpectedly or take the sufferer unawares, but announces its approach by precursive signs easily to be distinguished. First, the redness, which was lively, gives place to a brownish tint; the burning heat disappears; the sensibility of the part seems extinct; and the ulcer becoming livid or blackish, forms itself into a very ugly cicatrice: such are the principal characteristics of an approach to gangrene.

After this, the part affected remains in a state of torpor, apparently sinking downwards, until that nature by her own powers, or by the excitement of the proper remedies, renews the inflammation; or, more properly, produces a healthy excitement. The edges of the chilblains now acquire a fresh degree of extra heat, and assume a vermilion colour. The division or line of demarcation between

the morbid part and the living circle of flesh which surrounds it, becomes more evident, and a separation appears to commence, when a suppuration ensues producing in a short time an exhalation of the most disagreeable and cadaverous odour.

This, however, is by no means an alarming symptom, but consequent upon the exertions of nature to recover a healthy state; which will finally be accomplished, with good care and due attention to local and constitutional circumstances.

In describing the process so minutely, my object is to afford the sufferer the means of appreciating his own situation, but not of being his own surgeon in a case so hazardous as gangrene, or even the approaches to it. He must leave it to his professional attendant to regulate and modify the peculiar mode of treatment, agreeable to the constitution and age of the patient: I shall therefore conclude this part of the subject, with

merely stating that, in general, during all the stages of a gangrene arising from chilblains, it is necessary to drink plentifully of tonic medicines, amongst which the wine and bark are the most powerful and expedient. The exterior applications, in general, will consist of powdered charcoal, a most powerful antiseptic, spread on the surface of the ulcer, sometimes mixed with the peruvian bark ; whilst the falling off of the cicatrice may be hastened, or at least assisted, in due season, by an unguent of storax, and also by a lotion of camphorated spirits of wine.

SECTION V.

DISEASES AND DISTORTIONS OF THE NAILS; STATE AND MANAGEMENT OF THE TOES; PERSPIRATION OF THE FEET; GENERAL OBSERVATIONS.

CHAPTER I.

Diseases and Distortions of the Nails with their Cure.

The nails, in their substance, have a great resemblance to the horns of different quadrupeds, or to the bills of the feathered race; and are placed upon the extremities of the toes for many useful purposes.

They have generally been distinguished as consisting of three parts; the body, the extremity, and the *root;* but the latter appellation conveys a meaning which is rather incorrect, for nails cannot

be totally eradicated, though pulled out, or falling off by disease, but will always grow again, which could not be the case if they were actually rooted out when their whole existing substance is taken away.

Having made this observation, to guard against misconception of the following reasoning, I shall still preserve the accepted name of the *root*, when speaking of the inner extremity; of which I may here observe, that it is actually lodged within a fold of the skin, though not absolutely united with it.

The division called the *body*, is the middle part, which adheres to the toe by its lower surface, but is clear of all incumbent matter on the external surface; whilst the *extremity*, which is nothing more than a prolongation of the body, is free on both sides, and also at the edges, when in a healthy state, and is capable of growing to a great extent.

This is not a place to enter upon the anatomical disputes respecting the mode

of origin, and growth of the nails; perhaps, if we do not come near to the truth, we shall at least avoid error, by considering them as appendages of the epidermis, which naturally forms itself into a fold in order to present a lodgment for them; indeed whenever it happens that the epidermis comes off through a bruise, or any accidental hurt, the nail always accompanies it. It has been supposed that the principal use is to preserve the toes in their proper situation; but we must also consider them as a cover and protection to the nerves which are very numerous both at the ends of the toes and fingers. In themselves, they are totally insensible; and neither nerves nor vessels of any kind have yet been discovered in any part of their substance; their formation is then a mystery, but is supposed to have an origin in the corpus mucosum.

Some persons have imagined that they grow after death; nay I once heard it very gravely asserted by a monk in the

Convent of St. Francis at Goa, that an angel came down from heaven every Good Friday, to pare the nails and shave the beard of that holy personage, in order that the priests might distribute them amongst the penitents of the year, as they were always found deposited on the high altar, the angelic chiropodist and shaver not permitting any person to see him at work: but, in spite of those legends, we must be content with knowing that the nails certainly have powers possessed by no other part of the human body, since they continue to grow through life, in spite of disease, even unto the most advanced age.

Even at our first appearance in this sublunary sphere our nails are found of a sufficient length to admit of being pared or cut; an employment which often serves to wile away many a heavy hour through life with the idle, and which ought not to be neglected even by the busy, since it is conducive both to bodily comfort and external neatness.

The Chinese, indeed, in the higher ranks of life never cut their nails, either on the hands or toes, so as to shorten them; but in order to prevent their growing into the flesh, are often obliged to perform a simple operation, which might be practised even here, with great advantage. This mode of treatment is to shape the nail, especially on the great toe, like the top of the ace of hearts, so that the nail, as it extends in breadth, grows into the vacancy at the centre instead of spreading at the sides. Thus far we may copy from them with propriety; in other respects, especially as it regards the nails, we may leave those proud inhabitants of the "celestial Empire," to follow a custom as singular and absurd as any other part of their manners, so well described by recent voyagers. Indeed the general manners of Europeans of all ranks and professions, and of both sexes, completely forbid the use of very long nails, even if neatness and cleanliness did not promulgate an absolute law upon

that subject. Besides this, the removal of the nails is no insignificant matter upon the score of health; since their extreme length operates to prevent the feet from expanding properly, and assuming that breadth which supports the human body in its various changes of position, and in shifting its centre of gravity.

In performing this operation, however, we must be careful not to cut the nails too close, since that will actually prevent the proper expansion of the toes; besides exposing the tender extremities of the toes to accidental hurts or bruises: and it must be remembered, that wounds under the nails, or on those spots which ought to be covered by the nail, are too often followed by unpleasant consequences; nay, may sometimes produce a locked-jaw, if one of the numerous nerves in that direction should be wounded.

Let the mean then be adopted between the extreme shortness which exposes the toe to danger, and the extreme length

that will cause them to grow into the flesh, becoming a powerful obstacle to pedestrian exercise, and occasioning a constant and harassing pain: nay often producing worse consequences, since there are many very troublesome complaints, spreading to other parts of the system, which have their origin in neglect of, or accident to the nails, leading, though happily not very frequently, to incurable lameness and even to death!

The nails themselves are subject, even without external accident, to crack, to split, to exfoliate, to bend and grow backwards, to grow tough, and to suffer under various morbid changes leading to deformity, and often to their falling off with considerable pain and a tedious cure. These specific changes generally proceed from scrophulous, scorbutic, or other taints in the system; in which cases it is futile to expect a radical cure, except by a proper medical treatment of the predisposing cause: but when morbid appearances result from external accident, a local treatment is,

generally speaking, all that is necessary.

It is the result of extended observation that although children may be born with numerous deformities, yet a deformed nail has never been encountered. Even instances have occurred of the fingers, or toes being deficient in the last joint, yet the nails were perfectly formed on the remaining stump. The deformity of nails must therefore be looked for either in some morbific habit of body, or in external accident. These latter are numerous; either by bruises, from falling substances; from the tread of a horse; from accidents whilst dancing, &c. It is even asserted, though I vouch not for the accuracy of it, that hard pedestrian exercise has actually had the effect of forcing off the nails of the great toe, attended by loss of blood from the rupture of small vessels connected with the epidermis; but, even in this latter case, the nails always grew again, though attended with great inconvenience.

I can speak indeed frommy own ex-

perience, when I state that the great toe nail will sometimes come off from a long exposure to cold. About fifteen years ago, I lost both of those nails, from being frost bitten, yet they grew again ; but fell off regularly once a year for several years afterwards, being, indeed, pushed off, without pain, by the new nails which grew under them, whilst the outer nail was separated from the flesh, except at the sides and root. After going through this process during five or six successive years, the nails at length became stationary, without being deformed, and I have experienced no further inconvenience.

During the course of a long life, the nails appear to undergo considerable variations in their nature and mode of growth. In infancy they are soft, and in youth often covered with whitish specks; but in maturer years they assume a greater hardness, and their colour is darker than before. This change is generally accompanied by the growth of a spongy

substance, which manifests itself more particularly under the nail of the great toe, operating in some measure as a preventive against the nails growing into the quick. Some persons acquire this earlier than others; in some it increases rapidly; with others it is slow of growth. It may sometimes intervene to prevent the close cutting of the nail, and ought therefore to be treated tenderly; but no absolute danger can result from it, as it is not a part of the flseh actually, but is rather an exuberance growing from the nail itself. Yet it ought not to destroyed wantonly, and therefore the best way is to preserve it by cutting the nails square instead of round, for even then the projecting cornersare less likely to grow into the quick, the nail in its natural growth always pushing forward instead of sideways, if nothing exists to prevent it.

In cutting the toe nails, it will always be proper to attend to the thin skin, which more or less covers the bottom or root of the nail. Its use is to assist in

securing the position of the nail by binding it close to the cutis vera or true skin; but if suffered to extend itself too much, it becomes liable to accident, is more easily injured, and sometimes separates into what are commonly called *false nails*, often attended with pain and inflammation. In fact as the nail grows it mechanically draws this skin along with it, and, if it grows rapidly, frequently producing inflammation, which can only be guarded against by a careful separation of it from the nail, with a blunt instrument, sedulously avoiding not to proceed too far, as that may endanger the nail coming off entirely.

Whenever nails split, crack, or exfoliate, the same species of care and attention will equally serve. Let them therefore be wrapped, or bound up with a strip of linen on which is spread diachylon, or any other adhesive, but not drawing plaister; or even a little shoemaker's wax will often be found sufficient. In a few days the bandage may

be taken off, when the nail will be found to have grown sufficiently long to admit of the diseased or injured part being cut off without pain or trouble.

A nail which bends downwards and grows in that position, produces one species of what is commonly called "growing into the flesh;" it sometimes takes place in the hands; but is principally an affection of the nail of the great toe.

The predisposing cause of this, in most instances, is certainly to be found in wearing short shoes which press the nails into improper positions. When this artificial, morbific pressure is lateral, it has the same effect; that is, if the shoes are too tight over the toes. In that case the nail is bent into the form of a cylinder, so that its edge is forced against the flesh, producing a pain which is sometimes but little attended to, though at others, it induces the sufferer to have recourse to artificial means for relief.

To execute this, it is a common mode to cut the nail in a circular form, taking care to cut away as much as possible of that part which presses against the flesh; but this is a mere temporary relief, since the nail grows again rapidly, and its edge being cut by the scissors into little angles actually produces more pain than in the first instance. Thence, mere pain is not its sole attendant; for a considerable inflammation often ensues, when the nail buries itself in the flesh, pierces it, and a suppuration, often extremely obstinate, is the inevitable consequence, in which situation even a slight degree of exercise may produce the most dangerous results.

In any stage of the disease, the most radical cure consists in correcting the deviation of the nail from its regular growth, and in guarding against a recurrence of the irregularity: to perform which it is necessary to begin by scraping the upper part of the nail on the side of the disease, continuing this operation until the nail

shall have become sufficiently supple to admit of being forced into a position contrary to its acquired curvature. To aid this reformation of its position, some operators employ a small piece of sheet lead which is brought half round the toe, and which must be kept in its proper position by means of a bandage or compress, whilst the upper end of the lead is placed so as to lift up the nail from its former place, or to press down the flesh and disengage it from the nail. If this is neatly performed it is attended by no pain whatever; but the inflammation speedily goes down, and the cure is perfected after a few days, or perhaps a few weeks, just as the continuance of the complaint, previous to the operation, may have been.

Some operators prefer a piece of tin to sheet lead for this purpose, from an idea that the lead does not possess sufficient resistance; and this may often be very proper, especially when the nail cannot be sufficiently scraped, because it then

is almost inflexible, adheres by its concave surface, and opposes a very powerful resistance which cannot be overcome without a proportionate effort, often indeed causing most painful sensations. But when care has been taken to thin the nail, or to render it pliant, then instant relief can be given with great facility, and comparatively speaking, without any pain deserving notice.

It is unnecessary to describe the different methods which have, in this case, been adopted without success, any further than to guard the reader against trying futile experiments, especially that very dangerous plan of tearing the nail by force from its position, to which it very speedily returns, reproducing the the same complaint, and often with redoubled virulence.

But whatever method of cure may be employed, it will always be necessary to take precautions against a return of the complaint; in which the principal is to renounce tight or short shoes; next to

which is the plan already hinted at, of never cutting the ends of the nails round, but square in such a manner that the lateral parts shall spread themselves *over* the skin. Should they, however, manifest any tendency to bend before they grow sufficiently long, it will be proper to interpose a small piece of lint, or else of sheet lead. This may, for a day or two, be attended with a slight inconvenience; but let the patient remember that it is always safer and more agreeable to prevent a disorder than to cure it.

It often happens that the nail of the great toe prolongs its growth towards its neighbour, to which it is very painful, chafing and sometimes actually growing into it. At first sight it appears that the readiest method of cure is to cut off with a pair of scissors that part of the nail which projects so viciously; but the fact is that such a proceeding is in direct opposition to the object in view: for it is a principle now thoroughly established

and confirmed by every day's experience, that the oftener a nail is cut, the more rapidly it will grow. In fact the nails appear to have this property in common with the hair and beard; and it has been accounted for on the principle that the action of cutting calls to the point where it is practised, a vital activity of a superior kind to that of the other parts. Instead therefore of cutting that side only once to remove the immediate inconvenience, it will be proper to cut the nail frequently on the opposite side which will give an opposite bias to its mode of growth, and superinduce a new habit in the nail itself.

It sometimes happens that various substances force themselves between the nail and the flesh, such as thorns, splinters of wood, needles, pins, &c. when a collection of pus takes place under the nail producing great pain and fever. Fortunately for the patient the nails are in general so pellucid as to admit of the purulent depot being easily seen by a careful observer. Sometimes this sup-

puration takes place from a blow or a bruise, or a whitlow; but whatever the cause, the best mode of treatment is to scrape and pare the nail until it is so thin that an incision may be easily made in the skin below it, so as at once to afford an exit to the purulent matter, and thus, to relieve instant pain, but to prevent future unpleasant consequences.

Whenever any foreign substance, such as a thorn or splinter enters under the nail, the surest method in the very first instance is to extract it: and if this cannot be done without an operation on the nail, no time ought to be lost in making an opening in it, after having first thinned it, either by scraping it with a bit of glass or a file; and this process will often be found safer, easier, and less painful than attempting to open the hole by which the thorn gained an entrance.

The best instrument to extract either a thorn or a splinter is a needle: next to that a very fine probe, but pins ought never to be used. Even if the needle

does not extract the thorn, it will always raise it sufficiently to be laid hold of with a small pair of forceps.

I have very seldom seen corns develope themselves immediately under the nails, though often at the roots; but it will sometimes happen that they form themselves so far under the nail that it is necessary to prepare for their extraction exactly in the same manner as for a thorn or splinter, after which the operator must follow the directions already given.

CHAPTER II.

Of the Toes, and their General Management.

The toes, although in modern times completely secluded from sight and therefore little attended to except for personal cleanliness and the removal of pain, are

nevertheless of great importance in the animal economy.

To describe them anatomically is here unnecessary any further than to point out what has escaped the notice of thousands, that although the smaller toes have each three bones in their length, like the fingers, yet the great toe, like the thumb, has but two; but these are of extraordinary strength, so as to adapt them to bear the whole weight of the human body, or to resist the impression of any force to which the great toe is more exposed than any other part of the foot.

A little observation will shew, that in walking the whole of the toes are exercised, so as to bring the center of gravity perpendicular to the advanced foot: and as the soles of the feet are naturally concave, we can at pleasure increase the cavity, or diminish it, thus adjusting the foot to the different intended motions, or to the inequalities that occur

to us in walking over the roughest ground.

Thus it happens that we alternately throw the whole weight of the body upon the toes, especially the great toe of each foot; but more particularly in dancing as the whole frame through the greatest part of a ball is placed upon the *tip-toe* which resists, for a long time, its continual pressure.

But to judge accurately of the strength of this small member, let any person watch carefully the evolutions of an opera dancer, when they will see that in pirouettes, and other difficult steps, the whole weight, nay force, of the body is thrown upon a single great toe through all the mazes of a pas seul.

We may also observe in walking, with respect to our own motions, that in common motion we almost raise ourselves at every step upon our tip toes, especially if we walk gracefully; besides which each step is produced by the whole force of the muscles of the strongest

man exerting itself in sending the foot forward. This consideration at once does away the surprise which many persons feel if, in walking, they strike their foot unexpectedly against any hard projecting surface; for they will now be aware of the extraordinary impulse unconsciously given to that small part of the system.

In these operations, however, the toes are not unassisted, for the operations of the heel are of great importance, as every person will speedily feel, if a corn or wart should there occur. Let great care then be always taken of the heel, for it is very susceptible of receiving considerable damage in its internal structure, offering at the same time very little facility to the removal of complaints that affect it. The *os calicis*, which is of very irregular figure, is the largest bone of the foot, but is thickly covered with muscle, and behind it there is a considerable tuberosity, where matter is often lodged in a diseased heel,

without any means, except severe surgical ones, of discharging it, so that caries or rottenness often ensues, especially when any complaint in that part is neglected. In such cases, amputation is perhaps the only remedy; sometimes indeed a heel may be cured after taking out the carious bone; but the patient might be as well without his foot, in regard to walking, for the whole of that bone is necessary to support an erect posture, when we walk; and though, without it, we might continue to stand, yet in attempting to walk we should invariably fall backwards.

I have already said so much upon the constituent parts of the toes, in preceding chapters, that little is left to notice, except with regard to their mechanical arrangement, which is often affected by their riding on each other, either from constitutional, or external causes.

The usual mode in which this takes place, is for the vicious toe to turn itself either to the right or the left, in such

a manner that it encroaches upon the place of its neighbour, fixing itself obliquely either above it, or sometimes below it.

This morbid affection was totally unknown to the ancients, whose mode of dress for the feet, by means of open sandals, never impeded the regular growth nor the healthy developement of these lower extremities, having no other object but to raise the foot from the ground, and thus, in a great measure to protect it from any substances which might either gall or wound it. But changes of fashion, as well as of general manners, connected also with effects of climate, have led insensibly to the adoption of shoes and boots, which have varied considerably in form during the preceding four or five centuries. Unhappily with shoes of the present day, but more especially of the last generation, the feet have been locked up, or screwed, as it were, into a vice, and therefore, both from pressure and their own principle of

reaction, have assumed a deformity in all ranks, and in both sexes, which will readily appear if we compare our own feet w th any of the statues in the Elgin collection, or with good copies of the Apollo, Antinöus, Hercules Farnese, or Venus di Medicis.

It would be superfluous to trace the various gradations by which modern feet have become deformed; but if we may compare the rapid and extensive day's marches of ancient Greek and Roman armies, loaded with heavy armour, with the longest forced marches of modern times when troops have been pushed on without baggage or even artillery, we shall easily perceive that the broad expanded foot of a Roman soldier, resting solely upon a sandal, similar to those now worn by our Sepoys in India, must have had great advantages over the chafed foot of an Englishman cramped up in a contract shoe, which perhaps falls in pieces before his day's march is half over.

This is a point on which we ought

sedulously to be on our guard, even in the fashionable world, where the desire of having a small foot has so frequently led to the adoption of small shoes. Nothing can be more absurd than to fix false ideas of beauty to any species of malconformation; but here it is even more than absurd, being both inconvenient and morbific. Unhappily fashion mingles too much with the primary duties, both personal and moral, of mankind; and in this case it has so long prevailed as to give a sort of hereditary shape to the foot, although a moment's observation ought to have convinced our sharp-pointed grandsires, and high heeled grandmamas, that they were not only putting themselves to much personal inconvenience, but also entailing diseases and deformity upon their descendants. But when "square toes" had become a term of satirical reproach, it is not surprizing that the young and the would be youthful, should contract their shoes until the members upon which the body rests,

and which ought freely to enjoy their own power of motion, have been, as it were, "cribb'd, cabin'd, and confined" in a close prison. Indeed rational people cannot help wondering, at the present day, how it was possible that the acute pains, so generally produced by this compression, should not have induced the preceding and penultimate generations to avoid so baneful a practice—but then, the most rational people, at the present day, may cease to wonder, since they themselves, in the mazes of fashion, are in the daily, nay hourly, habit, of adopting customs equally hurtful to the constitution, and equally adverse to personal comfort!

To speak of the riding of the toes, more particularly, it is clear that such a malconformation, or derangement of the parts, must very much affect the pedestrian evolutions of those afflicted with it. In the army it must be peculiarly disadvantageous; and in pedestrian excursions over Wales or the Lakes, or in

walking matches, it often operates like a bill of suspension of *Habeas Pedes.*

This complaint assumes different appearances; sometimes the last joint of the toe lies quite flat, with two other toes lying upon it; sometimes it points directly downwards, so that in walking the points of the nail and of the toe touch the ground, a circumstance which always superinduces corns upon that spot. The pain, arising hence, obliges the sufferer to keep the nail of that toe extremely short; but he only changes one species of pain for another, since he thereby leaves the tender part of the toe exposed to every external concussion.

When high heeled shoes were in fashion, the grandmamas of my fair readers must have suffered severely in this mode; but as I trust that a fashion so very absurd can never again be adopted, it is unnecessary to notice it more particularly. It is a consolation that in all these lesser degrees of malconformation—for distortion or fracture, or

dislocation, I leave to the surgeons—the cure is not difficult, especially if taken in time, and the sufferer can be persuaded to avoid the predisposing cause, and also to avoid all injudicious attempts either at cure or palliation. It is a waste of time, if not worse, to place the foot on the upper leather of the shoe, with the heel up, or to expect that the wearing of large shoes, alone, will perfect or even lead to a cure. The cutting a hole in the upper leather is equally useless. But the mechanical process is equally simple, for nothing more is necessary in general, than to interlace the toes with a ribband in the same manner as twigs are interlaced in basket making. By this the toes are preserved in their due position, following each other in the order which nature intended; and all that is further required is to be particularly careful, at first, in walking, to avoid shoes so tight as to impede the healthy extension of the toes in their proper places.

A due attention to this easy remedy

will insensibly lead the vicious toes to assume a just direction, and to recover their natural form and order; in consequence of which the sufferer will speedily observe his footing to be more secure, whilst his own exertions to preserve perpendicularity will diminish, and every action be performed easily and gracefully whether standing or walking.

Where the disease is of long standing, or the toe has become rigid, it may be useful to form a small cushion of linen or soft leather to be bound in with the morbid toe, thereby keeping it more accurately in its place, and relieving it from the pain at first attendant upon the new position.

It frequently happens that nature, sometimes accidental causes, produce what has been termed a family toe, partly in consequence of its being hereditary, partly from the fact of two toes being joined together in a family way, through the whole extent of the joints nearest to the foot. This for the most part arises

from a preternatural junction of the skin and integuments, not from any affection of the bones, and may be cured by surgical separation, if desired, though it is but seldom that any absolute inconvenience arises from it.

I shall conclude this chapter with a few cautions respecting the nails; and in the first place, I most particularly recommend the avoidance of a pernicious mode of shortening the toe nails by tearing them off instead of cutting with a proper instrument. This is scarcely ever attempted without the injudicious operator being obliged to desist from the torn nail extending towards the tender flesh, so as often to produce inflammations that are not only tedious but even dangerous.

We must be equally careful, as already hinted at, not to cut any of the toe nails too short, as that diminishes their utility; and is always an unavailing remedy if tried to cure their growing into the quick. The simplest method, already detailed, is to cut all the toe nails,

square, and they will then, of themselves, assume the proper form and direction, unless some morbid or mechanical cause prevents them.

CHAPTER III.

Perspiration of the Feet; with General Pedestrian Observations and Cautions.

As the insensible perspiration of the human frame, when in a healthy state, is most beneficial to the constitution, so its exuberance, or reduction must be attended with morbid consequences; and there is no part of the frame to which this applies more particularly than to the feet. If any one doubts the fact of a general, though insensible perspiration, let him place a looking glass close to any part of the body, and he will instantly find it obscured by the perspired vapour, the quantity of which is very great,

since in a country of warm temperature, if a person takes eight pounds of food, solid and liquid, per day, the perspiration will in general amount to five pounds. In England it may be perhaps less, except in the height of summer; but such is the general proportion.

To keep this in a healthy state, in all parts of the body, is then most desirable, as well as to preserve its due distribution in all parts of the frame; for if nature requires the perspiration of four pounds of matter from all parts of the system, it will not suffice to urge its transmission from the upper parts of the body, whilst the pores of the feet are totally closed, either by accident or design.

To preserve the body healthy, is the way to preserve the equilibrium of perspiration; and, on the other hand, the preservation of that equilibrium is the safest and surest mode of preserving general health. Care then, of all parts of the system, is necessary for the due care of the feet; and the first object then

is, even in early life, to avoid soft feather or down beds so heaped up as to place the body in a stove, producing a general relaxation of the skin, but more particularly the breast and adjacent parts, leaving the feet without their due share of the excretion.

Nor is this the only unhappy result; for the pores of the feet, if not kept in their proper action, become closed up, and refuse a passage to the superabundant gases in the muscles and blood-vessels, and thereby often lay the foundation of rheumatic and gouty disorders, which can only be cured by a sanative return to a due state of insensible perspiration.

But if a stoppage of perspiration is an evil, one equally great may be encountered from an immoderate increase of that excretion.

This evil has many ramifications. In the first place, even in ranks of life far above the vulgar, there is an odour so peculiarly unpleasant as to render it

impracticable to remain in the same apartment with a person so afflicted. Even the individuals themselves often suffer from it extremely, independent of their feelings with regard to society; nay, even in the open air, they appear to themselves to draw after them a train of infection that corrupts the passing atmosphere.

It happens in many cases that this immoderate perspiration arises from constitutional causes, which must first be treated medically; but when it proceeds from accident or neglect, it rests with the patient to be his own physician. Whatever tends to check the insensible perspiration, soon produces an immoderate flow of it; partly from the accumulating matter, and perhaps partly from a morbid irritability actually superinduced. Let therefore the socks or stockings be always of a texture to absorb the slightest moisture, in order to prevent the formation of a humid atmosphere around the foot; and let that absorbent matter, whether in

summer or winter, be frequently changed, not only for neatness but for health: and the immediate effects of the unpleasant odour may be safely checked by a powder of burnt alum.

A want of cleanliness is certainly a moral crime with which no class of Englishmen, not even the unhappy but deserving mendicant, can be charged; it is enough therefore briefly to hint as a caution that prolonged or immoderate perspiration, in the absence of due neatness, will always be attended with galling, chafing, and even erysipelatous inflammation, followed by acute pains, especially after retiring to rest; independent of the additional tendency to chilblains.

Another consequence is that the superabundant excretion produces langour and feebleness, operating against preserving the health by due exercise; whilst the matter itself becomes so corrosive as to produce what is called scalded feet.

The best mode of preventing these evils is to take particular care of the feet when in a healthy state, for which purpose neatness and cleanliness will always suffice, without having recourse to astringent lotions, or absorbent powders. In fact these pretended remedies generally bring on a train of very dangerous complaints in the system, amongst which I may enumerate vertigoes, repeated coughing, asthmatic affections, glandular swellings, and acute pains in the limbs, head, breast, and bowels.

This clearly manifests that the perspiration of the feet is an excretion that ought never to be tampered with, but treated with the greatest caution. Even when immoderate it is dangerous to check it by rapid medicines; though, if diminished, it may often be allowable to restore it by forcible means, such as stimulant lotions, or blisters. It is however to be assumed as a principle that the only true mode of treating, without present inconvenience, or future ill con-

sequences, the immoderate perspiration of the feet is *cleanliness*.

Let this be extended both to stockings and shoes, by frequent changes, by airing and drying; and to the feet by judicious bathing: remembering that in such cases it is not necessary to steep them in the bath, but merely to wash them as we do the hands.

Generally speaking, it is proper to avoid frequent *bathing* of the feet, especially in hot water, unless it should actually be recommended in a medical point of view. When too frequently applied, *bathing* has a tendency to soften the skin too much, and to induce an inconvenient tenderness in the feet, and if administered in hot water, it is apt to attract a greater flow of humours to the spot, and thus increase, perhaps bring on, a morbid perspiration; besides rendering the necessary application of hot water less potent in other instances.

I may here introduce a hint to those who are directed to use the feet bath in

order to promote the circulation, and to diminish the determination of blood to the head. In such cases I recommend that the application shall never continue above ten or twelve minutes, as the desired effect ceases to operate in a great measure after that period. It is better then to renew the bath three times in the course of the day, than to keep the feet in it for half an hour, unless the patient is careful to keep up the temperature by successive additions of hot water.

But even in hot bathing, in a medical point of view, I wish not to teach my readers to become quacks. There is nothing more dangerous; and therefore I recommend it strongly to both sexes, to be on their guard in the use of the hot bath, either general or local, whenever any constitutional feeling shall give them reason to form the slightest doubt respecting its efficacy.

Neatness and cleanliness however require, at all times, a certain species of local ablution; and the safest way of

performing it, and indeed to render it efficacious against extreme perspiration, is to use water of a luke-warm temperature, rather below than above the standard, into which they may throw a handful of bran, keeping the feet in the water until they feel a little uncomfortable, rubbing them dry carefully afterwards with a coarse, rough, but soft towel.

Even in feet bathing, the time of day must be regarded, as in the general bath: let it be done at rising in the morning, or just before retiring to rest; but avoid it at all times whilst the stomach is in a state of repletion.

Before plunging the feet into the bath, especially when the feet are tender, or the constitution delicate, it is best to ascertain the heat by the hand, better by a thermometer: the common mode of trying with the feet themselves is to encounter the extremes that ought to be avoided, besides the feet are a very uncertain test of the absolute warmth of the water, in consequence of their artificial

state of feeling from being constantly covered.

In all cases the feet ought to be well and hastily dried, and covered with the stockings: nor would I recommend that the cutting of the nails should take place immediately after bathing, since the continued exposure to the air counteracts the effects of the bath. If cutting is required, let it be done before bathing; for when the instruments used are in good order, the supposed softening of the nails by the hot water is of very little advantage.

When a thermometer is used, I should never recommend the heat to be allowed to rise above 100 deg. of Fahrenheit, nor to sink below 78 deg. for young persons; for elderly people, 98 deg. ought to be the extreme rise, and about 96 deg. the lowest, or a heat approaching to that of new milk.

The general idea that the feet ought to be washed more frequently in summer than in winter, is perfectly correct; but

the term more "frequently" must not be considered as meaning oftener than three times a week in hot weather. Even that will be more than is absolutely necessary, if the feet are rubbed every morning, or every night, with a towel dipped in luke-warm water. By doing this the dust which would stop up the pores is rubbed off; and indeed best at night before the pores are opened by the heat of the bed-clothes: whilst frequent bathing opens the pores and even produces an absorption of the cleansing fluid. The soles of the feet are particularly absorbent; and in bilious complaints, instead of administering calomel to the stomach, it has been found better to apply it by the friction of an unguent upon that very absorbent part of the lower extremities.

These observations have a reference both to common practice, and to medical treatment of the feet; to which I shall add, that those who experience even a slight tendency to immoderate perspiration, will even avoid a towel dipped in

warm water, when rubbing their feet at first rising : but after taking off the moisture with a soft, dry, and *warm* towel, they may apply a sponge dipped in equal parts of spring water, and spirits of wine, or any other spirit that is convenient.

As it often happens during the day that the healthiest feet are affected with a redundant perspiration, which feels inconvenient as the body cools, it is always proper, as soon as exercise ceases, to change both stockings and shoes, drying the feet hastily with a proper towel, and using, at pleasure, the spirituous sponge.

Unless the perspiration at night requires to be medically treated, it will be proper to confine the cleansing to the use of a sponge or towel dipped in lukewarm water, but carefully applying it to all parts of the foot, between the toes and round the nails, drying it quickly, and, if wearing socks, turning them with the common *outer* surface to the skin.

Much also, both in cure and preven-

tion, may depend upon the quality of the stockings. Cotton feet are peculiarly objectionable, so are those of linen thread, as the perspiration turns them into a glazed substance, ceasing to absorb, and thus confining the feet in a bath of cold perspirable matter. Silk feet do not possess the same disadvantages: but those who suffer the morbid affection in question, will always experience considerable relief by the use of woollen socks, or of woollen feet to stockings of other substances, even in the hottest weather, and during the severest exercise. Even soldiers, at a period some years back when an unnecessary regard to shew forced them to attend parade in cotton or linen stockings, always found it most convenient to wear woollen ones on a march.

But let it not be supposed that there is any thing in these directions which should induce my readers to attempt, in any case, to *stop* the perspiration of their feet. My intention is to enable the feet

to preserve their due and equable share of that excretion, so as to prevent its exuberance, in the first instance, and finally to bring them back to a healthy state when the disease has taken place. Even then, the object is not to give a hasty check to the surplus perspiration; but to keep it within due bounds until the morbid tendency has been counteracted in its *cause*, thence producing a change in the *effect*.

I shall close this chapter with a few hints to those who may chuse during the summer season to amuse themselves with pedestrian excursions over Wales, the Lakes at home, or the mountains and lakes of Switzerland and northern Italy. Let them be careful to have stockings or socks with woollen feet, with a reference to which their shoes should be made so as to fit well but not tightly, allowing for the natural swelling of their own feet consequent upon exercise. If they are troubled with corns, this caution is the more necessary. Swelled feet produce

pressure. But the shoes must not be too wide, for then the increased friction will always produce blisters. These will indeed sometimes arise in spite of precaution; the best way of treating them is to open them with a needle, and dipping them in warm water until the extravasated liquid is completely expressed by a gentle and judicious application of the finger. With these precautions, added to what has been already said, a person, even with tender feet, may walk over Europe!

To general readers, the mass of the preceding observations may appear too minute and particular: but let it be remembered that many of them are inculcated as preventives of some of the acutest sufferings to which human nature is liable. To him who is in high health, precaution may appear unnecessary; but, in the hour of suffering, his pain will not be lessened by a vain regret at having neglected a course of practice which habit would speedily have rendered easy

and agreeable. But even in suffering, let him not despair—a judicious attention to rules here laid down may often prevent the necessity of surgical operation—let him remember, however, that it is not sufficient to read the book; he must carefully avoid the causes of disease here recorded, and he must sedulously pursue the active process here enforced. It is of no use to read a medical prescription, if the drugs are thrown out of the window!

The rules here laid down have also this advantage, that they add nothing to quackery; and cannot possibly injure the constitution which they profess to reform: whilst the comfort that they superinduce will always be found to compensate the apparent trouble.

SECTION VI.

OF THE HANDS; CARE NECESSARY FOR THEIR HEALTH AND BEAUTY: MORBID AFFECTIONS AND DISORDERS CONNECTED WITH THEM: GENERAL OBSERVATIONS.

THE HANDS, next to the face, are the most important part of the human frame, in regard to general and every day observation. Even from the earliest times their importance has been duly valued, indeed sometimes exaggerated, as when the Greek philosopher asserted that man is indebted to his hands for all his wisdom, knowledge, and superiority over other animals. This opinion of Anaxagoras was, however, very judiciously reversed by the sage Galen, who observes somewhere in his writings that it is not our hands that make us wise, they being given to us because we are

the wisest of all created beings. If, indeed, wisdom sprung from the hands, the monkey, the ape, and the ourang outang would be nearly upon a par with the human race. Some men may, it is true, make themselves apes; but we have yet to hear of an ape making himself a man!

If it were necessary here to enter upon an anatomical investigation of the hand, I might shew that the very useful part called the metacarpus, consists of four bones which support the fingers, being externally a little convex, and internally a little concave, by which the palm of the hand is formed. I might allude to their hollow and cylindrical form, enumerating the fifteen bones which compose the five fingers, there being twenty-seven in all in each hand; and from these facts I might deduce the absolute and imperious necessity of guarding against the effects of disease in a member so complicated in its construction: but leaving these considerations to books of surgery, I shall

at once proceed to a few popular observations in addition to what has been already said respecting the feet, and which applies equally well to the hands in similar cases.

As the ready pliability and quick sensation of the hands are of the first importance in common life, in the higher departments of art and science, nay in the amusements of the fashionable world, it may here be remarked that these great desiderata must always exist in conjunction with the cleanliness, flexibility, and activity of the skin which covers them. This healthy state of that useful membrane we are too apt to destroy by unnecessary care, or by an equally vicious disregard of the hand and fingers. It is well to keep the hands in a due state of perspirability, though not of perspiration; and it is equally proper to accustom them to the frequent changes of temperature to which they are likely to be exposed; but unfortunately, in this respect, mankind may be divided into

two classes, those who take too much care, and those who take no care at all. In the following pages I shall endeavour to restore things to a happy medium, offering the simplest preventives for threatening evils, and the simplest and easiest cures for those that are become inevitable.

Great care is always requisite in the preservation of the nails. If they are too short the finger looks clumsy, and the nervous part becomes exposed to accident; if too long, their appearance is unseemly; dirt collects under them which will not yield to the use of a brush but requires a sharp or pointed instrument to remove it, whilst the fingers themselves are rendered useless for any occupation, even for practice on the piano-forte. It is therefore proper that their growth should never be permitted to extend beyond ten days at the furthest. In early youth this is always beneficial, if it were only to prevent that silly habit of biting the nails, so easily ac-

quired and so difficult to eradicate. Independent of this, long nails not only impede the common action of the hands, but also check the fingers from their proper degree of expansion, and actually render the hand both ugly and useless; but let it still be remembered that if cut too short, the seat of the nerves will be endangered and the feeling blunted.

One bad consequence of nails worn too long is, that they will sometimes split in a very dangerous way, which is liable to be increased by the accidental catching of external substances. When such a split has once taken place, it becomes extremely difficult to cure it; for even when an expert operator has supposed that he had cut down to its furthest internal verge, yet as the nail grew the split has always occurred, obliging the person afflicted to wear a leather case to his finger for months before this acquired tendency could be removed.

When nails are too long, and indeed at all times, great care should be taken in

removing the dirt which invariably collects under them : a brush is the safest instrument, if not used too often ; and a blunted probe may be safely, if carefully applied : but all recourse to scissars, or pen-knife points, ought to be avoided as it often tends to loosen the nail from its proper situation.

From want of due attention, great inconvenience is experienced by many persons from corns on their fingers though by no means so frequently as on the feet ; but when they do take place, the pain and consequent privations are much greater. Sometimes a corn will manifest itself on the nail joint of the fore finger, especially on the right hand, which effectually puts a stop, with ladies, who are more subject to it than men, to all amusement whether ornamental or musical, the needle and the key being alike forbidden. This disease sometimes takes place, without the cause being known, whence often arises a protracted cure that might have otherwise been avoided :

for a little careful examination would have led to the eradication of a corn, whose cure would have been perfect in a few days, instead of which a course of practice is undertaken for a supposed whitlow, and the disease turned into a kind of nondescript that months of suffering will not remove, attended generally with the loss of the nail, and sometimes of the nail joint.

Nothing can be more unseemly, to say nothing of the pain and inconvenience, than a hand or finger covered with warts, though at first they give so little trouble as to be permitted to increase without molestation, both in number and in virulence; these are so liable to accidents that they often inflame, and are then the more difficult to eradicate. They are more numerous and more frequent in youth; but when they appear in advanced life are apt to degenerate into cancer, especially when of a livid colour and smooth surface.

If some are so careless of these excre-

scences, as to suffer them to degenerate into more serious diseases, others again bestow an overweening attention to the beauty of the hands and arms, and adopt every plan, however absurd or futile, that may be proposed to them. How many constitutions do we see undermined, and the loveliest forms sinking into premature decay, from the silly desire of increasing bodily beauty instead of being content with a rational adornment of that portion with which God has blessed them! Some are content to accomplish the desideratum by sap, trying to bleach their skins by seclusion from fresh air, by a diminished sustenance, continued sleeping, perhaps eating chalk, or drinking vinegar; whilst others, resolving to cut the Gordian knot at once, go hard to work with lead in all its poisonous forms, with quack preparations of mercury, and even more deleterious drugs concealed under pompous names, and disguised in the forms of oils, creams, and invisible waters. Nay I recollect

an instance of a young lady who retired to rest with her hands tied up to the bed-posts in order to make them white by forcing the blood out of them. She tried it *once*, and was a paralytic cripple for life!

It must be admitted that some of these dangerous preparations produce a temporary whiteness of the hands; but that is always followed by a deterioration both of the colour and texture of the skin, which would not otherwise have taken place. There may indeed be cases where a discoloration of the skin exists, without any predisposing cause sufficient to require medical treatment. In such cases if the party is very impatient it may be permitted to use an infusion of horse-radish in milk, or the fresh expressed juice of house-leek; yet it is better to avoid them both, and trust to time and good health for a radical cure. In many instances, temporary eruptions and discolorations of the hands and arms, might be removed by the simple process

of wearing woollen gloves; a remedy never known to fail, where the disease was not absolutely constitutional: but fashion too often forbids the use of simple remedies to remove those evils which fashion itself produces.

Callosities sometimes appear on the hands, but never, I believe, except when brought on by the continuance of any kind of labour. They require no particular treatment except the discontinuance of that labour, and in a short time will disappear. They may be checked at first appearance in the form of a blister, by letting out the fluid with a needle; which would otherwise harden and become a callosity.

Corns are not so easily cured. They are often the result of pricking the finger with the needle whilst at work on a sampler, which is further irritated by endeavours to remove the raised skin with the teeth, followed by inflammation and the injudicious application of poultices. Sewing without a thimble is equally dan-

gerous to the right hand; so is wearing a thimble after the finger has grown too large for it. It is not very uncommon to reward very good little girls with a silver thimble which exactly fits them; but whoever does so should feel themselves bound in common humanity to present a larger thimble as the finger increases in size, that the badge of honor may not be worn until it becomes the harbinger of disease.

Chilblains have been treated at large in a preceding section, so that little need here be said respecting them. The young of both sexes and females of all ages are most subject to them; no rank in life is exempt from the danger, but they generally attack those whose hands are often immersed in water without being speedily dried. They often arise also from the sudden exposure of a part previously heated, to a great degree of cold. In some constitutions they appear early in the autumn; in others not until winter; whilst some experience them

only in the spring: but in all cases they disappear in the summer. That disappearance is however by no means to be considered as a cure, since they often return towards the fall of the year without any apparent predisposing cause.

In addition to what has been said respecting the feet, on the same subject, of prevention, I recommend those who fear their appearance or recurrence, to wash their hands always in cold water, and then to warm them by friction, either of hand against hand, or of a flesh-brush. They may even find some advantage in a lotion called Theden's vulnerary wash; but it is a dangerous medicine where any tendency to gout exists.

To guard against chilblains, in extreme cases, it is always proper for persons exposed to cold, to avoid all spirituous liquors, at least their immoderate use, and to be careful to keep themselves in motion as much as possible, never sitting

or standing still in the cold in any manner whatever.

Should night be coming on, and they perceive any incipient languor, or inclination to sleep, then it behoves them to exert their strength to the utmost, in order to accelerate all the motions of the body, and to preserve the due circulation of the blood in the extremities, otherwise the veins will become frozen, and danger, nay even death ensue.

If any part of the frame is chilled to a great degree, much care must be taken in restoring the natural warmth ; since the hands, even when not exposed to extreme cold, yet, if suddenly brought to the fire, experience considerable pain ; and if the cold had been very intense and the exposure of long duration, they would instantly be affected with a violent inflammation, swelling considerably, becoming red and blue, and suffering an intolerable pungent and throbbing pain which might lead to gangrene, if not

instantly checked; at least the consequences must inevitably be chilblains, if not a whitloe. Instead of running to the fire then, let the person sit down in a room moderately warm, or be put to bed and partake of warm diluent drinks. If the case seems really violent, it may be proper to restore circulation in the hands by immersion in cold water, or rubbing them with snow, cold brandy, camphorated spirits, oil of turpentine, hartshorn drops or other common stimulants. If convenient, great relief will be experienced from drawing a few electric sparks from the affected part. In the application of these medicines it may also be observed that oily and emollient substances are fittest for rigid constitutions; whilst the spirituous stimulants may be administered to relaxed and feeble habits. The emollients are numerous, and the patient may take his choice of oil of petroleum, butter of cacao, balsam of Peru, balsam of capaivi, mixed with yolk of eggs; or the

more humble cataplasms of rotten apples, bruised house-leek, fresh drawn turnips boiled with eggs and myrrh, an unction of hogslard, olive oil, yellow wax and pitch, or frozen turnips scraped and fried with linseed oil: for each of these is a specific in various parts of the kingdom, and they are all, no doubt, though not all equally elegant, yet of equal efficacy.

If the complaint appears in its first stage to be inveterate, and violent remedies are thought necessary, the hands ought to be immersed in ice water, and kept there until every symptom is removed; after which it will be proper to wash them in strong brandy, or spirits of wine.

In simpler cases, sea water, even the liquor drawn from oysters, will be found a specific stimulant; to which I may add decoction of radishes; fomentations of warm wine and brandy; essence of turpentine if the smell is not disagreeable; but, above all, the lotion recommended

for the feet, consisting of two drams of liquid ammoniac, one dram of soap, and two ounces tincture of cantharides, or else squills applied with hot oil and soft turpentine.

If slight chilblains intervene, notwithstanding these precautions, then wash them frequently with water in which flour and mustard seed have been boiled; or with hot sea or salt water; or marine acid diluted in water; or spirits of wine and soap liniment; or the fumes of hot vinegar applied several times in the day. Keep the hands quiet and cover them from the cold; and these applications, if they do not produce a very rapid cure, will at least afford considerable relief from pain whilst nature is going through that process which she always does, with more or less rapidity, in all cases of inflammation.

With respect to the nails of the hand, I may refer the reader to much of what has already been said in regard to the

feet. In general I would recommend every person to cut their nails at least once a fortnight; only it will be proper to pare them neatly round to prevent any danger of tearing them by accident; taking care also not to remove the spongy substance which gathers under them in advanced life, and is placed there to counteract the change to extreme hardness in the quality of the nails, acting as a cushion to prevent their growing into the quick. In raising and eradicating the superfluous skin at the root of the nail, care must be taken not to remove too much of it for the sake of an handsome semicircle; nor is that necessary for those who wish, for the nail grows from the root, and therefore, if the skin is slightly cut, the semicircle will soon appear beyond it.

If by any accident the nails happen to split, it will be proper to guard against an increase of the evil by laying the nail neatly in its proper place, covering it

with a case of leather, and pairing it carefully once a week, until the fractured part is entirely protruded and cut off.

Some persons often experience great pain in their fingers from the nails growing into the flesh, or from their being injured at the root, whence inflammation, swelling, suppuration, proud or fungous flesh, and a protracted cure ensues. Here the error often is that the complaint is supposed to be a whitloe, and treated accordingly, to the great disadvantage of the patient. In such cases it will always be proper to have a surgical investigation of the evil, when it may be necessary to cut off that part of the nail close to the root, an operation which, if skilfully performed, is never so painful as it is alarming to the patient.

False nails, as they are called, arise from a due want of attention to the parts surrounding the nail. If it is attempted to pull off these ragged integuments, considerable pain follows; the same is produced by biting them as some people foolishly

and awkwardly do. The best method is to cut them off carefully with a pair of scissars, and then to cover the finger's end until a radical cure takes place by raising the skin from the root of the nail, thereby allowing it to expand more freely to the rapid growth of the nail, whence it is no longer split or cracked. The tendency to this complaint goes off as we advance in life; for the growth of the nails is then by no means so rapid as in early youth.

In curing this complaint, however, care must be taken not to bring on another, by loosening the nail. When loose nails occur, the best method, if they become so at the outer edge, is to cut them away as far as they are separated from the skin which must be kept very clean, so that the growing nail and the skin below it may be suffered to unite, which with proper care, will always take place in a month or two.

The nature of warts, with their cure and prevention, has already been touched

upon in a former part of the work, it remains therefore only to add a few remedies to those there detailed. If persons afflicted with them are unwilling to submit to extirpation, they may wash the wart, two or three times a-day, with a lotion of crude sal ammoniac in water, or better with a piece of the crude salt moistened with water and then rubbed upon the surface of the excrescence. Another lotion may be used of liquid salt of tartar; or spirits of hartshorn; or even the juice of onions; or the juice of celandine. When the warts are very numerous, and sprouting forth daily, it will be proper to wash morning and evening in lime water, or in a weak solution of sugar of lead: this will prevent the developement of fresh excrescences, whilst the existing ones are treated more expressly.

The treatment of the whitloe comes more under the care of the surgeon than the chiropodist; but it may be of use to describe it as a painful and inflammatory

swelling that often takes place at the finger's ends, and generally under the nails.

If permitted to take its course, it would terminate in an effusion of clear serum under the skin, of which the acridity is most extraordinary, as instances have been known of its not only corroding the periosteum, but even producing cariousness in the bones of the finger.

Even in its most favourable state, the pain is too great not to be sedulously guarded against, since it will often extend its inflammation up to the armpit, affecting the lymphatics and glands.

Whitloes sometimes appear to arise without any probable cause, in which case it may be proper to apply both general and topical bleeding, accompanied with the use of ardent spirits and astringents to correct the constitution. When they arise from accidental injury or external causes, the usual remedies against inflammation are generally suffi-

cient. But whatever may be their origin, it is always necessary, as soon as any serum is formed, instantly to discharge it by surgical operation, as it will never form a good pus likely to heal the wound, but probably penetrate at once to the bone.

My task is now fulfilled. — I have slightly, but I hope usefully, led my readers to a better acquaintance with themselves; amply shall I be repaid if my endeavours prove successful in the alleviation of present pain, and the prevention of future inconvenience.

THE END.

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