

A treatise upon ulcers of the legs : in which former methods of treatment are candidly examined and compared, with one more rational and safe, proving that a perfect cure may generally be effected more certainly, without rest and confinement, than by the strict regimen in common use, with an introduction on the process of ulceration and the origin of pus laudable : to which are added hints on a successful method of treating some scrophulous tumors, and the mammary abscess and sore nipples of lying-in women / by Michael Underwood.

Contributors

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A
T R E A T I S E
U P O N

U L C E R S of the L E G S; ⑧
I N W H I C H

Former METHODS of TREATMENT are candidly
examined and compared,

W I T H
O N E more R A T I O N A L and S A F E:
P R O V I N G

That a PERFECT CURE may generally be effected more certainly,
without REST and CONFINEMENT,

T H A N
By the STRICT REGIMEN in Common Use.
W I T H A N

I N T R O D U C T I O N

O N T H E
Process of ULCERATION and the Origin of Pus LAUDABILE.
T O W H I C H A R E A D D E D

Hints on a SUCCESSFUL METHOD of treating some
SCROPHULOUS TUMORS;

And the *Mammary Abscess* and *Sore Nipples* of *Lying-in* Women:

By M I C H A E L U N D E R W O O D,
Surgeon to the British Lying-in Hospital.

Æque Pauperibus prodest Locupletibus æque.

HOR. Lib. i. Ep. i.

L O N D O N:

PRINTED for J. MATHEWS, No. 18, STRAND.

M.DCC.LXXXIII.

[Price 2s. in Boards.]

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T O

Sir Cæsar Hawkins, Bart.

S I R,

THE following pages having been honored with your approbation, allow me to inscribe them to you, both as a mark of my respect, and an apology to the world for the present attempt.

For though Sir Cæsar Hawkins needs no panegyrist, the sanction of his name will make me less afraid of the severity of critical censure, either from the public at

large, or the medical faculty in particular ; with whom his opinion has ever been of the first authority.

I have only to regret, Sir, that the occasion of taking this liberty is not more important. My opportunities of improvement, in studying under your immediate care for several years, certainly demanded something more worthy of your protection, than so small and imperfect a performance.

However the nature of my obligations is such, as forces me to make this public acknowledgement : not that I mean, Sir, to trouble you at present with a formal declaration of those respectful sentiments to which you are no stranger ; I am only proud to be included in the number of
your

your friends, whom the advantage of a more intimate knowledge has inspired with an esteem superior to that of common acquaintance.

That you may long live to enjoy the honors and comforts, acquired with universal approbation, is the most sincere wish of him who has the honor to subscribe himself,

S I R,

With great Respect,

Your much obliged,

and obedient humble Servant,

Great Marlborough Street,
19th April, 1783.

M. UNDERWOOD.

your friends, whom the advantage of a
more intimate knowledge has inspired with
an esteem superior to that of common ac-

quaintance.

I trust you may long live to enjoy the
honors and comforts, acquainted with uni-
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of him who has the honor to subscribe

himself,

S. I. R.

With great Respect,

Your much obliged,

and obedient humble Servant,

M. UNDERWOOD.

P R E F A C E.

NO man publishes an opinion to the world, even on the most trivial occasion, without some view to himself, or others, or to both ; and custom has established an almost universal law, by which an author is bound either to discover his real motives, or to devise some plausible, and handsome excuse for his own boldness. The writer of the following sheets, without affecting any uncommon share of philanthropy, would not willingly have risked the favourable opinion of his friends, had he not been persuaded, that the good effects of this publication will answer his intentions, and be of some service to the distressed. He is encouraged to say thus much, at least, having already seen considerable advantages arising

arising from a method of treatment, materially different from that at present in fashion. And if any improvement can be suggested, in a branch of surgery confessedly imperfect, (for who will deny that sore legs are difficult of a lasting cure,) no great apology can be thought necessary, for communicating to the world any hints on the subject that may be useful.

The form, indeed, in which these observations are presented, requires more excuses than the author knows how to make; but he trusts that the plainness, or rather homeliness of their dress, will not so far prejudice them in the eyes of liberal men, as to prevent their being examined with candor, and made use of in practice, if they are found to be at all just and rational. A want of regularity and elegance in composition, may with truth in this case, be imputed to want both of experience, and leisure to study the correctness and embellishments of language. He has, indeed, no pretensions as a writer—but though truth may be adorned by a florid style, or enforced by elegance of argument, the greatest deficiency in these ornaments cannot invalidate facts, nor justify an illnatured criticism, on that which made no part of the author's design.

It may add some weight to this little performance, to say, that it is the result of more than twenty years attention and experience; the writer having, for a long time, invited the poor to his house, and even common beggars, the most intractable of all patients, and such as either for want of proper food, and cloathing, or from their dissolute lives, are the most unlikely of all to be cured. He affects no other merit than this attention to so limited, and in general so much neglected, a branch of his profession; to which he was led, so long ago, by an instance that fell in his way of a cure performed with great ease, and without confinement, by a very ignorant empiric, after two eminent surgeons had failed in the attempt. The knowledge of this at an early period in life, when youth and inexperience prompt to undertake any thing, having convinced him of the possibility of such cures, and led him to the knowledge of many, induced him to turn his thoughts to a subject, which he has never since lost sight of. In the mean time, his education under the best of masters, together with his long residence in one of the largest, and best conducted hospitals of this metropolis, as well as his attendance in those of Paris, gave him sufficient opportunities of seeing, that for some cause or other, the knowledge of compleatly healing

healing old ulcers in the legs, has been, and still remains very deficient and uncertain. The subject, though of so great importance to the suffering individual, has perhaps not appeared of sufficient consequence to eminent surgeons, whose employment has usually been both of a more profitable, and agreeable kind. It is hoped gentlemen of this class, who deserve and possess the highest degree of public esteem and confidence, will not think this an injurious suspicion, especially as the mention of it is principally intended, to save the writer the mortification of having his first attempt thought inferior to the dignity of a first rate practitioner. Besides, any attempt must be laudable to rescue this branch from the hands of quacks and ignorant pretenders, who it must be confessed, have sometimes got credit in these cases, where men of science and a regular education have failed. And here it may be proper, as the former class of practitioners needs no increasing, to add, that the precise quantities and forms of some of the applications hereafter mentioned, are not specified, but left to the judgment of the surgeon; who will find no difficulty in proportioning every active and powerful ingredient, to the nature and variety of each particular case.

As to the mode in which these observations are presented, the present was judged the most likely to answer any good end, for though what the author has to say in point of directions, might have been expressed in a smaller compass, or have appeared in some periodical publication, he could not, in such a channel, so fully support the principles he has laid down, nor justify his deviation from established authorities. He knew moreover, that an attempt had been made in that way, by a gentleman of acknowledged abilities*, which did not seem to gain the attention of the public.

With regard to the few hints on scrophulous affections, and complaints of the breasts in *lying-in* women, they are equally the result of experience: how far they are worthy the attention of the public, is cheerfully submitted to their consideration.

In concluding this preface, the author begs leave to urge again his good intentions, and to express his hopes, that the success of his plan, may in other hands, be equal to his own; and then he shall expect the satisfaction of contributing to lessen the difficulties and distresses of many afflicted fellow creatures, to preserve some of

* Mr. ELSE, Med. Observ. and Inquiries, Vol. IV.

them from leading miserable lives, and now and then, prevent that most dreadful remedy for bad ulcers, the loss of a limb.

E R R A T A.

Page 21 (note) line 1. for *affectata*, read *affecta*.

27. Line 3, for *clear*, read *clean*.

53. Line 16, for *of patient*, read *of the patient*.

53. Last line, dele *and*.

64. Latin note, for *finge*, read *finge*,

66. Last line, dele *the*.

71. Line 8, for *an*, read *un*.

93. Line 3, for *and*, read *And*.

120. Line 7, for *ruber*, read *rubr*.

120. Line 9, for *album*, read *vit. album*.

127. Line 25, for *healed and are*, read *and are healed*.——The author desires here to apologize for a very manifest inaccuracy that was not discovered in time for correction, observable at pages 56 and 57. Treating there on the subject of digestion, and attentive only to the mode of Practice, he has inadvertently run into a popular mode of expression, whereby he has appeared to treat That as an Effect, which might, with more propriety, be regarded as a Cause. The facts however turn out the same, for wherever there shall be the laudable discharge from an ulcer he has in any case supposed, there likewise will there be a kindly appearance of its surface; or wherever a copious suppuration is brought on that terminates in laudable pus, the means which produced it, by restoring a due action of the vessels, can never fail to induce a florid and healthy appearance of the sore, and remove the pain and inflammation that attended it; and on this account can never do any harm; nor will a profuse discharge, produced by digestives, continue many days after the ulcer has become clean.

INTRODUCTION.

THERE are some diseases which derive their importance, not so much from their fatal tendency, as from the pain and uneasiness they occasion. Stationary ulcers in the legs, may be justly ranked under this class. In general, we do not esteem their cure essential to life; but he who is the unhappy subject of them, can best estimate, how much the comforts and enjoyment of it, are impaired by them.

A variety of observations might be made on the several peculiarities of these ulcers; but it is by no means the design of this work to amuse the reader with theory on the nature of the complaint, any further than it may be necessary, in order to establish the means of a safe and lasting cure.

In this view, it will be proper to drop a few words upon ulcers in general, and on some material differences between those now to be considered, and all other
fores ;

fores; between recent wounds of the legs, occasioned by some accident, and those made on any other part of the body : some reason there must be, for the additional trouble in healing the former, as well as the greater difficulty with which they are afterwards preserved in that state. This is essentially necessary in order to form a rational practice, and so far as this end is kept in view, it is hoped, an attempt will not be accounted superfluous.

It scarcely needs to be observed, that ulcers may be occasioned either by every external accident abrading the skin,* or bruising the parts underneath, in a certain habit of body, predisposed to ulceration; or by any internal cause,† exciting such inflammation in a part as shall incline it to suppurate, though no external injury was received: such are fevers of different kinds. To these should be added neglect, or mismanagement, when an abscess is formed, by which a simple wound is converted into an ulcer, or continual sore of the part.

These are briefly the causes of ulcers in general, and where no specific contagion prevails in the habit, are all that need to be considered.

In those of the legs, indeed, we are further led to remark the state and circumstances of the limb, which being a depending and an extreme part of the body, may be regarded as a particular and predisposing cause. Its being an extreme part, appears to have a much

* *Ulcus est continui solutio ab erosione facta.*—GALEN.

† *Ulceris causæ vel internæ sunt, vel externæ.*—PARBY.

greater influence than has generally been imagined, or at least expressed by writers on this subject, and tends very much to account for the frequency of the disease, and to point out an indication of cure, which in practice has been entirely overlooked.

But previous to entering upon the cure, it will be proper to make some observations upon ulcers in general, enlarging a little on some peculiarities attending those on the lower extremities.

§ Authors of credit* have usually defined an ulcer to be a solution of continuity in a soft part, discharging a purulent, or ichorous matter.†

The process of ulceration seems to consist in more than a simple solution of continuity; there is a real loss of substance in the ulcerated part. To obtain therefore a more correct definition, I would be understood to mean by an ulcer, a solution of continuity in a soft part of the body, from which an ichorous, purulent, sanious, or vitiated matter is discharged; attended with a loss of substance in the part.‡

§ This

* HIPPOCRATES excepted, who calls any solution of continuity by that name.

† WISEMAN, TURNER, BELL.

“Partis mollis solutio purulenta, vel ichorosa.” CULLEN.

“Les ulcères sont des solutions de continuité dans les parties molles, avec écoulement de pus.” *Traité des Tumeurs et des Ulcères.*

‡ SENNERTUS and HOFFMAN give nearly this definition—“Ulcus dicitur solutio continui cum imminuta magnitudine, in parte molli,

§ This character may be very applicable to ulcers in general, and be quite sufficient as a diagnosis; but many important distinctions are to be attended to, which must have considerable influence in the treatment. It will be quite sufficient to hint at a few of them.

I. An ulcer may be simple, arising from external causes merely.

II. It may be the consequence of, or be connected with a bad habit of body; or,

III. It may be owing to some specific contagion.

IV. The situation also of ulcers deserves our attention. They may affect the surfaces of parts, in the manner of an erysipelas; or partake more of the na-

a materia erodente ortum habens. Differunt nimirum in eo vulnus et ulcus, quod in vulnere saltem est soluta unitas, nihil vero necessario de parte amissum est; in ulcere vero semper aliquid de parte affecta imminutum et amissum est, si non plus, saltem cuticula." Sennertus: lib. 5. pars 2. "Sunt autem ulcera partium solidarum, atque mollium cum cavitate quadam minori, ichorem tenuem, salsum et acrem fundente, dissolutiones et erosiones, a sero extravasato, et corrupto originem ducentes." HOFFMAN, cap vi. § 1.

It is evident however, that HOFFMAN, and some later writers, design moreover by an ulcer, an old, or ill-conditioned abscess; and there seems to be some reason for this distinction, if we would speak with precision; for otherwise, every impostumation, when burst or opened, as well as every wound after an operation, is equally an ulcer.—He therefore adds, "Differunt ulcera ab abscessibus, tum in hisce major, quam in illis deprehenditur cavitas, atque non tam sanies aquosa, falsa et acris, quam potius pus laudabile, bene coctum à sanguine, in partibus musculosis stagnante, et mora corrupto, gignitur; licet negari minime poterit, ulcera sæpe ex apostematibus oriri, quæ in principio meri fuerunt abscessus." § 2.

ture of a phlegmon, by being seated in the substances of parts.

But it will be necessary in this place to remark other distinctions, noticed by the best writers.

I. An ulcer, it has been said, may be of such a species, that it will not admit of cure *. This however, cannot often be the case, and belongs not to the present intention.

II. The ulcer may arise from, or be accompanied with such a peculiar state of the constitution†, that the patient may be unable to undergo such a discipline, as will be absolutely necessary to its cure.

III. A patient's state of health, or peculiar circumstances in life may be such, that the injunction of confinement and a recumbent posture cannot be complied with‡.——The present inquiry will be more immediately directed to the treatment of ulcers occurring under these last-mentioned circumstances; and as the lenient method is generally enjoined with an horizontal position of the limb, they will both respectively fall under consideration.

§ Ulcers troublesome in themselves, or of long standing, are very often brought into a healing state, by mild means, and absolute rest, where no cachectic disposition exists||. If the patient after this lives freely, or uses much exercise, it is highly probable the

* Cancerous, &c. “*Ulcerata Hydropicorum vix imo ne vix curantur.*” HIPPOC. Lib. vi. Aph. 45.

† SHARP'S Surgery. Introduct. page 29.

‡ Ib. page 38.—|| Ib. page 31.

fore will break out again. In such a case, it may be said the person was cured, but he was not restored to society. A very natural inquiry suggests itself here, viz. Is this the only rational method of treating such ulcers?—If it can be proved, that a strict course of regimen is generally unnecessary, and that absolute rest is often not only needless, but prejudicial; if it can be demonstrated, that by a different mode of treatment, they may be as certainly, and often as speedily cured, and without danger of relapse; it becomes a subject highly deserving the attention of every practitioner.

It has been observed, and long been a decided opinion, that wounds or ulcers, situated on the lower extremities, below the knee, do not generally heal so kindly as those on the upper parts of the body *. Various reasons have been assigned for this last-mentioned fact; and as principles are more or less connected with practice, it will be very proper to glance slightly at this subject, which will bring forward the immediate object of inquiry.

These extremities being depending parts, a stagnation of the circulating fluids has been offered by some as an explanation; whilst others have attributed it to a descent of depraved or vitiated humors †.

It

* It is a maxim in surgery, that abscesses and ulcers, will have a greater or lesser tendency to heal, as they are higher or lower in the body. SHARP'S Introd. page 17.

† See WISEMAN, TURNER, SHARP.

Galen de Ulceribus malignantis Naturæ. Talia enim appello, in quibus

It is ever of the utmost consequence, to separate facts from hypotheses. Our knowledge is actually increased by the one; we are not certain gainers by the other. Effects are obvious to every attentive observer, but causes are often latent and dubious.

The first theory cannot be admitted; as its proximate cause is, by no means, a constant attendant on sore legs. *Ædema* sometimes precedes, sometimes accompanies, and often seems to be a consequence of ulcers; but is only one evidence amongst others, of cachexy.

The second enumerated cause stands merely on an hypothetical basis. 'Till we get more distinct ideas of what is meant by vitiated, or depraved humors, and have their existence demonstrated, it ought not to be admitted as the occasion of the difference in question; especially as this difference is capable of being lessened, merely by topical applications and exercise, as I shall shew in its proper place.

§ Without presuming to solve the difficulty, a few hints on the subject, may not prove unworthy of attention.

quibus aut pars affectata tam vitioso habitu est prædita, ut vel optimum sanguinem, qui nutritionis gratia confluit, corrumpat: aut id quod influit, adeo perversum existit, ut etiam si pars rectè se habeat, ab ipso tamen solo erodatur. (de comp. med. lib. 4.)

AMBROSE PAREY, on the cacoëthic ulcer, copies after *Galen*: "influentem corrumpit humorem," (says he) and on the cachochymia—"propter influentis sanguinis, partem exedentis, pars affecta nimium humida non coalescit." Lib. xii. cap. x.

I. The living power of the animal exists in greatest quantity nearest the heart. In proportion to the different distance of parts from this centre of life, the circulation of the blood is more languid, the animal heat is at a lower temperature, and the animal functions are more liable to interruption. But the healing powers depend greatly on the general, or relative vigor of the system: If therefore, the vital energy diminishes, at a distance from the centre, shall we be surprized to find, that the *vis medicatrix* (which owes its salutary power to the same cause) is diminished likewise?

II. In the lower extremities there is diffused much tendinous or ligamentous membrane. This kind of substance, though not void of sensibility, possesses a very small share of it; its blood vessels are scarcely visible unless rendered so by disease, and in that state, it acquires a high degree of irritability. The structure of the parts therefore, may in some cases, have considerable influence in retarding the cure of ulcers. And perhaps the depending position of the limbs, though not sufficient of itself, may in some degree co-operate with other causes, in producing the evils complained of.

When an ulcer on the lower extremities, tolerably free from inflammatory symptoms, and unconnected with cacoëtic, or specific affection of the system, becomes intractable under the most prudent management, it is highly necessary to know the cause: Inquisitive men have, indeed, assiduously investigated it, but to how little purpose, the success, or rather the want of success in general practice, too evidently demonstrates.
—I will

—I will venture to suppose, that the most probable cause is a defect of vital energy either general or local. If general, which it is of importance indeed to determine, and an atonic state of the system prevails, that plan must be pursued, which is most likely to produce a state of general strength; but if the cause be merely local, our views must be very different. It must then be treated as a diminution of action in the part. Not that it is meant to suggest, that those two causes cannot exist together; they very often meet in the same subject. But it is proper to observe, that they may, and often do exist separately. Nor are we to conclude, that because our treatment has a tendency to strengthen the patient, the desired end will always be obtained. There may be a sufficient quantity of power in the constitution to overcome a disease, though that power be not fully exerted. It is often necessary to rouse nature to action, by the external use of stimulants. But in doing this, it will be well to observe, that as we have a certain end in view, our means must be adequate. Stimulating applications may be so used, as to fret or irritate the part, without the least good effect; nay, with very bad effects. If the power and action of the part be not rendered superior to the disease, every ineffectual effort of nature will increase it, and consequently retard the cure.

Perhaps the irritation arising from motion, may in this view, be accounted one kind of hurtful stimulus, when applied to ulcers on the lower extremities. A person affected with this kind of sore, though he should

not entirely confine himself, will be disposed to walk less than usual, and to give the leg some little indulgence. The stimulus, thus irregularly applied, excites the vessels to an increased action; pain becomes considerable; the surrounding parts are inflamed; and the discharge is increased.—He rests.—Nature was making efforts to give a new surface to the ulcer, but the stimulus, which excited her to action, being withdrawn, her attempts are partial and ineffectual. And as more or less of loss of substance, always precedes the shooting of granulations, perhaps only the first part of the process is completed; hence the ulcer is more foul, is deeper, and more extensive than before. All these evils are attributed to the motion of the part, and absolute rest is deemed a necessary requisite towards obtaining a cure.—Whether this be as evident as it hath been generally imagined, is a matter very much to be doubted indeed, and is worthy of further inquiry.

§ It appears then to be rational, as well as agreeable to experience, to suppose, that from the legs being depending parts of the body, the only, nor the chief obstacle to the cure of ulcers does not arise, but as hath been observed, from their being extreme parts, where the circulation is least vigorous. Hence it is, that the complaints of younger people are chiefly confined to the head and upper parts of the body, which at a more advanced age, usually affect the lower; and it frequently happens, that such as have had disorders of the eyes when young, are afflicted with fistulæ in ano, or sore legs, when they grow older; the circulation of
the

the blood through the more extreme parts, and their consequent tone, being then impaired: and every surgeon knows how much more frequently a gangrene is found to seize the feet or the toes, than any other part of the body. For although the fingers, with their vessels equally small, are at a considerable distance from the heart, yet the circulation in them is more vigorous, both on account of their vessels coming from the beginning of the aorta, and the continued exercise from their more constant use. The lower extremities being still further distant, and not so much engaged, have these disadvantages compensated by the exercise nature imposed upon them, in the support and conveyance of the whole body; for the want of which necessary stimulus, in indolent and sedentary people, the circulation becomes too languid to preserve their due tone. From this cause, as well as from the anatomy of their parts, it is easy to account for the swelling of the feet and ancles, so common in such persons, as well as for that which happens from the limb having been kept, for any length of time, in an horizontal position: for here, whilst the moles movenda is great, the vires moventes are diminished.—It is therefore presumed, that exercise being so necessary to support general health, and particularly the vigor of the extremities themselves, (so far from being positively detrimental,) must, under proper management, be conducive to the healing of ulcers situate upon them. Hence it will appear to be the province of art, to devise some proper means to regulate the effects of exercise, rather than to aim at a cure some other way, by subverting the order of nature,

and

and depriving the patient, for a time, of a necessary mean of supporting, or recovering his health; which pernicious custom, it is presumed, is one principal occasion of the difficulty in question.

§ The nature of the ulcerative process next deserves our consideration. When from some cause, external or internal, ulceration takes place, a very usual way of accounting for this solution of continuity has been, that there is a melting down of the soft parts into pus, sanies, &c.* Experiments on dead and living subjects have been made to prove this; yet it is apprehended, this process never takes place in the living body; it is a process that contradicts every thing we know of the animal œconomy, and the observations of the most accurate physiologists.

The perfect solution of a soft part, even when removed from the body, is not easily effected by art, unless it be immersed in caustic liquors; much less have we ever seen muscular flesh, and cellular membrane converted into a fluid resembling pus. Simple division of a living fibre, does not necessarily produce the death of

* “*Vascula distenta rupta cum dolore, calore, pulsu, liquores suos effundunt, solvunt, putrefaciunt leviter, solida tenera atterunt, solvunt, fluidis miscent in unum similem album, spissum, glutinosum, pinguem humorem, pus dictum.*” BOER. aph. 387.

“Pus or matter is certainly no natural secretion.—I believe I may venture to affirm, that the dissolution of some of the solid particles of broken capillary vessels, and a mixture of some part of the juices that should circulate through them, makes a necessary part of the production. PORR. vol. i. p. 315.

that fibre : but decomposition, either by the putrefactive fermentation, or by art, never can take place, without depriving the affected part of its life. Moreover, as the purulent matters discharged by ulcers, differ in their chemical properties from dead animal fibres in a state of dissolution, we are certainly not authorized to conclude, that there is a similar arrangement of particles. Besides we ought to find the most profuse discharge from an ulcer during the exfoliation of its sloughy covering ; whereas the reverse of this is really the case. An ulcer never pours out so large a quantity of good matter, as during a few of the first days after its surface has become clear. And every practitioner must recollect having seen cases, where the dimensions of an ulcer have been increased to twice its size, in the space of a few hours, without such a proportionate increase of the discharge, as we ought to expect under the idea of dissolution.

The process of ulceration seems to be a certain act of the absorbent system, whereby in consequence of a stimulus, it takes up the soft parts, and carries them into the circulation*. No anatomist can doubt the possibility of this, when he considers that ointments, and even powders are readily absorbed, especially where there is a want of cuticular covering†. If this

* Physiology, I believe, is indebted to the ingenious Mr. Hunter for this no less probable, than curious idea.

† See Mr. CRUIKSHANK's letter on the absorption of calomel, to whom the world is no less indebted for his indefatigable attention to, and useful discoveries in the absorbent system.

account of the matter be admitted, we shall be assisted in understanding the cause of the rapid progress of ulceration, the exfoliation of dead soft parts, and desquamation of carious bone.

§ But this idea of ulceration suggests a very natural inquiry, viz. From whence comes the purulent matter discharged by ulcers? It has been said, that ulcers are drains to carry off peccant humours^{*}; or dissolved cellular and muscular substance[†]; we have been told indeed, that pus exists in the blood, and is poured forth at these outlets.—The last-mentioned idea is in itself so improbable, and standing unsupported by any decisive proofs, it may be regarded merely as hypothetical.—A few remarks on the former will naturally arise in the further discussion of the subject.

“The most probable opinion,” (says a very ingenious and respectable author ‡) “hitherto advanced, concerning the formation of pus is, that it is always produced

* “Ulcers may be looked upon as drains which nature has made choice of to relieve herself.” LE DRAN.

† “Pus is a mixture of various ingredients, viz. blood, which has lost its red colour, and is the largest ingredient in the mixture; a little viscid lymphatic juice, and the extremities of the lacerated vessels, which fall off in small parcels, and are converted into a softish and whitish kind of glue.” FIZEZ on Suppuration.

“Si sanguis in ventrem effusus fuerit, præter naturam, necesse est ut suppuratur. HYPPOC. aph. 20. lib. 6.

“Hoc enim parte caro putrescit et exulceratur, et accedentem pituitam et bilem, insuper putrefacit, et fit pus.” Id. de morbis. Lib. 2.—See also CULLEN.

‡ BELL on the Theory and Management of Ulcers, &c.

by

by a certain degree of fermentation in the ferous part of the blood, after its secretion into the cavities of ulcers and abscesses." This opinion stands supported by the most respectable authorities †, but is not free from difficulties. Serous effusions made from a surface, that is not in a state of inflammation, will remain for months unchanged, and never assume the appearance of pus ‡. More or less of inflammation || seems absolutely necessary to its formation. It may likewise be observed, that the nature of the discharge depends greatly upon the healthy, or unhealthy state of the fore. Perhaps then, it may approach nearer the truth to suppose, that pus is a secretion sui generis, from the ruptured vessels of a cavity, or ulcerated surface, consequent on a certain degree of inflammation, possessing

† "May we not therefore conclude, that the serum is perpetually oozing into ulcers, but that from the heat of the part, and the volatility of our fluids, it is all absorbed or evaporated, excepting this matter that remains in the fore, in the form of pus." Sir JOHN PRINGLE, Appendix, page 72.

“If the increased impetus of the blood in an inflamed part dilates the exhalent vessels to such a degree, that they pour out an entire serum,—under stagnation, the serum may undergo a particular change, by having the gluten present in it, changed into a white, opaque, moderately viscid, mild liquor, which we name pus.” Dr. GEORGE FORDYCE.

‡ The water in hydrocephalus internus, ascites hydrocele, &c. which is generally coagulable.

|| “When a quantity of fluid is thrown out into any cavity, (the inflammation continuing) it ferments, and is converted into pus.” Dr. GEORGE FORDYCE.

originally

originally the most bland and salutary qualities §. Not that it is meant to be understood, that pus is secreted in the form under which it appears, but it is probable, that when it covers the surface of a wound, under the appearance of an adhesive glairy fluid, the only difference between this and white pus consists in the quantity of superfluous water. When, by remaining for some time upon the part, the thinner fluid

§ It is not necessary, that a part shall have precisely what we understand by a glandular structure, in order to secrete fluids for particular purposes. The mucous membrane, which lines every cavity exposed to the action of external air, secretes a fluid called mucus, for the defence of that part, &c.—This, in a healthy state, is mild and inodorous, and much resembles the white of an egg, which is perfectly insipid; and consequently, can be little more than a mucilage and water. Whereas serum contains neutral salts in abundance; such mucus therefore cannot be effused serum. If it were merely serum, it would be more irritating as its consistency increased, the reverse of which is the case. When morbid secretion takes place, as in catarrh, gonorrhœa, &c. the effects of the neutral salts in the serum poured out, are pretty evident. Now, these diseases cannot increase the quantity of saline matter, consequently, we must seek for the cause of this acrimony in the different action of the vessels.—These variously excited, by external or internal stimuli, to irregularities in their action, may likewise assist us in our inquiries after the cause of the various appearances and qualities of pus, and of the difference between that and such morbid secretions from an inflamed surface, as assume a purulent appearance.—With regard to the latter distinction, it may be worthy the attention of physiologists to consider, how far the simple inflammation of a surface, may possibly be inadequate to the production of true pus; and whether an erosion, or loss of substance may not be essential to that particular secretion.

is absorbed, or exhaled, the remaining part assumes opacity, and acquires a thicker consistence; for if wounds, furnishing a great quantity of good pus, are examined a few hours after being dressed, no such matter as pus will appear; but a thin, ill-looking sanies is spread over the surface *.—In short, the formation of true pus, and the putrefactive fermentation of animal substances, bear no resemblance to each other, since pure pus is perfectly inodorous, whilst the other emits a volatile alkali. Nor do we find, that matter discharged from a wound bears any regular proportion either in quantity, or quality, to the supposed degree of fermentation. If we only attend to the different aspect of an ulcer, when it produces pus, ichor, or sanies, whether we reason analogically, or from evident appearances, the idea that has been thrown out, of the healthy or morbid action of the ves-

* From hence, a fallacy is discerned in the ingenious theory of the late Mr. Freke, though it is a much more probable one than that of concoction, or what is usually meant by fermentation. He humorously observes, if it can be shewn, that any part of the blood, put into a sand heat, and digested there, or that decocting it ever so long, produces any thing like concocted matter, he will give up the belief of his own opinion, viz. that pus is produced by despumation, or agitation, from the serum of the blood passing through the partially obstructed extremities of divided, or ruptured vessels, which like a sponge, resisting a free passage to the globules of air contained in the blood, beats up the serum in its passage into a froth, just as soap and water would be by a like agitation.—ART OF HEALING.

fels,

fels, as the most probable cause of this difference, appears, by no means, to be an unreasonable conjecture †.

But the idea of true pus being a dissolution of the muscular and cellular substance, &c. may from its great popularity, seem to demand a little further attention. In support of this opinion, we are told, that in every collection of matter, there is actually very considerable loss of substance in the part, and for proof of it we are pointed to the cavity from whence the matter has flowed on the bursting, or opening of the abscess, and to the disappearance of the cellular and adipose membrane; the greatest part of which however, seems only to be condensed. To examine this point a little more narrowly, let us take a view of it where the fact ought to be the most evident, as in the case of large imposthumations, such as the psoas abscess; from whence a pint, or more, of matter has run out on the giving way, or opening of the integuments. In such cases, has there been a destruction of muscle, vessels, cellular and adipose membrane, equal to the quantity of pus, or the cavity that is formed? What! a pound of muscle and adipose membrane destroyed ‡? A bulk, equal to a pint, or more, of matter?—We may, indeed, find the

† How frequently is it in our power, to alter both the appearance and the quantity of matter discharged from a sore, not only by medicines, but merely by external applications?

‡ Experiments on living animals have lately been made to support such an opinion.

muscles separated one from another, and the cellular membrane torn away by the weight of the fluid; or sometimes a muscle divided longitudinally, or its belly eaten through; but the idea of a whole pound of organized parts being lost, or melted down into matter, is really much more improbable than any thing that has been advanced concerning the formation of pus, or doctrine of the absorption of parts into the constitution. For whatever has been said on the latter, is merely to account for a loss of parts, which sometimes actually disappear in the process of ulceration; but the former opinion supposes a quantity of parts to be destroyed, (in order to account for excessive suppuration) where there is no such manifest disappearance. But, moreover, in large collections of matter, there is not only a prodigious discharge on the first bursting of the abscess, but it often continues immoderate for days, and even for months, till the patient is destroyed by it. But upon opening the body, only a very small portion of muscle appears to be lost, and there is little, or no more deficiency of adipose membrane in the part, than throughout the rest of the body the whole being in such cases exceedingly emaciated; and the fat supposed to have been absorbed. To sum up the whole, it appears, that in the former instance of the sudden spreading of an ulcer ||, the discharge is, by no means, proportionate to the great loss of parts;

and in the present, there is not a loss of parts proportionate to the immoderate discharge.

But it is said by others, that there is not, indeed, so great a dissolution of solid parts, as to furnish the whole of these purulent matters, but so much of them is melted down as gives tenacity to the fluid; and is an essential ingredient in true pus §. Besides what has been already advanced in answer to this latter assertion, it may be observed, that wherever there is an evident admixture of fat, or of the crassimentum of blood; or the parts are in a lax and sloughy state, the pus is never good, but always thin, discoloured, or foetid. Whereas, when the surface of an ulcer is firm and florid, without the least appearance of the melting down of parts, (as it is called,) there, it has been observed, the pus is thick and good; there only is it *album læve et æquale*.

Moreover, if the dissolution of organized parts, does not furnish a very considerable portion of the purulent discharge, it can supply only a very small part of it, as is manifest from what has been said above on the state of the parts, as they appear in those who die of an atrophy, in consequence of very large incurable abscesses. And if so little of the pus can be furnished by the dissolution of solid parts, and its true purulent appearance be not occasioned thereby, the difficulty is not removed, and the question returns, viz. how is pus formed? —a question I have attempted to answer, and which

for any thing that has as yet been advanced to the contrary, may prove full as satisfactory and rational, as any other account that has been given of the matter.

§ When the constitution has, at a certain time of life, been long accustomed to the presence of an ulcer in some part of the body, practitioners have been much divided about the propriety of attempting a cure. It has been deemed improper to heal it, without substituting a drain in some convenient part, in its stead. This opinion is founded partly on theory, partly on observation. If we regard old ulcers as drains, or outlets for vitiated humors *; the evacuants of a considerable quantity of fluids, where retention must disorder, or overload the system, and induce plethora †, &c. such ideas must naturally produce a doubt of the expediency of effecting so important a change. Facts are not wanting to prove that disagreeable, and even fatal consequences, have followed the drying up of long continued ulcers, and even of issues ‡.—Though the facts cannot be denied, the explanation given of them may be called in question ||.

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* A mesure qu'on travaille à guérir l'ulcère, il faut avoir soin d'ouvrir un cautère à la partie qu'on jugera le plus convenable, pour donner aux mauvaises humeurs un épanchoir à la place de celui qu'on va boucher.

Traité des Ulceres &c..

† See BELL on Ulcers.

‡ Le DRAN's Observations.—SHARP's Surgery, Introduction.

|| *Ulcera diuturna et inveterata non sine periculo curantur, nisi corpus diligenter purgetur, et victus ratio bona observetur; cujus rei*

We know that in many cases, very suspicious a priori, ulcers have been dried up, not only without bad consequences, but where very considerable advantages have ensued. Whereas, fatal accidents have sometimes taken place after the cautious healing of more recent sores in apparently good habits of body ; which would scarcely have been attributed to such cures as to their proper cause.—The *post Hoc* and *propter Hoc*, it is well known, require a judicious discrimination.—Where, indeed, there has long been a very profuse discharge of matter, a cessation of the accustomed evacuation may have some influence. But if particular cases are excepted, it is more than probable, that the effect of ulcers upon the constitution, is not to be imputed to the quantity, much less to the quality of the matter discharged by them ; which it is likely, depend on the state and action of the vessels of the part, where at least, there is no specific contagion. No opinion is more popular, than the existence of humors in the blood ; and perhaps very few opinions have less foundation in fact. The serum of blood may differ in consistency, and contain more or less saline particles ; the red globules may exist in greater or smaller quantity ; the coagulating lymph may vary in its relative propor-

rei exemplum habet Gal. Fabricius, de quodam viro qui cum ulcus inveteratum in crure sinistro ab empirico ἀμεθοδῶς curatum fuisset, post menses aliquot pleuritide in sinistro latere correptus, atque in de mortuus est, et morbo durante *talia* expuit, *qualia* antea ex ulcere effluere solebant.

tion to the watery parts of the blood—if we advance much further, we are treading merely on hypothetical ground.

Nor are we warranted to conclude from observation, that quantity ought to influence us much more in the healing of ulcers. Are the effects of ulcers upon the constitution, by any means, proportionate to the quantity of matter discharged by them? Do we not see, that the species of ulcer, and its seat, very often determine its harmless, or mischievous tendency? Were we always to form our prognostic of the termination of ulcers, from the quantity of surface they occupy, or the fluids they discharge, every day's experience would prove the fallacy of such a prognostic. Small ulcers (unattended with caries of the bone) may bring on hectic symptoms, and the amputation of the whole limb shall save the life, and restore the health of the patient.

§ The ill-effects which ulcers have upon the constitution, seem to arise from irritation, and the consequent general state of exertion into which the system is thrown. When the discharge is very profuse, inanition is produced; but simple inanition is not a proximate cause of hectic fever; nor of symptoms of irritation*.

C 3

The

* Wounds of the tendons, ligaments, cartilages and the cavities of joints, are more liable to be attended with symptoms of irritation, than the inflammation of other parts: by such symptoms therefore are meant,

The system being kept in a perpetual state of tension, by the constant stimulus of an ulcer, and nature fruitlessly exhausting herself to subdue an obstinate disease, will sufficiently account for that train of ill symptoms, which sometimes accompanies ulceration *.—But though stimuli, in certain habits and under certain circumstances, may prove detrimental to health, yet in many instances, we find them excellent remedies. The good effects of blisters and caustics, applied near the seats of diseases, are generally known; yet we do not suppose, that there is any specific virtue in cantharides, neither do we regard them as the evacuants of vitiated humors. It is a fact pretty generally admitted, that however plentifully a blistered part may pour out its serum, it is often more advantageous to heal the sore, and apply a fresh stimulant, than to keep it open by mild digestives. If the good effects of blisters, therefore, be admitted upon these principles, why reject this reasoning in the case of ulcers, which may not improperly be termed perpetual blisters or issues?

The effects of ulcers upon the constitution in general, being thus hinted at, the main question may be re-

meant great depression of strength, anxiety, frequent respiration, quick and small pulse, a tendency to delirium, or spasmodic affections of the muscles. These symptoms do not indicate a disease of the general system, but depend upon the presence of an irritating cause; and when the cause is removed, the effect immediately ceases.

* *Natura enim, semper sollicita est in conservatione individui sui, morbi quæ sese opponit; sed prout valida aut imbecillis fuerit, aut victrix evadit, aut succumbit.* HILDANUS, *Observ. Chirurg.* 77.

sumed,

fumed, viz. Is it always proper to attempt the cure of ulcers? Were a general and direct answer to be offered, it might be given in the affirmative.—If a case occurs (which is not improbable) where upon the whole, it may be judged a lesser evil to let the ulcer remain, than to attempt its cure; yet if its extent of surface be very considerable, it will be prudent to lessen its dimensions. To this may be added, that as the seat of an ulcer, however small, may be in a very inconvenient part of the body, an issue † may, in many suspicious cases, be substituted in its stead ‡; which if this reasoning be valid, will much oftener than it is imagined, have the same good effect. Whether, therefore, we regard the operation of ulcers as a drain, or as a stimulus to the system, there can seldom be any reasonable objection against healing them.

The preceding observations are natural, they are founded on facts, and it is hoped, they will support the inference intended to be drawn from them. Many of them almost insensibly occurred to the author in the course of his practice, nor did he discern half their force, till repeated experience constrained him to attend to them, and forced on his mind such reflections as led

† In all these cases, it is proper to purge once or twice a week with calomel, if the patient can bear it, and to make an issue, when the sore is almost healed. SHARP, Introduction, p. 40.

‡ LE DRAN, BELL. The latter has some observations tending to prove, that the discharge from a common issue is usually much greater than is generally imagined.

to support them. Be it observed, however, once for all, that success preceded his reasonings, and if he has failed in his theory, the facts stand the same, and every man is left at full liberty to give a better illustration of them. He concludes it, indeed, far safer, even industriously to invent a specious theory in support of experience, than to found a practice on mere metaphysical reasonings, however ingenious they may seem. If he has erred, he has erred on the safe side, and cheerfully submits both his principles and practice to the judgment of others.



A
T R E A T I S E
U P O N
ULCERS of the LEGS, &c.

THE intentions in the treatment of ulcers on the legs, have been principally two; namely, to bring those into an easy, harmless state, whose perfect cure ought not to be attempted, or cannot be obtained: or secondly, in the most safe and rational way, to accomplish it in every ulcer not under those circumstances.

Whether there be many such cases as the former, where, at least, there is not manifest disease of the viscera, I shall not take upon me any longer to dispute: and however numerous they may be, the known rules of art are fully sufficient for every thing that seems to be expected from it. I may, however, venture to add, that perhaps nothing will co-operate so much with the first-named intention, as the bandage hereafter

hereafter to be mentioned, drawn moderately tight. It is the latter then that will be the subject of these pages, including some of those which have been judged incapable of cure, or of being long preserved in that state.

To pursue this intention more perfectly, it will be necessary to take a brief view of the most usual methods of cure, with the internal remedies on which surgeons have at different periods principally relied. And here a large field for disputation would open, if notice were taken of every thing that has been in vogue, or has had some warm advocates even from the press. But I shall only glance at such things as have not been generally adopted, and shall chiefly confine my observations to those in great credit amongst surgeons of reputation, who the author of this little essay wishes may peruse it with the same degree of candor, that he has meant to exercise of modesty and respect, in the liberty he has taken in differing from them in opinion. He cheerfully acknowledges the superior abilities of many of those who may be his readers, as well as their more extensive experience in the general practice of surgery—he thinks, however, he has some improvements to offer on the article of ulcers, though there is perhaps no other, in which he should not think it sufficiently honorable to say, *I præ, sequar, si non passibus æquis.*

Amongst the internal remedies once in great repute with some practitioners, are the SOLANUM, NITRE and CICUTA; of the latter, which has been tried in so many complaints, little more need be said in this day, than that it hath failed of that general success we were once made to expect, in any of those for which it was at first
so

so highly recommended; though it is well known to many people, that the materia medica has been enriched by the addition of it. Although an uncertain medicine, it now and then proves a most valuable remedy. In the hands of judicious physicians, and particularly those great ornaments of their profession, Dr. *Warren*, and the late Dr. *Fothergill*, many severe anomalous complaints have been immediately relieved by it*, after having withstood every rational means that could be thought of.—The cicuta, however, is no specific for sore legs, and though it may have its use as an anodyne, in a few cases hereafter to be mentioned, it will be sufficient to observe here, that it hath done but little in the cure of ulcers of any kind.

The SOLANUM, I believe, has been long exploded, as a remedy not at all to be depended upon, and would not have been mentioned here, if great things had not once been said of it. It appears, however, to have had its use in some cases, which I was witness to many years ago, when house-surgeon to St. George's Hospital, but it is certainly much too powerful and uncertain a remedy for general use, and there never was found any rule

* Of this, the writer of these pages was perhaps one of the most fortunate instances, when under the care of Dr. WARREN for a most severe and painful affection of the face. And he hopes he shall not offend that eminent practitioner, by taking this opportunity of publicly acknowledging, the very great obligations he has been long under to his friendship and services; and as, by no means, the least of them, that he has been more than once, the kind instrument of prolonging the valuable days of his nearest relative, and choicest comfort in life.

by which to judge of the probability of its succeeding, unless it may be said in cases attended with great pain; and herein it is not only far less certain than opium, but much inferior to the cicuta. It may however, be administered with safety for a few days, and will often produce a florid surface on an ill-conditioned fore.

NITRE was a few years ago recommended in the cure of ulcers*; and having been long regardful of every thing that promised relief in these complaints, I was readily disposed to attend to it. After a fair and repeated trial of it, I can venture to say only, that it is likely to be useful upon the lenient plan, as it certainly co-operates with the intention there pursued, of rest, evacuations, &c. by its known quality of lessening sensibility in the nerves of the stomach and the general system, and thus making the fluids circulate more slowly: but it has been observed †, that the cure of ulcers, when accomplished by such means, is seldom permanent. Most of those which were large broke out again whilst I persevered in the use of it, which I have since cured on another plan, as I believe, without danger of relapse. Besides, the possibility of such a medicine, in large doses long continued, producing some unpleasant effects in certain constitutions, may be considered as another objection to its general use. It is indeed a well known and powerful diuretic, but when taken in the large doses prescribed, its temporary good effects, I apprehend, are not so much to be attributed

* Dr. ROWLEY on Ulcers in the Legs.

† Vide the Introduction.

to this as to its sedative powers. In more moderate doses, however, it may be administered in those cases, wherein the above remedies are evidently called for, as where an inflammatory diathesis prevails in the habit, or perhaps the limb only is greatly inflamed; nitre is in such cases a most powerful medicine, and may be used together with gentle purges, for a certain, but probably short time, to advantage.

Before I proceed to make further inquiries into the use of internal remedies, it may not be amiss to take some notice of other modes of treatment, which might not be thought worth mentioning, but for their great reputed success.

One of these consists of frictions, and though it may be accounted in some degree empirical, probably some good may have been done by it. And it so far coincides with the present plan, as it proves a stimulus, supplying the defect arising from the languid circulation in the extremities. It will thereby liberate the parts, and open the fine vessels terminating on the skin*; but there is something so painful (as I am told) in the operation, and so inelegant and inartificial in the mode, that no surgeon will probably ever adopt it.

There are, however, people in London, who effectually cure ulcers in the legs without confinement, or

* Defrictio potest solvere, ligare, incarnare, minuere; dura ligare: mollis solvere: multa minuere: moderata crassescere.

regulation of diet, some of them with, and others without the use of tight bandages; one of these makes free use of the mercur. corrosiv. rub. and as it appears, with very good success. But where no bandage has been applied, the ulcers are apt to break out again; some of which I have attended afterwards, which now remain perfectly well.

Another method among such practitioners, is that of bathing the limb in astringent liquors, or applying astringent lotions or dressings. And indeed such a practice in some cases, with certain limitations and additions, seems more intitled to attention, than many other external applications; though it is capable of doing great mischief in the hands of empirics. This method however, as far as I have been able to trace it, does nothing without very tight bandage or rest.

Besides these methods, there are others which have been used in different parts of the kingdom, not without some success; but so much pains has been taken to conceal them, that their good effects are necessarily very limited. Amongst these, the most remarkable that has come to my knowledge, is that practiced by a respectable gentleman not of the profession; and should he think proper to make the public acquainted with his method and success, it is presumed that men of liberal sentiments will think themselves indebted to him.

I return now to some further remarks on internal remedies, and shall confine myself to those in more general use, and still in great reputation with the best practitioners in surgery.

The

The first I shall mention is MERCURY.—This may indeed be used with great advantage in many cases*, as a most powerful deobstruent and stimulant. But when exhibited freely, so as to raise a salivation †, the case is entirely changed; it may indeed from the vast discharge it occasions, from the various secretions, in a few instances carry off something that has been injurious to the habit, and may especially keep it from the wound, and from counteracting the surgeon's designs; but I am satisfied, it usually acts far more powerfully by reducing the vis vitæ for the present, and thereby coincides with the intentions of rest, diet, and purgatives, as will be further shewn in the sequel of this work. And every candid practitioner will allow, that of all the cases of sore legs, that return so frequently to the hospitals, the greatest number is from those who were cured under a course of mercury: nor is it even probable, that strong and laborious men, whose sores have been healed by the means of so debilitating a plan, should continue long in that state, when they return to their usual diet and exercise.

CALOMEL taken inwardly, and in small doses as an alterative, though it less powerfully promotes the secretions, acts nevertheless upon the same plan, and being indeed usually joined with purgatives, cannot fail to effect just as much as other medicines of this class. It may have one advantage of them, however, by acting

* See FALCK on Mercury.

† See SHARP's Surgery.

as a stimulus to the habit, though in this view, the corrosive sublimate is a preferable medicine, not being so likely to purge, and is often of great service in the cure of these ulcers, which so often happen to men whose habits have been tainted with lues venerea.

PERUVIAN BARK is directed in the cure of ulcers on the legs, as it is also of many other sores, and is doubtless a very valuable drug. In the cases before us, and perhaps in all others, it acts as a tonic, and as such, often produces wonderful effects; neither physician nor surgeon would willingly practice without it: but in the present instance, it may be objected to, in many cases, as a medicine to be very long continued, at least, with the view in which it is sometimes prescribed. It is useful only where nature is languid, and her powers stand in need of assistance to bring an ulcer into a good state; it may then, in general, be soon discontinued, as should every other means used under the idea of expediting a cure. It may be doubted, indeed, if it ever acts as an astringent in this way, but if it does, it will be often injurious; for it is a general rule, with very few exceptions, that ulcers on the legs should be suffered to discharge as much, and as long as they are disposed to do, which discharge should lessen only in proportion as they diminish in size: but of this, more will be said in its proper place, whilst I add a few words on other internal remedies in pretty general use.

After what has been said, little need to be observed on the article of Purging, unless it be to make an apology for so egregious a deviation from the general, and

most

most antient practice||; and this I am ready to do both on the present, and every other occasion, when I shall be found differing from gentlemen, who have made surgery their study and practice much longer, and to more advantage than I have pretended to.—But, amicus Plato, amicus Socrates, sed magis amica veritas.—To yield to any authority, would here be criminal. Facts must, and will stand.—I have seen the practice of the most eminent of the profession both here and in Paris, and have profited from it; but in this instance, at least, general prescription has failed; and every man knows how tedious is the cure, and how frequent the relapse of fore legs. Nature is compelled to dry up the surface of the ulcer, by the improper help of epulotics, rest, abstinence and physic, rather than encouraged to throw off by the fore, whatever is offensive, to fill up the surface with sound flesh, and gradually to abate the discharge, only in proportion as that surface diminishes.—This is the work of nature.—Νεσωγ φύσις ἰατρος §—art should do no more than assist her endeavours, or remove the obstacles in her way.—But this is to anticipate the substance of the following sheets; suffice it to say here, that whatever virtue the exhibition of purges may be judged to have in healing of ulcers, the frequent use of them certainly does not dispose them to remain so; nay on the other

|| See HIPPOC. lib. de humor. TURNER, SHARP, and HEISTER on ulcers on the legs, the last of whom more particularly advises frequent purges to carry off the foul humors; forgetting that a continued recourse to them, will carry off the good as well as the bad.

§ HIPPOC. EPIDEM. lib. 6. § 5.

hand, I venture to assert, that the long continued use of them is needless, and even prejudicial, in the cure itself, as is every other means of lowering the strength, and for the present impairing the general health of the patient.

Another means in great repute, both with former and modern practitioners, is the use of alterative medicines. — What virtue some drugs may be possessed of, it doth not perhaps become a surgeon to thrust in an officious opinion, but this I may venture to say, that some medicines have obtained very fine names, which it is well if they deserve. That there are such, as with very little or no sensible operation, may assist the vis medicatrix naturæ to make a salutary change in the system, will be disputed by no man of practice either in medicine or surgery; though there are certainly very few, that act specifically on any disease, or induce any such change in the blood, as that term is designed to imply. There are cases and constitutions, it is granted, that require medicines to assist the healing of wounds, but in specific contagions excepted, we have little reason to think, that there are any deserve the name of alteratives, in such a sense, as to point them out as adapted to the ulcers now under consideration, or that do any thing more towards the cure of them, than of any other wound. It will be sufficient therefore, the general health be attended to, and such medicines occasionally directed, as are likely to promote it—if it be otherwise, I have been hitherto fortunate in not having found the necessity of them, and the patient seldom cares how few he is troubled with.

The reader's attention is drawn next to the diet to which

such

such patients ought to be confined; and here I must again express my dissent from the general opinion, which I would not do, without being thoroughly satisfied of the sufficiency of the grounds upon which I advance so very an uncommon one. But it is apprehended to be a matter of very considerable importance.—The diet ought not to be slender, unusually low, or limited, as is too frequently recommended*, but just that which the person ought to use in a good state of health; lower than too many like to indulge in, and rather better than some people allow themselves; paying due attention to custom and habit, which, it is well known, are to a proverb become a second nature. The advantage of such a diet will be shewn in another place, at present I shall confine myself to what is judged to be improper, and shall therefore briefly point out the disadvantages of an error in this respect. A low, and very limited diet, by its effects in weakening the constitution, together with rest and purging, tends to keep up that indisposition to heal, constantly observed in these sores; and thus conspires with the weaker circulation in the parts, to prevent the formation of good and laudable pus, so necessary to the cleansing and filling up of every old ulcer. Besides, cures effected under such a regimen, are very unlikely to stand, and accordingly very rarely continue for any length of time. In many

* *Modicus cibus et aqua omnibus ulceribus conducunt.* HIPPOCR. de Ulceribus.

See HEISTER, TURNER, and more modern writers on this subject.

patients, and especially the heedless, and often abandoned amongst the poor, who soon return to their old and very different style of living, the yet tender cicatrix is unable to withstand this new impetus of the fluids, the consequence of which must be plain and obvious, without adverting to other considerations. Indeed too applicable to this and other circumstances of discipline, in the management of fore legs, is that universal maxim, *omnis subita immutatio periculosa*; for indeed nature is abhorrent of it*.—In short, if the cure of very bad ulcers on the lower extremities is designed to be lasting, there must be a greater conformity in the non-naturals, as they are called, both under, and after the cure, than seems to have been agreeable to the sentiment, or practice of the generality of surgeons in any age.

The supposed importance and necessity of rest, and an horizontal position of the affected limb, has long been a *sine qua non* in the cure of large and old ulcers on the legs, both amongst the ancients and moderns†, and though

* *Neque ex multa fame nimia satietas; neque ex nimia satietate fames idonea est.—Item, neque ex nimio labore subitum ocium, neque ex nimio ocio subitus labor, sine gravi noxa est.*

CELSUS, lib. i. cap. 3.

† *Stare autem ulceri minime conducit, præsertim si quis in crure ulcus habeat; imo neque sedere, neque ambulare. Verum otium et quies maxime conferunt.* HIPPOC. de Ulceribus.

See also *Traité des Tumeurs et des Ulceres.* Paris, 1759.

“ I injoin

though it may seem bold, yet it is the leading design of this publication to attempt to set it aside, at least to propose a method of cure without it, better, more rational, and lasting. And here it will doubtless be supposed, that every idea of necessity, or peculiar indication is excluded, such as fever, local inflammation, &c. which certainly demand a temporary confinement; and that the objection is limited to the simple idea of rest of the part, in order to facilitate or perfect the cure. Whereas, the frequency, I had almost said constancy, with which large and old ulcers on the legs are found to return, is greatly owing to their having been healed in an horizontal position of the limb.

Having now considered many, and perhaps the chief of the internal means in general use, together with the position of the affected part, and the diet of patient, I shall proceed to make some observations on topical applications, the more immediate province of surgery.

And the first thing that demands a particular notice, is the long continued use of fomentations and poultices, which however they invigorate and warm at the instant, tend greatly to relax the open mouths of the fine vessels, to destroy the tone of the muscular fibres, and induce and a

“ I injoin rest, with a due position of the limb, if not in bed or upon a couch, lying along at least upon some chair or stool, near a level with the trunk of the body.” TURNER.

“ Above all things rest, and an horizontal position; which last circumstance is of so great importance to the cure of ulcers on the legs, that unless the patient will conform to it strictly, the skill of the surgeon will often avail nothing.” SHARP. Introduction, p. 38.

flabbiness of the skin over the whole limb*; thus laying an additional foundation for ulcers healed in this way, to break out again. The use of them likewise generally obliges the patient not only to rest, but to keep in his bed†, that the limb may be preserved constantly warm; for where this is not attended to, little good can reasonably be expected, since a common poultice, soon becoming cold, is likely in many cases, to produce more harm than advantage. What has been said, it should be observed, relates to their long continued use; an occasional recourse to them, especially in the commencement of the cure, and in some instances hereafter to be specified, may be sometimes, though not very frequently necessary.

Without examining particularly the great variety of dressings that have been in common use, it will be sufficient in this place to say, that mere greasy applications without some warm and stimulating addition, however proper and useful in simple ulcers on other parts of the body, are liable to the same objections, and therefore not adapted to those on the legs. For though, like the former, they may sometimes, with the assistance of rest and epuloties, bring the skin over the surface, yet they very often leave the disease at the bottom.

After having thus stated some principal objections against the ordinary practice, I am happy that experience warrants me in proposing a plan of cure more certain and agreeable, as well as more durable than

* See BELL, part 2. §. 2.

† Id.

any hitherto described. Indeed the success has been abundantly greater than was at first expected, and its simplicity cannot fail of recommending it in preference to any other, if it were possessed of only equal advantages. But to save the trouble and pain of confinement and strict regimen, almost without the use of internal remedies, which in general are not very much relished by patients of any class, is surely an object highly worth attending to; so that very little need be added, if the rationality and safety of the method, can be made equally clear with its certainty and ease.

In the treatment of ulcers, two things are principally aimed at, whatever are the means by which we design their accomplishment; first, to bring the sore into a good condition with respect to its appearance, its discharge, and the sensations of the patient; and then secondly, to induce its surface to dry up, or form a cicatrix. In order to these, in the cure of every deep ulcer, it is necessary that its bottom should throw up healthy granulations, and come up near, or quite to the level of the surrounding skin, unless the ulcer has been attended with great loss of substance, or caries of the bone; but such incarnation is here included in the first idea, as it usually takes place at the time, or very soon after the sore puts on a healthy appearance. To these intentions a third may be added, which enters peculiarly into this plan, which is to heal them by such means as shall be most likely to prevent a return of the complaint.

To accomplish these intentions, there is one grand leading idea equally conducive to each; this I shall

therefore speak of without a precise reference to the indications laid down, or taking up the reader's time by an useless affectation of system and mode, which has been of late so justly exploded.

An ulcer is here supposed to be unattended with much topical inflammation, or uncommon pain, and without any febrile diathesis in the habit. Here the principal intention is to procure, and keep up a copious discharge, without any apprehension, in general, about the time it may continue, or the effects it may produce; the former will not be much longer than the ulcer is in a foul state, the latter, (it will be shewn) is the very object in pursuit; since the discharge will cleanse the foul surface, liberate the vessels in the part, and occasion a good appearance of the fore, much sooner than any thing else, and can therefore produce no manner of bad consequence*. On the other hand, where there has been great, and long continued pain,

* “ I should be unjust if I did not remark, that when these terrible scorbutic ulcers are cured by this method (a suppurative poultice) you may perceive during the cure, the patients countenances, which were generally of a squalid hue before, to be clearing up daily by the discharge from the fore, till they come to a perfectly healthy appearance. And this being done without any internal medicines, I lay it down for a maxim in all cases, that it is better for the patient to discharge any peccant matter externally from the part, which nature laid it on, than to retract it into the blood, by bleeding, purges, or other evacuations; for by this means, the matter is often translated to the lungs, or other noble part: for it is a well known maxim, that *ab extra intus redire, malum est.*” FREKE's Art of Healing.

and some consequent inflammation, the copious discharge produced by the means about to be prescribed, usually removes these troublesome symptoms †. And though the pain should be increased for two or three days, it will not be so constant as before, and after that period rarely returns, unless it be necessary to have recourse to some severer applications; which though they may create a painful hour now and then, will amply repay the patient at last. Should it be urged that fomentations and poultices are proper means to remove inflammation ‡ and pain, I must beg leave to remind the objector, how many cases he has seen, where the pain from small ulcers has resisted these applications for a long time together; whereas, I find similar cases yield in a few days to the treatment here recommended.

The discharge then is chiefly promoted by two things, the use of very powerful digestives or suppuratives, and the same degree of moderate labor and exercise to which the patient has been previously accustomed; to obviate

† What HIPPOCRATES observes on recent wounds, experience proves to be fully applicable to ulcers on the leg.—*At vero recentia ulcera omnia, tum ipsa, tum circumstitæ partes minimè inflammationem incurrunt, si quis quam vitissimè suppuret, et pus ab osculo ulceris non interceptum supprimatur.* De Ulceribus.

See also WISEMAN'S Surgery, book 2. ch. 4. observat. 1.

‡ By inflammation is here intended, not so much the true phlegmonous kind, as a species of erysipelatous inflammation, often the consequence of great pain, and thin acrid discharge, which some ulcers on the tendinous parts of the leg frequently furnish.

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the inconveniencies of which, a very tight bandage is to be used. Indeed the advantage of the bandage hereafter to be described, cannot easily be credited by those who have not been acquainted with it, or by not expecting enough from it, have not had recourse to it on every proper occasion*.

What regards the treatment of ulcers may be ranked under four general heads, external applications, bandage, exercise, diet and medicines. Of the first it will be difficult to make any exact, or regular arrangement; but it may be said in general, that they consist of digestives, detergents, escharotics, and a certain kind of astringents.

The digestive in most cases cannot be too strong, if not productive of that kind of irritation, which may provoke inflammation in the neighbouring parts; nor is that much to be apprehended, for it is remarkable, that very irritating applications to these ulcers scarce ever induce it; especially, (however incredible it may appear) where exercise is freely allowed; which by its tendency to promote the discharge, so far counteracts inflammation. And I cannot help adding, that surgeons may probably at first be surprized, how very powerful such applications may be, and how long they may be continued, without occasioning much pain after the first two or three days.

* See Thoughts on Amputation, by Dr. KIRKLAND.

The precise form of any such digestives, it would be thought trifling to insist upon; the Pharmacopœiæ of London and Edinburgh contain them; some one of the more active among these, will in a very few days produce a fine surface on an old, and very painful sore, and with the assistance of exercise, a good diet, and proper roller, will in a variety of cases, and without any other means, effect a speedy and lasting cure; though the patient should have been subject to sore legs for a number of years, and never easy a month together, after having been repeatedly healed in the ordinary way.

But before I proceed to particular cases, it will be found proper to state some of the advantages of this plan, and to obviate the objections that may arise in the minds even of eminent practitioners, against so free use of the remedies proposed, especially as so much is expected from them, as to occasion the discarding so many other means which custom has stamped with an almost sacred authority.

I can foresee no formal objection to be made against what has been called very powerful digestive, and suppurative ointments. Such made of the warmer gums, balsams and oils, are in constant use among surgeons; And if I have intimated, as I mean to do, that they cannot be too powerful (if calculated to promote digestion) and ought to be longer continued than is commonly done, it is on account of the more inert state, and weaker circulation observed in these parts, and their disposition to break out again into a sore, if too precipitately healed. It is to prevent this, that
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the discharge is directed to be kept up as long as nature is disposed to it, instead of having early recourse to drying, or healing applications, as they are called, in order to hasten the cure; and for which, in the greatest number of cases, there will be found little occasion on this plan.

But to pass on to things more liable to objection, such as stimulating, and corrosive applications. Here I wish first of all to obviate in part the force of a principal objection, that they occasion pain (which however, as hath already been said, they often remove*,) by observing further that such applications are to be used only now and then; and I can assert, that although they are to be applied in considerable quantity, they will not excite half so much pain as might be apprehended; as they are used chiefly to sores in a certain state, which will very well endure them, and are rendered very tolerable at the worst, by means of that exercise so continually inculcated. I am constantly told by patients to whom they have been the most freely used, that walking always mitigates the pain, which accordingly is severest in bed, at whatever time of the day they have been applied. Nor ought I to omit asserting, that filling a sore with mercur. corros. ruber, affords very little more pain, than moderately sprinkling it on the part; besides which, we are to consider, that one dress

* See WISEMAN on Ulcers with Pain. Chap. 4. observ. 2.
book 2.

sing in this manner frequently supersedes the necessity of many repetitions of it, in a more moderate way.

Another objection may arise from the stimulus, such applications will occasion, endangering inflammation, and rendering an ill-conditioned sore still more obstinate, by producing a sharp and ichorous discharge more abundantly corrosive. This is certainly true in a few cases, of which I shall speak in their proper place, but in a general way facts prove directly the contrary; sores on the legs require a stimulus*, and it has been said, are not easily provoked to inflammation. I have applied the red precipitate to sores exquisitely tender and painful, discharging nothing but a thin ichor, which has covered the surrounding skin with heated pimples, and small ulcers, and that after trying lenient applications to no purpose; the precipitate has immediately changed the appearance and discharge of the sores, the surrounding skin has lost its unpleasant aspect, the pain has been removed, and the ulcer, when small, been nearly filled up in a few days.

Besides objections taken from the pain, and other effects of such evident stimuli; it may be further remarked against the quantity and manner, in which such applications are used, as well as the intention itself, that large surfaces, being thus repeatedly and rudely de-

* WISEMAN observes, that "applications to these ulcers ought to have a temperate heat; and whatever objections" (says he) "may be made against even caustic applications, where milder ones take no place, we proceed to the stronger."

stroyed, and even deep floughs, produced in some of them, is a very inelegant mode of dressing an ulcer, and has more appearance of the farrier, than the surgeon. I shall not on this occasion stay to compare it with the actual cautery, very frequently in the hands of the former, and not altogether laid aside by the latter, but resting satisfied with the evident advantages arising from such an use of them, must urge the necessity of obtaining, in many cases, a new surface; without which, though the ulcer may sometimes heal up, under strict regimen and rest, it will most probably break out again, when the patient returns to his usual diet and exercise.

Beside the arguments that have been offered in defence of such applications, as create a more than ordinary irritation, or seem disposed to increase pain in the ulcer, there are not wanting obvious facts to support them; it being universally acknowledged there are many cases, even where a kind of inflammation attends, in which they prove more speedily useful than any other applications. I might particularly instance the small ulcers on the gums, and inside of the mouth, said to arise from an affection of the stomach, which are generally cured in few days, by a little borax, burnt-alum, or a lotion of diluted spirit of sea-salt. Whereas, holding warm milk, or any other lenitive, for a much longer time in the mouth, and frequently repeated, though soft and pleasant to their tender surface, offended even with the stroke of the tongue, would have little or no
tendency

tendency to heal them. So also the true scurvy on these parts, will bear, by degrees, the undiluted spirit of salt *, and is cured by it, when bland applications would increase the complaint. It is also well known, that some small ulcers upon other parts of the body, (and even affections of the eye-lids) which are apt to furnish an almost caustic discharge, and are therefore intolerably painful, and difficult to cure when treated with lenient applications, are frequently dried up in a very short time, by a few slight touches of the lunar caustic; which by destroying some little inflamed gland, removes the source of the evil at once. Such are very frequently met with on the inside of the lips, which when rubbed with the caustic, cease to be painful, and are healed before the little eschar is thrown off.

In regard to the bracing, or astringent applications I mentioned, the propriety of them will appear best in their proper place. It will only be necessary at present to remark, that these astringents are different from those in common use, both because they do not leave a dryness on the skin, and because they are of a very detensive nature; neither are they made of such a strength as to suppress the discharge, but rather to brace the surface of some particular ulcers: besides, the use of them is not constant, and is seldom long continued.

I come next to the subject of bandage.—It may be an empirical, but is no bad argument, when the in-

* See VAN SWIETEN's Comment. on BOERHAV. and LIND on the Scurvy.

tegrity and common sense of the speaker is not suspected, to say, that facts are stronger than reasoning; they are stubborn things even to a proverb, and they speak in favour of every tight bandage. I have applied it to the corpulent, heavy and inactive, to the young of an inflammatory habit, to the aged, to the pale and leucophlegmatic, nor have ever repented the use of it when accompanied with exercise; which every one will see, has some tendency to counteract its possible ill-effects on the extremities. It is true, we have known tight rolling and the laced-socking prove hurtful to some people, when applied to large, hard swellings of the leg with varicose veins, and have been repeatedly followed by such complaints of the stomach, as have made it necessary to lay them aside, though the limb has been greatly benefited by their use. But this disadvantage does not always take place even in these cases, and the objection is greatly, if not totally removed, as I have had the clearest proofs, when there is a sore on the leg; the discharge from which, cannot but tend to obviate all the apprehended ill-consequences*. And whilst

* See WISEMAN'S Surgery, Book 2. Chap. 4. Observ. 1.

Although for very obvious reasons †, I have been unwilling to adduce any cases of my own, in support of my opinion, yet I am inclined to think, the following is so fully in point, in regard to the difference made by the presence of a sore, where tight bandage is used in diseased and hardened limbs, as well as respecting the safety of healing up some ulcers in very suspicious habits of body, that I have

† Aut famam sequere, aut sibi convenientia fingere.

Scriptor.—

HORACE, de Arte Poetica.

whilst that is, on this plan, encouraged by digestives and exercise, it will abate only in proportion as the ulcer diminishes in size; which, as will be shewn presently, is permitted, rather than compelled to dry up.

Besides

have been prevailed upon, in this instance, to wave my prejudices against introducing cases on disputable points. To avoid breaking in upon the subject, however, I have thrown it into a note, that the reader may pass it over if he pleases.—A young woman, whose mother had been afflicted with a painful tumor and hardness of the leg, a schirrus in the breast, and afterwards died of a cancer in her mouth; had herself a similar complaint of the leg from the age of eight years. On the first appearance of the menses, this became more painful and enlarged, and soon after, confined her for some time to her bed; it was then fomented and poulticed, and she was let blood and purged, which took off the inflammation, but the hardness and tumor remained as before. A linen roller, and afterwards a laced-socking were applied, which kept it easy for three or four weeks, but her stomach being affected, she was obliged to lay them aside. In a short time, the leg became painful again, but did not inflame for some years, when she was again confined, and treated as before, but never got rid of the hardness and swelling, nor was ever long together perfectly free from the pain.—She was always easiest after the flow of the menses, and in most pain about the return of that period.

At the age of two and twenty she married, and soon becoming pregnant, her stomach was much indisposed, and she suffered in that way for several weeks. During this time, her leg became abundantly better, the hardness and tumor abated, and she could bear to press, and beat it with her hand, in a way she had never before dared to attempt. About the end of the fourth month of gestation, her stomach complaints considerably abated, and her leg became instantly painful; and in two days was very hard and enlarged, was considerably inflamed, and had a little oozing from under the skin.

Besides these things the kind of roller is to be considered, which ought to be made of the thinnest Welch-flannel, not thicker than coarse linen, with advantages no linen can have; it not only being softer, fitting easier,

At this time I was consulted, and was informed that her situation in life would not allow her to rest, or keep the leg long together in an horizontal position.

Taking in the whole of her case, I was very unwilling it should come to a fore, but (as she could not keep the part supported) I was fearful I could not prevent it, which I was very desirous of doing on account of her bad habit of body; or should otherwise have had no fears about treating it like other inflamed ulcers on the leg, whenever the skin should compleatly give way. I therefore did what I could to prevent the further cracking of the skin; but without absolute rest, this was scarcely to be expected, nor is it probable, even that could have prevented it. It accordingly gradually became fore, and was painful to the highest degree, so that she often sat screaming out aloud for hours together, unable to put her foot to the ground, tho' the fore was dressed only with ceratum alb. or a saturnine cerate, and sometimes with different poultices; and she kept the limb as quiet as her situation would allow of.

Not knowing what to do better, I determined to try my own method, being satisfied that tumid legs will often bear rolling when affected with ulcers, that would never endure it before. I dressed it with a powerful digestive, and rolled it up moderately tight, though it was swelled to a greater size than any leg I ever saw; notwithstanding it had, for some time, been rested great part of the day on a chair—It had broken into a small, foul fore, of an irregular shape, without the least appearance of red flesh, and the skin was discoloured half round the leg, which was exceedingly varicose; it discharged a scalding ichor, that destroyed the skin wherever it ran, increasing the size of the fore, and was daily more painful.

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easier, and making no plaits on the skin, but is elastic to a very considerable degree. This is greatly increased by its being torn across, and sewed together selvage-wise, (the hard selvage thread being first cut off) whereby

Having dressed it as above mentioned, she was now permitted and encouraged to walk, and became easier from the hour the roller was applied, which continued to agree perfectly well. The leg remained easier throughout the cure, except for some time after it was dressed, when sharper applications had been used, but continued to spread till the ulcer became clean, and a copious discharge was produced, which did not exceed seven or eight days at the most. After this, it became easy, discharged laudable pus, and in about a fortnight's time, it began to heal very kindly, and continued to do so till it was perfectly well.

Like many other ulcers, when the patient is permitted to walk, it was always most painful in the night, for which reason, she was obliged to take occasionally half a grain or a grain of extractum thebaicum at going to rest; which was sufficient to quiet the pain, and seemed to produce a very good effect on the sore. At the time this was the most painful, she was not only permitted, but compelled to walk out, and always came home easier, though she often walked further than she had been able to do at a time for a number of years; yet the leg never swelled, but evidently grew softer by the exercise. In this case, as well as in a variety of others, I may afterwards specify, the application of precipitate, though it some times gave great pain for an hour or two, proved an occasion of speedier ease on the whole, as it destroyed the foul surface, produced a laudable discharge, and brought the sore into a desirable state much sooner than it could otherwise have been; when this application was first made use of, the ulcer discharged a caustic sanies, that corroded wherever it ran, and the surface was so sensible, that the patient could not endure the slightest touch of an armed probe, to wipe off the matter. It was

by the roller is made to yield to every motion, and varying shape of the limb, and admits of, and assists the patient so much in walking, that I have known persons with such painful sores as prevented their standing upright, find immediate relief in this respect, and be able to walk with comfort, from the first hour they were put on. To this fact numbers can testify, and it is from experience I can say, it will be found no small improvement in rollers for the legs, that flannel is substituted for linen, and that they are made up in the manner here recommended. I should neither speak with such confidence, nor enlarge as I have done about trifles, having seen enough to prevent my depending on a few fortunate cases, or venturing to publish my thoughts to the world, as containing any improvement, if not sufficiently supported by facts, or if there was any room left to doubt, upon what such favourable events had turned.—Perhaps these, and other advan-

only a few weeks in getting well, the hardness and tumor of the limb subsiding as soon as a copious suppuration took place ; and before the ulcer was healed, the leg was, I believe, quite as small as the other, and has continued so ever since, though there was no remarkable return of the sickness, and she has now lain-in above a twelve month. Neither did gestation afford any impediment to the cure, nor have I in all the cases I have met with, ever taken notice of such an effect, though some gentlemen of character have, and much has been observed by authors on this head.—“ *Impregnantibus ulcerum curatio difficilis, propter retentionem superfluitatum earum, propterea quod ipsarum menstrua retinentur.*”

Avicenna, de Ulceribus, lib. 4.

tages

tages * of this bandage, may be explained on the following principles.

I. The moving soft parts are not only kept warm, but receive very considerable and constant support, and their action is rendered more general and regular : we may even suppose that some part of the effects of action, is transferred upon the bandage, or its operation so modulated, that it is not wholly exerted on the skin.

II. The blood and lymph are determined to a more equable circulation.

III. The growth of fungus is considerably restrained, and callous edges are prevented, or removed.

IV. The surrounding skin is brought forward on the fore, and the several parts are brought into contact ; and consequently, a lodgment of matter is less likely to take place.

V. Compression warms, sustains, strengthens ; and by repelling from the adjacent tumid parts, derives greater powers of healing in the constitution to the seat of the ulcer.

VI. The compression disposes the sore to heal more smoothly ; and these advantages which are very considerable, are increased, as hinted before, by the free use of the limb.

* The manifest advantage of the late improvement (if I may be allowed the expression) in great operations, arising from immediately bringing divided parts into contact, if duly considered, will afford another proof of the use that may be made of bandages in the cure of wounds and ulcers. See ALLANSON on Amputations.

I have said so much on this head, because this, as a general practice, is so much out of fashion, though once in great esteem with eminent surgeons, and particularly Wiseman, whose contrivance the laced-socking seems to have been. The ancients indeed made use of rollers much oftener than we do, and apparently to considerable advantage, but they speak of them only as retentive bandages, or for bringing divided parts into contact, and to assist the more speedy closing up of deep ulcers after a proper digestion; or sometimes indeed as expulsive, to prevent fluxion to a part, but their bandages were ill calculated to answer the end, and were never applied so tight as Wiseman recommended, nor with particular reference to the legs. Wiseman himself, however, does not appear to have understood all the advantages he received from the use of his laced-socking, as he seems apprehensive that the cure of ulcers on the legs obtained by this means, were less likely to stand, than those effected without it. He appears therefore frequently to have recommended the stocking and rollers on the same principle with rest, and an horizontal position of the limb, to prevent what is termed a descent of humors to the sore, and the ædematous swelling that often accompanies these ulcers. But his reasoning was certainly not so good as his practice, and had his bandage effected nothing beyond his intentions, his success had been much less than it was. The roller has many other uses besides counteracting the disposition to ædema, (to which the lower extremities are peculiarly liable), and one that I cannot omit mentioning

tioning here, arising from the manner in which the filling up of every deep ulcer is effected. To this end, there is not only a trifling elongation of the capillary vessels in the wound, but the parts contiguous to the ulcer, are found to waste, or diminish, considerably; inso-much that Messrs. *Fabre** and *Louis*, eminent surgeons in Paris, attribute the whole of this Process to what they call an *affaissement*, or a wasting away of the extremities of these capillary vessels. This indeed, is by no means the whole of the case†, though it is principally hereby, that the cicatrix in deep ulcers approaches the level of the surrounding parts, when such wounds are perfectly healed; and this (as hath been mentioned already) ought to be the case in newly healed ulcers; and indeed when it is not, the cure in general is not very likely to stand.

As this is a circumstance evident to every attentive practitioner, I cannot help observing it is matter of some surprize, that rollers are not more frequently used than they are, and a greater compression made by them, not only for sores on the leg, but also on many other parts of the body; as it is probable they would not a little contribute to their cure.

* *Memoires de l'Academie de Chirurgie*, vol. 4.

† That there is a power of extension or developement in the vessels of a wounded part, is evident from the vast fungus that will shoot up in some ill-conditioned sores; and in various excrescences, which are furnished both with blood vessels and nerves.

There is only one instance, however, that I know of (common incised wounds excepted) in which this practice has been much attended to, which is that of the venereal buboe; though even in this, the practice has not been general. But Mr. *Bromfeild*, I know, has constantly had recourse to it for that ill-conditioned sore, which it is well known is frequently very troublesome to heal, after the venereal virus has been destroyed. Such, however, after resisting a variety of dressings and alterative medicines, have been presently healed upon the application of a very tight bandage; for which information, when I first began business, as well as many acts of kindness, I am indebted to that gentleman, to whom the public well knows its obligations in matters of greater importance.

Upon this head I am much indebted to the ingenious author of a Treatise on Ulcers beforementioned †, whose reasoning long ago perfectly satisfied me, as to the safety and advantages of tight bandage, and determined me boldly to push the experiment, till I should find reason to change my opinion; which this publication is proof enough I have not done. But the laced-stocking so much recommended by *Wiseman*, falls far short of this double intention, and is every way inferior to the flannel roller, which lies much smoother, tighter, and makes a much more even, pleasant, and steady compression, than can be made by any other

† BELL, part 2. § 2. See also Clark on Abscesses.

contrivance||. By this means, as it has been said, the growing flesh in a healing wound, is easily kept within bounds, and that troublesome luxuriance is prevented, of which a more moderate degree is always required; and for the want of which, it will be shewn, sores on the lower extremities do not heal so readily as on most other parts of the body.

As so much is expected from rolling, it will readily be presumed, some care is required in doing it; and indeed the application of bandage, is no contemptible branch of our profession, though I do not mean to hint, that so much judgment or memory is requisite for rolling up a leg, as in the application of bandage to many other parts; yet great attention is necessary. The roller must press equally on every part, or some sinus may unexpectedly be formed, but of this there is not the least danger, if it be applied with care, and the proper directions observed, though it be drawn ever so tight;

|| WISEMAN indeed almost every where prefers the laced-socking to the roller, giving for a reason that the roller makes a less uniform pressure, and even bruises the parts: but however this may be with a linen bandage, no laced-socking can be so smooth, firm, or so pleasant as a flannel roller.—The great advantages of which are now so evident to me, that however necessary surgeons may think rest to be in some very bad cases, however attached to particular diet or dressings, or prejudiced against any part of this work; I would entirely upon principle importune them to add to all these, the constant use of a flannel roller, and can assure them of far greater success than they have ever had, in every ulcer of the lower extremities.

neither

neither will it leave so much rising on the skin as a linen one, which also will give considerable pain if the patient be permitted to walk. The warmth likewise which the flannel communicates to the limb, especially in cold weather, has long appeared to me a matter of very considerable advantage §.

The manner of applying it, it has been said, requires nothing but care: every one knows that tight bandage should begin at some distance below, and be carried some way above the parts it is chiefly designed to compress; otherwise, the matter attempting to issue from the ulcer, being confined by the tight pressure upon it, will force a passage wherever it finds a less resistance; and thus convert a simple ulcer into a fistulous sore.

But for ulcers on the legs, especially where exercise is allowed, this rule should be considerably extended, and the bandage, (which ought to be at least three inches wide) should begin as far below, and be carried as much above the affected part as the limb will allow of. To this end it should commence at the extremity of the foot (the end of the roller first crossing the instep) and after being brought two or three times over the ankle, should ascend spirally (the edge of one turn of the roller being not more than about an inch from another) till it rises to the calf of the leg. Here the stricture ought to be less, to permit a free action of the muscles, and the turns therefore be somewhat more distant; in which manner it must be continued up

§. See BELL on Ulcers. Part. 2. §. 2.

to the knee. Above this part it would be improper to carry it, though recommended by considerable authority †, and that for most obvious reasons, where exercise is both permitted and enjoined.

I have been thus particular on this head, from the great consequence I know it to be of, and hope it will not on this account be imagined that I affect any particular art in the performance. Every surgeon well knows of how much consequence it is, that rollers be properly adapted to the end for which they are designed, and how much trouble may arise from great compression being made above or below the precise part, for which such compression was employed: all such are capable of doing it well, if they will do it with care, which is the thing I mean to inculcate; as otherwise, the patient whose leg is rolled tight, will suffer great pain, and the surgeon be long disappointed in the cure. However trifling these directions may appear, experience will prove them to be otherwise—A very moderate share of knowledge of the first principles of science, were sufficient to guard me from insisting on trifles; upon which the art of healing will never depend. But as there are many young men always in London, who come professedly to learn, and some of them with very little previous education in surgery, for such at least, more particular directions may not be wholly unnecessary.

* Medical Observ. and Inq. vol. 4.

With regard to exercise, it may possibly be said, that this in a great variety of cases (even without the presence of fever, or topical inflammation) cannot fail to produce, or increase pain, especially where stimulating applications are used. And that in all cases, (though no pain or inflammation should follow,) it must have a natural tendency to retard the cure, if not entirely to hinder it, both by disturbing the tender granulations as they rise on the sore, and preventing that process of nature by which they dry on the surface, and produce a cicatrix.

Much of this reasoning may be true, and is so, as it respects many wounds on other parts of the body, but has not a like application to old sores on the legs; where a particular stimulus is required. The latter are never so expeditiously cured, as those on superior parts, in whatever way they are treated; but I am satisfied from a variety of facts, will in many instances heal sooner with exercise than without it. It is acknowledged, that after the operation for the hare-lip, and every other similar case, where parts are to be united by the first intention, they must not only be brought into contact, but be kept so for some time, in as quiet a state as is possible, or they will seldom unite firmly. But how different these cases are, I need not stay to point out, and have mentioned them only for the better clearing our way to the precise point on which the argument turns. For though the lips of such wounds will not grow together, whilst they are kept constantly in motion, yet both lips will be covered with skin in a very few

few days, and in this sense, a healing of the wound is produced; and it must be very great motion indeed to prevent it. Now this is the kind of healing in question relative to ulcers on the legs, and if motion of the part affected is capable of preventing it, (where a proper bandage is constantly worn†) it must either be such, and to a degree that would prevent, not the union, but the healing of the raw edges of the lip I have mentioned; and surely no common action of the lips will do this. Or secondly, it must be effected from the exercise so greatly increasing the discharge, as to prevent that disposition to dry up, which ought to take place in the extreme vessels of the sore, whereby it has been said,

† It may not be useless in this place, to make a few general observations on muscular action, with a view to point out some particular advantages of tight bandage, where exercise is used.—In muscular action, there is always an accurtation of the moving fibre, and a general enlargement of the muscle. This increase of bulk is not equal, but is greater about the belly, than at the extremities of the muscle. Disease in a part may render this action liable to great irregularities. Fascia, and annular ligaments, &c. prevent unequal contraction, and its manifest inconveniencies.—It is true, we don't find the muscles acting in such a way, as to press from within outwards, to a degree capable of forcing up the skin very considerably; but they can pull upwards and downwards, with sufficient force to derange a healing wound.—Now bandage effectually prevents irregular action, and will keep the skin from moving considerably when the muscles act; as well as diminish the swell of those that lie immediately under it.—These are precisely the points aimed at; and that bandage will answer these intentions, is very evident both from reason and experience.

the cicatrix is formed. And if the quantity of discharge be the objection, in regard to ulcers on the legs, it proves all I contend for; it is desirable if it be good, and the want of it is, during the greatest part of the cure, the grand obstacle in our way to the healing of the fore †. For those on the leg, and especially the most painful ones, either discharge very little, or abound only in a thin and excoriating ichor; and neither of them can be changed for the better, but by such means as shall restore the due tone of the vessels of the part, destroy the loose or callous flesh on the surface, and thereby open a way for the secretion of laudable pus, the best dressing that can be applied to a fore.

Now, exercise contributes to this, inasmuch as it tends to promote a free and bold circulation of the blood, to open the small vessels, and restore a free passage in the system of lymphatics, whereby it increases the strength and vigor of the limb. On this account the discharge can never do harm, nor the exercise that promotes it keep the fore improperly open; for if the habit in general has nothing particularly amiss in it, and the circumstances of the part are such as have been described, the discharge will gradually abate as the ulcer diminishes, and its surface will always dry up in a rea-

† L'ulcere sec, qui ne suppure pas, ne peut pas se deterger, or tout ulcere qui ne se deterge pas, ne peut pas se guérir.

sonable time. Such exercise of the part is not, indeed, necessary to the healing of sores on the upper extremities; but the difference in the lower ones, and particularly the inferior parts of them, is greater than has been generally imagined, or has, at least, had any influence upon practice. Nature, therefore, ever attentive to the good of the whole, and provident for every defect, has wisely supplied the natural deficiency arising from their distance from the heart, in the best way it was possible; besides, therefore, that share of labor they have in common with other parts, it has not only imposed upon these (as was hinted before) the weight of the whole body, but has destined them to be the instruments of its conveyance from one place to another.

But on this also I have already delivered my thoughts, and may have still further occasion to insist as I go on; suffice it to hint here, how greatly prejudicial it must be to general health for any person accustomed to labor and exercise, to be confined for a length of time in an inactive state, and the greatest part of it, in an almost horizontal position.—Can it then be necessary in the cure of ulcers on the legs, to deprive the part affected of those very advantages which nature designed to preserve it in vigor || ? Has it the most remote tendency to

|| *Ufus corroborat, otium autem colliquat. Hippoc. Med. Officin.*

This observation is universally allowed, and is remarkably evident in the vast influence that great exercise of the extremities is observed

to perfect the cure ; I mean, to make such a cure as shall stand ?—If not, certainly our art is materially deficient, or we are faulty in the use of it ; for is not a perfect cure much more likely to be effected, under such exercise of the limb as shall afford the natural stimulus, if the evils attendant upon that exercise can be obviated ?

It is granted, however, that exercise may in the case of some large sores, to a certain degree, retard the healing of the ulcer, for the same reason that very great motion of other parts would affect sores seated on them ; but instead of being otherwise injurious (by occasioning fluxion of noxious humors to the part, and I know not what other evils said to be peculiar to the lower extremities,) it is really useful in every other respect if a proper bandage is applied, and is therefore advantageous upon the whole for every ulcer on the legs, as I hope hath been tolerably proved ; and particularly, as it hath a direct tendency to prevent the sore breaking out again * : whilst
the

ed to have in watermen and porters ; the former of whom have usually large strong arms, and slender legs ; and the latter thick muscular legs, almost without exception, if they are in health.

* How far the continuance of a roller, which I understand a very respectable hospital surgeon advises to his patients, may prevent a return of the complaint, I have no right to attempt to decide, since I have never enjoined rest, in any instance, since I knew how to cure ulcers without ; though indeed an hospital is not the properest place to determine the point, as the patients are often never heard of after
their

the evils which are said to follow the drying up of old ulcers, when such do take place, are very often the consequence of an injudicious method of cure.

Many, however, would be the disadvantages of motion in ulcers on the legs, if they were covered only with a common poultice, or left merely to the dressings that are usually applied to them; but upon the plan here recommended, they are constantly supported by a firm, soft, and yet elastic bandage or roller, which in very many cases, as infallibly counteracts every possible inconvenience arising from motion, as the motion itself, thus supported, has a manifest advantage. And though some objections in turn might, with equal propriety, be made against the remedy itself, or the constant application of so tight a compression as has been recommended, yet all such objections, it has been remarked, are greatly obviated by the use of exercise *.

I am

their discharge: we know, however, how very common it is, for large or old ulcers, healed by means of rest of the part, to break into much worse sores than before they were first healed.

* A free use of the limb has been so generally exploded amongst regular practitioners, that it has been more necessary to insist thus largely upon it; and this appears, not only from its general disuse, but also from suspicions arising in the minds of sensible writers †, after other men of experience and reputation seem to have approved of it ‡.

† Bell on ulcers.—The following specimen will shew how strict an adherence to rest, authors have required, “ Il faut faire tenir la partie malade dans le plus grand repos; le moindre mouvement est capa-

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ble

‡ Medical Observ. and Inquiries, Vol. IV.

I am aware that such argument appears to manifest disadvantage, and may be thought to resemble a *circulus in circulo*; however, it is consonant to various maxims that were never disputed: for instance, as a very nourishing diet would prove hurtful, where proportionable exercise was neglected, and vice versa, hard labor without adequate nourishment, but taken together, contribute to the health of the subject; so clearly has experience proved to me, the inoffensive, and salutary effects of tight bandage and exercise united, in regard to the ulcers in question.

The diet recommended in this method, may be as exceptionable to some people as any thing that has been advanced; but such are desired ever to keep in view the whole of the plan, one part agreeing with, and assisting the other, and all of them conspiring to the grand end in view, which is to heal sore legs in such a way as shall tend to perfect a cure; and which abundant experience has confirmed my first expectations of, and fully justified the attempt. And, indeed, were it not for the depending situation of these sores, surgeons would scarcely have thought of the propriety of a sparing, or low diet *, for so many months together, in the cure of them, nor yet of that frequent recourse to purging, without which the

ble d'y faire des teraillemens, qui augmentent la douleur et la sup-
puration, détruisent les chairs tendres qui repaissent, et brisent les
premiers linéamens de la cicatrice." *Traité des Tumeurs et des Ulceres.*

* See BELL, part 2. § 2. where the ingenious author declares himself of this opinion.

healing

healing up of old, or large ulcers is scarce ever attempted. For these sores, it has been said, are not usually attended with inflammation, and where they are, it is seldom difficult to be removed. Indeed ulcers of this class, are more generally to be met with in weak, relaxed constitutions, than amongst strong plethoric subjects of an inflammatory habit, and are in such circumstances more difficult to be cured.

But when a way is discovered, to prevent the ill-effects of exercise, and the descent of humors, as it is called, there can be no objection, (an evident state of general, or local inflammation excepted) to any diet that would be found proper for such people at another time; and which most are sure to indulge themselves in, as soon as the surgeon has taken his leave.

The above ill-effects, it has been already observed, are obviated by a proper bandage, and I hope it has been made appear *, that the seat of this ulcer being on a depending part, is not the chief hinderance to a cure, but its being an extreme part of the body, in which the circulation is less vigorous, and the vires medicatrices naturæ, for these reasons, more languid and ineffectual.

If these things are allowed, many advantages must arise from such a diet †, as hath a direct tendency to support the patient in full health, and to assist the powers

* See Introduction, p. 22—26.

† Perhaps salted meats, and spirits, are the chief things to be interdicted.

of nature to create, and support a discharge of laudable pus, the constant forerunner of a cure in every cureable ulcer.

The last article mentioned relates to medicines, of which some notice has been taken already, but it may be proper here to enlarge a little on the subject ; wherein I hope not to forget the caution its importance requires. I know how easy, and how common a thing it is with some writers, in order to support an opinion, to bear down their opponents on every occasion, by declaring facts to be on their own side ; which they often do not, and sometimes indeed, are not permitted to produce. Such an argument, therefore, seldom comes with proper testimonials but from hospital practitioners, or must, at least, expect to stand or fall, according to the share of credit due to the writer. As far as that can go, however, in the present instance, I am encouraged to say, experience has led me to suspect, that less is to be hoped for, and much less is required from medicines, than is generally supposed ; ulcers on the legs being, in general, mere local complaints, not connected with any particular disease of the system. It is possible, I may be somewhat singular in these opinions ; whilst others have produced their experience to prove, that sore legs can only safely be cured by internal remedies. It is, however, by no means, my intention to assert, that medicines are never necessary for these, as well as other sores ; but that they are frequently prescribed in a very indeterminate manner, and their effects are consequently uncertain. But should the patient labor under the true scurvy, or the ulcer follow the suppression of some periodical,

periodical, or critical discharge, or the disappearance of a long continued eruption on the skin—these, beside other more common complaints, such as evident symptoms of a venereal infection, the presence of fever, &c. will constantly call for the physician's assistance, who will be at no loss to pursue a rational intention. In short, whatever is obviously wrong in the habit is to be corrected, but where there is no peculiar indication, I neither know how to prescribe, nor to expect much benefit from medicines. If surgeons will reflect for a moment, they will perceive the import of this observation, let them consider only what are the medicines usually prescribed, which, perhaps, excepting only the bark and cathartics, are administered under the idea of alteratives; by which some people intend a class of medicines that will effect a certain change in the habit, without so much as an idea, what that change is to be. The patient has a sore; it looks ill, that is, it is not deterged, or will not continue so; the matter discharged from it is bad; or the ulcer is not disposed to heal up.—Let every thing be done in such a case, that has a tendency to mend the appearance of the sore upon rational principles, and which generally is done for sores on other parts of the body. Let suitable dressings be applied; let the patient enjoy the air, moderate exercise*, and a proper diet; let a tight bandage be applied to brace, and contract the sore, to keep down the

* Celsus. lib. 7. cap. 3.

fungus, remove callous edges, and prove a tonic to the part. If these things fail, such medicines should be administered as will brace the system, or correct its manifest defects, of which some mention will be made in their place—further than this, I must say again, I have neither known their use, nor the want of them †.

Having now attempted, at least, to answer some principal objections to the plan I have proposed, and explained what may be expected from it, with the manner in which the effect is produced, it is high time to proceed to a more particular application of it.

In order to this, it will be necessary to make some distinctions of ulcers, since the general indications cannot be alike applicable to each. And this would have appeared, with much more propriety, in a former part of the work, but it seemed of importance to be fully understood as I went on, and to obviate, as they

† By a modern French writer on this subject, we are advised, before the healing up of old ulcers, to correct the vitiated blood, and to purify it from the foreign leaven with which it is infected. To this end he gives us six general indications.

“ 1. Si le malade a la verole, le scorbut, ou les écrouelles. 2. Si
 “ le sang est chargé de bile. 3. Si le sang est âcre et salé sans être
 “ chargé de bile. 4. Si le sang pêche par être trop épais, et trop réfineux.
 “ 5. Si l’on juge que le sang soit trop séreux. 6. En générale, il
 “ faut, dans tous les cas, purger souvent le malade, mais le purger
 “ doucement ; lui donner tous les jours une ou deux prises de quinquina ; et lui faire observer un régime exact, tant pour la quantité, que pour la qualité de la nourriture.”—If the reader can acquire any practical knowledge from the most of these indications, I must confess he has greatly the advantage of me.

occurred,

occurred, the difficulties of an attempt to introduce so considerable an innovation in practice. On this account, I have preferred this desultory mode to a more concise and formal method, but should I have so far succeeded, as to have pointed out a practice which others can with safety adopt, and furnished the ingenious with hints that may be depended upon, it is hoped, that some, or even many defects in other things will be overlooked. Thus much, however, may be said, that many cures have been effected by the means now recommended, which have hitherto withstood all the ordinary occasions of relapse.

The numerous distinctions of ulcers frequently met with in chirurgical writers, are taken chiefly from their different appearances, and the nature of their discharge, but when applied to ulcers on the legs, have most of them very little relation to practice, and amounting to no more than that their surface is in an illconditioned state, make little or no essential difference in the indications of cure.

The most easy and practical division, will be to consider them under two heads only, which are calculated to illustrate the preceding observations, and correspond with the different treatment they will require.

The first class will include ulcers attended with great enlargement, or hardness of the limb; recent ulcers originating from an abscess, or any internal complaint; and every very old ulcer of a moderate size, especially in habits accustomed to them.

The second comprehends the true phagedenic ulcer; superficial ulcers where the surrounding skin is excori-

ated by an excessive and acrid discharge; various large ones in very old people, or those of a relaxed fibre and habit, and all *very* large ulcers with a pale and loose surface, generally the consequence of ill-health, poverty, or neglect.

In speaking of each of these, it will be necessary to make such enlargements and subdivisions, as may relate to practical use.

And first, it will be proper to observe, there are two general affections, or symptoms, every ulcer is liable to, which will require their particular treatment. These are inflammation and pain; for each of which it will be necessary to lay down some general rules.

With respect to inflammation, should this attend a large sore, where the pain is very considerable (for the pain so common in very small ulcers, is seldom the consequence of much inflammation, but rather of a thin and caustic discharge;) an emollient fomentation, and afterwards a bread and milk poultice for a few days, may be applied to advantage: but if such a case can arise as to require a much longer continuance of a poultice, it should be changed for one of the saturnine kind. This will furnish the same moisture and heat, and is not only a less relaxing application, (for such it has been observed, should never be very long continued to the legs*) but is a more powerful antiphlogistic. And here I may venture to repeat from a long experi-

* See also BELL on Ulcers.

rience, that such poultices and fomentations, however great their reputation, are seldom necessary but in the beginning of the cure, where the parts are in a state of inflammation, and particularly in the poor, who have long endured, and stood much upon them in that state; whose skin is likewise often dry and left dirty, and its pores consequently obstructed. But as soon as the inflammation and foulness on the skin are taken off, strong digestives, with exercise and a roller, will produce a much speedier and better digestion †.—This I am so satisfied of, that I have no kind of hesitation in speaking peremptorily on the subject.

I wish to make one remark more on this head, which is, that when a bread and milk poultice is required, it should generally be applied on the naked fore ‡, whereby it fits easier, and is much more useful, becoming the mildest application that was ever contrived, if it is well made ||. And I hope I shall be pardoned

† WISEMAN gives a case very much in point, and observes, that after confining a patient to the bed for a very bad ulcer, which he had poulticed a considerable time, he could not get it to heal till he left off the poultice, and applied a laced-socking. Book 2. ch. 9.

‡ See FREKE's Art of Healing.

|| When I consider the importance of a good poultice to ulcers, when the use of them is called for, and the number of pupils who visit the metropolis every year, with an express design of acquiring every kind of chirurgical knowledge, many of whom there is reason to think, have rarely seen a bread and milk poultice properly made; it is hoped, it will not be thought trifling on this occasion to mention the best method of making it. This can be at the worst, but a little

done if I add, it ought generally to be made, and applied by the surgeon himself, or at least in his presence, and not intrusted to a careless servant, or ignorant nurse, as it usually is; the former of whom imagines no skill is required, and the latter, that no body can

little time thrown away, and if only one young practitioner should make a better poultice by this means, or if one patient be benefited by it, I shall easily forgive others who may smile at the receipt; for however well surgeons know how to make them, the fact is, they are seldom well made.—It has been too generally thought, that these poultices cannot be boiled too long, but on the contrary, it is long boiling that spoils them.—They should be made of the crumb of moderately stale bread, which should be cleared from every thing the least hard, or lumpy, and after being grated should be rubbed between the hands, till it is reduced, as near as possible, to its first state of flour. The milk should then be boiled, and the bread lightly sprinkled in with one hand, whilst it is kept stirring with the other. The difficulty with which the spoon is moved, will shew when a proper quantity of bread is put in, after which it should not remain on the fire above two or three minutes at most, and should be turned out boiling, (by which means the bottom will retain its heat a long time, after its surface is cool enough to allow of its application) and be spread upon a piece of double linen cloth, by the help of a round-pointed knife (greased with hog's lard or oil, instead of putting grease into it; which prevents its hanging together,) to the size it is required: and should always be about three quarters of an inch in thickness on the linen. If poultices are too stiff or lumpy, they will lie heavy, and become painful to an inflamed part; if too thin, or not well mixed into an homogeneous mass, they soon become cold, and chill the part they are intended to nourish.—If a poultice be applied to a depending part, such as the eye or the breast, where it will be apt to slip off, it will be an advantage to turn up the four sides of the inner cloth, about half an inch over the poultice; which will greatly support it.

make

make one so well as herself; though there is not one poultice in fifty, made and applied by either of them, that is properly managed.—Before I quit this subject I cannot help adding, that if much benefit is expected from these applications, they should in many cases be renewed oftener than they generally are: for the want of this, the smaller ones especially, soon becoming cold, I am satisfied, are often likely to occasion more injury than good.

These, (it is well known,) are the cases which call for bleeding and purging, and for which I have likewise sometimes advised nitre and cicuta§, or opium; the last, however, is less proper if the inflammation be considerable; but the antiphlogistic regimen can never be required very long, for if the inflammation does not presently yield, there is probably some other cause for it than the ulcer, unless there be disease of the bone. The former, it will be the physicians province to discover and remove; but if neither of these should be the case, and yet the inflammation continue, it will not prove of the phlegmonous kind, and I can venture to say will yield together with the pain, to such topical applications as shall promote a discharge, and with the assistance of firm bandage and exercise, shall cleanse or destroy the two sensible surface; which will immediately

§ This may sometimes have one advantage of opium, as it hath no tendency to constipate the bowels, and if it has any other virtues than that of an anodyne, as some people have been of opinion, the patient will enjoy the advantage of them,

be followed by ease, and a healthy appearance of the fore.

After what has been said, another observation or two respecting the symptom of pain, is all that will be necessary. And here I remark that, severe pain must be mitigated, if it cannot be entirely removed, or nothing will go on well; whilst the degree of pain, together with the nature of the discharge, will point out the most proper remedy for it; the quantity of the anodyne, is therefore not so much to be attended to, as its effects. I have known excruciating pain from small ulcers, almost entirely removed by half a grain of opium, taken only every other night, whilst at other times, three or four grains have given but little relief.

In these cases, the discharge is always thin and acrid; and though such vitiated matter may arise from the morbid state of the solids, and of the secretory organs of the parts, which throw off such kind of fluids as cannot be changed into laudable pus, yet this does not certainly arise from an inflammatory cause, and therefore is not always removed by antiphlogistics, and mere emollient applications; though it ever will be so, when that is the case. But if the habit is not particularly concerned, it arises more frequently from a want of that species, or degree of inflammation, which is necessary to produce well concocted pus*, which is therefore often induced by stimulating applications, which are a

* La seconde cause (du défaut de suppuration) est le défaut d'inflammation dans la playe. *Traité des Ulceres, &c.*

safe and rational means of promoting it, and will as certainly be followed by a cessation of the pain†, and herein we go back as far as relates to ulcers on the legs, to the practice of the antients‡, whose ointments generally consisted of the warm gums, spirits, and escharotics, which though in many cases justly exploded from practice, in the treatment of ulcers in general*, are usually of admirable efficacy, in such as attack the lower extremities.

† PAREY speaks exactly to this purpose in the cure of ulcers, lib. 12. cap. 9. where after having directed cataplasms of solanum, cicuta, poppey seeds, and sometimes opium, if these fail to procure ease in some cases, he adds, “neque anodynis, neque narcoticis, sedari poteris, imo blandis medicamentis apposis magis ac magis irritabitur. Itaque ad catherætica confugiendum erit, nempe fortibus morbis fortia remedia sunt optima. Quare ulceri imponatur pulvillus forti et viribus aucto egyptiaco, aut paulo oleo chalcanti imbutus, his enim domandi efferi illius doloris vis est.” To this he adds, “interim ulceri circumponetur refrigerantia, ne virium remediorum vehementia fluxionem excitet.”—But this latter is obviated by the use of a proper roller.

‡ See GALEN, particularly his book De Composit. Medicament. secundum genera, and CELSUS. Lib. v. cap. 26.

* See BELL on Ulcers, who has made several very useful observations on this head, though the French surgeons are still of a different opinion, (as appears from the 4th volume of Memoires de Chirurgie) and indeed some latitude must be allowed; for the fact is, that in the cure of every ulcer, as of fever, a certain degree of inflammation (or exertion of the system) is necessary; and too little does as certainly, though upon a different principle from Plethora, frustrate the salutary intentions of nature.

I shall

I shall only add on this head, that the most painful ulcer in general, is that of the erysipelatous kind, attacking the surfaces of parts: whatever dressings are applied to these sores, some of them are intolerably painful for a long time together, though without true inflammation of the part. As the free exhibition of opium can here do no kind of mischief, so will it render the most suitable dressings, which are apt at first to add to the pain, additionally useful.—But I shall have occasion to speak largely of this particular sore in its proper place.

This probably will be quite sufficient on these heads; we have here manifest indications before us, and the remedies are usually simple and evident—not always thought equally evident, through the whole indications of cure.

Systematical writers, who have been fond of multiplying distinctions of ulcers, have been equally precise in their directions for obtaining a cure*. We are to digest, deterge, incarn, and cicatrize; sinuses are to be laid open, callous edges are to be removed by the knife, or destroyed by the actual or potential cautery; some intemperies is to be corrected, or the whole habit to be altered: and above all, they advise an horizontal position of the limb, and injoin absolute rest. The

* *Compositi ulceris ad curationem multæ sunt indicationes propositæ.*

PAREY.

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whole process of cure is most accurately delineated, and some apposite remedy prescribed to effect every intention, as if art was sufficient for it all, and nature had nothing to do in the business.—And indeed, were ulcers such very tractable, methodical things, as the picture represents, memory might supply the place of judgment, and this part of surgery would be reduced to arithmetical exactness. But he whom practice has made most conversant with nature, well knows that her operations, and the arrangements of science too little resemble each other.

It is universally admitted, however, that except an ulcer becomes clean, it will not cicatrize, though practitioners are not so well agreed, concerning the best means of bringing it about. But we are always to know our proper place, art being in this, and in every other instance, a mere hand-maid to nature, to lend assistance in a way the most agreeable to her own laws.—In the introduction to this little work, an attempt has been made to reduce the principles of the cure of ulcers to two only, viz. an attention to the general vigor of the constitution, and to the action of the parts; but it may be also necessary to pay some regard to the nature of the different processes that are going on in the healing of every ulcer. There is, it has been intimated, a production of new substance in its cavity, and a condensation of its surrounding parts to a certain level and extent. By the union of these two means, nature accomplishes her end. That these processes do take place, may be known by an examination of the substance which is formed in the cavity of every cicatrized ulcer; and by
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the apparent evenness of the newly formed cicatrix with the neighbouring parts. And every one must have observed, that the loss of substance is more evident at some months distance from the time of cure*, than on the first healing of the sore.

Now, if the principles I have all along been laying down, as well as those last mentioned, are at all just and rational, they will at once serve to discover the impropriety of depending upon very mild applications †, whilst they enforce the expediency of the means I have recommended.

The cure, it is said, is brought about, by the general vigor of the system, and the action of the parts, together with an absorption of those contiguous to the ulcer; the most apposite to which indications, are a proper diet, exercise, and bandage, with the external use of invigorating applications. And how much may be effected by them, experience alone can demonstrate, and it is a principal design of this treatise to set forth.

* This observation has been long made in the case of those *foveolæ* which remain after the small-pox.

† Perhaps the very best of these is the suppurative poultice so much recommended by Mr. FREKE, but it does nothing without the horizontal position of the limb; and has even then been too frequently ineffectual, or it is probable, would not have been discarded from hospital practice. His intention, however, was perfectly rational as far as it went—"to sweat out the disease:" an idea I have always had in view, instead of inviting diseased parts to dry up; but I think it much better accomplished by other means, that do not require the horizontal position.

I am happy, however, to find an author of considerable esteem, and amongst the best of the later practitioners, so much of my mind; I mean *Wifeman*, who had continual recourse to warm and active applications, and rarely dressed an ulcer on the leg in the first stage of the cure, without merc. corrosiv. ruber in one form or other. By this means, and the help of a roller, or laced-stock, he succeeded much better than most practitioners have done since, with all our improvements*. And I am satisfied from what I have experienced, that had he allowed his patients to walk, and by the help of a flannel roller, had made a still tighter compression than the laced-stock can pleasantly admit, or effect, and had been yet bolder in the use of stimulating applications; he had not had reason to complain, that healing some kind of ulcers was in general only a palliative cure. For it has been very evident in reading his cases, and comparing them with the experience I have had, that the principal things which he failed in

* Notwithstanding all sciences have been frequently improved by reducing them to a state of simplicity, yet, in an attempt to purify them, artists have been sometimes led to overlook the principles on which some practice has been founded, and have therefore discarded many things that were valuable—like some unprincipled empiric, who in order to get rid of an imaginary ill-humour in the blood, directs so large a quantity to be taken away, as reduces his patient to a worse disease than he laboured under before; forgetting that the good and bad blood would run out together.

See Thoughts upon Amputation by Dr. KIRKLAND.

(besides forbidding his patients to walk, which it should seem, was not however always the case) was the not continuing his stimulating applications much longer than he did, and his changing them for very drying ones in the end, in order to hasten the formation of cicatrix. See his cases, in chap. x. particularly, in reading which, I could not avoid being surprized he had not himself made the remark. The like observations may be made on Turner, who was in many respects but a copyer from him, but in others, seems to have had an advantage; and had he been well acquainted with the use of the roller, and been less fond of abstinence and rest, would have set an example, which after practitioners would have made but little improvements on.

These things then, viz. exercise, bandage *, and active applications, may be solely depended upon in
ordinary

* For some practical observations on the subject of tight bandage, inserted in the Medical Observations and Inquiries, the faculty was some years ago indebted to the late ingenious Mr. ELSE, and though the practice was not new, may be said to have been revived by him, having been of a long time neglected; and it is matter of concern, that no mention has been made of it since, as the date of his paper is in the year 1770. I had made use of tight bandage, however, long before I attended to that publication, and had Mr. ELSE been acquainted with, and enforced a plan similar to this, I had not intruded my thoughts on the public; but as there is no disease (as that gentleman justly observed) more common in large hospitals than ulcers on the legs, it is become a matter of importance, to throw any additional

ordinary cases ; and where no specific poison exists, they will effect every thing in this class of ulcers, which are hath hitherto accomplished by rest, diet, and medicine ; and will moreover effect such a cure as will stand thro' all the ordinary situations of life.

Any common digestive is rendered deterfive in the degree it may be thought fit, by the addition of a little calomel, corrosive sublimate, the white, or red precipitate, or by a small portion of verdigrease ; but, however uncommon the practice, it is sometimes better to use the red precipitate alone in the first stage of the cure, where powerful digestives have proved ineffectual ; and this the ulcer will also readily bear, when exercise, and a good diet are allowed. And here it is that the judgement of the surgeon discovers itself, in adapting his dressings to the nature of the ulcer, which (laying aside the refinements, and nice distinctions I have ventured to discard,) must by one means or other, be brought to

ditional light on the subject. Moreover, as Mr. ELSE still expressed his fears of healing old ulcers, and perhaps had found some difficulty in doing it, on the partial plan he recommended, I cannot help observing, that his suspicions serve rather to support this method, and have a tendency to demonstrate the propriety of using strong digestives which have been so much insisted upon, as well as the further design of not hurrying nature to dry up the sore. I am led to these reflections, by Mr. ELSE having recommended only astringent or drying applications, and probably not encouraging, and perhaps not permitting his patients to walk, at least there is no mention of it as a part of the practice in his hospital ; nor any notice taken of his patients continuing well.

discharge laudable pus, whatever appearance its surface may have; for nothing goes on well till this is effected.—This, the most inveterate ulcers on the legs may be brought to afford, as freely as sores seated any where else; unless, perhaps, those on the head are excepted, which, I think, furnish pus more perfectly album, læve, et æquale, than those of any other part.

Probably nothing but experience can induce any one to think, how easily this may, in general, be effected by digestives and exercise, and how soon afterwards very troublesome sores put on a proper appearance, and are brought into a healthy, and healing condition. But where these things fail, recourse must be had to more powerful means *, and such as no surgeon is ever at a loss for; which if freely applied, interposing lenient applications when the appearance of the sore seems to demand them, will destroy the foul surface, and give nature (assisted by a good diet) an opportunity to exert herself; and as Hoffman says on this very occasion, "ex voto succedit consolidatio."

Perhaps one of the best applications of this kind, is the merc. cor. ruber very finely levigated; this is peculiarly useful in small and obstinate ulcers, nor will it be immediately suspected, with what freedom, and frequency this active mineral may be applied. It may be said of this, as Hippocrates says of frictions, that it

* "Vulnera maligniora, valentioribus egent remediis; imbecillioribus, autem, minora."

GALEN. de Compend. Med. lib. IV.

softens the hard, strengthens the relaxed fibres, destroys the unsound, stimulates, and elevates the growing flesh; that it promotes, or diminishes discharge, and keeps open, or heals up the ulcer, just as you would direct it. Nor have I said too much of it, with respect to a great number of cases; for all this is the consequence of a proper use of it, where a tight bandage is applied, and adequate exercise allowed. But then, it has been hinted, it must, for some of these purposes, be used in great quantity, and instead of being lightly sprinkled over an ill-conditioned surface, the ulcer must be filled with it *, the surgeon taking up a large pinch of it, and boldly plugging up the sore. It has been acknowledged, this is a very homely mode of dressing a wound, and nothing but a conviction of its advantages would have reconciled me to it.

It has been said, that the above practice is particularly useful in small ulcers; but in many large sores, something of the same kind will be found necessary.

* In the process of this work, I was happy to meet with more authority for this practice than I expected, and looking over WISEMAN found him making use of the very expression; to which practice, I am satisfied, he, as well as Dr. TURNER, owed much of their success. The former tells us he performed cures on the legs in a few weeks, as the patients had been years under the hands of those he calls the barber surgeons of the time. Book 2. ch. ix. SHARP speaks as honourably of it, in the cure of ulcers on the leg, and intimates that it deserves the credit it has obtained, but prefers it mixed with a digestive.

The foul surface must be removed, and the sore brought to the state of a fresh wound, which can be done only by the distempered parts being melted down (as it is usually said) by powerful digestives, or destroyed by corrosives; and till this is done, some obstacle or other will continually arise *, but this once effected, you remove the greatest hinderance to the cure. And it may be more easily done than is generally imagined, and though the succeeding surface should put on the same unpleasant appearance, after the first, or even second application, especially in small ulcers, yet the amendment, though gradual, is not uncertain, and the pain is less severe than might be expected. The digestives are still continued when the escharotics are left off, and the parts being, by these means, put into action, in general nothing further is required, than to wait till nature is able to accomplish her proper work. The want of this ability, or occasion to exert herself, is the grand impediment to the cure, and this restored once and again, will effect every thing that is required †.

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* *Ulceribus haud diligenter deterfis, hyperfarcosis supervenire solet.* PAREY de *Ulceribus*.—See also RHazes, lib. divis. cap. 134. 138. In which case (says a modern writer) “the granulations are either soft and spongy, and arise only from the surface of the ulcer, or else rise too high in the form of fungus, or soon ceasing to shoot, are not followed by a disposition to form a cicatrix; or if the ulcer heals, it soon breaks out again.”

† From the very judicious observations on the Malvern waters with cases annexed, published by Dr. WALL, it should appear, that the good effects produced by them on ulcers of the legs, have arisen from
their

There is an ulcer I have hinted at, that ought not in this place to be overlooked, which is usually very small, and particularly affects the parts about, and even below, the ancles; which, indeed, cannot therefore properly be called a fore leg. This is exquisitely painful, and for some time I found it difficult of cure without resting the leg, having so very little advantage from the roller; which can make no adequate compression below the seat of the sore. It was in these cases more particularly, that *Wiseman* preferred a laced-socking, because (says he) “ I could not with a roller make a suitable compression so near the ankle, without causing a swelling on the foot”—but this is certainly a mistake, for having, at first, found the same difficulty, I was soon able to remedy it, by carrying the roller several times over the ankle and foot, so as to leave no part but just the point of the heel uncovered by the roller; and by this means, I also make a tolerable compression below the ulcer itself: to which intentions, the circumstance of the roller being made of flannel, very greatly contributes. These

their volatile spirit. Such an idea agrees very well with the theory I have adopted, and which every day's experience has confirmed. Dr. WALL, indeed, in one place speaks of the coldness, and astringency of the Malvern waters externally applied, but this is only an opinion he has taken up from some cases, in which they had not proved beneficial; for he observes, they often occasion so great heat in the part as to induce suppuration in cold tumors, and that, in almost every case where they have been useful, they have raised more or less of inflammation, and have often occasioned very considerable pain for some days.

cases are often attended with a considerable puffiness, and a tetterous appearance of the surrounding skin, accompanied with a thin and acrid discharge, which renders the parts additionally tender; whilst the little ulcer is almost perfectly dry, and cannot easily be brought to suppuration, till the complaint of the skin is removed. This I once thought was relieved by bathing the parts in Nevil-holt water, as lately recommended for this purpose, but I soon learnt, is much more speedily removed by drying applications, which instead of the common cerate, may be spread on lint, or linen cloth, and applied over the usual dressing to the sore. This may consist of cerat. alb. with bole and powdered alum, or the ung. rubr. desiccativ. or in more obstinate cases, a compress of linen may be wetted in a solution of sacch. saturn. and vitr. alb. with an ounce or two of camphorated spirit, in a pint of spring water; which, notwithstanding the tumor, and heated appearance of the part, I never found disagree *. If the sore does not soon change its complexion, on the disappearance of the affection of the skin, the little ulcer should be filled with

* These local affections of the skin, vulgarly called scorbutic, have no one symptom of that dismal complaint, and being merely local, should always be treated as a disease of the skin; for true scorbutic ulcers are of a very different kind, and will not endure the use of escharotics. See Dr. CULLEN's Synop. Nosolog, also Dr. LIND, on this disease,

precipitate *, pulv. angel. dissolved lunar caustic, or any similar escharotic, and when the slough is come out, be immediately repeated, if the sore does not put on a kindly appearance, which it certainly will in a very little time ; but the cure will not stand if this is neglected. But though so much has been said on the bold use of very deterfive, and even escharotic applications, it is to be remembered, that recourse is had to these, only where active digestives, aided by the bandage and exercise, prove ineffectual ; and where this is the case, I rest it upon future experience to prove the utility of them.

There is nothing I can be more satisfied of, than the propriety of the method here recommended. There is no small sore on the leg usually so troublesome to heal, by ordinary means, as an old ulcer near the ankle, and there are scarce any of the antient writers but mention it as such ; whereas, there is no ulcer on the leg, that is so easily, soon, and certainly cured, when properly treated. The numbers, and variety I have seen, leave me no room for doubt on this head ; of which

* WISEMAN speaking of such an ulcer, has this bold expression, which I doubt not was the result of experience, “ the best anodyne had been to have filled it with precipitate.” Book 2. ch. iv.—He was not afraid of the consequence mentioned by Hippocrates, or knew better how to distinguish cases, than to be in any danger of the evil he mentions ; who says, “ Thrison Damonis filius, habebat malleolum ulcus, juxta nervum sane non purum, huic a pharmaco corroso contigit, ut opisthotonos moreretur.”

Epidem. lib. v.

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some have been from three to thirty years standing, breaking out again as constantly as they were healed, and inexpressibly painful. But if not of the phagedenic kind (of which I shall treat in another place) are perfectly cured, in a few weeks, by taking much exercise, and dressing with the warmest digestives, (or where these fail, by a free use of precipitate,) and a bandage. This may be very tightly applied, if no considerable inflammation attends, or as soon as this shall be removed by bleeding, and a few days application of *Freke's* suppurative poultice *; which it will be sometimes proper to begin with, if the ulcer is deep.

In ulcers of long standing, and where the constitution is thought to be concerned, it sometimes happens that besides a large sore, the leg shall be exceedingly swelled, with hard tumors, or lumps, in one or more parts of it, which will not always be dissolved by the discharge from the ulcer. Here, the application of a large piece of oiled-silk will produce the happiest effects, and with safety disperse the indurations. And it sometimes happens, that the other leg will be equally swollen, and exceedingly hard, though without ulceration. In which case also, whilst a copious discharge is kept up from the sore, the tumid leg should be rolled, and covered with a like piece of oiled-silk; which, by exercise, will daily produce a considerable perspiration, and without the least assistance from medicine, will bring down the

* See his Art of Healing—his poultice consisted of figs, onions, marshmallows, and white lily roots.

hardness and swelling, by the time the ulcer on the other is healed. This direction, however trifling it may appear, I have found such evident advantage from, that I think I should not have done justice to my subject, if I had not made particular mention of it.

I have seen, I think, some of the worst of these and other cases, in which recourse is usually had to a variety of internal remedies, where the cure has gone on, at least, as expeditiously without them; or has been effected, after very powerful ones have been administered in vain. And perhaps a little time may discover, how very few there can ever be occasion for.

Wherever ulcers are connected with disease of the system, it has been granted, the assistance of medicine will be required, all that I mean to insist upon is, that this is not generally the case. The true scorbutic ulcer, attended with spongy gums, and other marks of putrescency of the fluids, does not very often occur in this Island, or at least in the neighborhood of the metropolis; and the scrophulous very seldom attacks the legs in the form of ulcers. The venereal indeed, more frequently occurs, or at least, ulcers will partake of the poison, and I have seen also the cancerous, or something very like it; but as there will ever be, in these cases, something characteristic to their cause, the surgeon can seldom or never mistake them.

There is a medicine however, in pretty common use, that seems to claim an attention, and perhaps has been of service in some cases, though I am not yet satisfied they would not have got well without it. This is the corrosive sublimate, which in very large, and old sores,
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has, in compliance with custom, been frequently administered with seeming success. But it is often improper for labouring men, who are much out of doors, and for obvious reasons, more especially in winter. However, where these objections do not equally take place, every surgeon of experience will judge for himself, what advantages he may reasonably expect from the use of it.

There is, nevertheless, one kind of ulcer, improperly termed scorbutic, and is usually of very long standing, that is frequently assisted by medicine; but this generally attacks the poor, who have either injured their constitution by hard drinking, or on the contrary, have been in want of almost the necessaries of life. In such cases, the bark as a tonic, is of wonderful efficacy, and ought in many cases, to be given in much larger doses than it usually is; and in a few instances, for a considerable time. It is inferior perhaps to no medicine, unless it be a solution of the blue vitriol, which is likewise peculiarly efficacious in restoring the tone of the stomach (as it is usually expressed) in hard drinkers, as well as in stopping the progress of gangrene; which I have seen it do, three or four times, after the bark had been administered in vain.

To avoid returning to the subject of internal remedies, I shall here name other two medicines; a strong decoction of the woods, and lime-water. The first will be of service chiefly in cases of obstructed perspiration, and cutaneous eruptions, or the sudden disappearance of them; the other, in the erysipelatous sore, especially where a great part of the limb is infested with a scalding

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ing discharge, which takes off the skin wherever it runs. But we shall be disappointed, if we depend on this, or any other internal means; at least I have always found external applications much more effectual.

Having now said every thing that can be necessary, with respect to cleansing and incarning, and pointed out a few useful medicines, and some particular cases in this class of ulcers; I shall close this part of the work with some observations on healing, an article of as much importance, as any that have been noticed.

This last process of nature is by no means to be hurried; and if every thing is right, and the bottom of the ulcer become sound, no particular means will be required for it, it being in general, sufficiently disposed to heal of itself, and will in many cases, even with the use of ointments not a little digestive*. For it is supposed (as will soon be explained) the more active ones have been weakened already, but not so much as to become mere greasy applications; which (especially warmed ones,) upon this plan, do as much injury, by relaxing the parts, as do very drying applications, when used to hasten the production of the cicatrix †.

If this latter be attempted too soon, and especially if early recourse be had to drying applications, the surgeon will soon perceive his mistake. The ulcer, and

* WISEMAN particularly notes having cleansed, incarned, and healed ulcers on the legs, by the use of precipitate.

† See BELL on Ulcers—upon the relaxing nature of warmed applications. *Medio tutissimus ibis.*

particularly such as are termed constitutional sores, attended with diseased skin, and are of very long standing, will put on an unpleasant appearance; and when they have seemed disposed to heal up, small ones will be formed in the distempered parts of the skin, which in a while becomes pappy, and denotes the parts underneath to be unsound. Hence matter may be forced up by pressure, through many little orifices, putting on such an appearance of disease throughout a great surface of the limb, as may discourage the surgeon from expecting a cure, without a great length of time, and assistance from rest. But all will go well notwithstanding, under the advantage of good rolling and exercise, if the discharge be kept up; for the exercise, instead of protracting the cure, I am satisfied, tends in such cases, directly to insure it; and I accordingly always desire it may be increased. All that can be necessary, is to lay the small contiguous sores into one, by a slight touch of the lancet, which will afford very little pain, as the parts are now become perfectly sodden, and the skin parted from the edges of the sore: or should this be objected to by the patient, the little holes may be filled up, once or more, with precipitate, and the cure will go on as effectually, and almost as speedily as could be wished.

It was said, the digestive after a time may be weakened, and this may be done without improperly diminishing that discharge, which it has so often been insisted upon ought to be kept up: for when the most active digestives have been used, in bad cases, for two or three weeks, the stimulus from exercise will sufficiently

ently maintain it; and it is a good maxim to proceed gradually to that change between a copious discharge, and its total suppression, which should be always kept in view through the whole of the cure.

As soon then as the sore, however large, puts on a perfectly healthy appearance, this change in the dressing should begin, and the digestive be repeatedly weakened, three or four times at such intervals as the size of the sore, and the time supposed necessary for its cure, shall point out. This is particularly requisite, if it seems to be at a stand, or to heal very imperceptibly.

But great caution is required not to be too hasty in this, or to continue it, if the discharge is still very considerable. An attempt to suppress this is always improper, and if it succeeds, will indeed divert the discharge some other way for a time, but without any advantage to the patient; and the matter instead of bursting through the skin, as was mentioned where that is diseased, will form a passage in different places through the surface of the sore. In this case, the bandage should be drawn tighter below the seat of the ulcer, and the matter by pressure with the fingers, at each dressing, should be carefully forced up; the surgeon must likewise return to more active digestives again, by which the sore will soon recover a more pleasant appearance. But if no such change should presently take place, either more time is required to cleanse some distempered parts in the ulcer, or else the whole sore is unsound to the bottom. In the former case, time, it has been said, will do every thing that is wanted; but if it does not,
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recourse must be had again to escharotics, which, if no bone is diseased, will invigorate the parts, and soon improve the discharge; or if stronger be used, a thick slough will be made, and the surface, the moment that is thrown off, will be clean, and will put on a promising appearance again.

Upon this head it may be proper to observe, that when large and old ulcers are brought to a copious discharge, whilst the surgeon, from their unkindly nature, is afraid of too hastily weakening his digestives, though the ulcer may be very considerably diminished in size, it will often be proper to defend its tender edges, and new skin as it is called, with a little cerate, epulot. or some similar application, lest the powers of the digestive should injure its yet tender structure. But it may be still better, in very irritable ulcers, and such as are much indisposed to heal, to spread a margin of cerate on the same dressing, that the whole may be covered with one piece of lint, by which means the discharge finds a readier way to run off: a matter of the greatest importance in such ulcers as are easily offended. The pledgit, for this reason, should likewise extend considerably beyond the surface of the sore, especially in small ulcers; or the tightness of the bandage will prevent the matter from escaping, and thereby occasion a continual irritation, which will dispose the ulcer to spread. But though cerate is allowed of with the view I have mentioned, the use of very drying applications will, by no means, hasten the cure in this class of ulcers

cers, which, perhaps, contains much the greatest number.

It may then be laid down as a general maxim, that they should rather be suffered, than invited to skin over; and to speak plainly, I would, especially in those of long standing, rather irritate than coax them, for I know they will heal in the end, nor will time commonly be lost in so doing. For if every part is become perfectly sound, the bandage will furnish that warmth which inclines them to heal; whilst on the other hand, if nature be not yet disposed entirely to suppress the discharge, the surgeon, as hath been shewn, by attempting to heal up the sore, will have great part of his work to do over again. For this reason, dry lint, blue vitriol*, nor hard compress†, should never be used, though I know they

* WISEMAN experienced this in a case that appeared to be going on well, but suddenly turned foul, and in a few days became as bad as ever. (Book 2. ch. 9.) This, however, seems to have been his usual method, and it must be acknowledged, that some ulcers on the legs may be safely healed in this way, after they have put on a promising appearance; but others will frequently prove deceitful, and become fouler than ever upon the use of drying applications.—Some ulcers thus healed will likewise stand well, but there is no adequate rule to determine by; and therefore would a surgeon make sure of healing an ulcer, and perfecting a cure, especially where exercise is allowed, that must not be his method.

† See Mr. ELSE's paper in the Med. Observ. and Inquiries, where he speaks of covering the ulcer with a sheet of lead; so also a late French author, though, indeed, the practice is very ancient.

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have succeeded for a present cure in several instances. The case, indeed, is different, when patients, at this period, are confined, dieted, and purged, (though upon that plan sores are not so soon brought into a good state;) such applications may then both agree, and expedite the healing of the sore: but such being rather desiccated by art, than cicatrized by nature, it is most probable, many such patients must soon make application again.

The habit is to be first gradually relieved, and to speak a popular language, the humors are to run off, and the change from a long accustomed, or copious drain, to be cautiously effected; but which gradually abating as the wound diminishes in its size, nature, however abhorrent of sudden transitions, will when left to herself, in a reasonable time find some other vent. This remark, it will be supposed, is peculiarly applicable to ulcers of long standing, but although in more recent cases, it may not be so necessary that nature should find some other outlet than the ulcer, nevertheless, all the above reasoning, as far as it relates to practice, will generally hold good: though it may perhaps be better accounted for upon very different principles*. Experience proves that few ulcers on the

* Having already offered an opinion on that subject (vide the introduction p. 37, 38.) when speaking of the good or bad effects ulcers have on the constitution, which, it was said, were probably rather owing to irritation than the discharge; it was more natural to express myself here in the common language of writers upon this subject.

legs, though brought into a clean state, ought to be healed by any other means than preserving them so, nor will any other, under the directions here given, in ordinary cases, be found in the least necessary. Every surgeon knows very well, that the great difficulty respecting the cure of ulcers, and more especially those on the lower extremities, is to bring them into a good and healing state, and when that is accomplished an entire cure will follow of course. This is one reason that wounds on the head fill up so readily; they are not long in a foul state, and therefore after a few days use of some lenient digestive, want only to be kept clean, or at the most, to have their luxuriant granulations kept within bounds, which are merely a consequence of strong digestive powers, and of nature over-doing her part. But in the cases before us, there is little of this to be apprehended, for it has been said, the constant and firm pressure from the roller, (which may be increased as may be found necessary,) will always keep down this loose fungus. It will therefore be sufficient to apply a mild, defensive plaister, or sometimes one more drying, (as formerly recommended, if there are heats on the skin) which should be spread only on a piece of doubled linen, and be laid over the digestive; but if hard compress, or merely drying applications are laid on the sore, the ill-consequences I have mentioned will generally follow, or the sore, for want of proper digestion, will break out again.

Upon the above plan, however, every objection to healing the ulcer, as well as our fears for its return, are sufficiently obviated, and for want of which, the au-

thor of the paper in the Medical Observations, appears to have observed the above unpleasant effects; for if old ulcers are dried up instead of digested, and skinned over instead of being cleansed and incarned †; if any thing is ever to be apprehended from the suppression of an accustomed discharge, or the least attention to be paid to the depending site of a wound, it is here we must expect all the evils that theory suggests, or experience is said to have proved. But indeed it generally happens, that ulcers thus healed, form a callous cicatrix, which soon falls off when the parts are not sound underneath, and so prevents the mischiefs expected. Whereas, having thoroughly digested the ulcer, and brought it into a healing condition, leave it wholly to nature at this particular period, and not only will the cure be effectual, but as hath been observed, will often be accomplished in as little time, as it is usually done by rest, diet, and purgatives, with the assistance of all

† HIPPOCRATES speaking of recent ulcers, hints at this expeditious method of healing under particular circumstances, but how inapplicable to the cases before us, reason and experience will determine—"aut si quis avertat (viz. suppurationem) ut omnino non suppurentur, præterquam necessario, eoque paucissimo pure, et sicca sunt quam maxime, ex medicamento non molesto,"—though in another place he adds, "ulcera non purgata, non committi solent, etiam si adducuntur, neque sua sponte coeunt. *De Ulceribus* § v.

But TURNER speaks expressly and boldly on the subject, "to incarn (says he) before we mundify, or deterge before we digest, is building without a foundation, or to lay such foundation on the house-top.

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the alteratives, as they are called, that I have ever seen used.

Only large sores will afford any difficulty; whatever pain, swelling, or humors, so called, attend smaller ulcers (of this class), they will occasion very little trouble, after a little experience of this method of treatment. The copious discharge, which a proper diet, exercise, and the digestives always produce, remove these, and many other symptoms, that are found so troublesome on every other plan; and soon bringing the sore into a healing state, usually no further difficulties occur, if the bottom is sound. If therefore, after this period, a large ulcer is found indisposed to heal up, (though there is no other reason for suspecting mischief at the bottom) and the usual stimulants are found ineffectual, the sore after the use of them, still continuing at a stand; something further is necessary: the powers of nature being, in some habits of body, often insufficient to cover a large surface with new skin, without other assistance, and a very different stimulus, which will presently be described.

This brings me to the second class of ulcers, which in several respects, requires a treatment different from the preceding. It was a just observation of *Ambrose Parey*, “*neceſſe quoque eſt varia adeſſe medicamenta, viribus pariter et virium gradibus diſtincta;*” for ſays he, “*nihil mirum ſit, ſi ſuo ſæpe excidant ſine, qui eodem medicamento, omnia maligna ulcera curant, et ſanare ſe poſſe putant*”.

* Cap. ix. lib. 12.

Under this head, then I shall treat that species of ulcer called erysipelalous||, or herpes exedens, occupying merely the surfaces of parts, which is always glassy, and in its first stage, easily offended by every unctuous application; also many small ulcers, attended with an erysipelalous affection of the skin, furnishing a copious, and almost caustic discharge; the true phagedenic, and various large ulcers in very old, or poor people, and in patients of a relaxed fibre and habit; including every *very* large ulcer of long standing, with the like pale, and loose surface, the consequence of bad health, neglect, or intemperance. Not that I mean to imply that no very large ulcer will yield to the former method, nor that the means there laid down, have no share in the cure of those now to be considered, unless the erysipelalous be said to afford an exception; for whatever be the circumstances of the ulcer, it is to be digested and deterged, before we proceed to incarn.

These things premised, the cure of every ulcer is to be undertaken with the same intentions; powerful suppuratives, digestives, and deterfive applications are to be used, and we are to proceed to escharotics as occasion requires. But when active remedies under every form are found to disagree, after a sore has been properly digested, and has put on a tolerable appearance, it is to be ranked in the second class, however small it may be; and especially that ulcer, the most obstinate of any,

|| Introduct. p. 18.

described

described under various names*, and usually known amongst us by that of the putrid or phagedenic.—I shall begin with the erysipelatous.

I have used this term, for the want of a better, to describe an angry, superficial ulcer, which is sometimes likewise accompanied with an affection of the skin that will spread over the greatest part of the leg; and chiefly attacks the aged and infirm. It always furnishes abundance of thin, and very acrid discharge, especially if the surrounding skin is affected, rendering the limb intolerably painful; and when the dressings are removed, frequently emits a steam like boiling water. I have known poultices and fomentations long used to no purpose; the ulcer either not healing at all, or breaking out in fresh places almost immediately, and the pain still increasing. Purges likewise are here of no use; as to medicines, opium and bark seem of the greatest avail: the pain must be mitigated, and the habit be strengthened. The dressings should likewise be calculated to prevent fluxion to the part, or not the least advantage will be gained; and in this species, I have never seen any harm from suppressing the discharge, though the remedies may increase the pain at their first application. Having, in bad cases, made use of a mild suppurative poultice for a short time, to cleanse the skin, and empty the little inflamed and obstructed glands, by promoting their suppuration; I always use some di-

* Εἶλος φαγεδαϊνικόν, or Νομή of the Greeks.—Ulcus depascens, rodens, or serpens; ulcus ambulativum; ulcus putridum, et phagedænicum.—L'Ulceré Putride.

gestive to the deeper parts for two or three days. After which, an ointment made with as much true armenian bole as *Goulard's* pomatum will take up, may be applied to them, or a cerate to which some fine crocus martis is added, instead of the pulv. lap. calamin; whilst the whole limb, when the skin is affected, should be covered with the unguent. ruber. desicc. and after a while, with a compress wetted in the drying solution, made with sacch. saturni and album, formerly mentioned, to avoid loading the skin with the ointment. With such applications, it will be useful sometimes to give the cicuta, and aq. calcis minus compos. or the Lisbon diet-drink, where the pain has been so far abated, as to admit of laying aside the opium, and there is no peculiar indication for the bark. But if the above means should fail, recourse must be had to the astringent solution, or ointment, I shall presently describe, which will certainly be effectual; and will, I believe, in many cases, prove a valuable addition to chirurgical pharmacy. This is of itself, the remedy for those small ulcers attended with such an affection of the skin, as will cause a steam to rise from it like boiling water, which, after applying a poultice a few days, I am not afraid of suppressing by this means; and indeed have found medicines incapable of doing it.

Where almost the whole leg has been affected, a thick scurf, or scab will remain for a considerable time, which must not be hastily rubbed off. But the parts may, now and then, be touched with a little unguent. cærule. mit. and sometimes be washed with the drying solution
till

till the scales fall off of themselves, or are very easily separated; at which time the skin will be found, and perfectly smooth underneath. In all such cases, a piece of oiled silk, should now and then, be applied under the roller, about the time the scabs begin to loosen, though some of the sores should not yet be healed up; which will hasten the separation of the scales, and take off the stiffness of the limb. This should likewise be worn for a short time after the cure is completed, which it will contribute greatly to the continuance of, but must occasionally be laid aside, if it induces too great moisture on the skin; and the flannel roller be continued.

From these I pass on to the phagedenic ulcer; in treating on which, perhaps every thing will be said, that can be necessary for any other large and troublesome sore, classed under this general division.

This ulcer is always attended with an obstinate callus, on the edges, and on some parts of its surface; is streaked often with red lines, and is foul, glassy, and smooth, or resembles a newly made wound, where a portion of flesh has been rudely torn away by the bite of an animal. It is very easily offended, and often spreads and eats like a canker, on the application of common escharotics*, (which, indeed, it will some-

* See FREKE's *Art of Healing*. So also PAREY from GALEN, "nam diuturnior, et copiosior siccantium, et detergentium usus, "ulcera excavant indies; quare (says he) prudens videbit medicus, "quando à valentioribus detergentibus, et corrodentibus ad mitiora "fit digrediendum." Cap. ix. lib. xii.

times do under any treatment) the acrid matter either dissecting its way between the muscles, by destroying the cellular membrane; or by eating through the skin. Its edges always put on an irregular, and unkindly appearance, are often swelled, and streaked with blood-vessels like the bottom of the fore, and are disposed, from their laxity, to bleed upon the slightest touch. This ulcer generally takes place in the very poorest people, whose blood is broken down by hard labor, or intemperance; is very difficult to cure, and when very large often baffles every attempt of the best hospital surgeons.

There are, however, more ways than one to subdue many of these obstinate sores; and to this, the free exhibition of the bark will greatly contribute; which in some of the constitutions I have described, is more efficacious when joined with aromatics.

Where the patient's situation will conveniently admit of rest, (though indeed the remedies may be administered without it *,) a fomentation used for a few days, and the suppurative cataplasm †, supported lightly by

* The different intention with which a common bread and milk poultice, and that now recommended, is made use of, is such, that although the former is seldom of much service unless the patient be at rest, and kept warm in the bed, the latter, from its potential warmth, will answer tolerably well when lightly supported by a flannel roller, though the patient be suffered to walk; which he may do, not only about the house, but to the surgeon's to be dressed, or examined, as I have repeatedly proved.

† Vide page 106.

a flannel roller, about a week longer, never fail to lessen the most troublesome symptoms, and so far to subdue them, as to render this ulcer more tractable under ordinary means. That kind of dressing, besides every other advantage, has that of absorbing, and therefore sheathing the corrosive, and caustic discharge, increased by most other dressings, to the great aggravation of the disease.

When the callous edges become soft, their inequalities are removed, and a fine skin begins to cover them, the poultice may be discontinued, and the ulcer be dressed with some mild suppurative ointment, with the occasional addition of a little saturnine cerate, which is peculiarly friendly to this irritable sore; or sometimes, the cerate made with crocus martis, but more frequently, the best application, in this state, is *Goulard's pomatum* and bole just now mentioned *. By these means, the ulcer will become manageable, and will soon bear more effectual remedies. This period may be known, both by the appearance of the sore, and by, now and then, mixing a little red precipitate with the digestive. If it will bear this, a very few days will produce a wonderful change, healthy granulations will shoot, the remaining callosities will disappear, (which may be hastened by repeated scarifications) the hollow

* Besides experience, such ointments have the sanction of all the old writers from the time of *GALEN*, who constantly advise some preparation of lead with the absorbent earths, or other powder, for this malignant and eating ulcer,

parts will fill up, and, probably, no further difficulties will arise. And here, I must return to the caution, *festina lente*, which can scarcely be too often repeated with regard to ulcers on the lower extremities. But whenever gentle escharotics, and powerful digestives are found to disagree, recourse must be had to lenients, either such as are above mentioned, or at times more suppurative ones, according to the particular appearance of the sore ; now and then interposing a dressing with a little precipitate, whenever the cure seems to be at a stand.

By these means I have succeeded in very troublesome ulcers of this species, though perfectly intractable at first with every common digestive, and abhorrent of ordinary deterfives ; and I believe they will generally succeed very well if the ulcer is small : but if it be very large, it will not always be healed by them, without rest, and if that be permitted, they will commonly break out again. Mr. *Freke* indeed, in regard to these cases, has spoken very positively of the effects of his suppurative poultice, but it will certainly prove insufficient when there are large fungi, or of very long standing. The disease often runs too deep, with too hard a callus, to allow the parts to get unloaded, and however suppurative the poultice, it is not active enough to answer the end. The hardened parts, however, must be removed ; and it may be proper in this place, to hint at a method of treating them that is often preferable, because much less severe, than the cautery, or total excision with the knife. It is true, a fungus but rarely occurs, so as to prove troublesome, under the plan I have

have mentioned, and which both the bandage and exercise, have an uniform tendency to prevent; yet it sometimes happens that a large and hard fungus is formed ready to our hand, and is generally the consequence of a bad bottom to the fore. If this arises from a narrow neck, it may often be removed by pressing some fine lint pretty firmly round its base, or if this fail, a tight ligature may be easily passed round it. But if the basis be large, and it should not seem disposed to yield to digestives and bandage (which the softer fungus generally will, as the bottom of the fore is less frequently unsound,) it will be sufficient, in most cases, to make one deep incision to its bottom, after which its sides will generally waste away by digestives and bandage: but should this prove insufficient, escharotics should be sprinkled between the lips, and be occasionally repeated, till the fungus subsides. This effected, proper digestives should be continued, by which the discharge will be kept up, and every thing Mr. *Freke* expected from his suppurative poultice will be happily accomplished, without the baneful effects of rest of the limb; and without it, he never looked for a cure.

The large phagedenic ulcer is the only one that will create any great difficulty to the experienced surgeon; small ones, of whatever duration, and whatever may be the age and constitution of the patient, as far as I have seen, are healed by the above means, with ease, expedition and safety, after having withstood a variety of others under a tedious confinement. And many common large ulcers, though deep, with disease of the skin to a considerable extent, it has been said, are cured in a
very

very reasonable time, and require nothing but patience; I mean require the caution so frequently given, not to be anxious to heal them entirely, till the surface is perfectly good, and they are disposed to it with any common dressing. But the very large phagedenic ulcer, which is easily put out of humour, and disposed to spread on every little occasion, is that which will prove the skill, and sometimes try the patience of the surgeon.

However, from what I have known, I can venture to recommend a method to others; though it is confessed, want of opportunities has limited my experience in the worst sores of this kind, which falling to the share only of the poorest people, are seldom seen but in large hospitals, which I have therefore occasionally visited, purposely to make observations upon ulcers on the legs, by comparing some of the worst cases with those I have been concerned for. The poverty, and evil customs of these patients, indeed, greatly aggravate the complaint, and though the plan recommended be ever so well adapted to the disease, want of compliance on their part may render it abortive; and it is possible, there may be some cases will yield to no treatment whatever.

If very active applications are used, in the form of an ointment, these are often most advantageously applied to the large, and irritable sore, upon a thin piece of sponge; by which means very deterfive ointments will agree very well for the short time they are necessary, when they would otherwise eat the ulcer into holes, and give it a raw, dry, and indigested appearance. I received this hint, from what *Freke* says on his poultice, that it absorbs the acrid discharge, whilst it conveys to
the

the surface of the ulcer a suitable application. This led me to reconsider the very frequent use the ancients made of sponge, which is one of the many valuable remedies of antiquity, that the moderns have indiscriminately discarded; though it is in many cases, one of the fittest means of conveying apposite dressings to a sore, that was ever devised. It is liable to no possible objection that I know of, in point of utility, if not made use of too long, and which every surgeon will know how to avoid.

There is however a very bad phagedenic ulcer, and always a large one, that dislikes almost every thing in an unctuous form,, at least will not be healed by such applications, till brought into a different state; that is, till its surface is braced.—There is here, I apprehend, no virulent humour, as is usually suspected, no virus that wants to be discharged at the sore, nor an irritans aliquid which nature cannot otherwise get rid of. Facts demonstrate the contrary, for not only do patients enjoy very good health, after getting rid of the ulcer and their limb together, by undergoing a painful operation; but the cure of some of the worst of them, proves such ideas to be rather apologies for the want of success, than founded in the reason of things. Sores have been, healed and are by empirics under all circumstances, and no such dreadful evils have ensued; but we have not known their art, and have contented ourselves with supposing it to be unsafe, and disputing the propriety of a cure we have not been able to effect!—*Hic labor, hoc opus est.*

This, I would stir up my brethren to attempt, and think they may succeed oftener than it is imagined; and perhaps

perhaps the most rational means is to remove the local affection, a relaxed, and therefore irritable state of the parts. That this has been frequently the great obstacle to their cure, it were easy to prove by a variety of observations taken from healing sores, and from such as having promised well for a while, and then looking pale a few days, have run into a gangrene; or at least have continued at a stand—but I am satisfied, every experienced surgeon is before hand with me, and is inclined, at least, to suppose it probable, that the hint may be just.

It is not designed, however, to dry up ulcers on the legs, as one would a scratch on the finger; the vessels of the part are first to be freed, and the ulcer properly digested, and deterged; escharotics are to be applied if found necessary, and the sore to be treated as directed in the former part of this work, so long as nature is disposed to be active; but the moment she flags, or cannot be roused to a salutary exertion, by stimulating applications and exercise, (or whenever such applications offend) the inference is as obvious, as an attention to it never fails to be useful. The sore is to be *braced*, and the parts disposed to contract; the certain consequence of which will be a fresh, and healthy appearance of the ulcer; a pretty sure sign we have not mistaken the case, and that the means we are using cannot be wrong.

But if this be attempted too soon, and especially if the treatment be begun with it, the plan is perfectly irrational, and the cure will not be accomplished, or cannot be expected to continue. For this reason I have objected to the early use of those drying applications, which some empirics have entirely depended on; as
well

well as against dressing ulcers with aq. vegetab. miner.
 tinct. myrrhæ, dry lint, and covering the surface with
 lead; which I may venture to say, would, at least, be
 used with more safety and success at a later period,
 when sores are well cleansed, and nature flags under
 fruitless efforts to cover a large surface she cannot first
 sufficiently *contract*. And here, I cannot but remark,
 that there are but very few parts of the body, on which
 we meet with sores so large as those on the legs, where
 the whole surface is to be covered with entire new skin.
 Surgeons are always careful to preserve a great deal of
 skin when they take off any of the larger limbs, or a
 tumor of any considerable size; from whence it is,
 that although the ulcer, a few days after the operation,
 shall be very extensive, the cicatrix at last is not often
 larger than a half crown-piece, or even a shilling: and it
 is on this account, that large surfaces are sometimes so
 readily healed. But there is frequently great difficulty in
 thoroughly closing a sore occasioned by a burn, on any
 part of the body, when the true skin and adipose mem-
 brane have been destroyed to a considerable extent*.
 Such cases, in this respect, approach the nearest to the
 ulcers in question, of which the old skin can be brought
 over only a small part of the surface, and the rest is
 covered entirely by new. In all such cases, the lotion

* In such instances, though a patient be ever so healthy, we are
 apt to say, that the constitution long accustomed to the discharge, is
 thereby indisposed to suffer the ulcer to close. But it is very pro-
 bable, it may often be better accounted for, on the principle just
 now mentioned.

already hinted at will wonderfully assist the cure, by enabling nature to contract the surface, and lessen the dimensions of the sore.

But however, and whenever bracing applications are used to the legs, they should not be continued throughout the cure, nor longer than is absolutely necessary; but being gradually weakened, the last stage should be effected, if possible, by ordinary means, and with the cautions laid down in the foregoing pages.

The solution may frequently be made use of merely to wash the surface of the sore, or sometimes may be applied on a piece of doubled linen, (for lint sticks too close to the surface) its edges, (in very bad cases) being first spread with any mild cerate, to prevent them from adhering too tightly to the skin, and thereby confining the discharge; and should therefore be somewhat larger than the ulcer. There are however some very large sores that require a more effectual method, and the solution is most advantageously applied, for a short time, on a thin piece of sponge; but as the sore contracts, and becomes dryer, the granulations are apt to shoot into it, and the surface will bleed on taking it off. A slice of new bread may then be substituted, a little time longer, in its stead, which will equally absorb the acrid discharge; but this will be necessary only when the sore is yet very large, and has been much disposed to spread, or very unwilling to heal. And should we, now and then, meet with a case, wherein the application of the solution upon bread, may seem necessary for many days together, as this may be thought an uncommon, and awkward manner of applying a dressing, the basis of the solution

solution may be rubbed down very fine with a few drops of oil, and made into an ointment with ingredients more or less suppurative, or otherwise, according to the particular circumstances of the case. But if none of these difficulties appear upon leaving off the dressing with sponge, a piece of linen wetted in the solution, may be laid on the sore; or even washing it with the solution may now be sufficient, and a mild digestive, or in very obstinate cases, the cerate with crocus martis, or *Goulard's* pomatum and bole, be applied to its surface. To this, a little precipitate, or corrosive sublimate, may sometimes be added to advantage, if an ulcer has been in a very irritable state, and it is apprehended may not have been perfectly digested.

Some of these phagedenic ulcers with a very large surface, and of very long standing, are of a nasty greenish hue, exceedingly foul and indigested, and so painful that they cannot endure the tedious process of ordinary deterfives, but as hath been observed, are exceedingly aggravated by them; they are cleansed, however, in one or two dressings, by some such lotion as the aqua phagedænicâ, for the lotion that passes under that name, is too strong to be safely applied with freedom to very large surfaces †. Or, if ointments containing mercury are thought proper, the ceratum citrinum is one of the most powerful, or an ounce of ung. basil. flav. with a scruple of the mercur. corros. sublim, will form

† It is likewise a very inartificial preparation, formed upon erroneous principles, by which the intention is very much frustrated.

an excellent deterfive. They sometimes, however, prove very painful applications, and ought never to extend beyond the fore, as they may blister the part all around, and bring on an eryfipelatous inflammation.

The lotion I juſt now hinted at, is indeed generally preferable; this I have called a deterfive lotion, to diſtinguiſh it from that I formerly mentioned, and conſiſts of a mild ſolution of ſal. martis, with a very ſmall portion of merc. corroſ. ſublim. a thick piece of crumb of new bread well ſoaked in this ſolution, and bound on the fore at going to bed, will often cleanſe it in one night, and produce a diſcharge of as laudable pus as the ſurgeon can wiſh for; nor will frequent repetitions be neceſſary. It will then be ſufficient in general, to waſh the ulcer with it before the ordinary dreſſings are applied. But ſhould the ulcer ſpread again after a while, though it has been perfectly digeſted, and looked as well for a time, as a common fore on the arm, reſource muſt be had to the firſt mentioned lotion. The looſe flabby ſurface muſt be braced, and contracted, (and this is fitly done by aſtringents, which invigorate and warm without relaxing) which every ſurgeon knows always produces a freſh and pleaſant appearance, lightly granulated, but without a diſpoſition to bleed upon every touch of an armed probe; which by the by, is ſome times uſed more freely in wiping the ſurface of ſores than is ſafe, and generally much more than is neceſſary.

This lotion is very ſimple, yet is exceedingly deterfive, and by means of its bracing powers, gently cor-
rugates

rugates the surface, and by kindly urging nature to action, gives it a florid and strawberry appearance, but without leaving that dryness upon it, which common astringents, and particularly alum, always induce. And it may be necessary here to observe, that though applications merely astringent or drying, are in general very improper, for reasons that have been repeatedly hinted at, experience proves there are some things of the astringent kind, which are likewise deterfive, that may frequently be used with advantage and safety. It was not, however, without long attention to the subject, and numberless attempts, that a safe and suitable preparation has been discovered; such an one, as will not only brace, but cleanse the sore, and preserve a pleasant appearance of its surface, whilst it disposes it to heal; such an one, as according to the strength it is made of, will abate, or preserve the discharge, will stimulate the rising granulations, and urge nature to exert herself, or will more powerfully corrugate its extreme vessels, and disposing them to contract, prepare them to cicatrize at the edges of the sore.

Such, it is thought, is the solution frequently hinted at, and that it will often answer all the purposes required in large and obstinate ulcers. It may safely be used to every very large one, and in perfect consistence with the plan of not compelling them to dry up, if it is not used too early, or continued too long; and which the prudence, and experience of the surgeon will determine. This is made of the *vitr. virid. ad albidinem calcinatum*, dissolved in *aq. font.* and prepared

of such a strength, according to the nature, and extent of the sore, as the practitioner shall think fit.

This solution is a very powerful, though perfectly safe remedy, and together with the other means, has been hitherto successful in cases, which I think I should not have conquered without it. But it should be only in the hands of surgeons, who will vary its astringent quality and strength, to the circumstances of the case, and will not attempt to dry up old ulcers in the mode of empirics: for if made of an improper strength, it becomes a very different application, and will alone induce a skin on the surface of many ulcers that are yet in a very undigested state, and unfit to be healed—but fitness and safety are not the objects of that class of practitioners, and to whom therefore a little knowledge is a very dangerous thing.

Thus far some experience may be said to have gone, but how much farther this plan may with safety and advantage be extended, it is time only can prove: I am of opinion, however, from what I have seen, that the treatment laid down in these pages, may be applied to some ulcers attended with a caries of the bone. But I desire to acknowledge, that I have not yet had opportunity of proving it, where I have been certain the bone was affected; which it is well known, will sometimes throw off a small portion without being perceived in the dressings. However, when the ulcer is only of a moderate size, and the injury has not penetrated so deeply into the bone, or the pain and inflammation are so great, as to render a very long confinement absolutely necessary; I think I may judge from analogy, the methods

thods proposed will succeed in a variety of cases, where-
 in art has prevailed at length, under the circumstances
 of rest, and the horizontal position of the limb. And
 allowing only a certain time of confinement at a ne-
 cessary period, when the bone is exfoliating, (which
 may be hastened by slight perforations into the sound
 part) exercise will on the other hand, have a very con-
 siderable advantage through the rest of the cure ; for as
 a degree of inflammation is the process, by which na-
 ture throws off sphacelated portions of bone, it being
 perfectly similar to that which takes place in the softer
 parts of the body, I may venture to think this process
 may go on better, and if it succeeds, far more safely,
 with moderate exercise than by absolute rest, as the cure
 is likely to be more lasting, if not so expeditious, this
 way. We know how much can be done, even in the
 foul air of an hospital, under the hands of experienced
 practitioners, in some very bad cases ; though this is
 certainly sometimes prevented by the closeness of the
 place, or the patient accidentally taking a fever *. If
 these risks could be avoided by the patient being, with
 safety, permitted to take as much exercise a part of the
 day, as might maintain him during his cure, perhaps
 now and then a limb, or a life might be saved ; or, at
 least, the attempt, it is hoped, might be justified.

* Beside these disadvantages, there is another very common in
 hospitals ; which is the custom of taking off the dressings from fore
 legs, sometimes an hour or more before they are dressed up again.
 The bad effects of this practice must be evident to every man, but
 will be more so, by comparison, upon leaving it off.

But after all that can be said, the necessity of amputation, in some cases, cannot be disputed ; but if I am not greatly deceived, there is reason to hope such will not often occur, after this method shall have been for some time adopted. For patients will then have been informed, that sore legs are cured without confinement from their families or labor, and that so cured, they will not be afterwards liable to return, but from the same causes that produced them at first. These considerations will, probably, encourage most patients to seek advice very soon, and though some of the poorer amongst them should procrastinate longer, many may nevertheless get effectual help when they apply ; which will be likely, at least, to prevent the dismal effects of a mere temporary cure.

Beside the few cases which, but for amputation, are beyond the reach of art, others have been mentioned, which manifesting the existence of internal disease, with morbid affection of some of the viscera, where it has always been presumed an external drain must prove serviceable, it may become a matter of doubt, whether their cure may be safely attempted *, or the substitution
of

* Ulcers attending the leg in old people, ought to be looked upon as critical, and therefore should not be healed. LE DRAN. So HEISTER, and many other eminent writers.—The opinion of AVICENNA is so very emphatical, I hope I shall be excused if I give the quotation. “ Sed in senioribus non sanantur eorum ulcera—et quandoque sanantur, deinde rescinduntur, quoniam non generatur in eis
caro,

of issues be a sufficient supply in their stead. Here the physician ought to be consulted, and indeed it were to be wished this was much oftener done in surgical cases, than it is; he would furnish the surgeon with some useful hints on various occasions, and whilst they proceeded *pari passu* together, the patient would not have to repent it in the end.—But in the present instance, should they be of opinion that the discharge from a large issue would be inadequate * to the drain from the ulcer, they may perhaps be in the right, and the patient will probably chuse to err on the safe side. There are certainly facts which favor either side of the argument, and therefore some latitude must be allowed, and the discretion of practitioners must determine in particular cases. *Wiseman*, for instance, gives us a remarkable one (book 2. ch. ix.) of a young woman afflicted with a bad ulcer

caro, nisi ante mundificationem; quando ergo retinetur in eis superfluitas non munda, oportet inde ut corrumpatur continuitas proveniens secunda." De Ulcerib. lib. iv.—I have ventured, however, to cure ulcers of many years standing in very old people, and one many years ago in a lady upwards of eighty years of age, whom a very eminent surgeon had cautioned against suffering it to be healed; all of whom have since enjoyed good health, and the ulcers have shewn no disposition to break out again.

* See BELL on ulcers part 2. § 2. on the nature and quantity of pus discharged from a common issue—add to this, the very moderate discharge many ulcers furnish when left to themselves, or dressed as they usually are by paupers, with a little very bad cerat. epulot. But reasoning from facts, it appears full as probable, that the advantages of natural, or artificial drains, arise more from irritation, than the discharge from the sore. See *Introduct.* pages 37, 38.

on her leg, which for a long time resisted every means used by himself and others, on account of suppressed catamenia, which periodically occasioned a foulness of the ulcer ; till at length the fore being healed by the assistance of a laced-socking *, the woman enjoyed perfect health, and the menses soon afterwards returned in their natural course. Suffice it to say, that many ulcers have been cured where the bad consequences apprehended have not ensued, nor, as far as I could learn, have they ever broke out again.

Some caution however is necessary, but it consists in very few things, viz. purging, temperance, and continuing the bandage for some time.

Though purging has been so strictly forbidden, with a view to invite the ulcer to heal, during which process, to prevent constipation is all that, in general, should be aimed at ; yet when the cure is nearly accomplished, such a course is suggested with the greatest propriety. A few brisk purges, at convenient inter-

* That this, and many of WISEMAN's best cures were effected by a tight bandage, and often by a free use of precipitate, is exceedingly apparent.—Speaking of ulcers with great loss of substance, which he dressed with basilicon mixed with precipitate, (which he there observes he usually carried in his salutory) he expresses himself thus.—“ I then rolled it up with expulsive bandage, the cure “ indeed consisting mainly in the well rolling—by the use of it, both “ the influx was taken off, and the member strengthened.” And again ch. 8. on the ulcer with callous lips, he says, “ the speedy cure of this “ I imputed to the laced-socking, it performing all the intentions “ necessary to the curing of many such like ulcers.”

vals, should at this time be directed, according to the age and strength of the patient. The roller, it was said, should be continued for some time, the size and duration of the ulcer, with similar circumstances, which every surgeon will have respect to, will determine the length of this period ; for if the ulcer has been very large, and of long standing, it will be necessary to continue the roller a considerable time.—It need, however, be worn only for a few weeks during the night.

This is all that is required ; advising, however, that caution proper for every convalescent, to attend for a time to his general health, and to take a purge now and then, if a constipated state of the bowels should require it. To these, indeed, was added a caution to the intemperate, since, doubtless, a certain manner of living, may render this, and the cure of any other complaint, of very uncertain duration. If men will run quod ducit gula, they must themselves, and not the physician or surgeon, who has once or more cured them, abide by the consequences.



BEFORE I close this little work, I shall venture to offer a few practical observations on another species of troublesome ulcers.

When

When I began to reflect on the great advantages that had resulted, in many bad ulcers of the legs, from a bold use of the mercur. corrosiv. ruber; and of some digestive ointments of a warmer composition than those in common use, as well as from a generous diet and exercise, it was natural enough to extend the trial of them in other troublesome sores; the result of which experiments has, indeed, exceeded my expectations, and I can now venture to recommend them to the trial of others, and particularly, in cold glandular tumors about the neck, supposed generally to be of the scrophulous kind; which however, frequently appear, and break into very troublesome sores, without any other marks of that dreadful complaint.

I was further encouraged in these attempts, by some observations of the late Mr. *Freke*, who indeed was a man of a lively and warm imagination, and sometimes a little eccentric, but was nevertheless a thinking man, and had plausible reasons to assign for every part of his practice. I found his ideas of these cases (as well as of diseased bones) served to confirm me in the opinion I had entertained both of the disease and the remedy.

I have now, for some time, used the precipitate with great freedom in scrophulous affections of the neck, and with all the advantages I almost could wish.—If the swellings are at all disposed to come forward, but are not broke, or have only a small orifice, I always hasten the maturation, and the dissolution of the skin as far as it is diseased, by means of epithems made of honey, flour, and yolk of egg. I am very little concerned to what extent the sore shall run, as I know I shall have
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much distempered gland to destroy underneath, and that if the latter be not effectually done, the sore will either not heal entirely, however small it may become, or will soon break out again. The scars, however, are even smaller, than when the ulcers are treated in the ordinary way. For the skin, in this part, being thin, frequently loose, and yielding, the tumor beneath it removed, and the sores healing up much sooner than under the lenient method; I have known them, when cured by the above means, leave no more than a seam, and a little redness to be observed afterwards, without any proper scar on the part.

The only disagreeable circumstance that can attend such a practice, I apprehend, is the possibility of a salivation, of which I can say only, that it has never happened to me; though before I relied so much on external means as I now do, I have given mercurial medicines in small doses, for a considerable time, whilst I have made use of precipitate daily with great freedom. Moreover, as it is very common to prescribe sea-water, or some other laxative, in these cases, the risk of a salivation, I imagine, will in general be very little. But should even symptoms of it appear, every practitioner, as he will know the cause of it, will immediately take care not to increase it.

I am now however persuaded, there will generally be little or no occasion, for administering mercurials inwardly, or any other medicine under the idea of an alterative, (at least, I am afraid, we know of none adapted to the disease) much less for frequent purges, which serve only to reduce the vis vitæ, which, in these cases,

is always too languid already. I find likewise, the sores heal up as kindly without, as where mercurials, antimonials, cicuta, neutral salts, or sea-water are made use of, all of which I have formerly prescribed with great freedom; and I cannot doubt, that the plan I mean to recommend, (when the lungs are not affected) will be very frequently successful in the hands of every other gentleman, who will give a fair trial to it.

If the patient be unhealthy in other respects, such medicines should be directed as appear suitable to his complaints, when the bark will, I believe, be frequently found as useful as any; and I have met with one very evident instance of the efficacy of a strong decoction of the woods, and crude antimony. But in a general way, I depend upon nothing so much as procuring a good and early maturation of the tumors, and suppuration of the distempered skin and glands, by means of the aforementioned epithem; a very bold and continued use of the precipitate; a nourishing diet, and as much exercise as the patient can well bear; esteeming walking the best of all. To this end, the patient should be encouraged to be continually on his feet, and abroad in the air as often as the weather will safely admit of it; and of whatever age he be, after beginning this exercise in a way that shall be quite agreeable, to increase it daily, till he goes to bed every night exceedingly fatigued. The advantage of this*, I have had such proofs

* Nihil est, quod utilissimam superflui et nocentis humidi perspirationem tam egregiè juvet, quam motus corporisque exercitatio, qua

proofs of, as leave me no room to doubt of the propriety of venturing to recommend it, as far as such experience may be supposed capable of doing it.

To obtain the advantages that have been hinted from the use of the precipitate, scrophulous ulcers should be filled with it, and if a slough is formed by it, (which will not always be the case) the suppurative epithem is the best dressing till the slough is thrown off; when the precipitate should be immediately repeated. The first, and a very early advantage, from such an use of it, will be a change in the discharge, both in quantity and quality, which from having been too little, or from an abundance of corroding sanies, will be changed to a moderate discharge of good and laudable pus; and the fore, except when a slough is produced by the application, will always look clean. In a little time there will also be a favorable change in the parts contiguous to the ulcer, the swelling will subside, and from a red and heated appearance, the surrounding skin will acquire its natural color, and the patient himself, or his friends, will be able to judge of the favorable turn in his case.

I have advised a daily use of the precipitate, which indeed I intend almost literally; for when a good deal

qua tuendæ sanitatis vix præsentius datur auxilium.—Peregrinatio ad omnium salubritatem pertinet, quia non modo cum continuo motu, sed frequentiori etiam aeris in salubris in salubriorem mutatione conjuncta est, quæ tuendæ sanitati et corpori a pluribus morbis præservando egregiè velificatur.

HOFFMAN. De Motu optimo Sanitatis Præsidio. Cap. 9. et seq.
of

of the gland has been destroyed, the fore and surrounding skin will be found to contract under the use of it, as if an astringent application was made use of; and the parts will actually heal up to the breadth of a straw, whilst this active mineral, which has already destroyed a cluster of distempered glands, is daily applied.

I know it is an opinion with some people, that scrophulous swellings ought not to be invited to suppuration; though not from an idea that they will heal less kindly in consequence of early maturation, but solely from the difficulty of healing them whenever suppuration takes place, and the abscess is burst. But since scrophulous tumors, and particularly those of the neck, almost constantly end in suppuration, at one time or other, though not at all invited to it by art; and since experience has proved the very considerable advantage of bringing them to an early and copious maturation, which both prevents so much of the glands being affected, and occasions a more perfect dissolution of that which is already distempered; I can confidently advise the early use of the suppurative epithem*. It will be a means of preventing many of the sad effects of leaving them for months, and even years to themselves, in habits of body so ill calculated to get rid of disease; and wherein medicine is universally acknowledged to afford so little assistance.

* Hence, probably, it is that the Malvern-Waters have sometimes proved so beneficial in these cases. See the note on Malvern-Waters—page 102.

But should a scrophulous tumor in this part be unusually large, it may be treated in a somewhat different manner; it should, however, be speedily brought to a suppuration, by the epithem already mentioned; or should this be done to our hand, as it will consequently contain a good deal of pus, the glands will thereby be considerably dissolved. On this account, there will not only be less occasion for so bold a use of the precipitate, but the extent of the tumor being considerable, it will be of consequence to preserve a good deal of the skin, if there is no objection to doing it. Therefore, if that is not in a very bad state, (which it frequently indeed is, before these cold tumors suppurate plentifully) it will be found very convenient to open the abscess, by making only a puncture with a lancet, first at the top, and then at the bottom of the tumor, sufficient to pass a seton through it; or it may be done at once by a small seton-needle, armed with a slender scane of cotton or silk. Besides every other advantage of this method of discharging the matter, which will also be gradual, is the exclusion of air; a point scarcely enough attended to in the treatment of abscesses. The seton being introduced, should be drawn up and down at least twice every day, and sometimes be moistened with some proper deterfive ointment; and occasionally sprinkled with precipitate. The constant irritation of the seton, will tend to dissolve the remaining hardness of the glands, far more than any common poultice, which frequently serves only to destroy the skin without affording that stimulus to the parts underneath, which this sore always requires. The irritation of the seton will also dispose

the bottom of the abscess to throw up healthy granulations, the moment the hardness is dissolved, and the fore will thereby heal up kindly, more expeditiously, and with much less scar, than could be expected from the extent of the tumor; no more than the marks of the punctures, and a little redness of the skin, as it was observed, remaining afterwards to be seen,

Should the punctures made by the seton, however, not be disposed to heal in a reasonable time, after the silk is withdrawn (which should be gradual, by removing a few threads at a time,) and yet no fresh hardness take place, nor the discharge be increased; the little orifices may be easily dried up, by dressing them twice a day with bits of lint dipped in a mixture, consisting of a little new milk, and a drop or two of extract. saturni, which by this means will be thickened to the consistence of a liniment, and becomes a very useful application to many other very troublesome ulcers; of which I first saw the good effects some years ago, in a very different case, under the direction of Mr. *Watson*.—If the edges of the punctures become callous, a few touches with the lunar caustic will soften them, and dispose the punctures to heal.

If I might be permitted to offer any further hints on these troublesome sores, and to judge from some favorable circumstances joined to a little experience, I should hope the last mentioned method will afford some considerable assistance in some scrophulous abscesses about the joints of the upper extremities, if the patient be likewise sent to the sea; which I have seen attended with the happiest effects.—As for those on the lower ones, besides every other disadvantage they labour under, that
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of depriving the patient of good air and exercise, forbids me to expect any very material improvement upon the common method of treatment.

These things are all I mean to propose for these ill-conditioned tumors, which, I believe, will often require no other assistance. And I am persuaded, more may be effected by them, and much sooner, than is frequently done by the various alterative medicines, and other means that are generally prescribed; unless in some instances, it be sea-bathing, the great advantages of which are extremely uncertain in particular cases, and to be known only by the trial of it: every practitioner having often found his utmost expectations exceeded by it in some, whilst in others, his patients have returned from the sea much worse than they went there.

It is not unlikely, that such an use of the precipitate as I have now been recommending, may be already known to other gentlemen of the profession, but it is certainly not the common practice, nor has it, I believe, ever been made public; and from what I have known myself, and been informed of by others, of the success of ordinary means, I can venture to say, that the cure will often be more expeditious and certain, as well as less unpleasant, if the plan should be generally adopted.—It is scarcely necessary to add, that after the cure, or just before it is compleated, it will often be adviseable to open an issue in some convenient part of the body, as well as to attend carefully to the diet, and continue the exercise for a time.—Should the patient have been subject to ophthalmia, or have other mark of scrophula in the habit, he must pass a summer at the sea.

BEFORE I speak of the milk-abscess, I shall in this place observe, what perhaps some gentlemen may thank me for, that I can venture to say, the astringent solution I have so frequently recommended, is the best application hitherto known for that obstinate and painful sore on the nipples of suckling women, for which almost every thing has been tried—and almost in vain. The nipples need only to be touched with it a few times in the day, either by the point of the finger, or a camel-hair pencil; the part being afterwards covered with the patient's hand, or other contrivance, to prevent the solution being wiped off; the strength of which must be determined by the degree of tenderness and extent of the sore. I think I have found some advantage in these cases, and certainly, in drawing out a bad nipple, by covering it with a large nutmeg, hollowed out, and the edges left flat. But whether the warm aromatic quality of the nut, has contributed to this, or it has arisen merely from defending the tender nipple both from the linen which becomes rough by the milk drying upon it, and from the common air, I am not at all anxious to determine. Such a contrivance is always at hand, and attended with no trouble though worn pretty constantly, and I therefore often advise the use of it, as soon as the nipples begin to get sore. This is likewise, doubtless, the best time to have recourse to the solution, which has hitherto answered exceedingly well, ever since I have been acquainted with it. In
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some very bad cases, where the chaps are deep, and exquisitely tender, especially if of long standing, it will be useful to cover the part with an ointment that is not relaxing, but moderately warm and drying; as any proper cerate may be rendered, by simmering a little brandy in it. But my chief dependence is always upon the solution, which if properly attended to, will remove the complaint. It has also stood the test of the Lying-in Hospital, where it has been constantly made use of at my desire for above a twelvemonth, and with the expected success; though there are always in the hospital many women thus affected, and out of such numbers, it is probable, all the various kinds of sore nipples must, in that time have taken place.

One great advantage of the solution is, that it is perfectly harmless, and does not therefore require the caution of being wiped off from the part, when the child is laid to the breast. Being also lightly astringent and deterfive, without creating the pain, or that unpleasant and harsh dryness, which every other astringent I have made use of always produces, renders it as promising, as experience hath proved it to be successful in this obstinate complaint; which besides the great pain that attends it, has frequently frustrated a most laudable and pleasing impulse of nature, by preventing the fond mother from supplying the first wants of the tender infant, to which she has given birth.

But the evil frequently does not stop here; the pain and inflammation of the nipples often extend to the breast itself, and suppuration takes place.—I shall take this opportunity of making an observation or two on

this subject, which though important, has not been publicly treated of.

The first symptoms of such an unfavourable turn, are usually a deep lancinating pain, hardness and tumor in some part of the breast, and a considerable diminution of the customary discharge of milk by the nipple. This is the moment to prevent the evils complained of, as a very short delay renders the means ineffectual; the skin soon becoming discoloured, and the whole breast greatly enlarged. To remedy this, immediate recourse should be had to bleeding, and to laxative and anodyne medicines; but above all to sedative applications, which are usually found to be the most powerful discutients. Sometimes, however, solutions of crude sal ammoniac, with the addition of a good quantity of spirit, and if the inflammation be very recent, some vinegar, will be more adviseable than saturnine applications. Compresses of coarse linen-cloth, wetted in such a liquor made moderately warm, and renewed as often as they become dry, are abundantly preferable to heating and relaxing fomentations or poultices, to which surgeons have usually had recourse.

When the above means are made use of in proper time, the inflammatory symptoms will soon disappear, the pain be entirely removed, and if the milk runs freely again from the nipple, there will be no further danger of suppuration. On the other hand, if there be not a very early and considerable abatement of the first symptoms, however slowly the process may go on, the breast will seldom fail to suppurate. In this state, therefore, the plan ought very soon to be changed, in
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order to forward the work of maturation. And this, wherever the pulse will allow of bleeding, will often be hastened by taking away a small quantity of blood, once or twice, from the arm; though the patient should already have been let blood with a very different view. This will likewise be always a safe practice in plethoric habits, or where the inflammation is attended with fever, and the event yet doubtful: should suppuration finally take place, the bleeding will likewise tend to lessen the size of the abscess.

The whole breast should now be covered with a mild suppurative poultice, which must be continued till the matter can be felt, and may then be changed for one of mere bread and milk; the part should also be fomented twice a day, if the abscess threatens to be large, and does not incline to ripen fast, after there are evident tokens of suppuration. The circumstance of early maturation is of the greatest importance, for in proportion to the length of time taken up in that process, will be the size of the abscess, and the time afterwards necessary for its cure; at least, this is pretty uniformly the case.

Of no less importance is the manner of treating abscesses after the matter is well formed. And here I am constrained to oppose the antient and common method of surgeons, that of making a large opening with the knife; which can seldom, or never be necessary. This happy idea originated from the late ingenious Dr. *Hunter*, (to whose unremitted labors in the improvement of his profession, as well as in many other instances, the public is so eminently indebted,) and I be-

lieve that gentlemen in the department of midwifery, at least in London, are well acquainted with the many advantages of sparing women this painful operation : but as it has not been noticed by surgical writers, nor, I think, sufficiently approved of by the generality of the profession, there are probably many practitioners who are not duly acquainted with it.

The impropriety of making large openings in the breast, arises, I apprehend, from its glandular structure, and peculiar use, together with the harmless nature of the complaint. But I shall not enlarge here, on the many unfavorable circumstances attending such a practice, and the tediousness of the cure as the inevitable consequence. I mean only to hint at a method every way preferable to so painful a process. But not only are the larger incisions highly improper, which are made with the knife, but smaller openings with a lancet are generally better let alone ; not only because commonly needless, and very distressing to the patient, but the breast will heal sooner when the abscess is left to burst of itself. Hereby, we are sure the suppuration will become as compleat as the case will admit of, and the little jagged round aperture nature makes for herself, will keep open much better than the smooth puncture from a lancet. All that is commonly necessary, is to cover the part with a soft bread and milk poultice ; to keep it well supported by an easy bandage ; and carefully to press out the matter, and renew the poultice twice or three times a day.

The above method of discharging the matter, it was said, is usually the best ; there are however instances, where

where I have though small punctures made with the point of a lancet have their use. Such are cases, wherein the whole breast is very hard, and the habit not disposed to form matter so plentifully, as the indurated state of the part seems to require. Here a great number of very small imposthumations are formed, come very slowly to a head, often thicken and harden the skin, are but little disposed to break, and cease to discharge as soon as they have vent. The little tumors will even sometimes subside, if an opening is not made soon after the matter can be felt; and the induration remains a long time nearly the same. Poultices of more potential heat than those of mere bread and milk, are here, particularly, serviceable, as well as light frictions with a weak volatile liniment; and sometimes a cautious use of the unguent. cæruleum; which should not be forcibly rubbed in, but spread lightly over the breast. At this period, the exhibition of the bark is found useful in some constitutions; in others, small doses of corrosive sublimate; and I have sometimes found the decoction of sarsaparilla, and powder of millipedes, or sweating with pulv. Doveri of very considerable service; as well as purging now and then with rhubarb and calomel.

The worst cases I have met with, have arisen from cold taken after the end of the month, and are perhaps more common in women who have not suckled their children, nor been properly attentive to the turn of the milk. Here, one or more very large lumps are often pretty suddenly formed, or sometimes smaller ones almost insensibly run together, and occupy a great part
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of the breast ; are always exceedingly hard, but are not usually painful at first. The appearance, in some instances, is very alarming, but they all nevertheless end perfectly well if prudently managed. I have been called to cases of several months standing, where the breast had entirely lost its natural appearance, had become hard in every part, flattened, and the nipple almost obliterated. When the disease extends to such a degree, suppuration must take place, and indeed is a desirable event, as otherwise mischief would ensue ; for I believe, an entire resolution of the tumor is not to be effected. Hence, saturnine applications, which have been much too indiscriminately made use of, are here highly improper. I have seen nothing so useful as mild poultices, and a cautious use of the unguent. *cærul. fort.* from half a scruple to half a drachm, repeated *pro ratione effectûs*, and now and then taking away a small quantity of blood ; while the body has been kept open by the *sal. rupellens. polychrest.* or other cooling laxative.

By these means, I have succeeded in cases to appearance exceedingly unfavorable, and not to be distinguished from incurable *schirrhi* ; which have nevertheless got well in a very reasonable time ; and the patients have afterwards suckled children without the least inconvenience. In such cases, more especially, the abscess when formed should always be left to burst of itself, the use of the knife having a direct tendency to increase the induration of the parts, as well as to injure the structure of the breast ; and at the best, it has been said, is perfectly unnecessary.

Sometimes

Sometimes, where the suppuration has gone on very slowly, an oozing of ichor or sanies will remain, and often a discharge of milk from the sore, long after the tumor and hardness are removed. And I have been applied to, where a small fistulous sore has remained for some months, which I have safely dried up in a few days, by dressing it with aq. vegetab. mineral. made very strong: but if the sinus runs deep, the astringent solution before mentioned, used by way of an injection, will be preferable.

The above hints are thrown together, as the result of long experience both in the Lying-in hospital, and in private practice; not, indeed, as a treatise upon abscesses of the breast, but as the out-lines of a pleasant and safe practice, which every man of experience will know how to apply, and the young practitioner may possibly profit from.

But in whatever way any such abscesses may be treated, and however preferable this lenient method is to the use of the knife, and to the large incisions frequently made, the milk-abscess will very often prove exceedingly painful, while the necessary long use of poultices must render this complaint exceedingly disagreeable to the patient. If the number therefore may be in the least diminished, by the speedy cure of sore nipples, such a remedy must be acceptable, in a double respect, to gentlemen engaged in the department of midwifery.—Perhaps surgeons in general may be glad to hear, that the astringent solution is very useful in other fistulous sores than those just mentioned, and is also an
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excellent application to expedite the healing of large burns, as well as some troublesome venereal ulcers. And I am yet in hopes, when it shall come into hospital use, (which I do not know it ever has,) it may be found very serviceable from its friendly astringency, in many cases which I shall not yet take upon me to speak of. The vitr. cærul. calcined to redness is a very different preparation, as well as a solution of it in its natural state. The latter has been long in hospital use, and particularly St. Thomas's, but this is not only a very drying, but a caustic application, and frequently offends less irritable sores than those of the legs, unless it be made extremely weak; by which it will be rendered greatly inferior to the solution I have recommended.

BY way of conclusion to this little work, and with peculiar reference to the former part of it, it may not be amiss to bring the principal intentions into one view, as well as make some apology for so bold an attempt to set aside the common remedies and applications for ulcers on the legs, and even to recommend a method, in many respects diametrically opposite to those in vogue; as exercise instead of rest and confinement; free generous diet* instead of a strict sparing regimen; and strong stimulant ointments rather than mild poultices and cooling cerates.

* See Dr. KIRKLAND on the diet of patients, in his *Thoughts upon Amputations*.

If the success of a plan varying in such essential respects from any hitherto received, should justify the hope entertained, the advantages will not be inconsiderable to men of pleasure or of business, but especially to the suffering poor, who crowd the public hospitals much more on account of these disorders than any others. If they can be cured without being obliged to leave their families, and that labor by which their families are supported, it is thought one grand obstacle to their applying for relief in proper time will be removed: and the surgeon will doubtless be glad, on many accounts, to be saved the very disagreeable necessity of receiving such objects into the hospital, many of whom can, with more safety and propriety, be cured out of the house. But important and desirable as is such a design, the author is aware of the obstacles there may be to the extensive usefulness he has had in view, in rendering such a plan general amongst the very poorest and heedless part of mankind, who are seldom faithful to themselves. Satisfied however of many advantages it will have amongst those of superior rank, and wherever patients can be depended on, he is confident some good will be effected upon this plan, that has never been accomplished by any other. He only requests his brethren will condescend to make use of the preceding hints, and allow a little time to prove the utility of the mode, and he doubts not they will find success enough to encourage them to persevere, until farther improvements will be made by them.

He has, however, discharged his part; he has delivered his sentiments as the result of long attention to
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the subject, and must leave his readers to pass what sentence they please. In the mean time, it is his satisfaction to have aimed at things, which it can be no crime to have attempted though it should not perfectly succeed; whilst to have concealed what was judged likely to be of such public utility, would have been criminal in the eye of every benevolent mind.

It may be proper to add, that it has not been his design to intimate that other surgeons are without their success in these cases, some of whom he knows have paid particular attention to them; and should any know already as much as he has to say, and be able to heal them without confinement, or probability of their return, it is pity the public has not been made acquainted with it. It would have saved the compiler of these sheets some trouble; who had no such desire of appearing in public, as needlessly to have exposed himself to the hazard of censure, for opinions he has supposed novel among regular practitioners. To such he now submits the foregoing pages, persuaded they contain some improvements. But should they, after a longer trial, be found inadequate to the end, and any other method be pointed out more rational, easy, and certain, it will be the duty of every candid practitioner to adopt it. Till then, the author can only say,

Vive: vale. Si quid novisti rectius istis,
Candidus imperti: si non, his utere mecum.

HOR. Epist. 6. L. 1.

T H E E N D.