

**The duties of a regimental surgeon considered, with observations on his general qualifications, and hints relative to a more respectable practice, and better regulation of that department : wherein are interspersed many medical anecdotes, and subjects discussed, equally interesting to every practitioner / by R. Hamilton, M.D. of the Royal College of Physicians London; member of the Medical and Physical Societies of Edinburgh; and of the Medical Society of London. In two volumes.**

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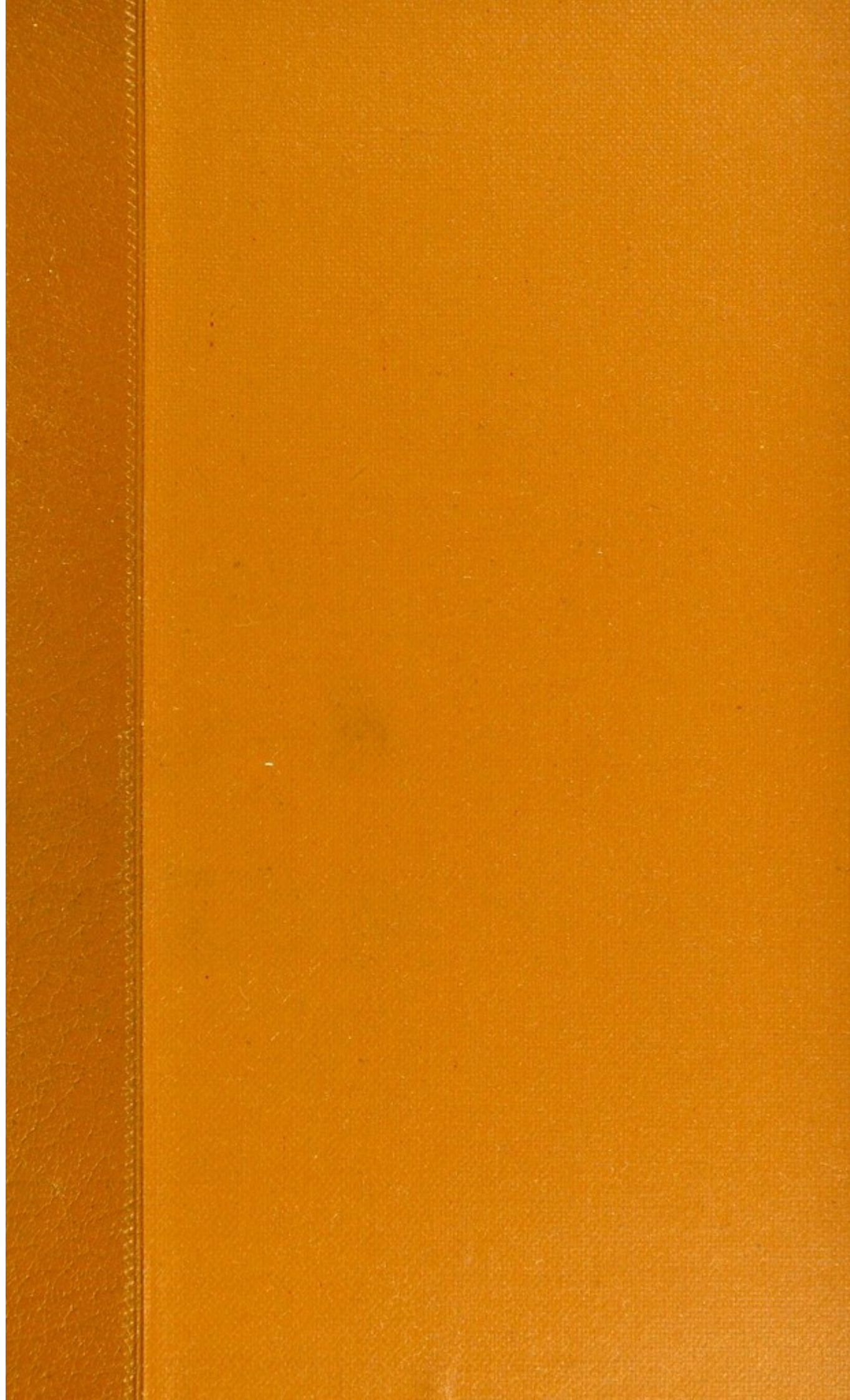
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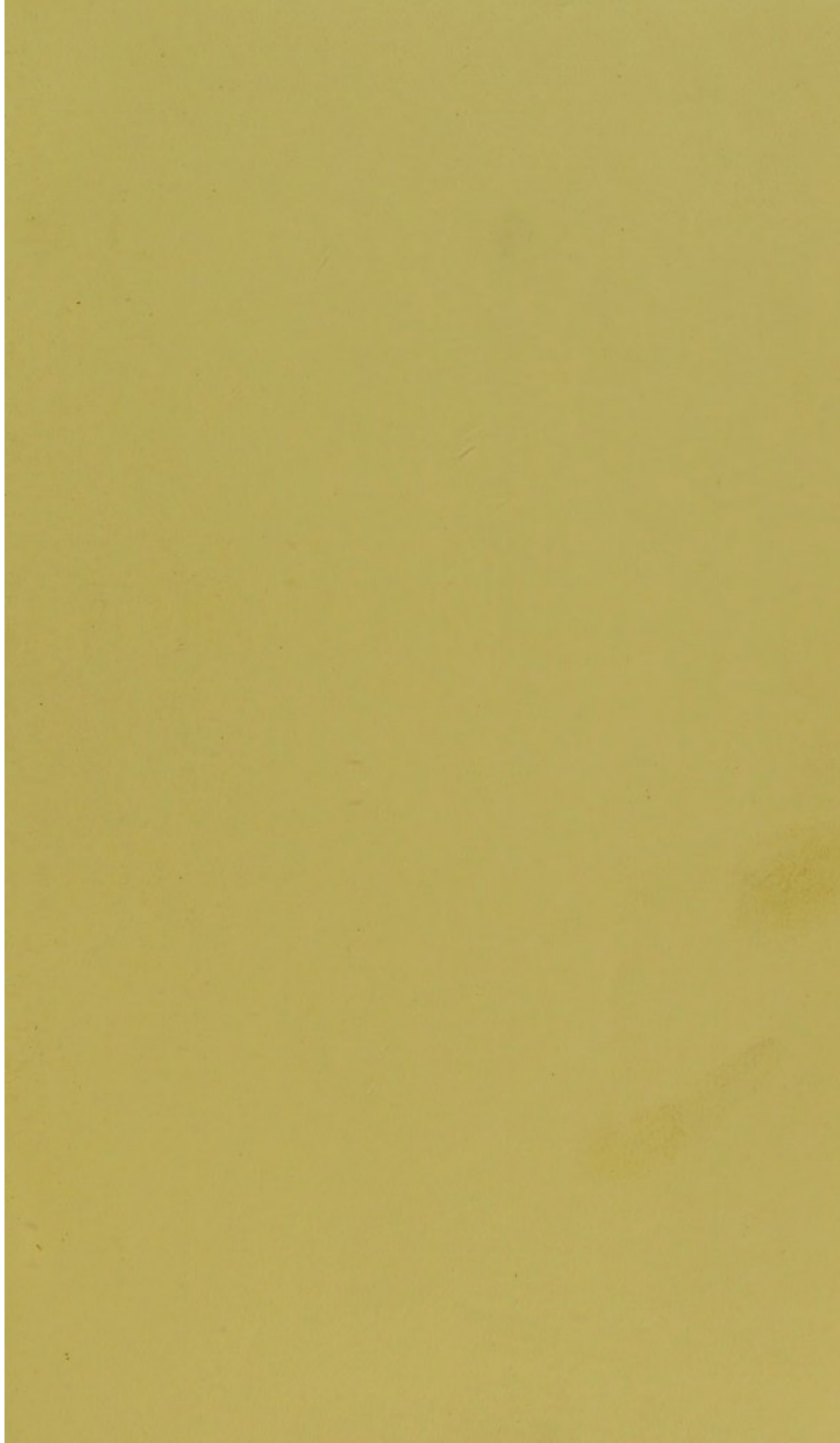
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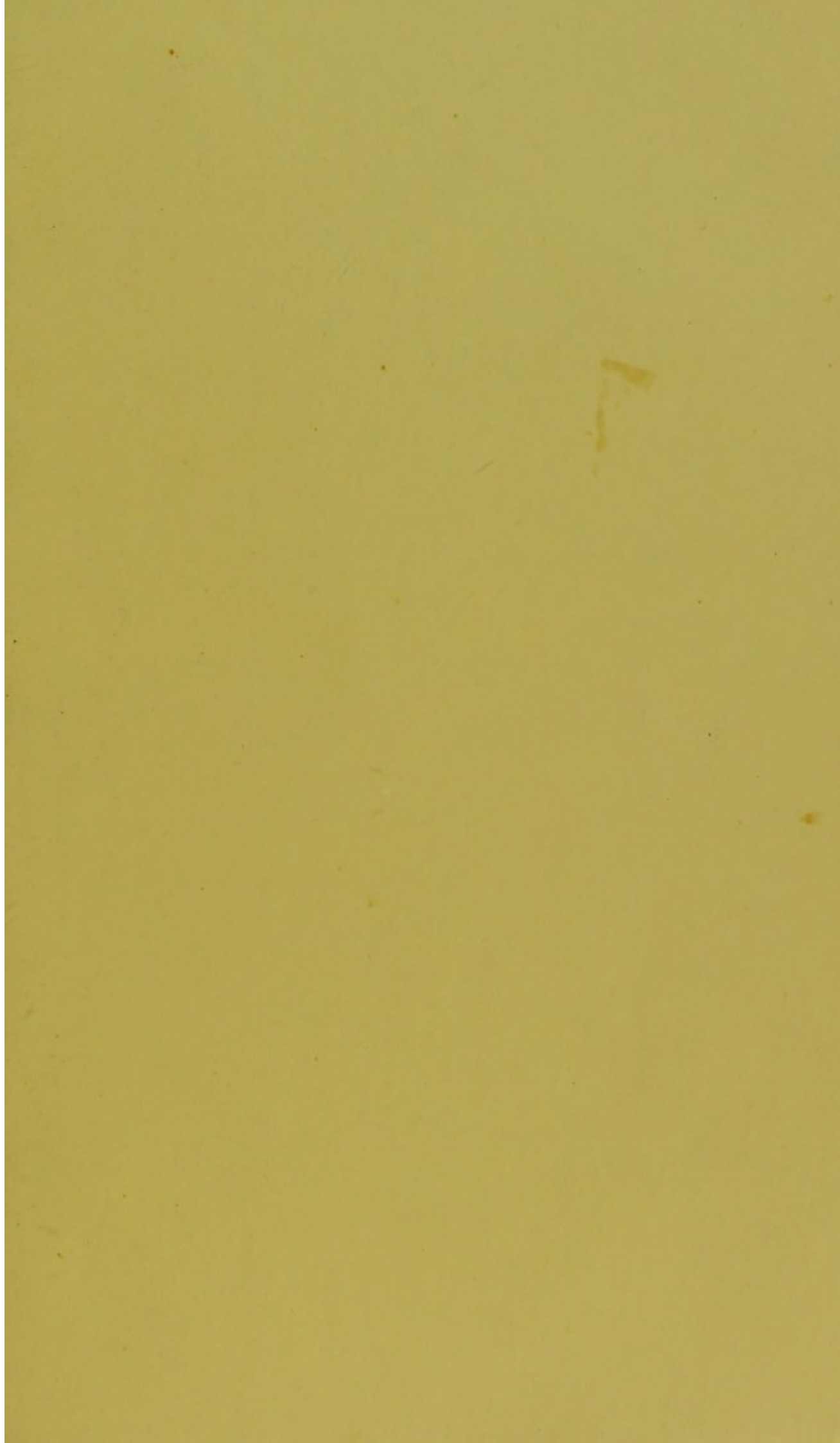
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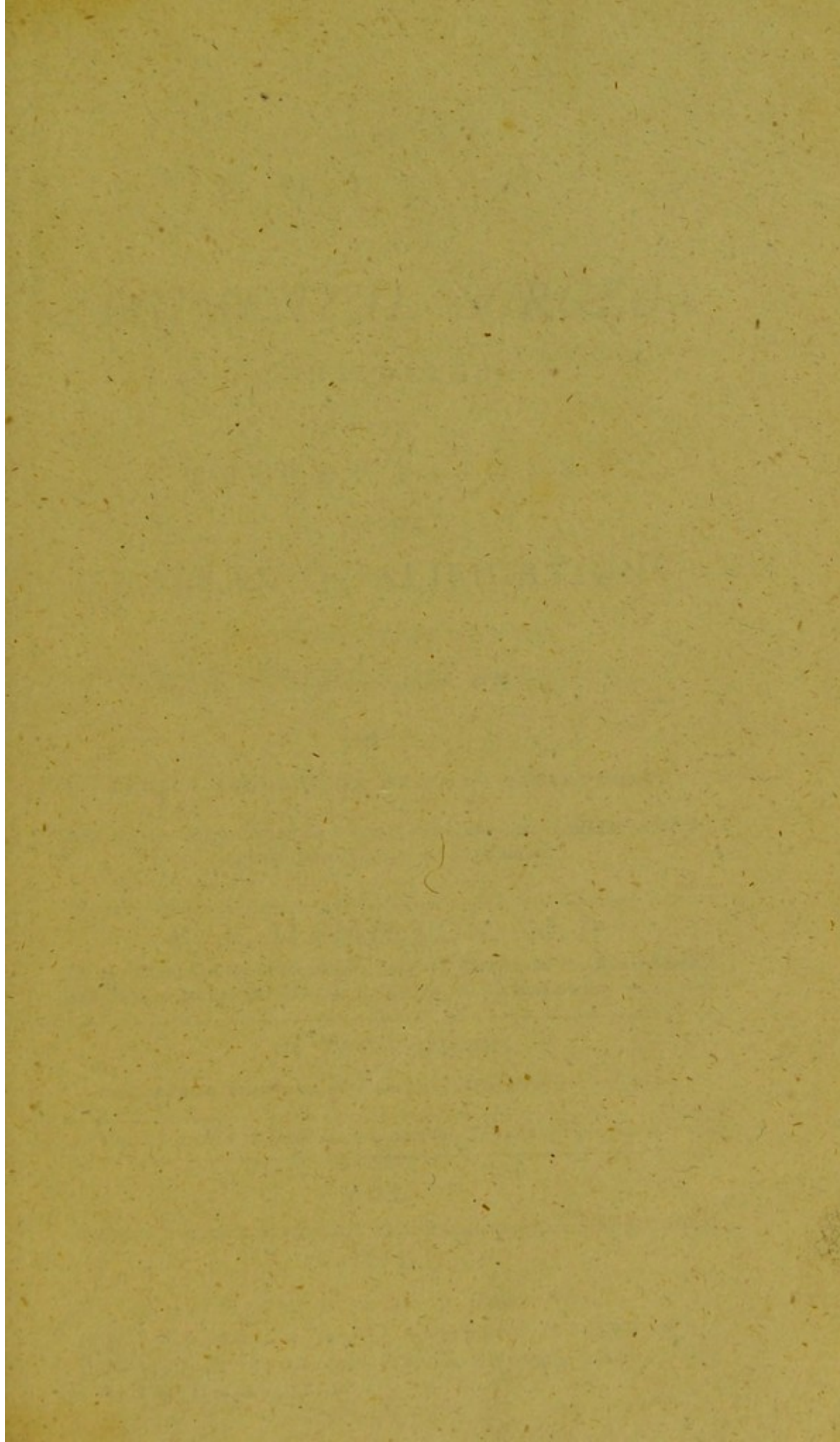




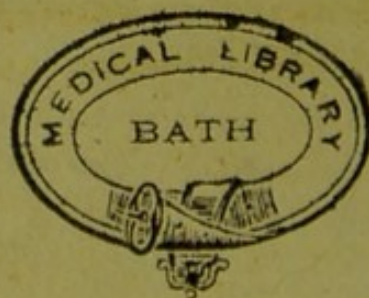












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THE DUTIES  
OF A  
REGIMENTAL SURGEON.

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CHAPTER XI.

SURGEONS DISSUADED FROM USING BILLETS, AND OF  
THE PROPRIETY OF KEEPING A MEDICAL REGISTER.

THOUGH we took notice in a former Chapter of the danger of having the mind alienated from Medical Subjects by associating with the Officers, nothing was said relative to Billets, notwithstanding they conduce in like manner to this end. In quarters these are allowed to the officers in common with the privates. To dwell always in public houses is to dwell almost constantly in the midst of noise, bustle, and revelling. In such places a man can never be alone, he is liable to interruption on every occasion. It is true,



this may happen, not only oftener in one place than another; but the company he is exposed to, in this manner, will be in some places more disagreeable than in others, and more unfit for a person of genteel education to mingle with, if he could well avoid it.

In some towns it is customary for every guest, of whatever rank, to meet in the same room. In a place where this custom prevails he will soon find himself surrounded with a crowd, drinking, smoaking, (for this is the custom in many such inns in England) and conversing promiscuously together; no person concerns himself with the employment of another, or refrains the more from indulging his own inclinations, the custom of the place giving them this sanction. Here the reader is not to suppose I am speaking of a London Coffee-house, where every guest may if he chuses have a separate box, and may either write or read at his ease, one person giving little disturbance to another. It is a very different place I am describing; it may be a small room in a mean inn, where all sit round the same table, nay the Cobler, and the Mayor of the Town together: \* and where there

\* I speak from experience



may not be a place in the house proper to retire to on such occasions.

In this dilemma, to study, is impossible. It is, we shall suppose, the coldest season of the year, and the weather even inclement for the season. There is not a second fire in the inn save in the kitchen, for it is a part of the kingdom where fire becomes a material article in house-keeping. The Surgeon may indeed retire to his bed-chamber, but he will not be allowed a separate fire, without paying sixpence for what will be consumed in two or three hours; or what is more common, there is no fire-place in the bed-chamber. What then must he do? The alternatives are few; he must lay aside his studies; and, perhaps, for self-defence, be compelled to call for liquor, and join in the noise to avoid singularity. To betake himself to head quarters, and the mess-room, will be as inconvenient with respect to study; there he will not be surrounded with less noise, though his company will now be more select; if he chuses neither of these, he has no where to fly but to the kitchen. Sad alternative for a mind accustomed to different companions! Suppose he retires to his bed-chamber, and



that there is a fire-place in it ; his small pay cannot afford a fire at so enormous a rate. Suppose again he wishes to walk out, rather than remain among companions such as we have mentioned : the weather is even too inclement to allow of this amusement, and too cold to permit him to remain long in his chamber without a fire ; nor will they suffer him to stay in the kitchen, were he even willing for a time to intermix with servants, but remind him, though politely indeed, that there is a fire in the *parlour*. In this a double purpose is served. First, they get rid of his incumbrance about the fire ; secondly, by dismissing him to the *parlour*, there is the greater chance of his spending his pence in liquor. Besides, as he is furnished by the house with a bed, which the law obliges them to give him, they always look on him as a nuisance ; did he expend all his subsistence in the house, it would not satisfy them ; such is the general dislike inn-keepers show to the military ; indeed, it must be confessed they have some cause ; for it is a severe tax on them : the subaltern officer suffers by it also, because he is often poorly accommodated ; and his pay will not afford him to hire lodgings : how-

ever



ever some may think this account exaggerated, I mention not only what I have experienced, but have also omitted circumstances that would make the account even less credible to persons that have not felt the various inconveniences attending the life of a soldier. An officer of rank is both allowed better accommodations, and is likewise better enabled from his pay to make his situation comfortable ; but one below the rank of a Captain, with only his pay to subsist him, must suffer many and great inconveniences.

The Inns, it is acknowledged, are not, however, all of this description. Sometimes we find them extremely commodious. In some he will be allowed a room, fire and candle, but never with a good grace, or true good will ; for the magistrate is frequently obliged to interfere in the officer's behalf, who is compelled often to spend money in the house, for no other reason whatever but to court the countenance of his host. Nay, supposing the best ; he is liable to many inconveniences and interruptions. If a friend calls he treats him perhaps, or is treated ; or if he endeavours to apologize, that he cannot drink ; that liquor does not suit his present state of



health, still his friend may persist, alledging it may be of service; perhaps, he will hint the refusal proceeds from parsimony, an accusation which his pride revolts at; and hence his compliance merely to weaken the force of the insinuation. In this manner his money is expended, his time wasted, and his mind vitiated. Again, suppose the weather mild and favourable, so that the surgeon can retire to his chamber; his bedchamber is not entirely his own; if possible he will be put into a double bedded room; here either one of the officers shares it with him, or what is much worse, it is every casual passenger's that pays for it. In both these situations his inconveniences are great; his comrade will spend perhaps several hours a day in the room, during which it may be almost impracticable to pursue his studies; for as his comrade's mind is engaged in different pursuits, he will think himself little interested in favouring the Doctor's designs.

Private lodgings then are by far preferable, but it is not in every town, where he can afford to engage them. The places they are most wanted in, are where a subaltern can least afford them on his pay. Suppose, such a place



place near London, as described above, where fire is so expensive, every necessary is dear in proportion. A very incommodious room may cost him above six shillings a week, he has fire and candle to provide besides; if he eats at a public house, a dinner of the most common food, and even then but scanty, stands him in a shilling; which is denominated by them a *parliament dinner*; for there is a law, by which the landlord is obliged to give an officer his dinner for a shilling; but in these places one shilling and sixpence is the common price; for the parliament dinner is held in a contemptuous light, and the consequence often is, disagreeable insinuations from the landlord, and uncivil sneers from the attendants. Small beer at the least is two-pence. All this is to come from a guinea a week subsistence, besides breakfast, clothes, shoes, and many other things which must occasionally be purchased; can a subaltern, *i. e.* the Surgeon afford to hire a room? In the present state of his pay, he cannot.

It were to be wished therefore, that the regulations were such, that the Surgeon should be provided with private lodgings, in order to give him the better opportunity of pursuing



his business, which is of so much importance to the corps. If he keeps a journal of every patient's case as he ought to do, it will oblige him to spend a considerable part of the day in writing, and it has already been shown how inconvenient, nay almost impossible this becomes in billets. Some may say, he ought to spend his time in his hospital; let this be his place of study; and then much of his complaints against bad billets, and inconvenient lodgings will cease; but it should be first enquired, whether he has an hospital; and what are its accommodations? It is probable he has none; for it is generally found also that in those places where they are most needed, houses for the accommodation of sick Soldiers cannot be procured. But allowing there be an hospital; we have pointed out in a former part how incommodious they generally are.

To procure the Surgeon a room when the regiment is in quarters seems to be necessary; but how the expence is to be defrayed may not seem so obvious; the stock purse we dare hardly mention; it would be hard to rob one officer to serve another; yet since government has made no provision here, some regimental scheme, we are of opinion, should  
be



be thought of. The only one that seems practicable is to take the allowance of a shilling a day from the non-effective men ; or in other words, let him be allowed to pay one of the companies, such as may be agreed on among the corps. Each company has the pay of three privates allotted for the repair of arms and accoutrements ; this is one shilling and sixpence a-day. Let him have this for paying the company. This will give him little interruption ; for one of the Sergeants will do the duty for a shilling, or even sixpence a-week. He has only to settle his accounts with him once a-week, which will not occupy above half an hour : here will be nine shillings and sixpence a-week at least. It is true he runs a hazard ; if a man deserts in debt, he will be obliged to answer it to the Pay-master ; also to repair what may be wanted in the arms of the company, since it is for this purpose the money is granted by Government ; but, on an average, he may still clear a crown, or six shillings a-week : this will afford him a room, fire, and candles. What is said here is likewise meant of the Surgeon's-mate. The non-effective men of another company should be allowed him. The good



good effects of such a regulation, and encouragement, I am persuaded, would soon appear, by his better attendance on his professional duty. The satisfaction this must afford a Commanding Officer, of a humane disposition, and the corps in general, will be a sufficient recompence for the small indulgence allowed him.\*

It will be said, the Surgeon's perquisite, and saving from the medicine-money, puts it easily in his power to furnish a private room; but we suppose the Commanding Officer has taken this out of his hands, and that he must subsist on his pay; for we shall afterwards endeavour to shew, that some regulation is necessary respecting the medicine-money. This, or some such method, should be put in practice, if the pay is to remain as it is at present. But another scheme shall

\* Since the peace was concluded, an alteration is made in the non-effective men; only two are allowed now to a regiment of eight companies, in place of three. This comes only to 18l. 5s. per annum; half at least it will take to keep the arms and accoutrements in repair; the saving then cannot be above sixpence a-day. As he may sometimes be in barracks, this may almost be sufficient at an average; but each Captain ought, for the sake of his men, to add sixpence a-week more; the same to the mate, if mates are to be continued.

afterwards



afterwards be submitted to the opinion of the public, which appears preferable.

When we consider the value of a man to Government, a political and patriotic principle, as well as humanity, should influence us to procure every thing the army can afford for his welfare. The death of a private is a loss to the nation, since he costs considerably before he is fit to act as a soldier in the defence of his King and country: for, suppose, at the death of one man, another recruit could be immediately procured, he demands his bounty, which must come from the national purse, independent of his pay, necessaries, and accoutrements. In times of war he is a double expence from an augmented bounty, and a double loss, as men are then doubly necessary, and obtained with much difficulty. Every death must affect the service, as it is a diminution of the national defence, and strength; and surely it must so far affect the national purse, as the expence thereby incurred amounts to. If this be allowed, and it appears undeniable, it points out the attention the soldiery deserve in a political view; and, we hope, humanity will be sufficient to enforce what politics demonstrate as necessary.

Hence



Hence every degree of encouragement should be given to the medical department, where so large a share of the soldier's welfare is placed.

"Success in war," (says Dr. Millar,) depends on preserving military forces in health and vigour : disarmed by sickness, the most intrepid warriors become a prey to the most pusillanimous adversary ; the wealthiest nations to those of the fewest resources, and the stronger to the weaker power. Fleets and armies moulder away by disease : new levies do not supply the place of veterans trained to arms, and inured to martial achievements.

Yet this fundamental branch of the art of war hath not been cultivated : physicians only, it hath been supposed, can best judge of it ; the most unsuccessful hath been consulted. The simple mathematics of shop arithmetic, as it is happily expressed by a celebrated political writer, might have corrected these ill-founded opinions, Statesmen might have judged without professional skill, and ascertained the truth by numerical calculation.\*

\* Vid. *Introductio ad Dis. of the Army in the late war.*



Suppose the medical department of a regiment is placed on the liberal plan we have proved to be necessary, the physician, or surgeon, that has the appointment, should, on his part, enter into obligations, which the military laws should take care were performed, and this under the penalty of severe punishment.

This leads me to mention a medical journal. It should be considered as a necessary part of his duty, to keep a regular journal of every sick man's case that enters his list, whose complaints are deemed of the least serious nature; with a history of the symptoms, and the prescriptions used. A copy of this might be given to the Colonel at stated regular periods, and by him, if he thought proper, transmitted to the Physician and Surgeon-general for their inspection, particularly such cases as terminated fatally, in order that they might judge, as far as the case stated allowed them, whether the Doctor had discharged his duty faithfully or otherwise: the medical and surgical cases being transcribed into separate books, should each be sent to the respective inspectors; the medical to the Physician,



Physician, the surgical to the Surgeon. The examination of these will, no doubt, be some additional trouble to the Physician and Surgeon-general; but we suppose their salaries are sufficient to recompense them. There is no doubt, however, of their ready compliance with any scheme that has for its object the prosperity of the service, and the health of so numerous a body of his Majesty's servants.

This would be somewhat similar to the log-book of a ship, by which the Commander's conduct is checked under any suspicions of misbehaviour. It would certainly be a powerful restraint on inattention and indolence; and perhaps would be as great a means of restraining unqualified persons from regimental practice, as any yet used. They would be now careful to avoid falling under the disgrace and censure of men of professional abilities placed above them.

In carrying on this register, the same plan should be pursued as is adopted in other Hospitals. First, the symptoms described; then the daily prescriptions mentioned; and lastly, an account of the operation of the medicine, with the changes the patient daily undergoes, whether



whether for better or worse, taking care to separate the disturbances created by the medicines themselves \*, which are exhibited, from such symptoms as truly arise from the nature of the disease (for a careful distinction should be made here in giving an accurate history of what is going forward) and this continued till the case either ends fatally or favourably. The experience reaped from such strict observations, would add to the stock of the Surgeon's knowledge, while a desire for honest reputation would quicken his diligence ; and this, perhaps, equally as much as if his support and continuance in the appointment depended solely on his success.

If some plan of this nature be not entered into among regimental surgeons themselves, for their own improvement, or by an order from superiors in the service, they may go

\* “ It seems certain, that medicines which do not produce some good effect, are, if they are of any activity, constantly more or less pernicious. We must therefore learn how to estimate the effects of remedies, if we wish to avoid an erroneous application of them, and to distinguish what share they may have in the *essential* or *accidental* symptoms of a disease.”

Vid. Zimmerm. on Experience in Physic.



on in the same thoughtless routine, tread in the same beaten track of bleeding, blistering, vomiting, and purging indiscriminately from habit, more than reason, as we have sometimes had occasion to observe, without the trouble of reflection, whether it is likely to do good or harm, or may be proper or mischievous.

To persons of this thoughtless turn, no time is so tiresome as that spent in an examination of the sick list; the patients names are called over, some insignificant advice given; perhaps ordering the patients to procure something, which the Surgeon ought not only to consider they cannot afford from the small pittance of their subsistence, but which, if its application be necessary, he ought to furnish them with; then return to his amusements, whether walking, fowling, fishing, hunting, or the like, till the hour of dinner approaches; while this and the jovial glass engages, perhaps, the greater part of the evening; morning comes, and the same scene is again acted; while the patients are but too often left to the strength of their constitutions, and the operations of nature for a cure.

What



What I mean they should furnish, if it be necessary to prescribe them, are, milk, vinegar, bread for poultices, oatmeal, and oil. These articles are often used in the regimental practice, and often with the greatest propriety; yet seldom have I observed it to be at the Surgeon's expence. If a soldier, by some accident, meets with a bruise or sprain on any part of his body, he is probably sent away, with an advice to bathe it with vinegar. This treatment may be extremely proper; but as it may happen that none is given him, and he cannot afford to buy it, the advice is seldom put in practice; thus the cure is frequently left to nature.

Bread and milk poultices are as often applied, with advantage, to various complaints. When this is the case, the patients in some regiments are obliged to furnish both bread and milk. I have known this become a very heavy and oppressive tax on the soldier, in cases where their application was necessary for any length of time; it may be two months and upwards. I have known them cost him no less than three half-pence a-day during the time they were used; and his remaining subsistence did not greatly exceed as much more: at the ut-



most, the remainder left was only about two-pence half-penny. For when a patient is sent to the regimental hospital, half a crown a week is generally his allowance while he continues in it. This is put into the hands of the hospital serjeant, and expended in the mess, or as the Surgeon points out.

The men justly complain of this heavy tax ; and it is for their sakes alone I mention it here, in hopes if these pages fall into the hands of any who still pursue the same custom, they may reform this abuse, and act differently. They must know, that the privates pay for their medicines independent of this, which the Surgeon of the respective regiments receives for the purpose of furnishing medicines, and things that may be comprehended under this head: for though they urge, that bread and milk forms no part of the *Materia Medica*; in a soldier's case, I would insist that it does, and that not only these, but every thing besides ordered by the way of cure, should be held in this light, and procured from the medicine fund: and here let me take notice of another auxiliary of the same nature, flannels for wrapping round  
limbs,



limbs, shoulders, arms, &c. affected with rheumatic pains : These, like the others, are often prescribed, and often with as much propriety. But can a soldier afford to buy a yard, or half a yard of flannel, when he needs it for such complaints ? A dozen or more of proper sizes, should be kept in the hospital, and lent to them occasionally ; the medicine money can afford all, and ought to afford them.

What I have said on this head will apply to oat-meal : this is used likewise in cases of various kinds in the form of poultice mixed with some other medicines, and with much success, in swellings of different kinds ; it is used as a proper vehicle for applying lead either in form of *Sach: Saturn:\** dissolved in water ; or in that preparation known by the name of *Goulard's Vegeto-Mineral Water*. When Beer is ordered in poultice, the same will apply to it. Some Surgeons apply oat-meal, and stale beer to ill conditioned sores ; and they say with good effects : when this is the case the Surgeon, not the patient, ought to bear the expence ; he is paid for all ; therefore he ought to afford every thing he finds

\* Now *Cerufs. Acetat. Ph. Lond. Nov.*



it expedient to prescribe, that part of regimen comprehending diet and culinary articles excepted.

Where such exactions are made, I mean when every thing proper, such as is now mentioned, are with-held from the soldier, when the medicine money can afford them, the military laws should interpose. And if Surgeons were compelled to return threefold, or something of this sort, to the man from whom they had made this exaction, with a public reprimand from the Commanding Officer, it might be the means of reformation; but it is not for me to presume to point out the mode: I must content myself with pointing out those abuses that seem to call for reform.

An orderly officer, it is true, visits the hospital in camp daily; in quarters, generally weekly; but I fear it is too much a matter of form with many. The report he returns to the Commanding Officer is as often taken from the Surgeon as from the patients. Indeed, he comes rather to enquire if any thing be wanted, such as fire-wood, straw, &c. than to hear complaints. He ought to visit the medicine-chest, and see that it be well furnished; but of this in general



ral he is a very incompetent judge: Besides, the Surgeon will seldom complain that medicines are wanting, when he knows he must himself procure them; or, in other respects, lodge an information against himself: But with these remarks I must leave this subject, and hasten to another of no less importance.



## CHAPTER XII.

OF THE PUNISHMENTS OF THE SOLDIERY, AS FAR AS  
THE SURGEON IS CONCERNED.

THE military laws are strict, and it is absolutely necessary, for the proper behaviour, and subordination of the privates they should be so. For this purpose Court-martials are often constituted to take into consideration the offences of those against whom accusations have been lodged, and punishments are frequently the consequence.

The British discipline may be called severe, yet it is in many respects more lenient than what the soldiery of some other nations experience. It is often indeed found necessary to punish faults not only proceeding from design, but those from negligence. If this were not done, negligence might prove of the worst consequence to an army. Among the Prussian soldiery this is carried to a degree far beyond any thing we are acquainted with in the British service. Dr. Moore informs us, that if even a soldier's hat is blown off by the wind, he is severely punished for it, although



although it cannot be supposed he made an agreement with the winds for that purpose. If, in the shock of a charge, a dragoon, by a dangerous accident, falls from his horse, and is thereby liable to be trampled to death by those that come after him, yet if he survives the accident, he is brought to the Halberds ; “ by this means,” says one of his Prussian Majesty’s Generals, “ we teach them the double danger of negligence, and force them to be constantly attentive to their duty.”

In his Britannic Majesty’s service we find them however occasionally severe. Anthony Gregory of the tenth regiment of foot, in the year 1759, was punished with a hundred lashes for suffering the queue of his hair to drop off, when on duty ; his hair was short, which obliged him to wear a queue, which perhaps he had that morning carelessly tied on.

When court-martials meet, and punishments are decreed, a disagreeable duty devolves on the surgeon ; for no man by the military laws, can be flogged without his attendance. It becomes his business diligently to watch over the sufferers ; for should the punishment adjudged prove greater than it is his opinion the delinquent can bear without



hazard of his life, he has authority to stop the Drummers (the executioners) at any period of it, and order him to be taken down.

This duty is, truly, one of the most disagreeable he is called on to perform: and one, likewise, that requires no small share of penetration to discharge conscientiously; for imposition though somewhat a justifiable one, is no where more apt to be practised than here.

Where is the man that will not endeavour to avoid punishment, if he thinks stratagem can accomplish it? with this view, the surgeon will sometimes find the sufferer fall into a seeming deliquium animi, before receiving his first twenty-five lashes\*; perhaps before he is much hurt, or almost any of the cuticle of his shoulders lacerated; if the court-martial has adjudged him much punishment, he should not be taken down at this period; there are few that cannot, with the utmost safety, bear double, or treble this number; if it be feigned, which may be discovered by the state of his eyes, for this very reason he should not be ordered down.

\* At the end of every 25 strokes, a fresh Drummer takes the cats; and this rotation is continued till the punishment is finished.



It is no uncommon thing, indeed, to see feigned fainting fits on these occasions, in order to excite the commiseration of the spectators, particularly the commanding officer, in hopes of pardon ; but we acknowledge it may at the same time be real ; for the first few strokes in lacerating the skin, give more pain than a great number afterwards, when once it becomes so bruised and destroyed in its texture by the *cats*, as to deaden and blunt its sensation. To an anatomist this, I apprehend, will appear rational and evident ; he knows the sensibility of the cutis from the great number of nerves that enter it ; nay, even the cuticle which many held as altogether void of sensation, and to be composed of lamellæ, without nerves, has been supposed of late by some distinguished anatomists to be almost entirely a congeries of them ;\* but this is a subject we shall not at present enter into ; it will require much more investigation than it has hitherto undergone, to elucidate it satisfactorily.

The trapezius, and head of the deltoid muscles, which lie most in the way of the

\* Vid. an account of the nerves as seen by Prof. Monro, in the Med. Comment,



instrument of punishment, and have but few nerves, comparatively, entering their substance, do not feel so acutely as many other parts of the body. All parts deeply covered with flesh, if they have not less sensibility, are at least less liable to danger from wounds. This is sufficiently proved by the common method of punishing disobedient children. The posteriors, on which they generally receive it, are composed of three large muscles, called glutæi, and which, as it would seem, are endowed with less sensibility from the small number of nerves that enter them, than many other parts of the body, bulk for bulk considered; it does not require the skill of an anatomist to point out this to the offended parent. Common sense and experience both show that little injury will be done the child, from considerable punishment on this part of his body.

Another reason is, the part yields to the stroke, and its force is thereby broken; the same degree of punishment, that is, strokes of equal force, on the tibia, the ankle, or other parts little defended with flesh, would receive injury much longer felt, and not so easily removed; the hard bone below acting as a fulcrum, would give the stroke its fullest power; while



while the vessels, nerves, and membranes of great sensibility lying between, must be bruised in proportion.

That part of the Deltoid muscle covering the shoulder, is likewise composed of a large quantity of muscular fibres. Hence, in the most common method of punishing soldiers, it is not only prudent but rational to teach those whose duty it is to execute it, carefully to avoid the ribs, and inflict it on this part. The pain also becomes less from the numbness that takes place by constant flagellation, for perhaps half an hour at a time. Should the sufferer really fall into a deliquium, some of his punishment passing during some seconds of insensibility, is, I think, in his favour, since he feels not, or at least obscurely, what he now receives.

We find this a wise provision of nature on all occasions, where pain becomes excessive, and irritates the system too much: here the powers of life, as it were, are at once suspended, and an interval of insensibility follows, whereby, like sleep, perhaps, to the wearied system, it is in some measure recruited, and rendered capable of withstanding the threatening danger. In this sense a slight deliquium



deliquium is far from being alarming ; it only becomes so by its duration : besides, the continuance of the stimulus of flagellation is one of the best means of recalling the patient back to sensibility. In slighter cases, then, of deliquium the punishment need not be interrupted ; a few more stripes will bring the sufferer again to himself, and prove that all our fears of danger were groundless.

Yet censure me not for want of humanity when I say so ; it will appear by and by, that my motive is very different. If, on the other hand, the deliquium continues, and he cannot be roused in the space of a few seconds, or if he turns cold, I always look on it as attended with danger. When I observe him sweat profusely on the face, as I have sometimes seen, I likewise look on his sufferings as severe ; and here I think it incumbent on me to attend well to the consequences.

Soldiers, during their punishment, never fail to call frequently for drink ; and they should always be indulged in this to the utmost of their wishes ; for it is the same now, as we find it in some kinds of fevers ; the great waste of liquids from an increased action of the heart, and from irritation, together with the  
violent



violent efforts used by vociferation, as long as they are able, and tossing to get loose, demand a supply, which in some measure refreshes them, and mitigates their pain. If refused this, which the wants of nature now loudly call for, they must bear a double load; the pain of the whip, and the added uneasiness of thirst; indeed, we should look on the punishment as a severe paroxysm, or temporary fever; with regard to the pulse, I never could depend on it in such cases; this will appear evident when we consider the ligatures upon the extremities, which, if they do not alter, at least impede free circulation.

If the deliquium continues beyond the time specified above, the punishment should be suspended a little, and drink administered, which should always be in readiness, with the use of some other stimuli, such as throwing cold water on the face, holding strong volatile salts to the nose, rubbing some volatile alkaline spirits on the temples, &c. and at the same time carefully observing the state of the eyes. In a true fainting, these are insensible to the stimulus of light; nor are they affected by threatening danger, such as making an attempt to rush the finger into them, and the like;



like; the same may be said respecting convulsions. The eyes will remain motionless, nor will the pupil contract and dilate by stimuli that were wont to affect them. For instance, if the head be now turned up towards the sun, the light, though too great for a healthy eye, will not induce any contraction in the pupil. I have, however, sometimes seen convulsions feigned as well as faintings; it is necessary therefore to be on our guard. But this will, in general, guide us in forming our opinion of the degree of the delinquent's sufferings, and assist us in knowing when the case is attended with danger, or when little or none is to be apprehended.

Should the offence be such, that the commanding officer thinks it his duty for the good of the service, \* and the discipline and cha-

\* The following anecdote is told as true, and will show how beneficial to the service, and safety, perhaps, of the army, occasional severity to individuals may prove.

During the late war in America—a grenadier struck Captain Boscawen;—a court-martial adjudged him a thousand lashes; which sentence was so perfectly disapproved of, that General Howe ordered it to be torn, and the man to be sent back to England.

In a few days another officer was struck, from an idea the thing would be passed over.—But mark the difference—in three hours (says the anecdote) *the man was hanged*—there was no more striking.

rafter



rafter of the regiment, perhaps the safety of the inhabitants of the place, as well as for an example to deter others from the commiffion of fuch offences, to have the whole inflicted, that the court-martial had adjudged him to undergo, whether at twice or thrice; if the furgeon is of opinion he can bear it without rifque of danger to his life, let him, by all means, receive the whole at once. I advife this from principles of humanity; for it will fave the unhappy man a great deal of additional fuffering.

Let us fuppofe him taken down at the end of two hundred and fifty, or three hundred lafhes; and that his fentence was a thoufand; all which he muft receive, whether at two, three, or more times, before he is releafed from confinement. This, abfolutely fpeaking, is giving him far more pain than the court-martial intended, unlefs they had particularly fpecified, in their minutes, that he was to receive them in this divided manner. This we fhall be eafily able to prove.

Let us fuppofe the Surgeon orders him down; that he is conveyed either to the Guard-houfe or Hofpital; is daily dressed till the wounds are healed, and a new cuticle formed,  
which



which may be in a month or five weeks. He is now become able to wear his clothes ; yet, perhaps, scarcely able to suffer the weight and friction of his cross-belts, or the pressure of his hammerfack ; the parts are as yet red and tender, notwithstanding he is ordered a second time to the halberds ; and at the end of two or three hundred more, is a second time taken down, cured as before ; a third time brought there, and so on, till the whole punishment be inflicted.

Those who consider the nature of the human body, will readily allow, that the second part of his punishment must cost him at least double the pain of the first. To illustrate this to such as are less acquainted with medical subjects, we desire them only to reflect on the pain they felt from a cut finger, or leg, after the wound is newly cicatrised, and the dressings are laid aside. They will agree with me, that they felt a tenfold sensibility in the part to what it used to possess. The very air affects it ; and a small injury at this time, before the cuticle thickens, and the part strengthens, such as a trifling blow, which on other occasions would not give uneasiness, gives now exquisite pain. Even more blood vessels, as  
well



well as nerves, seem now to be formed in the part than it was endowed with before, which age will obliterate as the cuticle condenses. We observe this take place in the infant state. Youth possesses many blood vessels, as well as nerves, which in riper years collapse and disappear. This is evident from the florid countenance of youth, compared with the wrinkles and pallid appearance of age.

Some will probably explain this from the ballance falling on the venous system. Anatomical injections, however, demonstrate innumerable vessels in the infant, that cannot be shewn at a late period of life. As nerves are always found to accompany arteries, the better to communicate that reciprocal action which they exert on each other, and by which their functions are more completely performed, it is reasonable to suppose many of these are obliterated also, as being no longer necessary. This at least we are certain of, that age is very far from being so mobile as youth. The blunted passions, the stiffened motions of the body, and hardness of each fibre; nay, a thousand things unite to confirm it.



Can a young animal of any species bear the same fatigue, pain, or cold, as one that is arrived to maturity? We see children suffer considerably in a degree of cold from which a grown person would feel no inconvenience. In like manner we observe them suffer greatly from a chastisement, inflicted for some fault, which would scarcely be felt, much less complained of by an adult. It is exactly the same with the soldier carried a second time to the halberds before his late wounds have been properly united, or the new cuticle properly condensed by age. This part is just in the state of a child's body; *i. e.* it is endowed with far greater sensibility from its recent growth, than it will be some months afterwards: it is no wonder then if he now suffers in proportion.

We know, that if a part of the body in health be covered some time, it becomes more delicate and sensible: for instance, the hands. Suppose on one hand a glove be daily and nightly worn only a few months, and the other allowed to remain bare; take off the glove, and expose the hand to the air, it will feel the cold much more severely than the other that remained uncovered. It is the  
same,



same, then, in the case above. The parts punished have been long defended by double coverings, and softening and lubricating dressings to favour the re-union; all this must surely add to its sensibility; but it seems obvious, and needs no farther illustration.

Yet as this train of reasoning may be rejected by some, however clear it may appear, we shall prove the fact, that more vessels do exist in parts newly cicatrized, than in others where no injury has been lately received. Dr. Monro has made experiments with this very view, one of which was on a pig, the part was cut out after it healed, and injected; an account of which the reader will find in his observations on the nervous system. After relating the experiment, the learned author concludes, "I will now add, that in calli, " cicatrices, or acretions, there are number- " less new formed vessels, filled in the living " animal with red blood, and which can " readily be injected \*."

Now it must appear from all this, that if the delinquent be taken down, cured of his wounds, and immediately after tied up again, he suffers a punishment equal to the whole

\* Vid. Obs. on Nerv. System, p. 86.



each time, should he be tied up ever so often. Surely this is what the court-martial never intended ; and is a cruelty the Surgeon ought to point out, and endeavour to guard against, by explaining the reason, if the officers be unacquainted with it.

The danger of recovery after a thousand lashes is, I own, vastly greater than that from two or three hundred ; but I am still of opinion, there is little difference in the sum of the absolute pain, if given at once.

Hall, was sentenced to receive five hundred lashes for house-breaking. He got four hundred of them before he was taken down ; and in the space of six weeks was judged able to sustain the remainder of his punishment, as his back was entirely skinned over. The first twenty-five of this second part tore the young flesh more than the former four hundred, the blood pouring at the same time in streams, as if a number of veins had been opened ; by the time he got seventy-five, his back was ten times more cut by the *cats* than with his former four hundred, so that it was thought prudent to remit the remaining twenty-five, and take him down.

For



For some days afterwards he complained grievously, and declared that his former pain was trifling to what he suffered now. Other examples might be added ; but to multiply such is disagreeable. This case, however, was so evident, that all the officers present at this part of the punishment remarked it, while the Lieutenant-Colonel, a man of great humanity, whispered in my ear, to order him down at the above number. In this instance, the copious flow of blood issuing forth at every lash, evidently proved an encrease of blood vessels in the new cicatrized parts.

When the Surgeon finds it incumbent on himself to take a man down, because it is his opinion he is in danger, he ought as carefully to represent the severity of a second or third punishment, and endeavour, if possible, to procure the man's release. This he may do privately, without its being known to the delinquent from what source his pardon comes ; for it is better that mercy should seem to proceed always from the commanding officer, whose duty it is to keep the privates in due subjection, and from villainous actions, than from any other. This clemency may have a proper effect on some, and from a sense of gratitude make them



behave well, while it will, at the same time, gain him a good name in the regiment. Yet, we confess, the evil-disposed may take advantage of such mild treatment, and commit bad actions through hopes of experiencing similar mercy \*.

From the reason adduced in support of my opinion, that a soldier should not be taken down till all his punishment be given, except when the case is urgent, or when he has reason to hope the delinquent will be forgiven what remains, which will be known from his general character, and the nature of the crime ; none, I am persuaded, will accuse me of inhumanity. My advice is surely calculated to obviate, as much as possible, both inhumanity and cruelty. For though the populace, who are often present at punishments, and as often, on these occasions, troublesome, may not see this, nor comprehend the reason, yet he that reflects must acknowledge its truth, and its salutary tendency.

Another thing which the Surgeon should keep in view, in performing this disagreeable duty, is, the form of the sufferer's body ; the

\* An instance of which we have already related in the anecdote relative to General Howe and the grenadier.



make of his fibre, and strength of his constitution. This is a very material thing, and without such attention, he may be guilty of great errors. I need not tell him how much this varies in individuals; nay, so much, that perhaps, no two on earth are in this respect exactly similar.

Some are of a more robust, some of a more delicate make; some from this endowed with great sensibility, others again far less sensible; he must never let this escape his penetration. Experience in making observations, and comparing the difference of the form of the body in different men, will enable him to judge in this necessary part. Men of red or fair hair, with ruddy complexions, and of a small, or tall and genteel shape, or that are plethoric; men of a scrophulous habit, or such as have a tendency to diseases in the chest, or are constitutionally weak; will be more affected by a given number of lashes, than a man of a hard dense fibre, with three times the number.

The way of life, *i. e.* the trade they have been bred to, unless they have long left it off, may add to this. Tailors, for instance, who are much confined within doors at their



employment in the army, are more delicate and tender than those who are always in the open air.

Edwards, in the end of 1781, was sentenced to receive fifty lashes; he had got drunk, and otherwise misbehaved. In the army this number is accounted next to nothing. So much, however, did this small punishment affect him, that notwithstanding every degree of attention to his cure, it was upwards of three months before he could bear his cross-belts, or even move his arms to work. Perhaps fifty more would have rendered his life in most imminent danger; he was of a thin, tall, genteel shape; his hair black, but soft, woolly, and thin on his head, with a skin remarkably white and smooth; he was a taylor.

Those, on the contrary, of a dark, or brown complexion, of black hard hair, or hair of a reddish brown, and curled, are generally of a robust constitution. I mean here, persons of adult age; though we may observe the same difference almost in infancy by comparing similar ages, but not so fully marked. Men who have much hair on their bodies, are stronger than those who have little  
or



or none. In a word, those of, or tending to the melancholic temperament, are always stronger and abler to bear punishment than the sanguine, or choleric; as also men of large bones, and their muscular parts equally furnished. I should be afraid to punish a person of a leucophlegmatic habit, so much as the melancholic. Though the shades of temperament gradually slide into each other, yet enough may be observed to assist us in forming our opinion with regard to the sum of punishment men in the army can sustain without danger.

Burch, a grenadier, received three hundred lashes for desertion, in August, 1782. He bore this punishment without the smallest groan, or ever moving from the moment he was tied up till he was taken down\*; nor  
was

\* Some, however, do not complain, through what may, perhaps, be called something like fortitude.—In a public paper I lately found the following anecdote; whether it will apply here, I cannot tell. “It is not long since,” says this account, “in France, a soldier received two hundred lashes without *flinching*; the officer, therefore, ordered the fusilier to stop, and stabbed the soldier with his sword—the soldier dropped, and in the moment of dying, said—“thank God.”

Lately, in England, not far from the Metropolis, says the same account, a soldier received four hundred lashes, he too, scorned



was he so much cut as I have seen others with much less ; for instance, in the last example. He was about forty years of age, five feet ten inches and an half high, with a proportionable thickness ; not corpulent, but had large bones, and of an athletic make ; his skin of a hard firm texture ; and on the whole, what may be properly called, a robust man. He had also been in the army eleven years, part of which he served in the West Indies.

Serjeant, a grenadier, in the latter end of the following October, received two hundred lashes for theft, yet he was not so much as cut by this punishment. He was tall, appeared even lean, fibres hard, and skin brown. His back was only blackened, and the vessels beneath the skin a little lacerated, as appeared from this colour, which proceeded from extravasated blood ; but the thickness and density of the cuticle prevented it from being cut ; yet the lashes were given with as much force as the drummers, who were strong men,

scorned to *flinch* for some time, till by a most dreadful repetition of stripes, he groaned, and died.—What a pity there should be (if there really is) a necessity for such horrid punishment !

could



could apply. The Adjutant of the regiment, on my mentioning how little effect the punishment had on the man, declared to me, that though he had served most of his life in the army, he never saw lashes, as he phrased it, *better laid on*. This man was of a strong fibre, dark black hair, hard and crisped; six feet an inch and a half high, and twenty-seven years of age, had been seven years in the army. I mention the length of service, because when inured to the life of a soldier, they bear its vicissitudes much better; and punishments I term one of them.

Sheppard, received five hundred lashes for house-breaking, and was entirely well in three weeks. Hall, who was his companion in this action, and suffered at the same time, was six weeks before he recovered from his four hundred, and his seventy-five given afterwards, made him an object of great distress. The difference of these two in constitution was remarkable, and easily discerned, even by those of no medical judgment. Had Sheppard received one thousand, his punishment would not have been equal to the others at four hundred; he was fit for duty, we find, after his five hundred, in half the time.

Henley,



Henley, for desertion, received only two hundred, but this was more to him than fifteen hundred would have been to this man. The head of the deltoid, the longissimus dorsi, the trapezius, and other muscles in the way of the cats were greatly injured. When the wounds were cleaned, and the skin and bruised parts had suppurated off, the spine below the trapezius, and part of the scapula were laid bare. I never had seen so much of the muscular parts destroyed, in any case from punishment, before. His stature was small, about five feet two inches; his shape proportionably delicate and slender; his bones very small; his body lean; his hair a fair brown, thinly covering his head, soft, lank, and without the smallest curl. He was twenty-three years of age, and had only been three months in the service.

A few days after he received his punishment, he was seized with an inflammation in his throat, which soon went off, but was succeeded by loss of motion in the lower extremities, which was upwards of a fortnight before it could be removed. A large abscess formed below his left shoulder, and considerably lower than where the cats had cut him;



him ; viz. about the fixth rib, and towards their infertion into the spine.

On the fourteenth day, after his punishment, I opened it, from which iffued more than two pounds of pus, mixed with blood ; before it was opened, its bulk was as large as the crown of a hat. I attributed the want of motion in his limbs to the inflammation of the abscess, and I may likewise place his recovery to the removal of the pus. Had it made its way through the intercostals, and thence into the cavity of the thorax ; or had the inflammation reached the lungs, the case might have ended in a hectic fever, and death. It was upwards of seven months before he was so far recovered as to be able to do his duty.

This case alone, is sufficient to point out the necessity of paying due attention to the strength and constitution in soldiers punishments. To contend that all can bear five hundred, or a thousand stripes, because some are found to sustain them without much danger, would be as absurd, as to contend, that because one man has escaped death in the midst of an engagement, all will do the same.



During the time of punishment, we sometimes observe the back tumify considerably; in the more delicate, it puffs up under the cats, in a very short time, and to a great degree. I have frequently noted this, and it is one of my characteristic marks of a tender habit; it is a sure sign of a laxity of fibre. This should not be overlooked in the quantum of the punishment, even should some of those marks, already mentioned, be absent, or at least doubtful. The robust seldom swell, with a moderate punishment. In such delicate habits, inflammations, and large suppurations ensue.

Jones, a grenadier, was punished in December 1782: The tumefaction took place to a high degree, and it was with no small difficulty it could be discussed. Dale, who was punished in the beginning of the following month, was, in this respect, still worse. For upwards of a fortnight he lost the use of his limbs.

In discussing these inflammations, when it is practicable, I have succeeded best by the liniment: saponis. The inflammation generally takes place below the lacerations; sometimes as low down as the last vertebræ  
of



of the back ; and in one case the gluteus was slightly affected. It is produced by the great quantity of extravasated blood, which falls from the wounds above, and from the great degree of excitement in the neighbouring vessels, communicated by the injury which the contiguous parts sustain.

When this tumefaction, during punishment, is observed to take place to any great degree, the soldier should be taken down ; it portends danger in proceeding farther. Such was the case with this unfortunate man. I had never observed the tumefaction so great with the same number of stripes. He was of low stature ; skin white and soft ; indeed he had very nearly fallen a martyr to the punishment. An abscess, such as already described, formed in the small of the back, by the falling down of the extravasated blood, between the muscles, and dorsal vertebræ, after it was opened, and almost cured, a second, still lower down took place, viz. about the last of the dorsal vertebræ ; these produced a severe fever of several weeks duration, and the copious discharge, which continued long, reduced him to a mere skeleton.

We



We must not omit giving some hints here relative to tying the delinquent to the halberds. This is generally performed by the Drum-major, and the Punishers, over whom he presides. But I am of opinion the Surgeon should inspect the whole. He should see that the arms, which are generally stretched above the head, and tied about the wrists to the halberds, be neither too tightly bound, nor over stretched. The same should be observed of the cords that fasten his thighs. I have seen inconveniences arise from want of attention to this article, where the hands above the ligatures, from the stoppage of circulation, have turned black, and remained numb, and cold, for upwards of a week afterwards; this accident will follow, when a man is injudiciously bound, so that he hangs, as it were, by the hands. The thighs ought to be considerably tighter bound than the hands, because it more effectually prevents swinging, which is always prejudicial, and renders the punishment both more severe, and attended with greater hazard.

But if the cords be too loose, it is as bad; for room is now allowed for swinging, and leaping about, to avoid, if possible, the strokes, whereby



whereby it is out of the power of the Punisher to give them on the parts where he is directed, and is often the cause to the Drummer himself of some stripes for not doing his duty with more exactness. By this means, the *Cats* falling on improper parts of the body, may prove dangerous ; if too low, affecting the ribs, it is bad ; it is too near the vital parts ; if too high, on the neck, or even twisting round on the breast, it is not less inconvenient ; nay, what is worse, by their swinging, I have seen the cheeks cut, and the eyes in danger. The possibility of losing an eye in this manner is very clear ; for it would be a thousand to one if the sight could be preserved after an accidental stroke from the *Cats*. They should then be admonished before the punishment commences, to stand as firm as possible ; for, as they cannot avoid the sentence of the court-martial, the more they toss, the greater is their punishment. To stand *fair*, as they term it, saves pain, not only to themselves, but several stripes to the poor fellows, who are obliged to execute the sentence\*.

Anderfon, was punished in April 1783. He behaved stubbornly, and would not permit

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\* The Adjutant charges the Drum-major, and often enforces it by a stroke of his ratan, to make the Drummers do  
their



mit himself to be so well bound as it was necessary; the cords that bound him were too loose; he had too much room to swing; and all the accidents I have mentioned, except the injury to his eyes, took place; the *Cats* plaited round his neck, and even cut his cheeks. The Punishers were obliged to stop, and bind him firmer. We see then, a medium is to be observed in this affair.

The Surgeon's attention should likewise be turned to the parts on which the cats fall. The mode of punishing, in general, is, for each Drummer, appointed on this duty, to give twenty-five strokes in turn, till the sufferer be ordered down. Some of them strike with more judgment than others; the surgeon should attend to this, and caution them to let their strokes fall on the shoulders, yet not on the neck. To punish so low down as the ribs should be religiously avoided; it is not a little dangerous; the heart, lungs, and other noble viscera are too contiguous, and will be affected in proportion.

Let as little new skin as possible be wounded, for the reason already given, that the cutis, cuticle, &c. are endowed with great sensibility. I trembled

*their duty*; he in return, strikes the Punisher, who, if he is able, is compelled to add force to his next stroke on the delinquent.



trembled always for the unhappy sufferer, when a left-handed drummer, punished in turn, with those using the right. His strokes cut exactly across those given before him, and by this means, both more muscular substance, and new skin was torn. The sloughs, that suppurate off in the course of the cure, are always deeper, and the patient, of course, longer of recovery. I could wish to exclude such men, for the sake of the sufferer; at least, I would estimate twenty-five such strokes at fifty of those given by right-handed punishers; for I am confident they do him more injury than fifty, where the cuts lie all one way.

Since, from the nature of the Surgeon's duty, and the military laws, he has so great a share in punishments, I must not omit another caution he is to observe; that is, the size and weight of the cats. The cords should be small, by which means they will cut cleaner, and bruise less; nor should the same cat be long used at one punishment; for by the additional weight of blood, with which they are loaded, the severity of each stroke is greatly augmented; they fall now on the sufferer's back, like so many *flails*, to use the poor men's own expression. They have often afterwards, on my dressing them, declared, that one



stroke from a cat loaded with blood, gave them more pain than four from a dry one ; it is evident it must be so.

It is often, from thence, that large and dangerous inflammations take place, and those dreadful suppurations already mentioned. In two cases, where these suppurations were large, from the long continuance of the discharge, I not only dreaded a hectic, but a corrosion of the ends of the ribs, connected with the spine, even from the top of the trapezius, to the extremity of the latissimus dorsi.

Sinuses always form here, and extend on every side, running far beyond where the cutis is wounded ; the cellular substance is always corroded, and melted down, and the cutis with its cuticle left detached ; so that by lifting it up with the forceps, to syringe the parts below, we can see down from the trapezius, between the cutis and the muscular parts, to the last vertebræ of the loins, where it is always necessary to make a counter opening, to allow the discharge a free exit.

In many regiments it is likewise customary never to wash the cats after punishment, but to allow the blood to dry on them, to render them more severe ; but I cannot avoid expressing my disapprobation of this method.



It is adding greatly to a punishment, which is already, from its very nature, accompanied with too much severity. I am firmly of opinion, that the cats should not only be washed clean, after every punishment, but that the same cat should not be used in more than fifty lashes in the same punishment, to avoid the bruises that constantly ensue from their augmented weight. The Drum-Major should, therefore, be provided with at least ten or twelve cats, which, at fifty lashes a piece, will be sufficient, in general, to finish the severest punishment.

These regulations are entirely in the power of the commanding officer; the military law leaves him altogether at liberty on this head. Perhaps it would have been better, had it been more definite than it is, on a matter that appears to me of some moment to the service. Men having a command over others in this respect, would not then dare to abuse it, as some instances prove to us they have done\*. Men would not then, at the caprice of a superior, or their *Governor*, be whipped to death as some recent accounts tell us, has lately been the case abroad, in one of the English  

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stations ;

\* Alluding here to the conduct of a late Governor of one of the British Settlements,



stations; but the cruel perpetrator of such a deed, though he may fly from the justice of his country, cannot fly from his own conscience \*; a wound must rankle there, and poison all his future happiness.

Would it not be consonant to policy to adopt that method of punishing which is attended with least danger? Pain must follow punishment; it is that for which it is inflicted; but danger ought not. The cat used consists generally of six cords; a hundred lashes given with this instrument, if we refer to the injury done, will be equal to six hundred given with a single cord. The skin and muscular fibres will be as much torn, as if 600 had been inflicted. The sum of pain, however, is not in the same proportion. The sum of pain will be greatly under. Therefore the danger from 100, given by a cat with six tails, is great; but the sum of real punishment, or the pain, is little augmented by the addition of cats. Let then a single cord be used instead of this multiplied number. Let us see how it stands when compared with the punishment given by the West-Indian planter to

\* One account says, the person alluded to above, ordered five soldiers to be tried, and condemned to receive no less than fifteen hundred lashes each; another account says, eight hundred



to his slave. The planter, while he punishes severely, has an eye to his interest, and for the most part does not inflict a degree of punishment that would deprive him of his work, or put his life in danger. Their punishments are given with a heavy cart-whip, and not on the back, but lower down. I speak of the most judicious and most merciful of the planters; for unspeakable cruelties are also occasionally practised by many of them, as we are well informed. They are able next day to attend their usual work. Not so the soldier: weeks, and often months pass away, and he is not recovered. †

But allowing, that few, or none die, which I believe to be the fact; immediately from punishments moderately inflicted, I know, from experience in the service, that constitutions have been considerably impaired by hundred with a rope's end; this, if it be true, must still be worse; while it must shock humanity to reflect on the consequences. Three, it is said, died of their wounds; and the other two must spin out the rest of their existence in misery, from broken constitutions and bad health, which must ensue from this barbarous treatment. Vid. the public papers, about the end of 1783, for this account.

† I acknowledge my obligation to the editors of the British Critick, in their review of the first edition of this work, for the hint of the above comparison between the punishment of the West Indian slave and the soldier.



them. We sometimes find the body melt away into a spectre of skin and bone, from the large suppurations that have followed; nor were they ever able afterwards, as long as I knew them, to bear the same hardships as before; and they must, from thence, also be more incident, not only to contagious diseases, if they be in the way of them, but to other complaints, to which fatigue, or hardships of duty may expose them.

The true design of punishment, is to prevent the commission of crimes, not as a sacrifice for that already committed; if this can be obtained, the utmost end of the law is accomplished. And may not this be as well done by moderate, as immoderate severity? That such punishments are meant as an example, to deter others from the commission of crimes, is proved from their being always executed in the presence of all the private soldiers in the place. They are constantly obliged to form a circle round, and be spectators: for this purpose, the ceremony of stripping, and tying up the offender to the halberds, should be rendered as solemn and awful as possible, to impress their minds the more deeply; but the punishment itself should be as moderate as the  
nature



nature of the crime, and the military law will permit.

The next thing the surgeon is to attend to in punishments, is the season of the year, and state of the weather. In winter, and in cold weather, a man will bear a considerable larger punishment with less danger than in summer, especially if the weather be warm, and has continued so for some time before; or if autumn be approaching. In cold wintry weather, the fibres are tense, and rigid, comparatively to what they are in hot weather, and much less danger is to be apprehended from fever, which when it has appeared, I have always found to be of the Typhus, than the inflammable Type: I never durst bleed in it; for it seldom takes place till suppuration comes on, and the smell from the back is considerably offensive; and to these putrid steams, I always attribute a great share of it.

If the prisoner has been long confined before the court-martial sat on him, or afterwards, before its sentence is executed, and the weather all this time continues warm, it is reasonable to suppose that the body will be proportionably relaxed and weakened. Even the dread and apprehension of the evil hour, must have its share in adding to this state of body,



body. It is needless here to enter into a disquisition concerning the sedative effects of fear, and the other depressing passions; for if they be not the ultimate cause, they are allowed by all to be powerful occasional causes of nervous fevers.

Every soldier, under confinement, has something to fear; all are not callous. I have seen some suffer more from this than from the punishment; we may add, that their situation is less comfortable in confinement; they are neither allowed a bed to sleep on, nor is their food so full; if they are placed in the Guard-house, they must lie on the guard bed, which is always a broad bench, without any thing spread over it; if in the *Black Hole*, they have only straw to lie on, and are otherwise worse off, as it is generally a small, damp, dark, confined place. Suppose a man kept in this condition for some weeks, never having his clothes off, nor ever out of it, except to the necessary, &c. under the care of a centinel; must he not be debilitated? The Surgeon should keep all these things strictly in view.

Autumn is the most sickly season; flagellation will now be more liable to produce fevers. At this time, then, let him caution the commanding



manding officer, to recommend to the court-martial, that punishments may be moderate. The smell emitted, in a few days after, from so large an excoriated surface, is of itself, independent of any auxiliary cause, sufficient to produce fever ; if contagious fevers be in the place, this must greatly predispose the body for their reception. I have often found the smell highly offensive, both to the patient himself, and all those in the room with him.

Burch had so great a discharge from his back, accompanied with a smell so great, that though a more than ordinary robust man, it made him extremely faint and uneasy ; he complained more of this than of the pain he suffered, yet he was carefully dressed, and washed twice a day, and for some time shirted once every day ; the weather was warm ; it was now the end of August.

Dale, who in January following, was punished for stealing, smelled so offensively, though the greatest attention was paid to dressing, and washing his back, as well as to changing his linen, and so great effect did it produce on his health, that he fell into a fever, and narrowly escaped with life. Though this was at the coldest season of the year, yet so disagreeable was the room where he lay, to  
the



the other patients, that they entreated me, to have him taken out of it, with which I complied, lest their health should suffer, and a contagious fever be induced among them. A separate room was, therefore, fitted up for him, to which he was removed ; the hospital, happening at this time, fortunately, to be more than commonly large and commodious. From the putrid smell of his sores, it was no easy task to dress him ; and such was the precarious state of his health, that I durst trust it to no one but myself.

Before I finish this subject, I must beg the Surgeon's indulgence, while I give him another caution, which is, never to suffer a prisoner to receive his punishment under cover ; let it be done invariably in the open air ; this, as far as I know, is mostly practised. I remember once a proposal to punish a man in the Guard-room of a Fort, the better to avoid the populace, but I strongly objected. I need hardly add my reasons ; it was to allow the man the benefit of the free air, a matter now of some moment. Sometimes, to avoid the mob, it may be thought prudent to propose punishing in the Guard-room, or under some other cover ; but if possible it should be avoided.

Punish-



Punishments should not be inflicted on, or immediately after a march, even should it be so short as ten miles ; for the sanguiferous system, by fatigue, must be accelerated, the body debilitated, and rendered more susceptible of injury. For the same reason, it should not succeed the exercises of a field morning, nor yet the morning after a drunken debauch.

From what has been said, it will occur, that in warm weather, the morning is the most proper time for punishments, as well on account of the coolness, as from the refreshment of the night, if the prisoner has had any place to sleep in. Should the punishment happen in a Cantonment, at a considerable distance from Head-quarters, and it be found necessary to send the prisoner there to the regimental hospital, do not oblige him to walk ; it is cruel. Let a cart be provided, even if the hire should be stopped from his pay ; a mile, or a mile and half I do not consider as of consequence, nor is a cart, in this case, necessary ; but if much more, he should be indulged with one ; for though his sores may not yet render the body stiff, or feel so painful, as they will some hours after, yet  
his



his spirits and strength must be so exhausted, that his limbs may be very unequal to the task of supporting his body in walking.

Anderfon, was punished at Lowestoffe, nine miles from head quarters ; it was found necessary to send him to the regimental hospital, at Yarmouth. A guard was ordered to escort him there ; he declared he could not walk, which I very readily believed, and prevailed on the commanding officer, of the party, stationed there, to indulge him with a cart : he had walked from head quarters, that morning, under a guard, and to oblige him, after a severe punishment, to return back on foot, might have proved dangerous.

Surgeons are apt to use too much delicacy, and do not always contend for their opinion and authority, as behoves them, respecting punishments. An ill placed delicacy, in this point, may prove serious, sometimes, to the sufferer. The Surgeon's business, at punishments, is to prevent any danger to the life of the patient, and to take off any blame that otherwise might fall on the officers ; he should, therefore, exert his authority, and take the sufferer down, though contrary to the opinion of the whole corps, when he sees proper

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reason



reason for it. It is he alone, not they, who is supposed to be acquainted with the strength of the body, and the human constitution. An apology is offered often, by Surgeons, that officers may be offended, if they officiously step in to prevent the farther execution of the sentence, when it may appear to them, that scarcely half enough has been inflicted; but he may depend on it, this will not screen him, if he proves too passive and obedient, when duty, and well timed tenderness, urge him to act differently.

It is true, some officers may be rash enough to censure him, if he orders down a delinquent, before receiving, what they may think his desert; but here, it is not the magnitude of the crime, but the sufferer's ability, and the danger the Surgeon sees before him, by which he is to act; nevertheless, I am apt to believe, there are very few officers of a disposition so cruel as to enforce more than the Surgeon thinks enough.

I have seen repeated instances of the humanity of officers; they have often whispered in my ear, on these occasions, and with expressive countenances, asked, whether I did not think enough had been inflicted? and  
this



this too, when both the offender's crime, and his strength, appeared to me to deserve more ; instances of which, I have often experienced in a Lieutenant-Colonel, under whom I served some years, who for humanity has, perhaps, scarcely his equal in the service.

They were always great offenders whom he ever allowed to suffer, even till I ordered the punishment to be suspended. Robbery, house-breaking, shop-lifting, theft, are crimes that always call for vigorous punishment, as they affect not only the property, but the safety of the subject ; not to mention the honour of the regiment, which every officer should maintain as far as lies in his power.

Should the Surgeon find many of the officers disposed to blame him for too great lenity, alledging that the subjection of the regiment will be injured, and the commission of crimes thereby encouraged, he should take pains to point out his reasons for his conduct ; and endeavour to convince them of worse consequences to the character and good name of the regiment, should any die from over-punishment. They should be informed, that it is the opinion of many eminent men, that the military laws are already too strict ; nor  
should



should it be without much reluctance that they are put in force in their utmost rigour.

Besides, as this is a duty for which he, in a particular manner, must answer, he is therefore, with reason, more concerned for the consequences. It becomes more incumbent on him to guard against danger, both for his own, and their reputation. Should a man die, in consequence of over-punishment, I am certain he might be tried by the laws of his country for his life; and such an accident would fix, and justly, an eternal blot on his character, both as a man void of professional knowledge, and of the feelings of humanity.

Such an accident, some years ago, did unfortunately happen to a regiment quartered in the west of England. There a man died in consequence of punishment. The circumstances attending it are not necessary to be related here; thus far may be said, that both surgeon and officers mistook the man's strength, for it must not be supposed they meant to whip him to death. The Surgeon too easily yielded up his prerogative, and forgot he was responsible, till his country called upon him to answer for his conduct. He



was tried at the succeeding assizes for the county, and though acquitted, from several circumstances that appeared in his favour, yet he never spoke on the subject without considerable emotion, as I know from my acquaintance with him afterwards : it cost him not only much anxiety of mind, but great expence, and the hazard of his life. An enraged multitude fought him in every corner ; but a precipitate flight to another kingdom prevented them from discovering him ; had he been found while their ferment continued, they would have taken the law into their own hands, and not waited for the verdict of a jury ; happily for him the assizes were at several months distance, and the minds of the people had time to cool before he appeared on his trial, which his friends thought it highly expedient for him to do,

When a court-martial sits, it is not the strength of the offender's constitution, but the accusation brought against him, that the members composing it consider. Nor do they wish to whip any man to death ; if he can bear their sentence, it is well ; if not, they are no longer judges, nor are they responsible ; this is placed in the Surgeon's hands ;  
 he



he is set as a counter-balance, and check over the severity of the law, in this respect : does he abuse this great charge committed to his trust, then is he, indeed, justly blameable ; nor ought a false delicacy, or an ill placed deference to officers, in matters of such moment, to screen him, if he be guilty, or lessen his accusation. He cannot restore life ; he ought not, on any account, whatever, to stand unconcerned, and see it taken away, when he is to be its protector.

And should any military gentleman, whose duty calls him to sit on court-martials, ever chance to look into these pages, let me beseech, let me entreat him, to weigh the matter of offence well ; let the accusation be fully considered, and let the unfortunate prisoner be well attended to in his story.

Remember, he has generally few to stand his friends ; let no prejudice affect him.—But, in doubtful cases, let them lean always to the side of mercy,—for doubtful cases will occur ; where innocence, notwithstanding the greatest care to arrive at truth, will sometimes suffer the punishment due to the guilty.



“ Was it Mackey’s regiment, quoth my uncle Toby, where the poor grenadier was so unmercifully whipped, at Bruges, about the ducats?—O, Christ! he was innocent, cried Trim, with a deep sigh—and he was whipped, may it please your honour, almost to death’s door—they had better have shot him out right, as he begged, and he had gone directly to Heaven, for he was as innocent as your honour.”—“ Honest Dick Johnston’s soul to be scourged out of his body, for the ducats another man put into his knapsack!—O, these are misfortunes, cried Trim, pulling out his handkerchief.—These are misfortunes, may it please your honour, worth lying down and crying over\*.”

Misfortunes, indeed!—yet such as will, in the course of things, sometimes unavoidably happen. We see men occasionally suffer death, for crimes they never committed, by the force of false witnesses, though the Judges take all possible care to sift the matter; and we have the same reason to expect that the witnesses examined on court-martials, by Military Judges, may not always be influenced by truth; here, there is no room to accuse the court; it must act by the witnesses brought before it: it is all we have a right to expect, when they candidly, and impartially weigh the force of the accusation with the prisoner’s defence, and give judgment accordingly.

\* Trist. Shandy.

I never



I never knew an instance, save one, of unmerited punishment, nor could the blame in any degree be laid to the court; as it happened, the punishment was trifling, I think, only fifty lashes. A soldier was found by the patrole, out of quarters, beyond the hour limited by orders; he was likewise without his hat, and standing up by the wall; he was carried to the officer of the guard, who confined him, as it was his duty. At this time orders were strict, on account of several depredations made on the property of the inhabitants, that had lately been committed, as was alledged, by the soldiery, which produced complaints from the magistrates to the commanding officer: his being found in this manner, and without a hat, weighed considerably against him; it was in vain that he urged he was standing at the door of his billet, and that the door had been shut against him. The truth was, the landlord had thrust the poor man out of doors, nor would he give him time to seek for his hat; it was a market day; the landlord had company in his house, and would not allow him to sit by the fire, as he took up the room of a guest; to retire to his bed, he could not, for the room he was to sleep



in was likewise occupied in this way : it was probable some angry words had passed between them ; but however this be, the foldier was shut out, and found as already related. In the first place, orders were disobeyed ; and in the second, the inn-keeper, when examined, insisted, that the foldier behaved ill : what could the court do ? they were obliged to condemn. The poor man assured me, during the course of his cure, of his innocence. Punished men seldom refused to confess to me, while I dressed their sores, whether they were guilty or innocent of the crime alledged ; but it was too late here, before I arrived at the truth, to prove of any service ; the deed was done, the punishment was inflicted.

Different regiments use different methods of punishing : in some to run the gauntlet, as they call it, is customary. This would appear a cruel method of treatment, even more so than flogging at the halberds. Here, instead of *Cats*, rods of willow are made use of ; the whole regiment are drawn up in a line, two deep, face to face : every man is furnished with a willow ; the prisoner runs naked, the whole length of the line, and  
every



every man strikes as he passes ; no regard can be paid in this way to the part they strike ; hence the ribs as well as the shoulders are wounded. I conceive, there can scarcely be a part from his neck to his heels, that has not received its share. Hence appears its cruelty ; I am, however, very little acquainted with it, and can speak the less positively on the subject.

In others, again, a different method is in use ; here they flog alternately on the back and posteriors ; I would object less to this than the former. The posteriors, as well as the shoulders, can without much risque of danger, bear a moderate punishment.

The mode is again varied in other regiments by the manner in which the lashes are inflicted. In some regiments of the horse, I am informed, it is always customary to count *ten* between each stroke ; I deem this tardy method of proceeding, likewise, an addition to the punishment ; when they are given more quickly, the patient has less time to reflect, and feels the less. I hope where this method of prolonging pain, is customary, an allowance is made by a fewer number. I should suppose, that two hundred lashes, trailed



out in this way, would be felt with more pain than six or eight hundred, such as I have seen commonly inflicted.

Captain George Coote informs me, that when he lay at Gibraltar, between the years 1763 and 1770, a surgeon belonging to one of the regiments then in the garrison invented a machine for confining the delinquent during the time of punishment; but both he and his machine was much decried by the men, and it soon fell into disuse.

It consisted chiefly, it seems, of a plank with holes cut in it, something like the common *stocks*, to be seen sunk in the ground, near the highways, and in several villages in this country. The culprit was placed on a stool before it, and his head bent down and put through one of the holes, and fastened down. His arms were stretched out, and in like manner each put through other holes cut for that purpose in the plank. The feet and legs were fastened together as he sat on the stool. By this contrivance the back was exposed to the punishment; nor could the sufferer move, or swing about, as in the common way; but on trial it was found to be attended with great inconveniences, and injury



jury to the men. Among these, none of the least was the awkward posture in which he was so long detained, with his head bent towards the ground : nor could the atmospheric air be so freely breathed by him, which I consider as one of the greatest of his sufferings. An erect posture is far preferable to this bent one, as the blood circulates with more freedom both through the lungs and the liver ; the parts of the human frame where it ought, on no consideration, to be interrupted. When its inconveniences were discovered, it was, by unanimous consent of officers and men, laid aside, and the old mode of the halberds again adopted.

Of the other punishments, viz. piqueting, and riding the wooden horse, I cannot speak much, having had few opportunities of seeing soldiers punished in either of these ways. I am of opinion, they are not so frequently used as that of which we have chiefly treated here ; nor am I certain whether the Surgeon has any concern with them. This is another reason why I may pass them over.

Some regiments there are in the service remarkably regular in their conduct. In such, punishments are almost unknown. Where  
this



this great blessing prevails, it is doubtless to be attributed to a reciprocal attention in officers and men; in the former's not being censurably severe, nor watching, as it were, for accusations, and catching at every trifling deviation from strict military discipline; in the latter, to a due circumspection in their conduct, and a careful avoiding every thing that might be construed into offence against military law. The Inneskillings, or sixth regiment of dragoons, deserve our eulogium here. I have been assured by their officers, and the behaviour of the privates during a year's residence at the place where I now live, proved it, that, for the space of the previous eleven years and upwards, there had not been a punishment, nor any offence to deserve it, among them; yet no regiment in the service was better disciplined; no disobedience to orders; no want of attention in them to duty more here than in others: it was fashionable among them to behave well; and the contrary, in an individual, would have been considered as a stain on the character of the whole, and would have been resented accordingly. Is not this some proof, that flogging might be struck out of the list of military punish-



punishments, and that, in most cases, honour, the honour of a soldier, as I shall term it, might be a means strong enough to act in its stead, and be substituted for it, while he that forfeited this honour should suffer degradation? Where there is most whipping, there will be found most disobedience; for few men can imitate the spaniel, and fawn the more, the oftener they are beaten; human nature revolts at this, and reason cries out against it. Flogging only serves to harden.

I have indeed been informed, that in some regiments, when they are obliged, or, in other words, it is thought expedient to inflict this punishment, the man is afterwards drummed out of the regiment, being thought unfit to remain afterwards in it; in these corps, experience has taught them, that such a man is never, from the time he is flogged, a good soldier; his spirit is depressed and broken, and he becomes altogether careless of his conduct, and tenfold more irregular than before; does not this go a great way to prove that flogging, instead of adding to order and discipline, in reality injures the service? The man is now bereaved of shame on one hand, and becomes a bad example to his comrades, if he is continued in  
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the corps; and on the other, if he is dismissed, there is a man less.

I should be sorry to see an English army so rigidly disciplined as a German one, though I am told that of late there have been some attempts towards it; I should not wish to see human reason degraded so low, and men drilled down to mere machines: when this comes to pass, I shall tremble lest despotism be too near our doors: a well-regulated army may be maintained and disciplined to the wish of a rational commander, much short of the severity necessary for this; an army that will love, more than fear their leader, and will second his intentions without the cane or the whip. That the severity of the German discipline is great, and that far beyond what is strictly necessary, is the opinion of several eminent men who have compared it with that of other countries. Dr. Moore, speaking of French and German military discipline, says, "These (the Germans) admit of the discipline of the cane on every slight occasion, which is never permitted among the French troops. Notwithstanding their being so plentifully provided with these severe flappers to rouse their attention, I could not perceive that  
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the German regiments went through their exercise with more precision or alertness than the French ; and any difference, in my opinion, would be dearly purchased at the price of treating one soldier like a spaniel." Then he ironically adds, " Perhaps what improves the hardy and phlegmatic German, would have a contrary effect on the more delicate and lively Frenchman ; as the same severity which is required to form a pointer, would render a greyhound good for nothing." After all, he continues, " I question very much whether this shocking custom is absolutely necessary in the armies of any nation ; for let our Martinets say what they please, there is surely some difference between men and dogs."

Though the discipline of the Germans is censured here as severe, and, from the best information I have been able to collect, not without reason ; yet I am happy to find there are men among them that do not take all the advantages that the military law, in this respect, puts in their power. As one instance of humanity even among German officers, where all allow the discipline to be extremely strict, we shall relate the following, recorded by the  
respect-



respectable author above : Field Marshal Spor-  
ken, as this author informs us, who, at the  
time he made this observation, was at the head  
of the army in the electorate of Hanover,  
never suffered his officers to order his sol-  
diers to be caned for trifles, though they were  
punished for real crimes by the sentence of a  
regular Court-Martial ; and though the dis-  
cipline is thus lenient, when compared to the  
rigid observance of it in other parts of Ger-  
many, yet the troops were sober, regular, and  
performed every essential part of duty well.  
With respect to caning, he adds, “ Caprice is  
too apt to blend itself with this method of  
punishing, and men of cruel dispositions are  
prone to indulge this diabolical propensity,  
under the pretence of zeal for the service.”

No action whatever is so well performed,  
where force dictates, and fear mingles in it, as  
where the inclinations are concerned, and  
meet smiling, as it were, the mandate. Even  
religious duties, if they are exacted by punish-  
ments, are not performed at all, however the  
body may incline in seeming obedience. What  
man ever became holy by the Inquisition ?  
The old proverb will long hold good, that  
forced prayers are not piety. Our modern



poet, the facetious Peter Pindar, doubtless had this in view in his story of the chaplain reading the service to a ship's crew. A boy on board hides himself in an empty cask, to prevent his being present at the duty; the boatswain goes in search of him, and finding him, flogs him with a rope's end, giving him his reasons why he did so,

“ Come out, and save your damn'd sinn'd soul, I say !”

The poor boy, feeling the pain, answers, with tears of vociferation,

“ I'll come, I'll come, but *damn* me if I'll pray.”

Force made the boy obedient, but religion had little to do in the act,

What would we think in England of praying by tuck of drum; and praying too just as long, and no longer, than the Adjutant pleased, or the manœuvre required to finish it neatly? Yet such is the mode used on some parts of the Continent, as a respectable author informs us. On the most trifling occasion, he tells us, the Major's cane is exercised; and whim and caprice, where such strict discipline prevails, one may reasonably conclude, not unfrequently govern its motions. These are his words: “ I was a good deal surprized to observe



observe, that not only the movements of the foldiers' muskets, and the attitudes of their bodies, but also their devotions, were under the direction of the Major's cane. The following motions are performed as part of the military manœuvres every day before the troops are marched to their different guards : The Major flourishes his cane ; the drums give a single tap, and every man under arms raises his hand to his hat ; at a second stroke on the drum they take off their hats, and are supposed to pray ; at a third they finish their petitions, and put their hats on their heads. If any man has the assurance to prolong his prayer a minute longer than the drum indicates, he is punished on the spot, and taught to be less devout for the future." The author facetiously adds, " The ingenious inventor of drums certainly never dreamt of their becoming the regulators of peoples' piety."—*View of Manners in France, &c.* v. i. p. 368. Edit. 6th.

Although I have, several times, in the course of this chapter, inveighed against the severity of flogging, yet, when the nature of the crimes soldiers are often guilty of are considered, it will not seem altogether so cruel. Their offences,



fences, for the most part, would bring them to the gallows, were they to be delivered over to the civil law : hence, instead of cruelty, it often becomes mercy and lenity ; for, when compared to this ignominious death, the idea of severity vanishes to nothing.

I thought it necessary to throw out these few hints relative to punishments, since part of a regimental Surgeon's duty is to see them inflicted. I wish, after all, the military laws knew no such thing as flogging ; and that, in place thereof, some other mode of punishment could be devised, less ignominious ; on this head, however, I dare say nothing ; it is out of my line of life. Though I wish it with all my soul abolished, as an inhuman thing, more suiting the nature of savages, than civilized and polished nations ; yet, as I have nothing better at present to offer in its place, I must leave it as it rests, and refer it to the wisdom of a wise Legislature.



## CHAPTER XIII.

THE UTILITY OF EXPERIMENTS.—DANGER OF OVER-  
HASTY PROGNOSTICS.

THE Surgeon should institute, whenever an opportunity presents, experiments tending to advance the science he is engaged in; none can enjoy better opportunities for the application of new and unusual remedies than army Surgeons. The foldier is entirely at his disposal, as soon as his name is entered in the sick list; by this means he can repeat trials made by others, and put them to the test; or institute new ones, such as may seem to him to promise instruction, and be advantageous to practice.

“ An experiment,” says a learned author, “ differs from a simple observation, in as much as the knowledge that an observation affords, seems to present itself spontaneously to us; whereas, the knowledge we derive from *experience*, is the result of some attempt we have  
4 made



made, with a view to see whether a thing *is*, or is *not*."

"A physician, therefore," (we always place the army Surgeon in this light) "who carefully considers the whole of the phenomena of a disease, may be said to make observations; and he, who in the course of it exhibits any remedy, and notes its effects, may be said to make an *experiment*."

That to make experiments, may require more than the medicines commonly in use, we grant; but if the Surgeon has improvement in view, he will not stop here for the sake of saving a trifling expence. A little money expended in such laudable pursuits, will be considered as nothing, when compared to the satisfaction he may receive, or the good he may do, both to himself and others.

By trials of this kind, it may be in his power to confute too hasty, or confirm still farther, well grounded conclusions. In his experiments, I would not confine him to articles alone now in use in the materia medica: others not yet received, may, occasionally, be had recourse to, and their virtues investigated; but all trials on the human subject, hazardous to safety, are ever to be avoided.



It is not meant here to exclude chymical experiments, if he has an opportunity of exercising his genius in this way ; these may be prosecuted in the army, though not, indeed, very extensively. It will require no very expensive apparatus to repeat many ingenious experiments on the different kinds of gas ; if no use to practice should result from them, they may prove, at least, a virtuous amusement, and fill up a leisure hour more laudably than in dissipation, idleness, or the pursuit of folly. He may try the different degrees of strength in the different articles of the materia medica in decoction, and infusion ; and perhaps, be able, sometimes, to take advantage of the knowledge he gains by this in his future practice. He may be more fully enabled to tell in what parts of the substances the chief virtues lie ; whether in the gummy or resinous parts, (I speak of vegetables) and in what proportion they are to each other.

He may try the different antiseptic powers of different articles, in like manner, without much trouble, and thereby satisfy himself of the truth of what authors have advanced on the subject ; and in these kind of trials, who knows, but he may be happy enough to discover



cover something which was over-looked by those whose experiments he is now imitating, and be led from thence to furnish us with a better explanation of the *modus operandi* of these articles, that may point to a better, or more efficacious method of applying them to the human body.

To conduct experiments, requires, however, no uncommon share of sagacity, when it is considered how small a deviation, in many cases, may occasion a very essential difference in the result. Any mistake, or neglect, however trivial it appears to the less attentive, may form the grounds of very erroneous conclusions ; but notwithstanding, we may agree with the learned Zimmerman, that “ A man of genius will soon perceive the modification he is to adopt, when he is about to put the precepts of others in practice.”

It must undoubtedly be some mistakes of this sort, that cause the great variation, which we find in the results from the same experiments, made by different persons ; innumerable instances of this might be adduced from the writings of medical and philosophical men. There are few who have made any progress in these sciences, that have not, in the course



of their researches, had reason to lament it ; much ingenuity has been thrown away to no purpose ; perplexity has been created, and truth, instead of appearing obvious, been involved in tenfold more obscurity\*, to the fatigue and mortification of the student, who from this alone, often becomes disgusted at the uncertainty which furrounds him, and laments the mazes in which he finds himself entangled.

In our observations, previous to an experiment in practice on the human body, many things are to be considered ; the patient's age, constitution ; the former diseases under which he laboured, and their sequelæ in changing, or weakening the habit it may likewise be expedient to know, as well as the present complaint, and its duration ; the state of his urine, pulse, respiration ; whether he breathes freely, or otherwise, and to what it may be attributed, should his respiration be impeded ; nay, even, the position in which he lies in bed should not be overlooked ; an uneasy position in bed may affect respiration, and create a change

\* Examples in those made on the Nervous System, also on those more recently made on Heat.



in the pulse, which a less attentive observer may be ready, rashly, and erroneously to attribute to the medicine last given, and mark it down as such ; or, perhaps, to a cause more dangerous in its nature, an affection of the organs of respiration themselves, &c.

These, and many other minutiae, are attentively to be observed, and referred to their proper sources, in calculating the effects of a medicine, and forming a just estimate of the result of the experiment ; effects from some, or all of these causes may take place, and mislead us in the conclusion. It must be something of this kind that obtains certain medicines credit, which better information shows they did not deserve ; or cause others to be rejected, when they should have been held in esteem. The many trifling compositions, which have from time to time been in great esteem for the bite of rabid animals, is a strong proof of the one, and the no less bitter invectives that were once thrown out against the use of the Peruvian Bark, is a glaring instance of the other.

A faithful register from the time our experiment commences, of every change in the patient, should be kept, and our observations,



now especially, made with care and circumspection.—“Observations,” says an eminent author, “should be exact, clear, and faithful.”—If this be necessary at all times, it is surely punctually to be attended to in making an experiment. In practising medicine, nothing, truly, is more necessary; yet observation, as it is here meant, most certainly requires a particular *genius*, a turn of mind, that cannot be supplied by the most *laboured industry*. Some, we know, contend, that more is attributed to genius than it deserves, and even go so far as to deny that there is any such thing; yet while so many proofs to the contrary daily appear, we must beg leave to dissent from them.

With respect to a genius for observation, “it is easy,” says Zimmerman, “to discover it in each individual, by observing how he is affected at the theatre; or at the sight of a picture, or a piece of mechanism, &c. One person will see only the dresses of the actors; another notice the decorations of the theatre; others attach themselves to the attitudes, and gestures of the performers; all these spectators,” he continues, “are directed in their  
*taste*



*taste* by some particular *passion*, and go to the theatre to flatter that passion, &c.

In the line of philosophical knowledge, we see likewise this variety of inclination; this varied taste. Whoever refused to admit that Sir Isaac Newton had a greater taste, a bent of inclination, or genius for mathematics, than for poetry, or perhaps any branch of the fine arts? All the industry it was possible for him to apply, could never, in my opinion, have given him abilities to write *Paradise Lost*, the *Iliad*, or the *Æneid*; and *vice versa*, the authors of these three great epic poems, could never have unfolded to us the laws of attraction and gravitation, or *untwisted*, if I may be allowed the expression, a sun-beam into seven distinct and perfect colours.

In the pursuit of the different parts of medical science, one shews a predilection for anatomy; a second soon discovers a bias towards chymistry; while a third, contented with a more superficial knowledge of these, is led to excell in the operative parts of surgery, and the dexterous use of the knife; while another, still, is more especially led to consider the pathology, and physiology of the  
body,



body, the phænomena of diseases, the exhibition of medicines, and possesses a talent for *observation*, tracing their action on the solids and fluids of the living animal, and forming useful conclusions from thence. Nay, perhaps, there is no person, whatever, that does not possess a particular bias to one pursuit, in preference to another, independent of example, imitation, or habit; and this I would denominate *genius* for these several studies; and to me it appears a full proof that such a thing as genius exists.

Helvetius, Johnstou, and Smith, have denied that genius presides in so great a degree; and maintain that a man may be what he pleases, if he applies himself. This, in its full extent, will hardly be found to hold; most certainly not, in poetry, and the fine arts. If genius be a strong bent of inclination, with capacity for a particular pursuit, that pushes a person forwards, and gives him fortitude, and perseverance, to surmount all difficulties that present themselves in it; where this is not to be found, the mind surely must flag, and excellence never be obtained. More, I am ready to allow, may be attributed to genius, than it deserves; but to deny its force entirely,



tirely, would be rash, and contradictory to the evidence which every day's experience affords.

But to return ; we shall now suppose, this inclination, this genius, if you please, present, and that the Surgeon has a natural turn for the cultivation of the different parts of his profession ; for if this be not the case, he is wrong in entering upon it, and has thereby deprived some other branch of business, for which nature had designed him, of a member ;—he reads of experiments, as he peruses authors ; he is desirous of knowing the truth, and of repeating them ; or, perhaps, he doubts of the truth of the results, from what seems to him the want of probability ; or, he is led to make new ones from suggestions of his own. I say, doubts from want of probability ; for, perhaps, to doubt, may be considered as a mark of his sagacity and discernment. Persons of little genius or discernment, are seldom troubled with *doubts*, but take things as they are told them.

When I advance this, I am not singular in my opinion ;—Zimmerman, who was a man of much observation, has told us the same thing,—“ The man of genius, alone, is able,”  
he



he says, "to determine within himself the degrees of *probability*; and hence it is, that he alone can become a great minister, a great warrior, or a great physician. Such a man knows *how to doubt*, when he perceives, that the reasons why any particular thing ought to be believed, are of little value; and, on the other hand, he knows how to act, when there is greater reason for certainty, than *for doubt*.—Men of little minds are not susceptible of doubts of *this sort*."—But he very justly adds—"and they who do nothing but doubt, are incapable of acting like men of genius \*."—So, that we find, both not *to doubt*, and to *doubt* too much, are extremes, which the man of genius and discernment equally shuns.

If the Surgeon, then, is to repeat the experiments of others, made on the human subject, that which he is to imitate, is carefully to be perused, and every circumstance strictly kept in view. From the time he has come to a resolution, a proper opportunity is to be sought for his purpose; all possible justice ought to be done the experiment, both on the experimenter's account, whom he has thus under judgment, and for the sake of medical

\* Vid. Experience in Phys.



medical improvement, and truth. The subjects of the trial should be as similar to one another, as the nature of the thing can admit, or the subject requires ; otherwise he has no right to call this a *test*, or to regard it, in any measure, either as a confirmation, or refutation of the experiment under consideration. But we must repeat here again, that no trial, dangerous to the patient's life, is ever to be risked : this would not only be wantonness, but wickedness ; and highly criminal, if done knowingly.

Medicines that have been long in the hands of quacks, and that have kept their credit for some time with the public, may be analysed, if convenient, and their virtues investigated ; if upon this, they are found to possess activity, trials, in certain determined doses, should be cautiously made, in diseases such as they have been famed for curing.—For, although, most quack medicines and nostrums, are some common substances, and often even *formulæ* of them, either now, or heretofore, in daily use, triflingly changed for the sake of disguise ; yet we now and then find one among them of great activity, which from causes, such as we have formerly mentioned, has  
fallen



fallen into disuse with regular practitioners, but which, on account of its activity, should still have held its place in the *materia medica*. These, by his cautious trials, he may be able to rescue from empiricism, and restore again to their deserved consequence.

The use of arsenic, though formerly employed by physicians, has long been almost banished regular practice, till lately. Perhaps, the discovery of the Peruvian Bark, might have been one cause of this; whether this be so or not, the success that followed its use, in the cure of intermittents, disguised in a nostrum, prepared by *one Edwards*, under the name of his *tasteless ague drops*, could not escape the notice of the regular faculty.

The history of those drops is as follows:—Upwards of twenty years ago, as I am informed, Mr. Mowbray, now physician and surgeon of the Dock-yard at Plymouth, at that time a surgeon at Biggleswade, gave a trifling sum to the wife of a German quack, who had left her in indigence, for a receipt for the cure of agues, the principal ingredient of which was arsenic: this receipt he, with a becoming liberality, communicated to several of his medical friends in London. Aguish complaints,



plaints not being so frequent in London as in the country, they had no opportunity of ascertaining its efficacy. Mr. M——, however, gave it with wonderful effect. At that time he had a shop-man of the name of Edwards, who usually prepared the medicine. Edwards, if we are not mistaken, settled afterwards at Newmarket, and vended this medicine under the name of his ague tincture. His formula\*, as I am now assured, does not contain above one half more arsenic to an ounce of water, than that used by me.

None, however, took up the subject, till Dr. Fowler, of Stafford, turned his attention that way. He analysed it, ascertained its nature, and performed many speedy cures, not only on agues, but in some other diseases, by a solution of this mineral, in imitation of these noted *drops*.

Similar experiments have been since repeated by different practitioners, both in the metropolis, and in the country, in varied doses, but still with equal success. The num-

\* Vide British Critic, No. I. v. 3. for January 1794.—  
For the above anecdote I am indebted to the Editors of the  
above publication.



ber of cures, given us by Dr. Fowler, are many\*; and Dr. Willan, amongst others, has published seven cases of its success in agues;—at the end of which, he adds,—“the above cases I have given in detail, as being the first which occurred, and thence soliciting more particular attention; it seems only necessary farther to add a general report from the sum total of patients treated in this manner. The solution was prescribed for about *forty others*, in different species of intermittents, and succeeded almost instantaneously, in every case†.” The solution he used was made according to the formula, published in Dr. Fowler’s work on the subject.

In like manner, I thought it incumbent on me to make trial of it. In the course of the last few years several opportunities presented, in every one of which, it succeeded to my wish, and without the smallest accident, or inconveniency whatever, during its use. My formula differs, however, something from Dr. Fowler’s, in its being more simple.—I found it unnecessary to add either nitre or alkali, nor do I always distill the water in which I dissolve it. I take six ounces, by weight of

\* Vid. his Med. Reports of Arsenic.

† Vid. Lond. Med. Journ. v. 1. part 2d. part 191.



the common culinary water, used in this place, and add to it twelve grains of the white arsenic, of the shops, reduced to powder; this I place in the heat of 212 degrees, or that of boiling water, the phial being only slightly corked, to allow any air which may be extricated, to escape. During the time of solution, the phial may be briskly shook now and then, though I do not know whether this be absolutely necessary; in less than three quarters of an hour the solution is complete. When it cools, the bottle containing it, is again weighed, and as much of common water, or for the sake of giving it colour, of sp. lavend. is added, as was found to have evaporated during the process to make up exactly the six ounces. By this means the dose is more accurately calculated, a convenience which I consider as of some consequence.

In the last edition of this work, I was guilty of an omission when speaking of this medicine, and I think it right to supply it now. I should have observed, that it is proper always to filtrate the liquor after solution through bibulous paper. By this precaution, not only dust, which has fallen into the phial during the time of solu-



tion will be cleared out of it, but what is of more importance, any granules of the arsenic remaining undissolved, will be likewise retained in the filtre. In a substance so active as this, every precaution ought to be used, lest it should affect the stomach, and induce symptoms, if not dangerous, at least troublesome, and retarding recovery. I use now always distilled water; the solution is the more complete by this means, and it is easily procured; for if a few gallons be kept in large bottles, well corked, it will remain fresh for years. I have kept it upwards of three, without any perceptible change. This will depend, however, on the mode of the distillation, by an equable heat, and by not pursuing it too far. A considerable portion of the water used should remain in the bottom of the still, when the operation is stopped.

I have distributed this solution to several practitioners in this neighbourhood, with directions for its use, in order to collect their practice, and form a conclusion from as large a number of trials as possible; in every instance, that has come to my knowledge since, it has proved successful. The following I shall detail from the first of my own trials;



trials ; and exactly as I find them in my notes.

## C A S E I.

Green, a foldier in the Queen's 2d regiment of Dragoon Guards, quartered in Ipswich, aged 30, put himself under my care, August 7th. 1786, by the desire of Mr. Hamilton, Surgeon to the regiment. His complaint was a *quartan*, under which he had laboured many months ;—the fits are long and severe ;—has taken pounds of bark ; and often upwards of an ounce a day. By this means his fits were generally suspended for a short time ; sometimes he has remained free from them for two or three weeks, but the disease always recurred. It occurred to me, to try arsenic, having, a little before that time, perused Dr. Fowler's reports, relative to this mineral.

As this was my first experiment, I made use of only one grain to the ounce of water, which I had distilled as directed by Dr. Fowler for the purpose ; the bottle into which it was put was suspended in a vessel full of water, (as already described) and set on the



fire to boil.---When the arsenic was dissolved, the solution, when cold, was weighed, and six ounces, the quantity I prepared, was found to have lost three drams by evaporation; to supply this, 210 drops of common water were added; I calculated this to be the quantity lost, allowing 70 drops to the dram; no allowance was made for any loss the arsenic might have sustained, judging it to be trifling. Aug. 8th. hor. 10. A. M. gave of this gutt. xxxv.--in a little common water---ordered it to be repeated at four, and at ten P.M.

Aug. 9th.—No inconveniency from the medicine; at nine this morning the same dose, as yesterday, repeated—at seven P. M. took a second—the fit returned this day, and prevented his being regular in the time of taking his medicine:—only two doses, therefore, were given this day: medicine caused no sickness—his appetite, he thinks, rather impaired; the fit was shortened this time a full hour.

Aug. 10th.—This morning took forty drops—and repeated it, to the third time, at the distance of six hours from each—no other inconveniency than a slight degree of impaired appetite.

Aug.



Aug. 11th.—Took the medicine, as yesterday—without inconveniency—two hard stools to-day ; to-morrow expects his fit about two P. M.

Aug. 12th.—Took gutt. 50—thrice to-day, and at six hours distance each—fit commenced an hour later---was not less severe than formerly. The last dose puked him a little, and he had seven stools.

Aug. 13th---Omit the drops---let him have an emetic.

Aug. 15.---This day had recourse to the drops---took gutt. 50, thrice as before---did not make him sick---fit returns to-day.

Aug. 16th.---Had little or no fit yesterday---medicine did not make him sick.

Aug. 17th.—Yesterday no inconvenience from the drops---had four stools---appetite not impaired---to-day took gutt. 60---thrice.

Aug. 18.—Yesterday had only one stool---drops did not give uneasiness—this morning is a little indisposed, or faintish, as he calls it—expects his fit to-day.

Aug. 19th.---Had no fit yesterday---took his medicines---had only one stool---complains to-day of a slight pain across the abdomen ;---



yet, augmented his medicine to-day to gutt. 65---with orders, that if the pain increased, he should take only two doses.

Aug. 21st.---Yesterday had no fit---medicine gave him three stools---no sickness.

Sept. 3d.---Is compleatly cured.

I may add, he remained so for upwards of six months after, i. e. till the regiment marched to other quarters.

The reader will perceive, this cure took up twelve days. i. e. from 8th to 20th inclusive; for on the 21st no medicine was given---and he began it on the 8th---the reason, perhaps, it did not yield sooner, was owing to my cautious dose; I thought it safer, as it was my first trial, to be rather under, than over in my dose.

## C A S E II.

Samuel Thompson, aged 21,---a soldier in the same regiment---was soon after put under my care by Mr. Hamilton, seeing the success I had with Green.---This was a quotidian of six weeks duration; fits return daily between eleven and twelve.---I began with gutt. 35, of the same solution, of one grain to the ounce, and repeated it at the distance  
of



six hours, to the third time. The day before I began with him he had an emetic, which operated well---report---yesterday had his fit as usual---medicine has had no sensible effect---this day to be repeated as yesterday.

Finding it tedious to measure out so many drops, I thought of preparing the medicine of double strength, but was uncertain at this time whether I could dissolve two grains in an ounce---on trial, however, I found no difficulty \* ;---of this I began with gutt. xx. ter de die.

Morning report.---Had his fit yesterday as usual ; no stools from the medicine---to-day the medicine to be repeated to gutt xxxv.---each dose, at the distance of six hours exactly.

Morning report. --- Yesterday had three stools---fit returned an hour later---less severe---medicine griped him a little---but no other inconvenience---ordered the same to-day as yesterday.

Morning report.---Had three stools yesterday---missed his fit entirely---only about the hour of its former occurrence, felt a little anxiety---medicine griped him considerably---appetite impaired---ordered to intermit the

\* I have dissolved three grains to the ounce since this.



medicine—two days now intervened without any—at the end of which—report—no fits since.—Repeated the medicine two days more—quantity as before—no fits—report two days afterwards—continues well—dismissed cured.—In like manner he remained well till the regiment marched into different quarters.

I gave Mr. Hamilton some of the solution, requesting him to try it, when opportunities offered. Some time afterwards he reported to me several cases of its speedy success, both on the foldiers, and on a few paupers in the town, whom he found labouring under intermittents.

### C A S E III.

John Gould, Esq; near this town, requested me, a few weeks ago, to give advice to a poor man, called Hynd, at that time one of his labourers, at haymaking, whom he found one day in the meadow ill. He had been afflicted with a quartan for several months—I gave him the solution, beginning with gutt. xxv—ter de die—two days after he had his fit—but not less severe—the medicine neither griped, nor gave him any uneasiness. I en-  
creased



creased it now to gutt xxx---ter de die.---The second fit was considerably shortened---no looseness, nor gripes.

Continued it at this dose some days longer---he escaped the third fit altogether---had two or three loose stools, and a slight pain across the abdomen---discontinued the drops for three days---at the end of which, repeated them three days more---no return of the fits---dismissed cured---with orders to return in a week, to report how he had been in the intervals---continues well\*---Quartans are allowed to be the most obstinate of all the kinds of intermittents---but this last yielded, in a short time, to the medicine---perhaps, had I ventured on a larger dose it would have yielded sooner; but I think it safer, with so active a medicine, not to be too bold.

The medicine sold under the name of Edwards's Tasteless Ague Drops---has certainly a much larger proportion of the arsenic†, in a given quantity, than what I ventured to prescribe.---As the dose is only seven drops, and

\* Some weeks have now elapsed, without any return of his complaint.

† The difference of strength has been already mentioned in this chapter.



yet the effects are sometimes, it is said, violent. The doses are ordered to be repeated at the distance of nine hours.—It is but justice, to add, however, that a practitioner here, assures me, he has administered those very drops, and he adds, used many a bottle of them,---for several years, in cases of the intermittent kind, with perfect safety, and speedy success.---This surely speaks greatly in favour of arsenic---for it is not now doubted that this is the mineral which gives activity to this nostrum.

In the winter of 1781---and spring 1782 ---I had a soldier whose ague I was not able to overcome,---he had got bark, and other medicines, in use for the disease, till he was tired of taking them.--He seldom was free more than a week.---Marching into Royston, in the beginning of July, where the men were to remain a week or two ; he was again taken ill.---I was advised to try the Tasteless Drops. ---I had some reluctance to exhibit a medicine, the composition of which I was ignorant of, but by the persuasion, chiefly, of his Captain, I complied. He took them only a few days, when his ague left him, and never returned afterwards, during the time I knew him,



him, which was more than a year.--Yet, I confess, this did not induce me to try the medicine, again, till I saw Doctor Fowler's reports.

It is needless to tire the reader with more cases ; the medicine, I am persuaded, will be found on most occasions, especially in intermittents, a safe and efficacious cure, if administered with that care and circumspection, which the regular practitioner is bound in duty to use with every active article of the materia medica,---nor should it be the least objection, that it is one of the most powerful poisons with which we are acquainted ; several other articles in daily practice are not less so ; for instance, hydrarg : muriat :---Nay, it is true that substances of such activity form the most useful part, of what are denominated articles of the materia medica, and from these we may hope for most success in the cure of diseases. This ought to be one strong reason, however, for employing the regular faculty, and the suppression of quackery.

Since these cases were first laid before the public, I have used arsenic in a variety of instances and to persons of all ages, even from six or eight months old. For in this country, where  
agues



agues are frequent, I have met with them in children not exceeding their first year ; my dose of course was proportioned to their tender age, and I am happy not to have it in my power to recount a single instance of its failure in the intention for which it was administered, or of its producing the least disagreeable consequences. It is now a medicine of very frequent use in this neighbourhood among all descriptions of practitioners. It has been tried likewise in a variety of other diseases besides those of the intermitting class, and in many the reports have been very favourable : it bids fair for being useful where powerful tonics are indicated, for in this view it appears to me that its chief action consists. Its want of odour and taste, and the small bulk of which its dose consists, render it extremely convenient to many stomachs, whose irritability will not suffer them to retain the more coarse and bulky medicines of this tribe. In young children, and indeed in any age where reason has not begun to exert her power, those substances of a nauseous taste and disagreeable flavour are constantly refused, nor can even force make patients swallow them. To possess a medicine then, to  
which



which these objections are not liable, is surely a great acquisition.

Arfenic has been tried in other diseases, besides intermittents, not without success.---Mr. Hamilton, already mentioned, says, he cured a soldier of an epilepsy thereby, since the time when I taught him to prepare it.--I tried it in a case of this kind, in the spring of 1787, for some weeks, but it was without success.---It was, however, a case of long standing, in which numberless medicines, by a variety of practitioners had been employed, at different times, for several years past.---A Surgeon, at Bury St. Edmund's, in this county, informed me, sometime ago, he was trying it on an epileptic patient, and he had some reason to think, from what he had observed during the time he had administered it, that he should be successful, ---but I have not had an opportunity since of knowing the result of this trial; on the whole, it is the duty of every practitioner to repeat trials made by others, or make new ones himself, as he sees opportunities, and as suggestions of this sort occur to him, and among these, it is no less the duty of the regimental Surgeon.

In



In the months of September and October, 1781, many of the foldiers were feized with the Typhus, as defcribed by Profeffor Cullen. The ufual fymptoms, with depreffion of fpirits, and fudden lofs of ftrength, formed the difeafe. In fome cafes the head was violently affected, in others, only a giddinefs, with but little pain, and alternate hot and cold fits of fhort duration; but thefe were often fo violent, at night efpecially, that when the patients came to report themfelves fick, and be put under my care, they defcribed their complaints as a quotidian, or *one-day fever*, as they termed it; the ftate of the pulse was generally, fomewhat, though for the moft part, but little accelerated, and the conftant thirft and parched tongue that accompanied it, affifted to point out the nature of the difeafe, and eafily diftinguifhed it from an ague, where all the fymptoms, in the intermiffion, for the moft part, vanifh, and the patient appears as in health.

The feafon proved very variable; one day rain, another clear and warm, but a hoar-froft, which covered the ground frequently in the morning, rendered the air, as it diffolved, cold and chilly, for a confiderable part of the day. The regiment was but thinly clothed,  
the



the men not being permitted (for some reasons, best known to the commanding officer) to wear their new clothes, before the beginning of December; these were the evident external causes of the fever; the irregularities of the mens' way of living may be mentioned as occasional and exciting causes. In these fevers, however, I always suspect contagion, though I may not be able to trace it.

I found very few of these fevers that required the free use of the lancet; of this I am always sparing, when there does not appear to me to be absolute need of it. For I have often found, where it is improperly used, that recovery is not only more doubtful, but the disease seems thereby protracted to a later period, by an encrease of debility. Some died, after lingering to the twenty-seventh day; but most of them recovered.

About this time a correspondent sent me from Edinburgh, a book intitled, a Physiological Disquisition, and Enquiry into the Principles and Common Practice in Fevers, in that city, wherein was recommended a practice taught by Dr. Brown, founded on different principles from the common. To confirm these new opinions, a numerous train of cases



cases was advanced, which had terminated happily by it ; and contrasted with these, were several that had ended fatally by the old practice, in the Royal Infirmary of Edinburgh.

In this enquiry, published by Dr. Jones, much ingenuity of argument is used to induce the reader to disbelieve all the distinctions of Nosologists, and to inculcate the opinion that all the genera, and species, &c. into which diseases are divided, may be reduced to two alone, namely, those from debility, or *asthenic*, and those arising from too high a degree of health, or *sthenic*. We are told, also, that the doctrine gained ground among the unprejudiced, and many of such as were heretofore adherents to the Cullenian system, which this opposed.

In the class of *asthenic* diseases, the cure consists in strengthening, and stimulating medicines, and the quickest of operation, and most *diffusible*, to use the author's term, are to be preferred. Hence wine, brandy, opiates, and volatile alkali were given to a degree, never ventured on before, especially opiates ; and the change for the better, that almost instantly followed, were spoken of as incontestible



testible facts, to prove the superiority of the doctrine.

Willing to find the truth as far as I was able, and not slavishly bound down to any man's opinion, or system, as such, I watched from this time, the first favourable opportunity to make trial of this doctrine, which promised such advantages: out of six men, therefore, ill of the fever, already mentioned, I chose one for the subject of the experiment, which appeared to me the best adapted for giving it the fairest trial. It was one, where all the symptoms of debility were evidently marked, so that I could in no wise mistake its *asthenic* nature. It was, as near as I could find, the eleventh day of the fever; for soldiers are generally several days ill before they report themselves in the sick list, if they think they shall be confined to the hospital, to which many of them have an aversion.

### C A S E.

Bates—of the General's company, with all the symptoms common in Typhus, head-ach, parched tongue, prostration of strength, rest-



less nights, flushed cheeks, delirium, pulse about 74 beats in a minute.

At eleven—A. M. a dram of sp. C. C. to which were added gutt. xl. of Tinct. Opii.—in an hour after, pulse rose to 80.—The opiate did not induce sleep. He roved violently as before.—The room was darkened, and all noise kept from him, as much as possible.

Visited at four P.M. same day.—Pulse now 76—and small—delirium as before.—I should mention, that he had slept little or none at all for several nights before this plan commenced, but was all this time delirious. The same repeated as at last visit.—Here then were no less than sp. C. C. dr. ij.—with Tr. Opii gutt. lxxx. administered in the space of five hours.—But as this was trifling to the quantity recommended by Dr. Brown\*, I could not call it a fair trial, if I stopped here, without pursuing his stimulating plan farther.

At half past seven—returned—this was three hours and an half from my last visit—found him quiet, and was informed by the nurse, he had been so for some time. On entering the room, however, he lifted up his eyes, which were heavy and red, and he

\* Vid. Jones's Enquiry, already mentioned.

began



began to talk wildly,---yet named me as soon as I came near.---Gave him now a tea-cup full of red port---pulse 80.---At half past eight visited again---gave another tea-cup of port---at ten, another cup of port, to which Tr. Opii g. xxv. were added---at twelve the same night visited---another cup of wine was given.---Here were no less than 105 drops of Tr. Opii in the space of eleven hours.

From this time till eight next morning (Monday) he drank about ten ounces of beef tea---this was always given warm---his pulse 84---tongue moist.---I began now to form some hopes of his recovery---yet he roved almost as much as formerly.---I went on further with the plan, and gave him gutt. lx. of Tr. Opii in a cup of wine---took no more of the medicine this day---continued much the same.---Next morning at ten, A. M.---found his breast and shoulders full of maculæ---his pulse 76---and seemed silly---turned up the white of his eyes a little---was, nevertheless, sensible when spoke to---called me by my name---complains of great sickness---attempted while I stayed to make water, but could not---drank, since last night, a pint of beef tea---at one P. M. got a cup of wine.



Visited an hour after, viz. at two, and found him quiet---at four, and gave him another cup of wine---at nine, and found him singing, when I entered, and talking foolishly---his teeth and lips furred over, and black, with pulse at 88---this was ten beats more frequent than in the morning.

As the delirium, which never abated, was now encreased, and he had got no opiate this day, I ventured on a larger dose than I ever gave before, viz. Tr. Opii gutt. lxxxviii.---Next morning visited him at nine, and found him dosing---was informed by the nurse, that he lay very quiet through the night. Pulse now slow and equable---I thought him better on the whole---at eleven A. M. got another cup of wine.

I was willing now to intermit a while, and observe what the effects of this last dose might be, so gave nothing more till next day at eleven, A. M. when I found him not only roving as usual, but with subfultus tendinum---frequently convulsed, and pulse very feeble and up to 108.---His death now appeared inevitable---got a cup of wine---ordered his head to be again shaved---for it had been shaved before---and a large blister to be applied



plied over it. A glister was administered before the application of the blister---this gave him a stool---made water also.

While I was present he suddenly started out of bed, and I ordered him to be supported some minutes on his legs---delirium more encreased---eyes wild.---At eight P. M.---his pulse 120---and weak---passed two large lumbrici---next morning found him more composed---gave him a cup of wine, and ordered him another at one o'clock.

The opiate was intermitted this night, and till next evening, when he got 105 drops.---This was coming something nearer to the *new practice* of Dr. Brown, though still much short of it.---For from the little success it had hitherto afforded, I was afraid to proceed as far as this publication set forth.---The delirium had never abated.---From this till next evening he got no more, when 110 drops were administered---with no better success than before.---The day following I thought him better, though his pulse was weak, and frequent.---Sometime after it was no less than 130.---He was ordered wine and beef tea this day---but in the evening he died without a struggle.



This, I am led to believe, will be allowed a pretty fair trial of the *diffusible stimuli* applied in case of Typhus. But whoever will take the trouble to examine it, will find no great encouragement to repeat the experiment. For my own part, I am inclined to think, I never shall make another on the same principles. Here, evidently, no advantage was obtained; nay, I am led to believe it was hurtful, though I dare not say the case would have proved more successful, if it had been treated on a different plan.

Perhaps, it will be said, I was too timorous, and did not venture on large enough doses; it may also be objected, that I omitted the use of Tonics.---Such as the Cort. Peruv. &c. The reason was, I wished to tread as nearly as I durst in the footsteps of the father of this new doctrine, as set forth in some of the cases, in the publication already quoted, by which it is endeavoured to be proved *the best practice yet found*. But I shall not take upon me either to condemn, or approve,---here is a case, I lay before the public, pretty exactly narrated.---It may, no doubt, take many more trials by different practitioners, to settle the merits or demerits of this system.

Stork



Stork extolled Cicuta to a degree, not yet deserved, according to experience in these countries.---But the many trials made after him, though it could not be concluded that the medicine deserved all the praise he bestowed, have confirmed it to be an useful article of the mat. med. and one, from which we may promise ourselves advantage in various diseases. The same conclusion, perhaps, may be drawn from this medicine in fevers; it may teach us a more liberal use of opiates, without going so far as this new doctrine points out.

Graham, the noted Quack taught us, that with safety, we might administer Æther in much larger quantities than had ever been ventured on before; and the Suttons, by an extensive practice, first brought the cool regimen in the inoculated small pox into almost universal use. Though few of the Regulars ever administer the former in such quantities as Graham sets forth he did; or pursue the starving plan in the inoculation of the small pox to the degree practised by the Suttons, several diseases, no less fatal, having been the consequence of it, yet both have been useful, especially the latter; and with respect to the



Brunonian system, perhaps the same inference may be drawn.

Let us, however, keep in mind the pilot's advice, and endeavour, by a middle course, to gain the wished for harbour, since death may be as equally certain from the Rocks of Scylla, as from the Gulph of Charybdis.

Ne incidamus in Scyllam cupientes vitare Charybdin.

It is ten years and upwards since this practice came into use : soon after the publication of Dr. Brown's *elements* of Physic these doctrines were suddenly diffused throughout these islands by his pupils and other adherents, and rapidly gained ground, being carried to the patients bed-side by many who did not see the full extent of their meaning, and by others doubtless willing to give the fairest trial to the opinions of this ingenious man, and the practice built upon them.—If many mistakes have been committed thereby, and I fear many there were, we can only hope and plead as an apology that it was from a zealous wish to extend the science of medicine that these trials were undertaken. The practice to its full extent is now losing ground, for it has not been found, on a fair comparison and investigation, that  
more



more success has arisen from it than from those methods that were in use before. The doctrines however have given rise to other ingenious opinions, and new light would appear to be thrown upon the intricate subject of Physiology, a subject but yet in its infancy, to conduct the Philosopher at least one step further in his researches—*Irritability* has now taken place of *Excitement*, and fevers are now treated on this foundation. Instead of wine, brandy, and opium, the exhibition of nitre, vegetable acids, and things of this nature abounding with Oxygene are strongly recommended, and the greatest success, it is affirmed, has attended them. Dr. Wood, a physician of promising abilities, has lately laid before the public an essay on this subject, to which the reader is referred for further information. Various and discordant are the opinions on the subject of fevers, and men of the greatest abilities have differed on it the most. Little seems settled as yet on the subject, which is a proof of the obscurity in which it is involved. On a fair examination, we believe, as many cases have succeeded on the plan laid down by one set of men, who thought it incumbent on them, by preconceived opinions,

to



to administer opium, wine, bark and tonics; as from another set who had conceived it right to follow one totally different; but as the science of medicine is daily extending her empire, and nature seems yielding herself to philosophic scrutiny, this, as well as many other parts of medicine, will admit hereafter, I hope, of a truer decision.

In cases of extreme debility and danger, we find Dr. Heysham administering large doses of opium from gutt. xl. to gutt. l. united with vol. alk \*, as a more instantaneous and diffusible stimulant, he says, than either brandy or wine, the former of which he gave in larger doses than common, and the latter often to two bottles and an half in twenty-four hours, with the best effects. Many authors, from Sydenham to the present day, extol its use in fevers, but none that I have perused ever carried it to the length recom-

\* His formula is as follows :

R. Conf. Cardiac, gr, xv.—

Aq. Cinnam. ten. Semunc.

———— spirit dr. ij.

Sp. Lavend. compos. dr. j.—

T. Theb. gutt. xl. vel.—gutt. l.—

Vol. alk. gutt. xxv.—M. f. haust. h. S. Sumendus.

mended



mended by the author already mentioned, whose practice I attempted to repeat in the above case.

Professors Cullen speaks favourably of opium as a stimulus \*, in fevers of the nervous kind, where the *vis vitæ* is apt to sink. He believes, wine and opium act in some measure analogous to each other; and he thinks it useful, particularly in every case of delirium from irritation; but that in an inflammatory state of the brain it is hurtful.

Doctor Campbell thinks it chiefly useful in the beginning of fevers. But he says, "I have been informed, from authority on which I repose the greatest confidence, that the exhibition of opium in larger doses in the more advanced periods, and more dangerous states of the disease, has also been attended with happy effects.---To the amount of 120 drops at a dose †. But having myself had no opportunity of seeing it successfully given, under such circumstances, I shall decline speaking upon that point."---As to its being a poison, he very properly adds, "I do not know that the smallest quantity capable of inducing

\* Vid. Lect. on Mat. Med.

† Vid. Treat. on Typhus, p. 86.



death, has been ascertained by experiment, or the largest that may be taken with impunity. Much will depend on original idiosyncrasy, or peculiarity of constitution, which cannot always be known *a priori*; and upon the degree and nature of the morbid affection, at the period the opium is administered."---As one person will bear of spirituous liquors, or wine, without being affected, twice as much as others, so it is allowed to be the same with opium.---In cases of mortification, in severe pain, locked jaw, or Tetanus, it may be given in such large doses, with advantage, as might poison a person in health.

Doleus tells us of a case, where only a scruple of Op. given in clyster for a complaint in the bowels, brought on apoplexy and death \*; and a poor woman, Dr. Campbell tells us, in his neighbourhood, in a consumption, took two drams of T. Op. by mistake, at once, when comatose symptoms ensued, which terminated fatally in twenty-four hours.---The same author says,---"but even in states of disease, where Op. is manifestly proper, an over dose may be attended with the same bad consequences as in other situations.---I have an

\* Vid. Encyclopædia, p. 322.



unfortunate case in my eye, where an attempt was made to cure a violent convulsive disorder by means of opium."

" The patient was a robust man, who was affected with severe and frequent twitchings : one day he took two grains of solid Op. which was repeated at the interval of two hours, and again at the end of other two hours, without any sensible effects. Six grains having produced no alteration when taken in this way, he took three grains the day following, at a dose, and three more at the distance of an hour, without any perceptible consequences. The succeeding day, the spasms being more violent than ever, he took thirteen grains of the same medicine in the course of five hours, without the least effect on his convulsions ; nor did this quantity produce either sleep, delirium, or thirst.

" He was then ordered to take gutt. lx. of liquid laud. which was repeated four times at the interval of an hour between each dose. This had no sensible effect in diminishing the spasms, or affecting him in any other manner. The next day the dose was augmented to gutt. lxxx.—and repeated four times at the same intervals. He slept about an hour after taking the four doses of laudanum, and then awoke,



awoke, seemingly, in his usual state of health, the Op. having had no effect on his convulsions. He went to bed about ten o'clock; at twelve, the nurse observed he was in a very profound sleep, but did not attempt to awaken him; at six in the morning she found him still in the same state as before, and endeavouring to rouse him, found it impossible; every method was used for that purpose that could be thought of, but in vain; he died about eight o'clock that morning.

On dissection, an *Echymosis* was found in his stomach; no other morbid appearance in the alimentary canal, nor in the brain.

“ Here,” he goes on, “ thirteen grains of Op. were given in the course of a few hours, without any bad consequences. At another time 240 drops of Laud. which are equal to about nine grains and an half of Op. also without any sensible effects; but, when on the succeeding day, the dose was increased to 320 drops of Laud. which is equal to thirteen grains of Op. (a quantity that he had taken before in a solid form, with impunity) fatal consequences seemed to follow the exhibition of the medicine; it must not, however, be suppressed, that a pint bottle was found in his  
bed,



bed, which contained some whisky, and of which it is supposed he had drank."

The most that I find Dr. Campbell administer, was gutt. lx.---on some occasions, he found it necessary to add twenty or thirty more in two hours after---before he found it followed with rest.

Doctor Martin Wall speaks much in praise of opium also---yet I do not find he ever ventured to pursue it to any thing like the length the *new doctrine* sets forth. A medical practitioner, about twelve miles from this place\*, conversing lately with me on the subject, told me very freely, he had tried opium in this way, and was inclined to think he did hurt by it; the quantity given, he did not mention; and from my own experience in many trials, in smaller doses; such as from half a grain to a grain and half, in fevers, though it was often beneficial, and highly necessary, yet it was by no means universally followed with good effects in all cases. I have found several in which it rendered the patient restless, instead of producing sleep,---and thirsty, and vapoured, who had better nights on leaving it off, than when they used it.

\* Ipswich.



A much simpler method of proceeding was successful, lately in Edinburgh.---Out of one hundred and thirty children, in one of the charity hospitals in that city, eighty-five were seized with this fever; they were under the medical care of Mr. Kerr;---the first thing given was an emetic, and as soon as possible after being seized;---the succeeding treatment consisted in *cleanliness*---the greatest attention being paid to it in all its varieties; fresh air, the apartments being almost constantly ventilated---belly kept open by simple laxative injections---diluent copiously employed, and sometimes acidulated. By this simple method, not one of the whole number died; yet several had alarming symptoms---petechiæ, vibices, and hæmorrhages. The matron of the hospital was seized with the fever; she took an emetic as soon as she found herself ill,---and without any thing more, that may be called medicine, she also recovered in a short time. From whence it would appear, as the Editor says, and to which I am inclined to subscribe\*, "that in the treatment of fevers, practitioners are as often apt to err by *doing too much*, as by *doing too little*."

\* Vid. Med. Comment, D. 2. v. 1.



The pulse was very flow, in the case, on which I made my experiment; and this is no uncommon thing in these fevers. Dr. Campbell had one case where the patient died, covered with petechiæ, whose pulse never rose above sixty-six strokes in a minute.---A second, who also died, where, till the day preceding her death, it never exceeded seventy-seven strokes in the same space;---and a third, whose pulse beat no more than sixty-eight in a minute---but in others, again, it is very greatly accelerated.---*Pulsus, parvus, debilis, plerumque frequens* are the words of Dr. Cullen, in his definition of the disease.---Nor is the heat of the skin always increased. *Calor parum auctus*---as the same Nosologist expresses it,---but the *sensorii functiones plurimum turbatæ*; and the *vires multum immutæ*, are seldom found wanting.

To sum up the whole; though I dare not subscribe implicitly to the doctrine laid down, by such as extoll very large doses of this medicine, in febrile complaints; yet, if used with caution and proper circumspection, a due regard being had to the particular constitution of the patient in bearing its use, much advantage may reasonably be expected from opium;



and we may likewise justly say of it, as the great Sydenham did, that, *sine illo, manca sit, & claudicet medicina.*"

With respect to making experiments on the living subject, it may not, at all times, be expedient to discover our intention. There are few, who have not an aversion to become the subject of experiment, even though attended with the utmost safety and innocence ; nor are we to satisfy, at the expence of much uneasiness, perhaps pain and danger, foolish curiosity, where no inferences useful to science can be drawn from it.

I remember, many years ago, a practitioner, who administered to a patient no less than twelve grains of T. Emetic\*, merely to see what effect this *double dose*, as he termed it, would have. The consequence, as might be expected, proved very nearly fatal ; for the patient was thereby thrown into violent convulsions ; his limbs drawn up with violent spasms, and his life for several days, rendered extremely doubtful. The story made some noise in the neighbourhood, and the blame was laid on a young man, then his assistant in the shop ; but it must not be hid, that he was

\* Antimon. Tartarizat.



generous enough, afterwards, to remove the stigma from the innocent, where he saw it so unjustly placed, by avowing the fact.

We come now to hazard our opinion, with regard to the exhibition of *doubtful medicines*. It has been long laid down as a medical maxim,---*Melius anceps quam nullum uti remedium*,---or, that it is better to have recourse to a *doubtful remedy*, than to none.---But, perhaps, objections may be raised to the application of this precept in its utmost extent; because to adhere to it, and act innocently, in our practice, on all occasions, will require no small share of sagacity.

If we are determined, however, to apply this *anceps remedium*, it should, in my opinion, certainly be such, as is calculated, if it does *no good*, to do *no harm*; and yet, if we have any hopes from its use, they must be founded on *certain qualities*, perhaps *active qualities*, we know it to possess, and a comparison of these, with some *probable* or *certain* state of the organs of the body, on which it is to have salutary effects.

In *doubtful cases*, without acting in this circumfpect manner, we act *rashly*; yet to reason thus by induction, though it be useful,



can only lead to a degree of knowledge, and not to certainty; but it is a clue notwithstanding, that may be allowed occasionally to guide us; a taper that *may* lead from a *doubtful* into a more direct, and certain path.—“Probabilities,” says an author lately quoted, “are not to be despised, if they are drawn from experienced facts, to which we are led by the senses; because they are then to be established as so many fundamental propositions. A medicine which has often been useful in a case, and in circumstances similar to these of the case before us, will *probably* be useful in this, but if I have not seen it tried in these cases, my conjecture will be mere *chimera*. We ought, therefore, on such occasions, to reason only from experience.”

If we have recourse to dangerous remedies, merely to learn their effects in cases, where the patient, *in our opinion*, is past hopes of recovery, so that should the worst happen, we shall think ourselves free from blame, we may err; for this must be founded in the truth of our prognostic. That the wisest are frequently deceived in these, is well known. This has, and may happen agreeably, sometimes, contrary to our *prognostic*; and this incertitude,



certitude, should ever make us cautious in the exhibition of dangerous medicines, from an idea, that death appears inevitably approaching, and must take place.

We commune with ourselves, perhaps, in this manner.—“ It is in vain to be any longer solicitous respecting the fate of the patient; my skill, in medical science, can prove of no use in his case; yet I have heard of certain complaints, seemingly similar, where a certain medicine, when every thing else had failed, was successfully exhibited. As all hopes are here at an end, I can have little hesitation of trying it; yet I am perfectly convinced of its doubtful, as well as dangerous effects. I know it may do mischief; yet it may *chance* to do good here as in other cases where it proved salutary; let things fall out as they may, since every other medicine I can think of has failed, where can be the harm of risking a trial? No one can blame me for killing a dying man.” Such reasoning, it is to be supposed, as this, before the qualities of James’s powders, and their effects were fully discovered, was often used. They were often given as the last refuge in cases of fever; and as often, not only at improper periods, in the



exhausted state of the patient's strength, when the disease had spun out to several weeks, but in improper doses ; the consequence was, they killed many, though they cured some. The cases that terminated happily were publicly mentioned, while those that ended fatally, were looked upon to be occasioned not by the medicine, but by the disease. These abuses, since the composition, and qualities of this medicine have been better understood, are now corrected ; perhaps much more good, and certainly less mischief results at present from their exhibition in the hands of judicious men than formerly.

With respect to the above reasoning it is specious ; but I think it in some measure wrong : first, because the prognostic we have made, may be ill-founded ; for while life remains, there always remains some room for hope, because many of the operations of nature lie so far beyond our reach, that even the greatest penetration cannot fathom them. What then can common abilities, and superficial observation avail ? We know from the experience of ages, that the efforts of nature, which in the end turn out salutary, appear dangerous in the eyes even of the wise ; and in reality  
they



they are so ; since it is frequently found necessary to attempt to moderate them.

If on occasions of this kind, a less attentive observer, or a practitioner of less experience, from too hasty conclusions, gives up his patient, he acts worse than a coward ; at least he discovers a degree of timidity allied to ignorance. And should he now rashly, and without the advice of other medical men, and the concurrence of the patient's friends, if these can be obtained, administer a medicine of the nature of which he is altogether unacquainted, or, of which, from probable reasoning, he cannot conclude favourably, he is wrong, and should beware of the consequences.

In situations of this sort, I should esteem it both more safe, and not less conscientious, to trust the case, in a great measure, to nature alone, than to make hazardous attempts. Let our care now be directed to what are called the *non-naturals* ; to sleep ; urine ; stools ; food ; drink ; perspiration, &c. and suffer nature to perform the rest. I can easily conceive more danger from being too *busy* with medicines of the more active kind, than from none at all ; and, as has been said on another



occasion, it is safer to do too little, than too much.

“ The particular nature of diseases is frequently so obscure, that the utmost sagacity cannot discover it; and, in such cases, it is evident, that it is at least an even chance that medicines of any power may injure rather than benefit the patient; in such a state of uncertainty, it will certainly be prudent to give, in the form of medicine, what cannot produce any essential change; and in the mean time remark very accurately, the effects of diet, which will often afford the safest clue to the *general* nature of the disease; and which being ascertained, we shall have advanced one step nearer to a knowledge of its particular nature\*.”

But while we advance this opinion, it is not meant to inculcate indolence, or inactivity, or to deter from rational experiment; the last I would encourage.

We have the example of eminent men, both in and out of the army to follow here. It was in the army Sir John Pringle, Professor Home, Dr. Brocklesby, with many others,

\* Med. Cautions, Ed. 2d. p. 305.



made useful experiments, and laid the foundation of a practice which still continues.

It is, however, in such states of uncertainty, as already described, that it behoveth us to call others to our aid. Some others of the faculty should be now consulted; it will be for the attending practitioner's credit to do this: it is preferable to the precipitate use of this *doubtful* and dangerous remedy. Our prognostic, though formed with every possible care on our part, may be erroneous, and we should act with caution.

“It is a curious fact,” says Dr. Adair\*, “that though it might be reasonably expected, that considerable injuries of the brain must always be followed by great weakness, or total abolition of sense or motion: yet in some cases neither has been affected, and the patients have survived after wounds and impositions of this delicate organ, and in one instance after half of the brain was destroyed.—A caution against *precipitate prognostic* even in the worst possible cases.”

As an instance of the little reliance, sometimes to be placed in prognostic, and to point

\* Philos. and Med. Sketch of the Nat. Hist. of the Human Body and Mind, p. 25.



out their fallacy, we may mention one in the case of the once celebrated Mr. Pultney, as related by Bishop Newton. "This gentleman," the Right Rev. Prelate tells us, "once lay ill of a pleuritic fever at Lord Chetwynd's, in Ingestree, in Staffordshire. He was attended by Drs. Hope, Swynden, and other physicians, from Staffordshire, Litchfield, and Derby; by Dr. Friend, from London, and Dr. Broxholme, from Oxford.

"These two last mentioned gave him over on their arrival, finding, as they thought, the case desperate; he was still alive, and was heard to mutter in a low voice *small beer! small beer!* They desired that this or anything else might be given him. Accordingly, a great silver cup was brought, which contained two quarts of small beer; they ordered an orange to be squeezed into it, and gave it to him; he drank the whole at a draught, and called for another; another was given him; and soon after drinking that, he fell into a sleep, and a most profuse sweat, for near twenty-four hours. From that time he recovered, and so speedy was his recovery, that in a few days his physician thought it unnecessary to attend him longer \*."

\* Bishop Newton's Works.



I shall now venture to relate a case wherein I was agreeably disappointed in my prognostic, in the spring of 1782; though I thought myself sufficiently warranted, from the symptoms, to pronounce then as I did. The patient was in the seventeenth or eighteenth day of a Typhus, as far as I could learn, for it is difficult to find the exact commencement of these fevers, as we are neither called early, nor can the patient be distinct in his account; every attention in my power was paid from my first visit; all the symptoms carefully noted, and the changes that took place as diligently watched; the bark had been administered, and likewise wine in good quantity, more than commonly falls to the share of regimental patients. I had likewise tried calomel joined with camphor, in the manner prescribed by Lyson in fevers; with many other remedies, all with a view to raise the vis vitæ. My patient's strength was hourly sinking, and for two days his life appeared doubtful; but I had as yet been cautious in publicly giving my opinion of the event, though often interrogated on this point, a precaution which every medical man should use. In the evening I visited him,

and



and things appeared much against him ; yet I still hesitated in declaring my opinion. Next morning I visited again, but on entering his room, there was so evident a change for the worse, that my hesitation was now at an end ; the event appeared too plain, I thought, to be concealed even from the by-standers. The report I received of his night's rest, and above all, the appearance of his look prognosticated a speedy dissolution ; his countenance was sunk, and death already seemed to sit on each eye-lid ; the corners of his mouth were fallen, a symptom I had often noted to portend speedy death ; his urine and excrement passed involuntarily ; he had a subfultus tendinum ; his pulse so feeble and weak as scarcely to be felt, and a constant picking at the bed-clothes. I forbore now to prescribe, and only admonished the orderly (this happened in a billet) to give him now and then a little drink ; I left the house, therefore, with orders to let me know the time of his death, for I had no doubt remaining respecting it. Having heard nothing more of him, I visited next morning, and, to my agreeable surprise, found every deadly symptom changed for



for the contrary ; he was sitting up in bed, and the orderly feeding him with panada.

The unfavourable appearances continued, they told me, for some hours, while they expected every deep sigh he fetched would be his last ; but he sunk, after this great struggle, into a profound sleep of seven hours, and awoke, refreshed, sensible, and changed in the manner I saw him. He soon recovered, so well, as to render my attention needless ; but I freely confess, I was more obliged to nature for her timely interference, than to any thing I was able to do for the patient. I doubt not but many others have been similarly circumstanced ; and hence it is, that prognostics, in my opinion, should be made with caution, and relied on with doubt.

Another example tending to the same purpose may be here adduced : a Quarter-master in a regiment of Dragoons fell ill ; he was a valuable man in the regiment, and much anxiety was expressed by the officers for his recovery. The fever ran very high, and every day portended more and more danger. My advice had been requested, for it happened since I settled in this place, and I laboured with all my might, in conjunction  
with



with the surgeon of the regiment, to save his life. Death, however, appeared to us inevitable; and although I had been much conversant with disease, and had been present at the dissolution of many, I never saw any case wherein I thought it might be pronounced with more certainty. The Commanding Officer was therefore made acquainted with our opinion; and, from his regard for the man and his family, who by his death would be deprived of the means of subsistence, an express was sent by him to the Colonel of the regiment for leave to dispose of his warrant while he yet lived, which could not be done after his death. By a little manœuvre, known in the service and practised on similar occasions, it was disposed of to a serjeant in the same troop, that the purchase-money might be saved for the widow's use. The transaction was completed, and the new Quarter-master ready to enter upon his office, when things began to take a more favourable turn. A bolus had been administered the preceding evening, after the effects of which the amendment took place. His recovery was now rapid; and, to the joy of his wife, and the satisfaction of the Commanding Officer,



Officer, he was soon pronounced out of danger, and regained, after some weeks, perfect health and strength.

“ A Physician,” says Zimmerman, “ who goes so far as to predict what is to happen, can, on many occasions, say only, that it is *probable* such an event will take place ; sometimes, however, it is impossible to foresee this *probability*. The probability of a prediction is founded on the effects that have been observed in similar cases ; these effects are, therefore, to regulate the conduct of the observer.”

Hippocrates himself was aware of the great difficulty of forming a probable prognostic ; and though he had all the observations made by the family of Esculapius to assist him, he readily acknowledged it, and does not hesitate to declare, that it is very easy to be deceived. “ The prognostic, in acute diseases,” says he, “ is *uncertain*, and it is impossible to say *infallibly*, whether the disorder will terminate “ in death or in recovery.”



## CHAPTER XIV.

THE NECESSARY QUALIFICATIONS OF THE SURGEON'S  
MATE.

EVERY regiment has a Surgeon's Mate, or an Assistant Surgeon, whose duty is the same with that of the Surgeon. It frequently happens that the whole business devolves upon him, the Surgeon making only occasional visits to the sick; it would appear from hence, that his qualifications in medicine ought to be equal. The military laws, however, place him in subordination to the Surgeon.

If the regiment be separated into different divisions, and placed in scattered quarters; the mate is set over some of these, while the Surgeon remains at head-quarters, a compliment paid to him, and superintends the party that remains there, and near at hand. As the Surgeon receives the medicine-money, he is to supply the Mate with every article he stands in need of in this way.

It is clear from hence, that if he is not regularly supplied with medicines, his visits and prescription can answer little purpose to the afflicted whom he is to attend. Deficiencies  
have



have been observed in this point ; it is then the Mate will find his situation awkward, if he has any regard for the welfare of the men ; for the general rule with many regimental Surgeons is, to save as much from the money allotted for medicines as they can, since their perquisites must be in proportion. Yet, as we have already said, the fault is not altogether to be placed to their account, but to the bad establishment that limits their pay to a sum inadequate to their necessary expences.

This, however, not only injures the men, but often gives rise to discontent and animosity between the Surgeon and the Mate. For if the latter is active in discharging his duty, the former never fails to *admonish* him to beware of expence in medicines. If the Mate be possessed of any medical discernment, this cuts off all opportunities of displaying it. Though we said above, that the qualifications of both ought to be equal, yet under this restraint, it becomes a matter of little moment how he is qualified ; for should the first professor, in the most celebrated university, be placed in such a situation, surely his knowledge would be of little avail ; since, under



these circumstances, it is out of his power to execute what his discernment dictates.

An architect may plan a building with every degree of judgment and taste, but if he is deprived of workmen to execute his design, the structure can never be raised. It is altogether the same in medicine, should the prescriber be withheld from the means of composing his prescriptions : if Mates, under these circumstances, possess any medical knowledge, they become disgusted, and lament the unfortunate and *ignoble* station they hold, which prevents them from being of that use to their patients, which they otherwise might prove ; if this, with other things, does not determine many to quit a service they cannot remain in with honour or satisfaction, they become careless and indolent ; and observing that their greatest efforts to merit attention, and their most diligent application to their profession, can neither attract respect nor notice, they no longer take pains to obtain it ; their ardor by this behaviour cools, and they now become as indifferent to what happens in the line of regimental practice, as they observe their predecessors have been, till by degrees this indifference settles into a habit ; and



they lose all relish whatever for the profession, finding the labours requisite for it so ill rewarded.

Although it would appear from the foregoing, that almost any person may be a Surgeon's Mate, yet it were better, that care was paid to their choice, since every one, who is Mate, may in time, by interest, or some lucky chance, be Surgeon; for admitting, little now be in their power, yet when they commence Surgeons, their authority commences with the station. But will they be fit for the duty they must now undertake? It is not to be expected, that the improvements they have gained under such restrictions as we have pointed out, can have added much to their experience, should they have been Mates even for twenty years; and if they entered novices, insignificant visits to the sick, where they neither did, nor observed any thing material, and the wearing a cockade a number of years, can surely add but little to the general stock of their knowledge; for it is not to be supposed that knowledge will come intuitively, or be like their pay, the consequence of their promotion. However just the poet's opi-



nion may be in many things, when he says,

“ A business with an income at its heels

“ Furnishes always oil for its own wheels\*.”

it cannot surely be admitted in cases of this nature, if by oil, he means capacity for business. The parchment on which their commissions are written, cannot convey medical skill, or teach them how to make observations. Accurate observations so necessary to be made in physic, are not to be expected from such men.

The learned Zimmerman says, “ to *see*, is not to *observe*; and the hoary veteran, who has looked for ages on the complicated ills to which human nature is subject, may at last be uninformed, and unworthy of confidence. But the world thinks differently. With it, to be young, is to be *ignorant*; and to be old, *sagacious*.

“ Judgment is still more rare; it unfortunately requires erudition, reflection, and attention; it is not attained in the splendid circles of gaiety and dissipation; it is not the attendant of the coffee-house, or tea-table;”

\* Vid. Cowper's Poems. Vol. I. p. 289.



---But such is the life too often of Surgeons and Mates, because such is the life of the army. The manners and customs in use there, rendering it almost unavoidable ;---nay, such is the conduct, too often, of medical men out of the army. He proceeds farther in his observations on this subject, which though they be applied to *Physicians* in general, will, we think, equally apply here---“ these, however, are the schools of modern improvement ; and while the young Physician aims at being agreeable, he loses the opportunity of becoming useful. In this case, mankind combine against themselves ; the Physician acts only on the defensive.”

Galen complains feelingly of many practitioners of his day, who were not ashamed to attend in the morning at the toilet, and make their court to the ladies, and at night to be of the most sumptuous parties ; in this manner, by modelling themselves to every fashion, they aimed at establishing a reputation ; and this is the reason, says this respectable man, why the fine arts, and philosophy, are considered as very useless branches of a Physician's knowledge. “ Ought we then to be surprized,” to use the words of Zimmerman,



“ that ignorant mechanics should quit their trades for the sake of practising physic ; or that persons, who have learned only the art of preparing medicines, should have the boldness to consider themselves as physicians, and undertake the treatment of diseases ? ” ---Pliny has very well observed, that he who has *impudence* may very well pass for a Physician---and the observation, though some centuries old, is sufficiently applicable at the present day ; the conduct of our modern Empyrics will confirm it ; and since I have touched on the subject, give me leave, though it may seem a little out of place, just to add the sentiments of this author, relative to the tolerating quacks.---After inveighing against them in pointed terms, he adds, “ Is it not strange that the *State* should suffer this destructive breed ;---surely the people, blind and ignorant as they are, ought not to be abandoned to the prey of these *impudent* and *dangerous* men. If society claims a right to oppose the designs of any individual, who wishes to render himself unhappy, why should not he preserve the same privilege, when the safety of a great number of her members becomes concerned ? If society has such a right, she is surely blameable



blameable for not exercising it. The Sovereign will always be disposed to incline a favourable ear to representations which may be made to him on the subject. The Colleges of Physicians ought therefore to unite in the reformation of these abuses."

With respect to want of erudition, he delivers his opinion in the following words:—"The views of the inattentive practitioner are vague and uncertain, but the results of attentive observation, founded on a knowledge of human nature, with a just degree of erudition, are very different. These lead to useful conclusions: the others are like castles in the air, they vanish into nothing\*."

Many, likewise, of the regimental practitioners, both Surgeons and Mates, remain almost totally ignorant of what is passing in the medical world; their acquaintance and connections in it being either none, or very few. Their want of books contributes to this; for granting they have a taste for perusing them, they seldom possess any. "He who never reads," says the same author already quoted, "sees in the world only him-

\* Vid. Treatise on Experience in Medicine.



self ; he has no idea of what has been thought by others ; he considers all his own reflections, as of the greatest importance."—All these things conspire to withhold them from improvement, and cut off their communication with men of letters ; but we have touched on this subject in a former chapter.

Though this complaint against regimental practice, may have, in some degree, ceased within these last twenty years ; and though many may be now found in both capacities of Surgeon and Mate, whose abilities *ought* to command respect ; yet we may venture to say, without over-stepping truth, that several have found their way into it who deserve all the severity of this remark. Nor can much amendment be expected, till better regulations take place here, which I apprehend is not to be done without holding forth proper encouragement to men of regular education, to induce them first to enter into, and then to continue in the service.

Durst I venture to propose any plan, it would be something to the following purpose ; that Surgeons Mates, if they continued in the army, ought, previous to admission, to be strictly examined at Surgeon's Hall,



Hall, respecting their knowledge in surgery ; and afterwards by a Committee of Physicians, appointed for that purpose, relative to their abilities in what is more properly called Practical Medicine ; and to the privileges of undergoing these trials they ought not to be admitted, till after a certain number of years spent at a Medical University, or some other reputable Medical School, from which they are to produce certificates of their attendance, in the same manner as a Candidate for a degree in medicine, before his admission to examinations.

Brocklesby, who is well acquainted with army practice, is confident, “ That all future  
 “ examinations of persons employed as Mates,  
 “ or practitioners, in the army, should be  
 “ solely submitted to some one of the Censors  
 “ of the College of Physicians, together with  
 “ any one of the army Physicians, conjointly,  
 “ who know the requisites for the post, for  
 “ which they stand candidates.”

To alter the mode of examination at Surgeon's-Hall, he thinks, is indispensibly necessary for the benefit of the public service. Though he has laid this before the public, so long ago as upwards of twenty years, in  
 which



which time we have struggled with another long war, and are at present engaged in a second, things remain in this department just as they were, without one step of improvement attained. It is not to be expected that regulations of this nature can be attended to in time of war, when the public attention is drawn forcibly to different points. In such times even the progress of the arts is stopped; in times of peace we may be led to expect more; errors might then be rectified, and regulations formed to prevent them in future. There are few departments in the state where they are more wanted than in the medical; and in time of war few departments on which the success of our armies may more depend.

Something like the plan proposed above is followed in passing medical practitioners for the navy; after they pass an examination at Surgeons'-Hall, they are sent to a Physician appointed for this end, to be examined in medicine. When it is considered how much regimental practice partakes of the Physician's province, the propriety of this will appear evident. Brocklesby says, touching on this subject, in his *œconomical observations*, "I cannot



cannot admit that any one of the best of them, (Surgeons) although their knowledge may be sufficient in their own profession, or even any Court of examining Surgeons, at the Hall, are competent judges of medical subjects, sufficient to ascertain what are the requisite physical qualifications of men who presume to superintend the lives and health of nine hundred soldiers\*."---This, it seems, was the compliment of a regiment when he practised in the army.

It must be admitted, however, that medical education at the time this author made the above remark, was considerably more defective than it is at present, and it is hoped it can apply in its full extent to few now in the service; notwithstanding this we still fear that it holds good in some measure from the ease with which admission into this department of the army is obtained, and from interest united to careless and superficial examination.

In giving such certificates, private teachers for their own sakes should be cautious; they ought not to be allowed where the requisites are wanting: some grant these with too great

\* Vid. Œcon. Obs. &c. 1764.

facility;



facility; they have been given where the bearer's attendance was neither regular nor constant, and without any examination whatever. They have been found, however, to answer the purpose equally as well as an university diploma, or certificates from Surgeons'-Hall.

For the better encouragement of men liberally educated, more pay should be allowed. May we not, with propriety ask, who would give himself the trouble, and run into the expence necessary for such an education, for the poor pittance of three shillings a day? To live on this small stipend, when their necessary expences are considered, is barely to exist.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Mate's full pay, at 3s. 6d. a day *, for 365 days, is	63	17	6
	<i>l.</i>	<i>s.</i>	<i>d.</i>
Subsistence issued at 3s. per day, is	54	15	0
Poundage stopped by government, } is. per £. is — — — }	3	3	10½
Chelsea Hospital, one day's full } pay, is — — — }	0	3	6
Warrants and contingencies, two } days pay, is — — — }	0	7	0
Agency, 2d. per £. is	0	10	7½
	59	0	0
Remains of 365 days, or one year's } arrears at 6d. per day, is }	4	17	6
	63	17	6

\* A Surgeon's pay is 4s.

Or,



Or, he loses of his full pay, every year, no less than 4l. 5s. 6d.—while the annual arrears, or neat clearings, viz. 4l. 17s. 6d. are so irregularly paid, that it may be said, likewise, to be almost lost. The warrant and contingencies are an imposition of the agents, or their clerks; government never consented to them—an order has been lately made to prevent their being exacted, but it has not yet been enforced.

Another part of the regulations that might be found necessary is, that no subordination should exist between the Surgeon and Mate. Subordination, here, is found to be productive of jealousy, which if it does not injure the practice, at least makes the parties unhappy. What could first induce government to institute subordination between the Surgeon and his Mate, unless the latter was to be held in the light of an apprentice to the former? but we shall suppose him of equal qualifications; for if he is what he ought to be, he must possess equal medical knowledge. Is such a person to be treated as an apprentice boy; and as it were implicitly obliged to obey the dictates of one only his equal in point of medical erudition? nay, he may be  
far



far his superior in this respect ; for, though it has been mentioned as a doubt, whether many regularly educated, enter the regimental service in the station of either Surgeon or Mate ; yet, there are, most certainly, some in both ; but it does not always happen that two such are appointed to the same regiment. Where the weaker, the less qualified, chances to command, it is always an injury to the service, and a reproach on the ill-formed regulation.

Several young men, of good education, have entered as Mates, in the late war, and some from my own knowledge might be mentioned, in the present contest between this nation and France, both in the militia and marching regiments, through the laudable desire of falling into immediate practice, and obtaining speedy experience ; most of them however have soon found themselves disappointed in a great measure, by means of this subordination. But it is the fault of the military laws that permit this, not the fault of the officers\*.

Ought

\* I could mention several of promising abilities that went into the army, in the late war, both regularly educated Physicians, and Surgeons. Of these, two Surgeons have been fortunate



Ought subordination to take place in the medical, because it was found necessary in the other orders of the military? Is it not to be regretted then, that there are in the army men of education, yet the service so little the better for them, and which always must be the case, as long as they have not the regulation of affairs. If regimental Surgeons set up for teachers, subordination is allowable. Boys may then be put under their tuition, as they are under that of other masters, for a certain term, till they be supposed properly instructed in regimental practice.

But where they have already received a good education, is it treating them fair to set a master over them, for no purpose whatever, but that of humiliation? Surely it is humiliating enough, that their pay is less than the Surgeon's, who has been more for-

fortunate enough to get appointments, as regimental Surgeons. Of four others, all Physicians from the first Medical School in Europe, one only has the appointment of Surgeon. The others were, and are Mates, (1783.) It is not our business to say what are the abilities of those under whom they act. Some of the above, finding themselves mistaken in the choice they made, soon retired from a service they could not remain in with credit to themselves, or usefulness to their fellow creatures.

tunate,



fortunate, without, perhaps, possessing more merit.

In hospitals, out of the army, where two or more medical practitioners are appointed conjointly, it is not with this invidious distinction. They are denominated *Colleagues*, and no subordination subsists between them \*. They consult together ; they deliver their opinions freely, supported by reasoning ; and by this each is actuated. It is very different in the army, where a Mate *often* receives his *orders*, as a servant does from his master, or as a serjeant from his officer. There is no room for remonstrance, if the Surgeon chuses to insist on it ; he may even be compelled to do what his judgment points out to be wrong. Under these circumstances, observation and judgment must yield to stupidity or rashness. For it does not always happen that the other may be inclined to listen to the reasoning of his Mate, in matters wherein they differ in judgment.

\* The term senior and junior Physicians, &c. to an hospital, does not imply that the one is obliged to obey the *orders* of the *other*, nor gives any other than mere nominal distinctions.

There



There is a sort of pride, but it is of a very censurable kind, in insisting on our opinion, because it is such, when there are evident reasons why it should be yielded: but this is a fault too often found among all orders; and we may pretty nearly coincide with Pope, when he says, that,

“ 'Tis with our judgments as our watches, none  
Go just alike, yet each believes his own.”

but instead of this obstinacy of opinion, where it unluckily happens, they ought to meet, consult together, and reason on doubtful points, as is practised out of the army; this, however, can never happen with the same cheerfulness, where an equality does not exist. If complaisance in a Surgeon, or perhaps sense of his inferiority, bids him act towards the Mate otherwise, it is to be placed to his own benevolence of disposition, and a wish for the welfare of the patients; but the laws of the army give him power to act very differently.

Mates labour under other hardships as well as these, which must ever prevent men of much knowledge from holding the office; *i. e.* the length of time they may remain in



this situation without farther promotion. Instances have occurred, where a man has been Surgeon's Mate in a marching regiment fifteen years ; others ten ; others eleven ; and even then, when vacancies happened, they have found novices both in years and knowledge, set over their heads. This is bad, but it will still appear worse, when it is considered, that they may spend twice the number in it, and be at last dismissed without any thing to support them in their old age.

The case is different with the Surgeon ; if his service was even less than a year, nay, perhaps less than a week, provided the regiment he served in be reduced, he is entitled to half pay \* ; the Mate is left to provide for himself or starve. Would it not appear more equitable to place him on the same footing

\* I speak of the Regulars. Militia Surgeons receive no half pay—several instances of this kind occurred at the late reduction, on the close of the war. I am happy to find an acquaintance, and worthy young man, among this fortunate number : though I have the mortification to find more than one, no less deserving ; nay, even Physicians, who served most of the war, as Mates, dismissed like private soldiers, without a penny ; and the same would have been the case, had they served in this station the greater part of their lives. He is the only officer in the corps that is thus ill rewarded for his labours.

with •



with the Surgeon, allowing him also half pay? When a private foldier ferves twenty-three years he is entitled to his difcharge, and is allowed a fmall penfion. It feems but rea- fonable that fome provifion fhould be made for Surgeons Mates.

But though thefe inconveniences are great, they are not all they lie under; they are ftill fubject to a farther humiliating circumftance, *i. e.* being liable to confinement in the fame ignominious manner as a *private*, and this even at the pleafure and caprice of the youngeft Ensign of the corps. Let us now fuppoſe an example, and obferve how it appears: fuppoſe then a man, fuch as defcribed above, refpectable for his knowledge, perhaps venerable for his age, ferving as Mate in the army: let us likewise fuppoſe a boy, as frivolous as he is young, and as ignorant as he is frivolous, juſt taken from a writing ſchool, and entered into the ſervice; a trifling diſpute may ariſe between them; the Mate, without more ceremony, if he ſeems to reſent, is threatened with the *Black-Hole*; nay, he is in reality by the military laws, liable to be tried by a Court-martial, and flogged like one of the foldiers, under the idea of *infolence to an*



*officer*; and this merely, because his warrant, instead of being signed by a Commander in Chief, or Secretary at War, &c. like the Officers and Surgeons, is only granted him, and signed by the Colonel of the regiment.

It is true, this law is seldom put in execution; the gentlemen of the army are ashamed of it; and I doubt not but he must be a great delinquent, whom they would suffer to be treated with such ignominy; yet as the minds of men are variable, and as disputes may take place, there is a *possibility* of its happening some time or other. I have heard it often mentioned in jest, which was still reminding the Mate, of the law that hung *in terrorem* over him; and once I knew it threatened (not indeed executed) in good earnest. A repeal of a law so unjust, so absurd, ought surely without loss of time, to take place.

It may be objected, that if the Mate's warrant was signed in like manner as the officers, it would infringe the privileges of the Colonel. I deny this; for the Colonel, as now, may have the nomination, (proper certificates of the candidates qualifications being produced) and may signify it to the War-office, or Commander in Chief. We have a similar example  
in



in the appointment of the Adjutant: the Colonel has authority to appoint his Adjutant; but the commission is signed by a superior power.

By some such means as these, regimental practice would become more respectable; and men of reputation would not, as now, think it beneath them to accept the office, either of Surgeon or Mate; nor would they leave it as soon as they understood the nature of such ill contrived laws. The sick foldier would be more advantageously attended, and the service in general better conducted.



## CHAPTER XV.

SURGEONS MATES UNNECESSARY ; AND THE PROPRIETY  
OF AUGMENTING THE SURGEONS PAY.

THOUGH I have taken some notice of the qualifications necessary for Mates, and such as they undoubtedly ought to possess, if they are continued in the army, yet I am persuaded the office is superfluous. It has already been shown, that a regiment of foot, of the late establishment, when compleat, was only 746, non-commissioned officers included ; and of these two companies, called additionals, are always on the recruiting service ; and never with the regiment either at home or abroad, and of course never in the number of the sick. We have, likewise, pointed out the number of sick that, at an average, may be expected to require daily assistance. We know that it is not the number, but the distance our patients are placed one from another, that constitutes the fatigue of the profession.

Among the number of the sick we always find men that, properly speaking, have no  
right



right to be returned to the Surgeon. Parties are frequently sent out on different *Commands*; some after deserters, and some on other duty. On returning, they are generally put into the sick list on account of blistered feet, or, perhaps, for the sake of resting a day or two; sometimes they want shoes, or some other of their necessaries, and cannot appear on parade, nor be put on duty, and are always placed in the Surgeon's list; for they *must* be accounted for; and this seems the most convenient place for them in the daily returns made to the commanding officer.

Many also, of these called sick, ail little or nothing; at least, need very little medical attendance. Some are affected with chronic complaints, that only require occasional visits, and occasional assistance; some with cut fingers, and others with blotches on their legs, preventing them from wearing their Long Gaters; nay, I have frequently seen the whole list not exceed twenty-six, and continue about this number for weeks, the above included, and this when the regiment was near 600 strong\*. During this time there was little need of any medical advice.

\* In the year 1782-3—it continued so for some months.



We know that practitioners, who have the care of hospitals, out of the army, visit daily far more than the number we have mentioned, besides their attendance on a large private practice. Most of their patients require much attention; for few either come to hospitals, or employ Doctors out of the army, that do not really stand in need of their assistance. Why then is the regimental practitioner to labour less than the practitioner in common life? Let him only enjoy a proportionate compensation, and he will seldom complain of any fatigue he may sustain in the medical practice of a regiment. Let his life be only made comfortable, and the office he is engaged in more respectable, and he will seldom think the medical care of a regiment of six or seven hundred, nay of a thousand men, too laborious\*.

It may be objected, that the regiment is often cantoned, and separated into different divisions, which may make it not only very troublesome, but even impossible for one person, daily, to visit all the quarters. This is

\* In the spring of 1782, most of the regiment were ill, at once, of the Influenza; but epidemics of this kind rarely happen.



true, it will be next to impossible to visit them separated in this manner, but an easy method may be found ; let some Surgeon in each town, where a division or party is stationed, be applied to, and for the medicine money he will attend them during their residence. This is often done, as things now stand ; why may it not be done, if the reformation hinted at here, should ever be thought worthy of the notice of Government ? It might be easily proved, that the soldiers, under such medical people's care, would receive better attention when sick ; and more efficacious, at least, more palatable medicines would be administered to them, than if under the care of a Mate, limited in his practice as already described.

A settled Surgeon deals largely in medicines ; his practice obliges him to procure them both in abundance and variety ; and his own reputation requires that they should be of the best quality. He purchases them, likewise, at a cheaper market ; hence he can afford a neat medicine to a soldier, perhaps cheaper than the regimental Surgeon can his coarse ill-chosen drugs, bought from retailing druggists, or country apothecaries : it has  
already



already been mentioned how far a good medicine, well prepared, exceeds in efficacy those ill prepared ; how much more palatable, on this account, their medicines may likewise be made ; and it is well known, how necessary even an agreeable vehicle oftentimes is, in the exhibition of medicines, to ensure their success.

Many of the soldiers buy medicines out of their small pittance of pay, from the Surgeons of the towns wherein they are quartered, rather than be subjected to swallow the medicines which their own *Doctor* prescribes for them. In this way they are often great sufferers, and it would seem that there must be some fault on the Surgeon's part that thus compels them to it. For when this is the case, they must do their *duty*, as well as buy their medicines ; since no man is supposed sick unless he be reported to the Surgeon. I am convinced one reason is, the neglect of proper vehicles to administer medicines in. This, I know, is too little considered by several of the regimental practitioners : yet it would add little to their expence in the purchase or preparation of medicines.

Settled



Settled Surgeons, who take the care of a division, should daily receive from one of the corporals a list of the sick, for the sake of order, in the same manner as is customary to be given to the Surgeon of the regiment; this might be weekly transmitted to the Surgeon at Head-quarters; nor would this consume more than a few minutes of his time daily, and could not on that account be objected to.

We shall suppose, from the encouragement given the Surgeon now acting without a mate, that he is enabled to keep a horse. It will, therefore, be no great trouble for him to visit these different cantonments, if within a moderate distance, once, if not oftener, a week, converse with the Surgeons under whose immediate care the men are placed, respecting their complaints; but he should never interfere, or order any medicine whatever, without their concurrence; without some previous conversation with them on the subject. If the case be either tedious, or doubtful in its event, they may consult together. These gentlemen should have an order to procure what wine may be thought necessary for the patient's recovery, in cases where its use is indispensable,

When



When a camp is formed, if it be large, consisting of several regiments, a physician is appointed, and a general hospital established; it is obvious that a regimental Mate will be unnecessary now, since all difficult cases may be sent thither. But supposing no general hospital, the Surgeon's fatigue cannot be greater than in quarters or barracks; since the men are placed equally near him, in the small circumference of a camp.

Suppose again, his hospital be at some distance from camp, even two miles; the toil of visiting it daily, nay twice a day, if necessary, is nothing; should it be at a greater distance, it would be better if he lodged at it, or as near as he can find conveniency. If he can hire no private lodgings near, which I think can hardly be the case in England, let him pitch his tent there, instead of sleeping in camp. He may visit camp once a day at his leisure hours, and even dine there; but let the greater part of his time be spent near his hospital.

The Surgeon should have the choice of the house for an hospital, where a choice can be made; this, though an affair of the first magnitude to his patients, is too often left to the judgement



judgement of a Quarter-master. He should take care to provide one sufficiently large ; and if one house may not appear large enough to contain all the sick his experience leads him to expect, two or even three should be rented for the duration of the campaign ; two moderate houses will certainly be enough : this will require not only more nurses, but more fire-wood, and *Orderlies*, as well as an additional centinel. But some trifle in the augmentation of the duty, or the expences, is not to be put in competition with the health of the foldiers \*. Much of his care should be directed to the prevention of acute and epidemical diseases. If the hospital be crowded, and the infectious, and non-infected be compelled to mingle together, diseases may arise, which in a short time must thin the regiment, notwithstanding every medical care to suppress them.

When the hospital is bad, and the sick numerous, if the weather be at all moderate, I

\* Government has very wisely made an extra allowance here, during the campaign. The hospital money, which we mentioned to be generally 30*l.* per ann. now ceases ; and in place thereof, the sum of 7*l.* 10*s.* a month is given. In five months this amounts to 37*l.* 10*s.* which will defray the expence of sufficient accommodations.



would advise a few tents to be erected, and part of the sick lodged in them. For infectious diseases these may be preferable to the hospital, in as far as they may be more easily kept clean, and a free circulation of air obtained, a thing of the highest consequence. This was practised at Mahon. When the hospital fever in the late war, Dr. Lind tells us, was brought from England into the hospital at Mahon, the house being found insufficient for so great a number of sick, *tents* were reared up in the fields for many of the men. These poor fellows were thought to be badly accommodated; but it was very observable, that most of those who lay in the cold *tents*, recovered; when the mortality in the house was so great, that in some wards not *one* in *three* escaped\*.

The custom at present is, when the regiment is encamped, to keep the Surgeon always in the camp, lest accidents should happen there. But this appears a very unnecessary rule, and is frequently a disagreeable thing to the Surgeon. If accidents should happen, are not the men easily and conveniently carried

\* Vid. Lind, on the Health of Seamen.



to the hospital? Should not this be the case, a very short time will bring him to them.

It may farther be said, are not Mates necessary abroad, on actual service? Encampments at home may be considered as actual service; and if we have shown that they may easily be dispensed with in the one case, the same will follow in the other. Soldiers abroad are either in garrisons, or in camps; in both cases the men are never so far scattered, but the Surgeon may conveniently give his attendance. There are abroad, however, always general hospitals established, which must subtract greatly from his labour. Besides, the regiment is almost daily on the decline by deaths, desertion, &c. and cannot abroad be easily recruited. The fewer the number of the regiment, the less must be his toil. Should a battle be fought, much assistance, indeed, may be necessary; but even then the wounded are sent, as fast as convenience will allow, to the hospital. A general battle is, nevertheless, what seldom happens; skirmishes more frequently take place; here a few men out of a party detached on some service, may be wounded; but this can never create so much fatigue to the Surgeon, as



to require a mate constantly in the pay of government.

It may be farther urged, that the Surgeon may fall sick, therefore be unfit for duty: this may take place; but he will always find some of the faculty, where he is quartered, ready to give assistance, provided he has formed any acquaintance among them, as we have elsewhere shown he ought to do; at least, they will readily undertake his duty, for the medicine money, till his recovery. Should the same happen on foreign service, he may have the assistance of some brother Surgeon, since one regiment is seldom stationed alone for any length of time on these services. A neighbouring Clergyman will officiate for his sick brother, and a neighbouring Surgeon *ought* to do the same for his sick friend. I mean here only regimental Mates; I meddle not with the hospital Mates, nor the regulations and œconomy observed there; this would be stepping beyond the bounds of my subject.

Instead of the medicine-money which we think should never be placed in the hands of the Surgeon, and for any fatigue more than usual, he may be liable to undergo from the  
want



want of a Mate, he ought to be allowed the Mate's pay in addition to his own; and from neither should any deduction be made. Besides this, a gratuity should be given by each officer to purchase medicines for themselves: he is obliged to give them advice, but not medicines.

In some regiments, as matters now stand, the Surgeon is allowed a guinea a year from every Subaltern; two from each Captain; three from the Major; five from the Lieutenant Colonel; and ten from the Colonel. For each foldier whom he inoculates for the small-pox, government allows a guinea. This might enable him to live tolerably well, at least in a cheap country; and yet I am still of opinion, that even this is too small for the encouragement of men of science to continue in the service. This should be equal to what they may expect out of the army; indeed, if we consider the many hardships which they undoubtedly must suffer, who are engaged in the army, to which persons out of the service are not exposed, it ought to be more than equal.

It is not to be supposed that a man whose fortune is his profession, and who has wasted



not only much time but money, in acquiring a proper knowledge in it, will ever enter into the army for one hundred a year, (his pay is only 80l.) when he has the prospect of making more than four times this sum in common life, with equal ease, and a better reputation. Why then not allow him the same hire? When this is done, he is not on an equality with the other officers in many respects.

Let us suppose him twenty-five years of age before he be qualified for his office; I should think it almost improper, that any person should enter into the army as a Physician, or qualified Surgeon, till he be nearly this age; neither is his understanding properly ripened, nor can a liberal education be finished much earlier; and till both take place, he is unfit for so important a charge. Let us suppose, also, that he has received an expensive school education, and afterwards resided several years at an university, (the least is four) and at no small expence. All this is to be done before he can begin, as I shall call it, the world; or is in a situation to recover an equivalent for his time, money, and trouble. Here is upwards of one third of life wasted, which



ought surely to be considered of material weight, since we find the period of man's days so limited.

On the other hand, a youth at the age of sixteen, (and many have been admitted much younger) may rank as an Ensign in the army. He *may*, or he may *not* have received a classical education; (at this age it must be a very imperfect one;) this is not thought a requisite in the military profession. Let us suppose that he has not received one, which I am apt to believe will most commonly be found to be the case; at the age of twenty-five, if he be fortunate, he may rank as a Major, nay, a Colonel; for to use the words in a theatrical piece, represented some time ago, "Colonels are all *young men now*." Here are two advantages he has above the Surgeon, not to mention others; first, he receives pay from the age of sixteen, and without much previous expence for education; and secondly, at the age when the other is only qualified to be admitted, he has not only an equivalent for his time, money, &c. but is far superior to what the Surgeon can *ever* expect in his station. Moreover, the officer has the farther advantage of having in view several other ho-



nourable, as well as lucrative steps before he arrives at the top of his profession\*. The Surgeon has few or none.

It may be said, the officer often purchases, and thus pays both for his rank, and the emoluments arising from it: this, however, will make very little difference in the case, because they have permission to sell when they wish to retire from the service. A Surgeon is often placed in similar circumstances; he often, in like manner, purchases, and it is only then he has permission to sell, if he chooses to quit the army; nay, of late, he is forbid to sell, notwithstanding he may have purchased; and what is still worse, when he is superannuated and so infirm as no longer to be capable of doing the duty of his station, there is no provision for him. He *may* retire, but if he has no private fortune, which

\* The steps of preferment are few in the Surgical line: the vacancies happen still more rarely. We have but few general hospitals belonging to the British army; few, therefore, can at all hope for preferment above that of a regimental Surgeon. Nay, we have heard, but shall not positively assert it for truth, that the Surgeon General, some time ago, gave it as his opinion, that regimental Surgeons were unfit to be Surgeons of Army Hospitals. If they deserved this reflection, is it not strange, that they should have been appointed Surgeons to regiments?



for the most part is the case, he retires to *starve*. Was he allowed, in his old age, to sell, he might be able to subsist the rest of his life. On the whole, it would appear but a moderate allowance, if government would settle two hundred pounds per ann. free of all deductions, on the regimental medical practitioner, with the addition of Rations, when on services where these are allowed, of the same value as received by a Captain.

This regulation would not stand government in more than the service already costs. When the Surgeon's and Mate's pay are added, it amounts to 7*s.* 6*d.* a day; three and sixpence a day more is all the addition required. Ten pounds per ann. may lawfully be subtracted from the medicine money, which will reduce it to 60*l.* per ann. in regiments where 70*l.* is now allowed; a very great quantity of genuine medicines may be purchased for this sum; even more than sufficient for the sick, not only of 400, the present, but 636, the late war establishment of several regiments. A guinea is the allowance for every man the Surgeon inoculates for the small-pox; this should be stopped, and in place thereof 10*l.* per ann. added to the pay.



Inoculation is now well understood, and needs little addition of medicine or trouble. Besides, he ought to perform every medical duty, as it occurs, without a bribe.

We may venture to say, by this regulation government will be a saver; for one year with another every regiment must cost upwards of ten guineas in this article. In place of the medicine chest of addition, which each regiment receives when in camp, let 6% a year be allowed. We shall endeavour to prove in another place, that it is superfluous, and is not in reality needed for the intention it is given; at an average it must be worth more than 6% a year.---We have now found no less than 26% of the sum required; there remains only the small deficiency of about 30% a year to compleat the augmentation proposed. This small sum must surely be looked on as a trifle, when put in competition with the good that must result from it, both to the soldiery and the Surgeon, but chiefly in what relates to the health of the former. The scheme to be adopted to raise this small augmentation I must leave, however, to the wisdom of the Legislature.



An author, who upwards of twenty years ago, treated of this subject, says, "Gentlemen filling the medical character, should be sought out more respectable, better qualified, and every way more truly honourable; and then they should also be better rewarded than the generality of the present deserve to be."—He is of opinion, a regimental practitioner, qualified properly by a liberal education, should not have less than 250*l.* per ann.—"This competency," he adds "in time of peace would be an inducement to abundance of learned and ingenious men, of sufficient science, to divest themselves of ambition, and to quit the farther bustle of a busy world, for the means of a genteel employment in those paths, into which from their first outset in life they had early entered\*." The Surgeon, however, I am persuaded would think the augmentation we have proposed sufficient. And, indeed, it would be sufficient, provided no stoppages; I mean no arrears be allowed. To the charities they ought to contribute as they do now. The scheme the above author devises for his augmentation is from the stock

\* Vid. Brocklesby on *Æconom.* and *Mil. Dis.* &c.



purse, but this appears to me exceptionable. It is a pity to rob one officer to serve another.

I am apt to believe the reader, who understands the army customs, and regulations, will readily agree with me, that the pay of subaltern officers in the army, is far too small, and greatly inadequate to their necessary expences. Three shillings, or three and sixpence a day to a man, obliged to live as the rank of an officer requires, is less than ten-pence a day to a labouring man, or even six-pence to a foldier: I could prove that the foldier on his six-pence, is at the end of the week, unless he be a spendthrift, the richer man of the two; *i. e.* can save more money from eating, &c. than the subaltern; but this is a subject which does not so much fall under our consideration here; yet it is not unworthy of a more accurate investigation; nor ought it to be beneath the notice of government: this likewise I have touched on in another place\*.

With respect to Surgeons, the difference between a wandering life, like that of a foldier, and a settled life, like a private Physician or Surgeon, is surely very great. By an allowance of 200*l.* per ann. we shall not find

\* Vid, Treatise on the insufficiency of Subaltern's pay.



that the regimental Surgeon enjoys any thing above a moderate competency. If he wishes to marry, which it is hoped is a state that will rather gain, than lose credit in the army, he must, even on this sum, exercise all possible œconomy to educate his family decently, and settle them reputably. Will any one venture to assert that there is any thing like superfluity in a salary of 200*l.* a year, as times go, allowing for an officer's expences, and as the value of money now stands?

In almost any other way of life a man may obtain this, and that without either the toil or anxiety of study, or the expence at which medical honours must be obtained. In most of the genteel mechanical branches, a sum as large can be yearly cleared. If this be true, who would enter the army, where he must starve on much less than the half? A soldier (we include the Surgeon in this title) purchases every article of life at a far greater price than others. He must dine at a common tavern expence, almost wherever he goes; in every town he finds himself a stranger, and most people he deals with ready to make what advantage of his situation they can. He is seldom above a few months in one place; besides,



besides, the custom of the army renders it almost necessary for him to frequent public places : at least, he must often appear there, if he wishes to get into genteel company ; this is a considerable additional expence.

I would now hazard an opinion with respect to another regulation ; *i. e.* when a Surgeon is desirous of retiring from the service ; he should let his intentions be known to the Colonel, six months previous to his resignation. And if the place is to be purchased, no candidate should be allowed to make proposals, who was not qualified in the manner already set forth ; and till he produces his diploma before a committee of medical gentlemen appointed for this purpose, who are to judge, whether the claim to the privilege be valid or not.

It would be better still for the practice, if the place were not to be purchased, lest corruption should sometimes slide in ; for he that can procure a sum so large as to purchase 200*l.* a year, will never want for interest. It would sell for little less than a Captaincy : now, it is well known, that few who can raise this sum, will ever undergo the fatigue of so much study, as is requisite to the right discharge of the office ;



fice ; when they may procure a place equally, if not more lucrative, as well as honourable, without much literature, or the expence that attends a liberal education. The regulation of the price, when it is to be sold, should, however, be settled by government.

I say *less honourable* ; for the Surgeon is held in an inferior light to the youngest Ensign ; and the King himself considers him so. In the year 1778, when his Majesty reviewed the camps, no Surgeon was allowed to kiss his hand, a permission granted on that day, to every officer down to the Chaplain, except the Surgeons of the Militia, who were present, who bore commissions as officers, and did it in virtue thereof. This distinction was *not* given to any lower than the Chaplain, and the Surgeon ranks after him. This proves that it is considered as *less honourable* to be a *Surgeon* than an *officer*. Why it should be so, I leave to others to investigate.

Since this appointment is a matter of great consequence to the regiment, interest should, as far as possible, be excluded ; merit only should meet with encouragement ; neither rich friends, nor high birth, can supply medical knowledge ; therefore both should be excluded



cluded where this is wanting. But it is always to be presumed, that where an university has granted its licence, this, for the most part, is to be found. Yet even here there is a choice, for the talents of one may far exceed those of another, though both have acquitted themselves to the satisfaction of their Examiners.

I have ventured, in a former chapter, my opinion relative to genius; and presume, observations will confirm that such exists, if care be taken to compare the different progress of different persons following the same pursuits, and who have enjoyed the very same opportunities of improvement. It was this (genius) that Celsus meant, when he said there ought to be in a Physician, or Medical Man, a *certain quality*, which can neither be named, nor easily understood.---“ It is this undefinable something of this great *man*, *that* constitutes the difference between two Physicians, who have had the same education, have seen the same cases; have, in short, had the same opportunities of acquiring knowledge, and yet the one shall infinitely excel the other. It was this same thing which made the difference, Martianus perceived between *himself* and



*Galen*, and which induced him to say, one day, when he met him at Rome,—*I have read the prognostic of Hippocrates as thou hast, why then cannot I prognosticate as well as thou?*”

There is nothing, perhaps, that has contributed more to the present contempt in which regimental practice is generally held, than the busy interference of interest. A young man has, perhaps, never been in any medical school, or very little; he goes out to some of our colonies, in character of a mate, with as little medical foundation; he is, perhaps, a good companion; a *jolly fellow*, as the term is; and, on the whole, an agreeable young man. By his officiousness, and attention to persons of superior rank in the army, he still strengthens his interest; he is soon recommended for preferment in his profession, and as soon obtains it. Though, in many respects, he may be very deserving, yet such must be an improper person for the trust now committed to his charge.

They do not consider, that neither his jokes over the bottle, his smart repartees, or the studied politeness of his address, can assist him in removing the gout from the stomach, should any of his company need his assistance



in this way, nor yet give him abilities to remove diseases, when his duty calls him among his patients. A French lady was told, her Physician had not common sense; she replied —*tant mieux—Un homme qui passe son tems à etudier le sens commun, comment peut-il apprendre la médecine?* She thought, if he had consumed his time in studying *common-sense*, he would have had none for the study of physick.—Not reflecting, that if he wanted common sense, he must be but a poor prescriber.—But from recommendations, and promotion obtained by the means we have suggested, it would lead one to think, they too frequently considered medical science as the attendant of *jollity* and *good-fellowship*—But we may answer with the same lady, though she applied it differently.—*Qui parle grec comme Homere, ne sait pas danser.*—He that spends much time in one pursuit, *must* have the less left for others.

Again, young men may be employed as Mates in General Hospitals, be expert enough at dressing a wound or ulcer, yet be altogether unqualified to prescribe in diseases of the general system; nay, even in many topical complaints. To cure a fever, and spread and  
 apply



apply a plaister, are truly different, requiring very different abilities; the one is obvious, and a knowledge of it more easily acquired; the other complicated, and difficult of investigation, and requires much knowledge, even in collateral branches of science.

It will be said, ought not such as have served in the capacity of Mates, in regiments, for upwards of twelve, fifteen, nay seventeen years, to be promoted to Surgeoncies, when vacancies happen? Undoubtedly, provided they be found qualified for the office: but length of service, though it ought to be rewarded in some way, should not entitle a man to an office, the principal duties of which he is ignorant how to perform, and likely ever to remain so\*; there is an absurdity in the very supposition. If any such be found in the army, by all means let some reward be

\* Mr. G—— served as Mate seventeen years and more, in —— regiment of foot; the Surgeoncy at last became vacant; he offered himself at Surgeon's Hall for examination, and was rejected, as not qualified; and yet my informer assures me he had the sole medical care of the regiment, for near eight years of the time he served as Mate. If unqualified, why so long trusted? The fault lay in admitting him at first, without qualification.



given them ; but suffer them not to be advanced to an office where they may have an opportunity of doing mischief ; nor, like unwholesome leaven, let them be incorporated with the new mass, lest the whole be contaminated.

It will be said, is no assistant necessary ? is the Physician or Surgeon to do all the drudgery himself ? It has already been proved, that no great degree of drudgery can attend it ; at least, not more than one person, by the assistance of an Hospital Nurse, and one or two Orderlies, can perform. We shall, however, allow an assistant, but one which shall be no additional cost to the state.

In every regiment there are one or more old worn out men, who are disabled either by some disease, or perhaps by age from doing duty, and are always allowed the privilege of remaining on the sick list. Let one or two, if necessary, of the most expert of these, be chosen for the purpose. And with a very little care, nay, with a few day's instruction, they will be qualified for most of the ordinary business of a Mate. They will spread plaisters, dress small sores, and punished  
mens



mens backs\*, make unguents, boil poultices, and many things of this nature that are necessary, and will be done by them with pleasure, though if left to a man of education, such as the Surgeon, would be troublesome, and even beneath him to perform; if any thing in the way of his duty ought to be held in this light.

Such an assistant is analogous to a porter in a druggist's shop. I know from experience this is practicable; I have taught no fewer than five such persons with very little trouble, and who, in a very short time, have after-

\* Since I have occasion to mention punished men, give me leave to relate what I was lately told to be facts, that fell within the knowledge of my informers.—A medical gentleman in this neighbourhood affirms, that a soldier died, after receiving 700 lashes, and that in a very short time after.—Another professional gentleman likewise declares, he knew one to die in Dublin, after 500.—I had mentioned, when on the subject, that I believed few, if any, ever fell martyrs, immediately to flogging.—I am sorry to have it in my power to record these two cases—but it is hoped they may serve to put the Surgeon on his guard, when his duty demands his presence at punishments.—It has lately been hinted to me, that if it was recommended to the Surgeon, to advise that the culprits be bound down to a flat board, or table; that in this situation they could bear more punishment with less danger, than if they were tied up in the common way, with their hands stretched above their heads, to the halberds—the experiment is certainly worthy trying—at any rate, things cannot be worse.



wards saved me many disagreeable jobs, that without them I must have undertaken. I have been sometimes almost tempted to trust them to bleed, only that this is an operation, that should never be trusted to men ignorant of the structure of the parts concerned in it.

Farther, respecting the inutility of Mates; we know that in time of war, almost any thing, having the appearance of a man, is acceptable; hence the sickly and healthy, the strong and the weak mingle together, and all must do the same duty. In times of peace, none but the young, strong, and healthy are enlisted. It is reasonable, then, to suppose, that number for number, fewer will be sick in time of peace than in time of war; the duty in time of peace is likewise less than in war; and since we have already shown, they may be dispensed with in time even of war; it is obvious they may be dispensed with in peace. An epidemic may arise at any time, whether in peace or war; but it is no objection to our proposed plan.

I have spoken all along of the full complement in time of war; but it is evident there must be much fewer in time of peace, consequently,



quently, less business to employ the Surgeon. Sometimes, the peace establishment is so low as twenty-seven a company, especially in Ireland. The peace establishment before the present, I think, was at this number; the present, however, is forty a company, which supposing the regiment compleat, amounts in ten companies only to four hundred men. Surely one person is sufficient to take care of the sick of this number, which, at an average, can hardly exceed twenty; and more than half of these, such cases as may require very little medical aid. When the labour is so small, where is the utility of a Mate? A period of seven years we consider as a long war; but we are often blessed with a peace of three times this period. This I would consider as a farther argument for the reduction of Mates. According to our calculation, it is plain, in time of peace, they may be dispensed with; and we have already advanced reasons to show the office may be even struck off in time of war, supposing the regiment at its full complement.

Some may still farther object, that if a Mate be not allowed, the Surgeon's attendance in the field on field days, must be in-



interrupted, for some person must remain convenient to the sick. To this I answer, that his attendance on common field days may very readily be dispensed with; there is no absolute necessity for it. Indeed, it is considered more as a compliment to the officers, than as of any utility expected from it. The Surgeon, or Mate, for they generally attend alternately, are never expected in the field, unless the officers also be ordered out. When the Adjutant and only an orderly officer march out the regiment for exercise, neither he nor the Mate goes.

The reason given for their going at all, is, lest accidents should happen. We might give the same answer to this, which has already been offered to obviate the custom of sleeping in camp; the accidents which take place are of so trivial a nature, in general, that they very rarely require the presence of a Surgeon; they are seldom more than a scratch with a flint, or a slight cut in the hand, in the hurry of fixing and returning the bayonet. During several years, I never knew nor heard of any, save the following: first, in very uneven ground, a man, at one of the great guns, fell,  
in



in the hurry of changing the position of the line, whereby the wheel of the carriage on which a six pounder was placed, ran over his legs, and fractured the fibula ; but when this did happen, of what use was the Surgeon's presence there ? He neither could, nor did he attempt to do any thing till the man was carried to the hospital : when this took place, the regiment were at exercise near seven miles distant from it. Might he not have been at his hospital, or near it, all the time ? A second case happened, during my being out with the men one morning, when by over fatigue, one of the privates fell ill ; the commanding officer ordered him off the field, with two drummers to assist him to the hospital, while I followed at my leisure, just time enough to be there when he was laid in bed. Might I not have remained at the hospital ? A third, and it compleats the catalogue of accidents, happened on another field morning, in cold weather, when in the hurry of manœuvering, a ramrod was shot through a man's hand ; here the patient was taken to the hospital to be dressed. Where then, in these cases, was the necessity of the Surgeon's presence in the field ?



A surgeon may be as usefully employed at home as in the field ; it is enough if he be ordered to keep himself always in readiness on days of exercise, lest accidents should take place. Suppose him in the field, his presence can be of little use ; he cannot carry a medicine chest with him ; when his assistance is wanted, it is not always in the way of bandage and plaister ; yet, if they will insist on it, because it has long been a custom, I shall not contend much against them. The orderly men, with proper directions given them, will sufficiently supply the place of Mate in the hospital, till the surgeon's return, which is generally in the space of a few hours.

In treating on this part of my subject, some have differed from me in opinion. They think Mates necessary. They agree with me in what is said respecting the encrease of the Surgeon's pay. But they think it would not be liberal to do it at the expence of Mates. " And in another sense," say they, " it is surely *impolitic*, as it would tend to diminish a considerable branch of *exportation* from that part of the island, of which we apprehend,



hend, Dr. H. is a native\*." In this criticism there was evidently a little *flourish* against the Scots. Many of them, doubtless, go to other countries to push their fortunes. But frequently they carry with them what is as useful to the inhabitants of the places they go to, as the bread which these afford is to them. It seems a fair and mutual species of traffic. Both are satisfied; the emigrant and the native of the country emigrated to, because both are benefited. The Scot, whether it be by his abilities and communications in the arts and sciences, or whatever else he employs his talents in, gives them what they either want or esteem; while they, out of the abundance of the things they possess, and of which he stands in need, feel no hardship at the reciprocal exchange. Perhaps this nation has done more in spreading useful communications, both in the Arts and Sciences, throughout Europe, at least since the reformation, than any single nation in it; and, perhaps, also, the mediocrity of their circumstances was the real cause, by stimulating them to industry, and by causing them to carry the

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fruits

\* Vide British Crit.



fruits of that industry where it could find the readiest market. While I have attempted this apology for the Scot, I declare myself neither a native, nor the son of a native of that nation : and the above, which appears somewhat like a sarcasm on that ingenious people, cannot, in this light, apply to me. A man may disgrace his country, but I know of no country, as such, that can disgrace the man. National reflections, perhaps, it would be best always to avoid, for I believe they are seldom just.

These will be considered, I apprehend, as unwarrantable innovations, an appellation which all reformation receives ; and the proposer be also held as self-interested. But we hope this will not be found true. There are some superior to such sordid motives ; such may propose schemes, that may be denominated innovations ; they disinterestedly propose them, and only because they appear preferable to customs in use. The public must judge from the arguments adduced in their favour, and the inconveniences of the others compared together. On such evidence their merit should rest ; and they ought  
to



to stand or fall in the public opinion accordingly.

There is no great fear, however, from innovation, where use and custom have long swayed. It has always been found difficult to remove what has been long established, though ever so absurd. Such is the force of habit, even among the intelligent.

To give an example from our own profession, though they may be drawn from every part of life. I knew a Surgeon who used a tooth drawer, invented almost in the infancy of the improvement of surgical instruments, though well acquainted with its inconveniences, and who had seen many of the best form. It had been in the family, I believe, some generations; he preferred it to all others, though he had not a single argument, but habit and custom, to urge in its favour.

This may not be a case exactly in point, yet it will serve to show us the power of prejudice; the prejudices of our fore-fathers, even in what relates to education, lie deeply rooted in us. Innovators appear like the approach of an enemy; we are roused, and  
unite



unite our force against them. Innovations then, or improvements of any kind, in any department, will ever meet with warm opposition; but this will never serve with the unprejudiced, for a reason, that they are always unnecessary.



## CHAPTER XVI.

OF EXTRA-MEDICINES ALLOWED EACH REGIMENT,  
WHEN IN CAMP, INDEPENDENT OF THE MEDICINE  
MONEY; AND OF THEIR UNNECESSARY EXPENDI-  
TURE.

To every regiment encamped in England, as well Militia as Regulars, a chest of medicines is sent by government, in addition to the common allowance of medicine money. I presume the same method is followed on services abroad. This is done on the supposition of more diseases appearing in camp, than in quarters, and on a presumption that the medicine money be too scanty to purchase all that may be required. Both these should be proved before the supposed deficiencies be supplied.

With respect to the first; it frequently happens, that where the ground for the encampment has been well chosen, and a due regard paid to situation, soil, and water, (as far as circumstances permit) neither more diseases, nor greater fatality will take place, for the most part, in camps than in quarters. Though  
Great



Great Britain be chiefly meant here, we may add Ireland also; nay, instead of more, much less sickness has taken place; and camps have proved more healthy than either quarters or barracks were in large towns, or in bad situations, or otherwise unfavourably contrived\*. I can point out an instance, where a camp turned out more healthy, both to the officers and men than quarters. In one case, in all probability it saved the life of an officer. This gentleman was of a slender make, a delicate constitution, and mobile temperament from nervous weakness, chiefly induced by irregularity in living: he had been long affected with a chronic catarrh, and even laboured under an affection of the lungs. This was proved repeatedly from the bloody sputum

\* Several of the barracks are ill-contrived; we may give for example, those of Chatham Lines, and Hilsea, at Portsmouth. The barracks at Tynemouth, are not only too small, but the walls too thin. If barracks be built of brick, the walls should be of a proper thickness to resist the rain, &c. Great attention should likewise be paid to the quality of the bricks. If they be made of salt water, the walls can never be dry, from the strong attraction subsisting between the acid in the bricks, and the moisture of the atmosphere. I have seen floors laid with such bricks, that were constantly wet, as if newly washed, though a fire was kept almost daily in the room.

he



he ejected at different times. His cough was incessant, and frequently deprived him of sleep; and he was almost as emaciated, as if in the last stage of a consumption. But soon after taking the field in the beginning of July, 1782, on a dry common, in an elevated situation on the eastern coast of Suffolk\*, all his former complaints almost entirely vanished; he recovered his flesh; his cough disappeared; and every day gave him a healthier look.

The good effects of the healthy situation did not take place in him alone, but among the troops in general that formed the camp. In the end of September, when they were reviewed by the Commander in Chief, not a single man was ill in one of the regiments, and in the other scarcely any, that deserved to be in the Surgeon's list. During a space of four months, only one man was seized with a fever; nor was this the offspring of the place; for he brought it with him, from a prison where he had been confined for several months before; the commanding

\* On Hopton Common, between Yarmouth and Lowestoffe.



officer having given him up to the civil law, for an accusation brought against him.

Wet, and otherwise unhealthy seasons, may happen; nor will the service always admit of the best situations for encampments. For the most part, however, in England and Ireland, it will be the fault of those concerned in chusing the ground, if the situation be bad. We are not now hemmed in to a mile or two by an enemy. Proper attention is very far from being paid to the situation of camps on every occasion; might we not bring the common now mentioned as an example? In the year 1781, a number of troops were encamped on it in a piece of low ground, but not above a musquet shot more to the north; whenever a few hours of rain came, the water stagnated among the tents, and even descended from the higher ground among them, the bad effects of which were severely felt. They were taught by next year that experience, at the expence of much sickness, which common sense, without much philosophy, might have plainly predicted, and at first pointed out to them, in laying out the ground.

The Surgeon in these cases is seldom consulted; indeed he is seldom present: for the  
ground



ground is generally marked out some time before the troops arrive on it. As he is much concerned in the consequences, he should have a vote in the management, and more especially as his medical knowledge gives him, or ought to give him pre-eminence in judging of it; therefore he should be sent to the spot to reconnoitre, some days before the march commences.

The Quarter-master is always sent; he may now accompany him, and in forming his opinion of the soil, &c. he should take the assistance of the medical people near the place. He will be of much more utility if employed on this service than with the regiment on the march, to watch for accidents and other maladies, which seldom take place; and where, like field service, as already treated of, when they do happen, he can prove of little use till the men arrive at the destined ground; besides, a second advantage would result from it; he would have a place provided for an hospital, and be prepared to receive what sick he had. It is always some days after their arrival before the sick can be accommodated, in the manner we generally go to work at present.

We



We know, indeed, that at an average with other countries, Great Britain may be stiled moist; the seasons are variable, and the weather often suddenly changeable throughout the island; yet we find also in it, occasionally, long seasons of fair dry weather; it was so in the summer of 1783—it has been so even in winter seasons. The greater degree of exercise the soldiers are obliged to take, from the nature of camp duty, is considerably in their favour, provided it be not carried by frequent field days, to a degree of over fatigue. It is well known, that nothing is more conducive to diseases than indolence. A certain degree of exercise in moist and relaxing weather, and when the men are not suffered to lie down in wet clothes, is altogether necessary to obviate sickness. The beneficial influence of motion, in carrying on the circulation of the fluids, and preventing obstructions, is equally well known; none will deny that it braces and strengthens the body.

In towns, soldiers, for the most part, have too little exercise; infectious diseases are frequently fostered there; and troops quartered in them very apt to catch the reigning maladies,



dies, their way of life contributing to this end; their billets are dirty and incommodious and their own irregularity great. Wherever infectious diseases happen, if soldiers be exposed to contagion, they are more severely handled by them than others. Such diseases, also, are always observed to take their rise among the poorest of the inhabitants, where their clothes are seldom changed, and their dirty and ill-aired habitations seldom swept; living in close allies, and confined streets. In these places the soldiers are frequently conversant, which exposes them to the infection; while their poor living, as a debilitating cause, predisposes their bodies for its reception.

Again, if provisions be wholesome, and the season not remarkably moist, we have no reason to apprehend much disease in camp. It seldom happens that provisions are scarce, or of bad quality in England; it is famed through Europe for plenty. Soldiers encamped here are not cut off from supplies by an enemy; neither are they, in general, harassed with fatigue. The markets are open to them; they are now stocked in greater abundance, by such as have provisions to dispose of in the neighbourhood. None need



complain of hunger who has money to purchase. A soldier has always his stated pay, on which he endeavours to live, now faring better, now worse, according to the rate of victuals ; but as messes are formed in camp, and a contractor furnishes them with provisions ; their fare is nearly the same whether dear or cheap.

Wet seasons, vitiated air, and salted food, will give rise to the scurvy\* ; but all these causes are seldom found to concur in England ; hence it is rare to find this disease among camps in Britain. Bad food, and wet seasons, &c. will likewise give rise to dysentery ; and very dry ones lay the foundation of cholera, yet record does not furnish us with many dangerous epidemics of these kinds, during the encampments of Britain. In many parts, we grant, intermittents, are endemic ; but we neither find them so dangerous nor so numerous, for the most part, as in some other countries, where there is more moisture, more wood, and less free perspiration. The jail, or camp fever, has appeared in England ; it has done the same, and even to a great degree in

\* Trotter, on Scurvy, Ed. 2d. He proves that a deficiency of oxygene in the habit, is the cause of this disease.

quarters.



quarters. It arose among the troops in the castle \* of Edinburgh, in the spring of 1780; and, perhaps, on other occasions, with as much violence and danger as ever it has been found in camps. All these diseases are more the offspring of other climates than Great Britain; and on an average, as often in towns, as in camps formed in any part of the island. Now, if this be allowed, it is plain, there is not more need of additional medicines in camp; and it follows, that the additional chest is unnecessary.

As to the second argument, that the common medicine-money is not sufficient, we have already delivered our opinion and reasons on it. We showed, that not above a third of it is ever expended in medicines, nor is it wanted; hence we have proposed the sum of ten pounds to be taken from it, as part of the additional pay to be granted to the Surgeon. Genuine medicines may be purchased for 60*l.* a year, more than sufficient for the sick of 700—in peace we have only 400 men. The regiment is seldom compleat; yet, did it consist only of twenty men,

\* Vid. Dissert. in aug. de febr. auctore J. Bell, 1780.



the full complement of medicine-money is given.

We shall suppose that the chest dispensed yearly to each regiment in camp, is worth at an average 6l. 6s.—and let us again suppose the number of regiments encamped to be sixty\*—this amounts to 360 guineas a year. This sum will be much better bestowed in money to the Surgeon of each regiment, as an augmentation of the pay. It will be said, that it is a matter of no moment whether he receives the medicines or the money, since he can save it out of the medicines; but it will be better to stop it, and let six pounds a year be granted; *i. e.* let him enjoy a subsistence of eleven shillings a day, of which this will make part of a fund from whence it is to be defrayed.

It is readily granted, that taking the field is more expensive than quarters. A *marquée* must be purchased, with bed and utensils necessary to furnish it; but the forage of three horses will assist in defraying it†. I

\* In 1782, sixty-three regiments were encamped in England.

† In the plan proposed, it was mentioned, that the Surgeon should be allowed Rations equal with a Captain, during encampments, &c. a Captain receives for three horses, besides Bat. and Baggage money.



state this at two shillings a day; which in five months, the usual time of encampments, amounts to 15l. This we allow, is far inferior to the first year's expences in camp; but taking three years, at an average, it will be sufficient; a good marquée will last three summers, if the weather be moderate; the first year's expences we shall state at 27l. 2s. the next two only at 10l. each \*; the whole extra-expences then, for taking the field for three years, amount only to 42l. 2s. his forage money, for the same time is 45l.—But to this we are to add the Bat. and Baggage money, allowed officers in camp, and his share of this is to be equal to a Captain's; from all which it appears, that the extra allowances in camp, are a sufficient ballance for the extra expences; and, therefore, this additional medicine chest, on this plea, is unnecessary.

Let me conclude these remarks with a hint at surgical military precedence. From the lowest order, a regimental Mate, to the

\* At a moderate estimate, the bed will be 10l.—a table and two stools, 1l.—the marquée, 16l.—these summed up, amount to 27l. 2s. This was the expence to the officers at Hopton Common in 1782.



highest, that of Surgeon-General, it is as follows—Regimental Mate—Hospital Mate—Regimental Surgeon—Apothecary to a general hospital—Surgeon to an hospital—Surgeon General.—In this line of precedence we find the Apothecary ranks almost at the head. It is not from the regimental Surgeons that a Surgeon to a general hospital is chosen, but from the apothecaries ; and before the regimental Surgeon has any prospect of succeeding to this rank, he must be degraded to an apothecary, an humble mixer of drugs. Strange, truly ! I object not to the Apothecary of an hospital being rewarded with 200*l.* a year ; though even this is stepping far beyond what is given to men of the same employment, out of the army. It is seldom the salary to the Apothecary of hospitals, out of military life, exceeds half of what is thought necessary for the Surgeon. It is generally thought, that there is less expence necessary in an education for this branch, than for a Surgeon. Here the regimental Surgeon is obliged to subsist on 4*s.* a day—the Apothecary has no less than 10*s.* with the addition of superior rank. This order ought,  
in



in justice to the regimental Surgeon, to be changed. Hospital Surgeons, should be chosen from regimental Surgeons; and men possessing knowledge of the mixture and composition of drugs, who have undergone proper examinations for the same at Apothecaries Hall, and none else, should be chosen to fill up this office.



## CHAPTER XVII.

NECESSITY OF A LIBERAL EDUCATION TO PRACTICE  
 MEDICINE SUCCESSFULLY—REGIMENTAL PRACTICE  
 MORE THE PROVINCE OF THE PHYSICIAN THAN THE  
 SURGEON.

MEDICINE, though frequently termed an art, is a science, and truly a very complicated one; in comprehending it, as becomes its professors, every part of nature is to be studied; but more particularly the animal, vegetable, and mineral kingdoms; nor is this to be done superficially; nay, with more care and attention are the component parts to be scrutinized, and their principles investigated by such as wish to be liberally educated in it.

Strabo says, it is impossible to be a great poet, without being a man of real probity; this observation is, undoubtedly, not less applicable to the physician than the poet;—“ can any physician in good conscience venture to prescribe a medicine, without at least having formed inductions from the most exact analogy?—is not that man an enemy to his patient,



tient and to society, who pretends to cure, without knowing, to a certain degree, the nature of the disease, both from its causes and symptoms, and its antecedent and present state? Is it not to be wanting to every thing we owe to humanity, and even to religion, to approach the bed-side of the sick, without having previously acquired the necessary knowledge? can any man say to himself, *I have done all I could do*, if he is unable at the same time to say, *I know all that I ought to know?*—Such is the language of a celebrated physician, a language that must speak to every man's breast, and carry conviction wherever it is heard.

A knowledge of natural and experimental philosophy, is in a physician almost absolutely necessary; nor should moral philosophy be excluded. In a word, a physician should not only be acquainted with physics, *i. e.* with the works of nature in general, but likewise metaphysics. I remember to have heard the same declaration from an illustrious professor \* to his pupils. His opinion on this head, he told them, was, that a man who was

\* Professor Cullen.



not a tolerable metaphysician, would never be a discerning physician.

It was not his intention, by this, to inculcate that false species of reasoning, which confounds the mind without enlightening it, and, like an ignis fatuus, leads farther astray the farther we pursue; not the subtle disputations of the necessitarian, or the reveries on the doctrine of chance. His meaning was, if I may be thus far allowed to interpret it, that accurate investigation, and chaste reasoning, proceeding cautiously from what is known, to what is unknown, or from effects to their causes, is the true way to arrive at the end in view, an explanation of various phænomena that present themselves in the course of medical practice; and without some enquiry into the union of soul and body, and of their action on each other, this cannot so fully be done.

The ingenious Dr. Percival, in a paper written to prove the utility of experimental philosophy, and endeavouring to wipe off a stigma thrown on it by the author of *Hermes*, speaks of metaphysics in these words, after telling us he had always studied them with delight, “ it (this science) invigorates the faculties of the mind, and gives *precision* and  
*accuracy*



*accuracy* to our investigations, by instructing us in the nicer discriminations of truth and falsehood \*.” —“The mutual action of the body and the mind upon each other, is felt every moment. The knowledge of the nature, effects, symptoms, and measures of these reciprocal influences, forms no inconsiderable part of the science most necessary to the *Physician*, the *Moralist*, and the *Divine* †.”

In a former part of this work I have adduced facts to prove the reciprocal influence the body and mind have over each other, where I had occasion to mention that disease distinguished by Nosologists under the appellation of *Nostalgia*. It was there shown ‡ that the affections of the mind were capable of inducing even fatal diseases, and that many have fallen a prey to them. In Switzerland, there is a dance which the young shepherds perform, to a tune played on a sort of bagpipe; the tune is called *Rance de vaches*; it is wild and irregular, yet has nothing in its composition that could recommend it to our no-

\* Vid. Mem. of Phil. and Liter. Soc. of Manchester, v. II. p. 327.

† Dr. Barnes, *ibid.*

‡ Vid, vol. I



tice. But the Swifs, it is affirmed, are fo intoxicated with this tune, that if at any time they hear it, when abroad on foreign fervice, they burft into tears, and *often fall fick*, and *even die* of paffionate defire to revisit their native country. For which reafon, in fome armies, where they ferve, the playing of this tune is prohibited \*. True then, it muft be, as the poet has beautifully expreffed it, that

There is in fouls a fympathy with founds,  
And as the mind is pitch'd, the ear is pleas'd  
With melting airs, or martial, brisk, or grave.  
Some chord in unifon with what we hear,  
Is touch'd within us, and the heart replies.  
How foft the mufic of thofe village bells,  
Falling at intervals upon the ear,  
In cadence fweet! now dying all away,  
Now pleading loud again, and louder ftill,  
Clear, and fonorous as the gale comes on.  
With eafy force it opens all the cells.  
Where mem'ry fleeps. Whenever I have heard  
A kindred melody, the fcene recurs,  
And with it all its pleasures, and its pain. †

“ Every experienced Phyfician,” fays Zimmerman, “ knows that the difeafes of the mind will yield to no phyfical remedies, unlefs the foul concurs at the fame time in re-

\* Vid. Dr. Beattie's Eff. vol. II. p. 175.—Alfo Rouffeau Dict. de Mufique. art. Rance de vaches.

† Cooper's Poems, v. II. p. 23.



lieving the patient. The more the soul of the patient seconds the endeavours of the Physician, the greater will be his hopes of success. An intelligent and prudent Physician has often begun and compleated cures which seemed to be impossible. If, therefore, there are diseases, in which the patience, the assiduity, and the indulgent attention of a Physician, can so far influence the mind of a patient, as to contribute to his cure, may we not very justly conclude, that the dispositions of the *soul* may be the occasional causes of changes in the *body*. It proves to us, that the passions, and dispositions of the mind, having so great an influence on our health, it *behooves* the Physician to aim at keeping both the mind and the passions of his patient in order.”—Another author, in his facetious and humourous manner\*, compares the relation between the body and soul, to a coat and its lining; for, if you rumple the *one*, says he, you rumple the *other*.—If this be true, which almost every day’s experience fully proves, the study of the passions would seem an indispensable part of a Physician’s education; and on this ground we assert, that not only a know-

\* Tristram Shandy.



ledge of the *physical* but the *moral* man should be acquired. Physicians seem to be more interested in the acquisition of this knowledge, than any of the other classes of civil life; the passions come in for so great a share in *diseases*, that it would seem criminal in a Physician to enter into practice, without having particularly applied himself to the study of man."

It is by " nice discrimination," by rational investigation, and precision, that we may hope to distinguish what is *true* from what is *not*, and thus pursue our researches successfully; and the farther we recede from this plan, the nearer we approach to empiricism. As far, then, as metaphysics can assist us towards this end, so far they are useful; for though an empiric may occasionally be successful in his practice, yet it is but reasonable to conclude, that nine times out of ten he must miss his aim. A blind man cannot distinguish colours, nor he that is deaf, the harmony of combined sounds in music; neither can an effect be removed when the cause lies concealed, except by mere chance, on which no wise man will ever build his dependance.

Some



Some may answer, that the most acute investigations of the best cultivated understandings, will frequently fail in finding the real causes of certain phænomena, that present themselves in the cultivation of medical science, and in practice ; or when found, that they are as far from being able to remove the maladies induced, as if unknown and undiscovered. This is granted ; but if the informed may, and often do, the uninformed in such intricate cases must necessarily fail. But it should be remembered, that in consequence of their ignorance, in cases where the literary and more enlightened man would succeed, they will as assuredly err, unless accident turns the scale in their favour.

It is true, experience will teach us on several subjects, where reasoning could have none, or but little effect ; but let this maxim be constantly kept in view—to *reason*, as a practitioner, and practice with *reason*. Experience, we know, proves, that scammony will purge, that arsenic will poison. It tells us also, that neutral salts, as well as several other substances of the mat. med. will do the same. By reasoning alone, perhaps, we never could have been able to discover this. The experience  
that



that taught us the purgative qualities of medicine, teaches at the same time their different modes of operation; it points out, that the one acts mildly, while the other is highly irritating and drastic. But when, in certain circumstances, we are about to make a choice, which to prefer, we call in reasoning to our aid, which we build, indeed, on this experience. After investigating the cause, we make an estimate of the power to be applied for its removal, with a due allowance for constitution, and the present strength of the system. It is this that determines the choice we are about to make: it is this that cautions us against the use of the one, while it acquiesces in, or enforces the use of the other. It is by this that we are informed, that a promiscuous application of them, though both seem to produce the same effects, *i. e.* prove cathartic, would be very detrimental, and highly injurious.

This, it will be said, is still in part reasoning from experience; I grant it; and, wherever it will apply, we ought to have recourse to this guide; but many circumstances will present themselves, wherein we shall not have it in our power to appeal to the decision  
of



of this judge. Here we must rest satisfied with a less certain method ; our reasoning must now be drawn from analogy ; from subjects where we can trace a degree of similarity, and our conclusions must be formed accordingly.

“ As a Physician,” says a learned author, “ is not always able to chuse his method of treatment, and as many accidents may occasionally vary the appearance of a well known disease, it will be necessary to have recourse to analogy : and how can any man give the necessary scope to his enquiries on such an occasion, who is not able from his reading,” (his knowledge) “ to draw together all the lights, which different authors may afford him on the subject ?”

Analogy, indeed, may not on every occasion be a safe and unerring guide, nor universally afford us confidence of success ; but surely it will be preferable to blind chance, which begets rash practice.—A rush taper is better than total darkness.—On the whole, we must have a proper notion of the nature of the affection, and the powers to be applied for its removal, before we can venture on rational grounds to attempt a cure.



An empiric says to a person with a complaint in the organs of hearing, " Sir, you must apply blisters ; I know from experience, they will remove affections of the ears."—If a second consults him, the same remedy is proposed ; and the same to a third, a fourth, &c.—for, in fact, he possesses but one remedy for all the varieties of the diseases of this organ, though arising from the most opposite causes ; in one, perhaps, from some mechanical cause, as from Cerumen hardened, and plugging up the meatus ; in another, from an inflammation of the membrane lining the ear ; in a third, from a caries of the bone of the ear itself ; and in a fourth, from some affection of the portio mollis, or branch of the auditory nerve, that is spread over the windings of the cochlea.

It would be absurd to suppose, in these different examples, that one and the same method of treatment could succeed ; nor would any man, informed in his profession, and who had taken pains to investigate the cause, ever recommend it. He founds his cure on a knowledge of the parts concerned, and the nature of the affection ; and should his practice not succeed, he can with tolerable confidence



dence point out the obstacles to the patient's recovery ; or shew why the disease is seated beyond medical assistance.

I entirely agree with an author, often mentioned in these pages, when he says, " there are certain practitioners more blameable than the empyrics." The reason he gives is, that though they go by the name of regulars, they seldom or never employ investigation, or reasoning on the subject of their profession. He continues, " all their ability seems to consist in copying formulæ.—Then follow a few examples, somewhat similar to those already advanced.—" A girl comes to them," he says, " with chlorosis ; they give her some cooling medicine, because there is a fever. A pregnant woman complains of retention of urine, and they give a diuretic ; they are ignorant that it is the fœtus that presses on the neck of the bladder, and that a diuretic may be fatal in such a case. These people not only *do not see* the chain of circumstances that occasion a disease, but they are strangers to every one of them. Shall I say what I think ? The Physician who sees all the circumstances of a disease, and he who sees only a part of them, or rather his own prejudices, must necessarily



be of different opinions ; and yet they will both *swear* by their *experience*. A man defends, even to his latest moments, that which he thinks he has seen, without asking himself whether he was capable of seeing. A drunken man swears that every thing dances around him ; a superstitious man believes in magic ; a little mind dreads apparitions : all these speak from *experience*, fancying that it is from *experience* they have learned all things. The Physician who has discovered the ways of nature, and follows her in them every day, and the old nurse who is directed by this Physician, both appeal alike to *their experience*, and the former very properly ; but ought any one to appeal to his experience who does not possess a proper talent for observation ?---Is it by a blind practice, with a few receipts, and many prejudices, that we see nature ?"---certainly not.---She must be traced by careful investigation.

It is acknowledged, that many cases will occur, where we can only apply the means of relief to obviate particular symptoms ; and where the causes of the affection cannot be discovered during the patient's life. Our knowledge of the structure and functions of some  
parts



parts of the body is yet in its infancy ; we know little of the uses of the spleen, and almost as little of the nervous system. Perhaps the progress of ages in philosophical investigations, be it ever so industrious, will fail in finding the causes of the various affections of the nerves, of their modification, and manner of operating ; or tell, with certainty, where the percipient principle has its seat, whether diffused equally over the whole, or if it places its residence in a particular part ; or wherein lies that connection so intimately uniting the soul and body, giving them that reciprocal action which has lately been taken notice of, or how that mutual sympathy takes place which so invariably prevails between them.

The most ignorant Quack, however, reasons, but he reasons badly. If the reasonings of the *systematic*, with every advantage of education in his favour, fall, and indeed, must sometimes fall short of the truth, what is to be expected from the other ?

“ Baron Haller informs us that Boerhaave, who even to his seventieth year, had, in general, devoted sixteen hours every day to the study of his profession, often complained of



extreme difficulties, and of people who were daring enough to practice without having ever studied, or reflected in their lives." Reasoning then, and reflection, I am persuaded, will be found not only highly necessary to the medical practitioner, who wishes to be useful to society, and an honest man, but altogether *indispensable*.

As to moral philosophy, I mean a knowledge of the operations of the mind ; this, and the philosophy of phycic, seem to be intimately allied in some of their parts, and like the shades of a picture, slide insensibly into one another.

With respect to what seems more immediately in the Physician's line, no man can, on rational pretensions, profess to remove the diseases of the body, who is unacquainted with Pathology ; and this must lead to the study of the human structure ; he must know the functions of the different organs in health, as far as they can be known, before he becomes a judge of the defects he observes, or is qualified to attempt a restoration of them to their natural condition. The study of anatomy is the work of time ; it cannot be comprehended without labour and close application. On this the  
founda-



foundation is to be built ; it is the support of the future fabric.

In a former part of this work\* I have spoken more fully of the advantages that result to the medical practitioner from his acquaintance with the component parts both of man and other animals ; for comparative anatomy is far from being an useless study ; several of the parts in other animals may be more particularly traced, and better investigated than the same parts can be in man, and analogy will occasionally teach him to draw the same conclusion relative both to the similarity of functions and structure.

In the light of conveying true knowledge to build future practice on, anatomy is one of the principal key stones. In the light of conveying a knowledge of the power and wisdom of omniscience, the Creator of all things, and proving the existence of an all-wise, and powerful First Cause, it must afford one of the most striking proofs. Hence it would seem impossible, that an Anatomist can ever be a Polytheist, much less an Atheist. ---It teaches us, then, religion, and veneration

\* Vid. vol. I. ch. 7.



towards the Supreme Being, while it assists us in removing the maladies that “ *Flesh* and *Blood* are heirs to ?”

Galen, a name well known in physic, was a Polytheist till he studied anatomy ; on considering the various uses of the Hand, and reflecting on the beauty, regularity, and wisdom of its structure, he was compelled, as it were, to believe in the *one living God*. He called out as he examined it, in a kind of ecstasy, *Behold ! this is the work of works !*—after his conversion, brought to pass in this manner, he composed a Hymn on the subject, it consisted almost entirely of praises on the hand, and an enumeration of the uses of this part of the human body.

From the study of the structure, the student must proceed to the uses of the parts he has thus examined. Physiology, a name which has been given to this study, is no less complicated. When we consider the numerous tubes of various sizes, structure, and uses ; the different fluids, formed by peculiar organs, and fitted for particular purposes ; the various glands, with their different secretions, all adapted to different ends, and regulated by the justest laws ; the more solid parts of  
the



the fabric, as the bones, cartilages, tendons, ligaments, &c. for giving strength and motion to the machine ; with the manner of their nutrition and natural decay, it will evidently appear, that this study is none of the least complicated.

Pathology, or the study of the deviations of these organs from health, must be founded on this. When he is well instructed here, and in anatomy, he is yet far from having finished his task ; if he stops here, it were as well he had never begun. In comprehending the modes of action of several of the organs, it will appear how necessary a knowledge of natural and experimental philosophy must be.

Before he can comprehend the functions of the Eye, he must have previously studied the doctrine of light, and colours ; and this will require a certain portion of mathematical learning. At first view it may seem absurd to maintain, that mathematics are necessary to the successful practice of medicine ; yet this example alone, were we to advance no other, would be sufficient to prove it.

But the diseases of the Ear are as much the Physician's province, as those of the eye ; yet  
before



before he can obtain a just knowledge of this organ, he must make himself acquainted with the medium through which sounds are communicated ; the properties of the air must therefore be investigated, as far as it is concerned in communicating this sensation. This is a branch of natural philosophy, to which the name of Pneumatics has been given, and is equally as indispensable as the foregoing.

Hydraulics, and Hydrostatics have, in like manner a reference to the human frame, in as far as the body is a compound of tubes containing circulating fluids, and having a similitude to fluids conveyed through tubes out of the body, making *a due* allowance for animate, and inanimate matter, the moving powers, the cohesion of parts, and their viscosity, with their ramifications, angles, friction, and other causes of retardation. This is another wide field, requiring an acquaintance with mathematical, and experimental philosophy.

Chymistry teaches many things respecting the animal machine, as well as the properties of those parts of nature, *i. e.* those substances, employed in the removal of diseases.

Heat



Heat is something, without which, in a less or greater degree, animal life cannot for any time exist; chymistry seems to afford us the best knowledge of this. By heat we may be said "to live, breath, and have our being." Besides this, it teaches likewise various other operations, and processes necessary to be investigated by the medical enquirer.

By chymistry he can give or take away at pleasure, certain properties from substances, which enables him to produce particular changes on the human body. We omit mentioning its great utility in the arts, by which life has been rendered so comfortable, being less connected with our present subject. To this part of philosophy, then, the Physician is greatly indebted.

The nature of the Air, also in a different sense, from that of conveying sounds, *i. e.* in as far as it becomes noxious and wholesome; or salubrious, and vivifying to animal life, is another material branch, a knowledge of which we derive from chymistry. It is by this, among other things, we have been able to detect the qualities of the various species of *Gases*, or elastic fluids. We no longer now stand in stupid wonder at the death of a dog,



held over the Grotto del Cani, or seem amazed at the noxious effects of the fumes of charcoal, or the dire exhalations that often suddenly deprive the unsuspecting Miner of his life. The nature of fixable and inflammable air is at length, by the assistance of chemical analysis, and fortunate experiment, well known, and has opened another ample field of useful investigation.

By the same branch of science, in like manner, we obtain information relative to another fluid, not less essential to the health of the human race; I mean Water. If the various changes of the air materially affect the living body, the various admixtures found in this Element, as well as the many species of which, from this cause, it consists, have no less a share in producing noxious or salutary effects. By chymistry, we can make it our antidote or our poison; it detects the principles on which these depend, and compounds, or decomposes it at the Physician's will, rendering it subservient to his intentions. This is an extensive study; but without a competent idea of it, how limited, how imperfect must be the medical practitioner's skill!

From



From a knowledge of the effects of heat and moisture on the human body, when conjoined, he learns the remote causes of several fatal diseases ; he reasons on the sedative powers of contagion, and becomes the better enabled from such investigations to apply his method of cure.

Many of the changes in the vegetable world, seem likewise to be produced by chymical laws\*. With this assistant we may discover

\* A late writer of respectable abilities, in an essay on the study of natural history, complains that not only Mineralogy, but Chymistry, is less attended to with us, than with several of the neighbouring nations. In Sweden and Germany, Mineralogy forms a distinct and honourable profession, like the Divine, the Physician, or the Barrister. In these countries they have colleges for regularly teaching it. The Russians and Spaniards have lately adopted this plan; the French, likewise, have formed a Mineralogical School at Paris; and persons are employed in tracing subterraneous maps of the whole kingdom of France, and Mineralogical voyages have been taken at the public expence; yet England has paid, hitherto, little attention, comparatively, to this study. Though our own country is allowed to be richer than France in mineral productions; it has been chiefly confined to a few gentlemen of the medical profession \*. " Even chymistry," says he, " which we shall attempt to show is the parent of Mineralogy, has scarcely been attended to in England, whilst neighbouring nations have pursued it with enthusiastic

\* Vid. Kirwan's Elem. of Min. p. 28.



discover several of the properties of plants; we may separate their parts, and reject or chuse that which suits best with our intentions.

A knowledge of this part of nature makes another branch of medical science. Many of the articles used by the practitioner are derived from the vegetable world. Botany, therefore, or a knowledge of plants, whether respecting their external figure, or internal qualities, cannot be dispensed with by the scientific Physician. Under this head I com-

thusiastical ardour. It forms the favourite occupation, and most fashionable object of attention, not only of the middling, but even of some of the highest ranks of society."—Amongst these, says Mr. Kirwan, we may reckon in Russia, Prince Gallitzin; in Germany, Count Sickengen; in Italy, the Counts de Saluces, de Morrozo, and the Marquis de Gironi, governor of Leghorn; in Geneva, Mr. de Saussure; in France, the Dukes de Chaulnes, Rochefoucault, and D'Ayen; the Counts de Lauraguais, la Geray, Milly, Treffan, and De-la-Tour d'Auvergne; the Marquisses de Courtenvaux, and de Courtinvron; the Barons d'Olbach, and de Servieres; Messieurs Trudaine, Lavoisier, Montigny, de Morveau; and among the Ladies, Madame la Presidente d'Arconville: to this list we may add the Earl Dundonald, in Scotland, and Mr. Kirwan, in England \*; several others in Great Britain may certainly be added to these two gentlemen, though they may not appear amongst the most conspicuous.

\* Dr. Kentish, on Nat. Hist.



prehend that study, known by the name of *Materia Medica*, which teaches the manner of preparing the substances obtained from the vegetable world, for medical purposes, and points out their qualities, or the doses in which they are to be exhibited. The former leads him by the hand, as it were, to the plant; the latter prepares it for exhibition. This is a branch of useful study, and one, which unluckily, is by the generality, even of sensible, and otherwise literary practitioners of late years, too much over-looked; I mean the *Materia Medica*. For botany, as an amusing part of science, is more attended to.

The study of the vegetable kingdom, in another view, is not only curious, but highly interesting; it enlarges our ideas with regard to the operations of nature, and conducts us forwards in the scale of science. Till lately this branch also was little cultivated; but since philosophers have turned their attention this way, every day's experience proves more and more its consequence to the existence of life. We are not only supplied from thence with food and medicine, but it has its effects in a special degree on the atmosphere with  
which



which we are surrounded ; it seems to be the chief restorer of the salutary quality of the air. After it has been rendered noxious by various phlogistic processes, it dephlogisticates \*, and renders it once more fit for respiration ; it drinks up, and is even nourished by what would destroy man, and returns it to him again, like gold, as it were, from the refiner's furnace, newly combined, and newly modified. Here we find putridity has its use, and through the medium of the vegetable kingdom, becomes the foundation “ of that which is pure.” This is a beautiful link in the laws of the creation, and the existence of the world. It is a law founded on wisdom supreme, that as soon as one principle becomes unfit for certain uses, it is only then rendered fit for its destined functions in another part ; here is order springing from confusion, and beauty from deformity. It is the work of God !—

I need not mention here the mineral kingdom ; it is evident the medical enquirer must

\* This term first introduced, as is well known, by Dr. Priestley, is now called *oxygination*, by the new nomenclature ; phlogisticating, is also by the same termed *azotifying*.



not overlook its investigation, since it affords him several of the most powerful of those articles by which he effects his purposes. This is also a branch which will require his attention; but, perhaps, this may be in a great measure comprehended under the head of chymistry, which we have already endeavoured to point out as an indispensable study.

Natural history he will likewise find of importance; it will assist in explaining several of the operations of nature, and farther enlarge his ideas. I mean something more by it however than a mere arrangement and classification of the different articles usually comprehended under this term. He must investigate the cause that gave existence to many of these productions. This may lead him to consider the formation, not only of the earth, but the earth itself. It will teach him in a more medical view, both the animals and the climates, each class inhabits, with something of their variety and nature.

In a word, as all the parts of science have a relation to one another, and all ultimately assist in explaining the properties of animal life, and the diseases to which every thing “that breathes the breath of life” is subject-



ed, it behoves him who is engaged in the removal of them, and professes to alleviate the tortures of pain, to be duly conversant with all. But as the life of man is so limited, and the various studies mentioned so complicated, that the longest period of mortality is far too short for the intimate comprehension of the whole, a general, or more superficial knowledge is all he can aim at, is all he can hope to attain.

In our proceedings here, however, we ought always to bestow more time and attention on those branches that have a nearer relation to the chief point, than to others, which are secondary only, and may be called more ornamental than useful; hence I have passed over several, that if a medical man has leisure to cultivate, it will be well for him to pursue.

Electricity we have already mentioned; but it is more than one of those ornamental branches; it is among the indispensable parts of a Physician's education; and this will readily be granted, when, not only the principal rank it holds in the universe, and its great agency in nature, but even its applica-  
tion



tion more immediately to the diseases of the body, are considered.

Nosology I have likewise left untouched, a study however, which the Physician will find of no small importance in his distinction of the various maladies incident to man. To find out the disease under which our patient labours, is one great step towards the cure, and one not, on all occasions, easily attainable; it is the province of nosology to teach this, as it enumerates the leading symptoms that characterise it.

And notwithstanding what some even of the learned say of its inutility, I mean, of dividing diseases by its assistance into classical order, I am persuaded, it will be found of no little moment to the practitioner at the bed side of his patient. The student will certainly find his account in it; his memory will be assisted by a nosological arrangement. Hold it in the light of only a common-place book, and its usefulness must be manifest; but it will do more, it will be found applicable in practice.

Diseases are sometimes as truly marked, as the writers on this subject have represented them. Systematic arrangements have proved



useful to the progress of botanical studies, and in other branches of natural history, and I can find no sufficient arguments for rejecting them in medicine. I am inclined indeed to consider them as equally advantageous here.

The dosing of medicines, which is termed *Dosology*, demands also the medical man's consideration; something has already been advanced on it in a former part of these observations\*. To learn the more common doses of the various articles exhibited in diseases, as they are given in different authors, will require attention and time. To know this branch as far as books can teach it, is necessary; but no book can lay down infallible rules here. All they can do is, to inform us of the quantities that have been exhibited. The different articles in use become different medicines, according to the quantities, and the time in which they are administered. Thus, ipecacoanha given in a small quantity will prove cathartic; and in a larger, emetic. Rhubarb in small quantities becomes astringent, if given at proper intervals; in larger, it purges, &c.—The knowledge

\* Vid. vol. I. ch. 6.

then



then of the dose must depend on a knowledge of the affection, and on proper views of the animal œconomy, with a knowledge of the idiosyncrasy, and present strength of the habit; from which it must appear, that no general rules can hold good, but that the dose must be varied as exigences require, to bring the disease to a termination; all which must be calculated at the bedside of the patient, and the quantity adapted for the present individual, and the present moment of that individual's complaint.

After what has been said on the foregoing subjects, it will be unnecessary to mention regimen in diseases, as a knowledge of it is founded, like the dosing of medicines, on a knowledge of these. It is a part, however, that ought to be considered as of more importance in restoring the sick, and valetudinarian to health, than I fear is generally done. There is no part of the science of healing, wherein a man shows his judgment more, than in the regimen he lays down for his patient. In most of the chronic diseases, and these are very numerous, he may do as much, if not more by this, than by his prescriptions made up at the apothecary's shop. But to bring to



pass the great end in view, both must be judiciously united.

By regimen, I mean to comprehend not only diet, *i. e.* meat and drink ; but the state and temperature of the air, cloathing, exercise, sleep, and watching ; the just regulation of the secretions, and excretions, and in a word, “ *quid ferant vires, et quid non.*”—In this the former habits of the patient are carefully to be considered. Much might be written on the subject of regimen ; but it is not our business to enter any farther into it here, than just to point it out to the medical practitioner’s notice, as being a part comprehended in his medical education.

Though bathing be none of the articles which can be noticed in a pharmacopœia, it may nevertheless be termed an active medicine, and one from which, much good, or much mischief may accrue, according as it is applied. I know not whether it can be ranked in the class with those things we more strictly call *regimen*. But rank it where you will, it demands attention, and no small share of judgment to advise it with propriety, and modify it with medical discernment.

Nothing,



Nothing, now-a-days, is more common than bathing, and no part of medicine, perhaps, more indiscriminately, and, it is to be feared, more injudiciously, in the greater number of instances, made use of. This will be sufficiently proved, from the promiscuous use of *evacuations* recommended to bathers, previous to their going into the bath. If the case be such as is proper for bathing, it must be such as excludes all debilitating causes; and surely purging, called, for I know not what reason, *preparation* for bathing and drinking the waters, is one of the most powerful. Both bathing and drinking are under proper restrictions tonic powers, the latter gently stimulating and invigorating to the habit, and the diseases requiring them are consequently those of debility; it must appear, then, that this debilitating course must be contrary to just reason, and true medical philosophy. But to know when, and how to apply these, like regimen, requires a previous acquaintance with the animal œconomy in all its parts, and a knowledge of the diseases then under consideration. Much may depend on the regulating the temperature of the water; the present strength of the habit;



the time of the day for bathing ; the length of time to continue in the water ; whether the patient should bathe early in the morning, and with an empty stomach, or if a certain quantity of food should be allowed ; how often he should go into the water in a given time ; all demand serious reflection. An error in these must tend to the patient's hurt instead of his welfare. On this part also, much might be said, but it does not in this place fall any farther under our cognizance, than to point it out as highly deserving the medical philosopher's notice, and showing him the importance of its consideration in the course of his studies.

I have hitherto said nothing relative to Languages. In a Physician, a classical education is altogether indispensable ; but this we have always supposed a point incontrovertible, and that the student is well acquainted therewith, before he enters on the more material parts of his medical education. For though languages may only be considered by many as the shell, the external crust of education, which teaches words without ideas, sounds without things, yet before we can with advantage proceed farther, it is incumbent on



us to penetrate here. Our literature must be greatly confined, if we can only read philosophy in our native tongue; and though we may at length learn by translations, yet it will come late; half the world will have the start of us: like a lame horse we may hobble after, but we can never come up with the chace.

Some of the modern languages are almost indispensable to the Physician. French is not only the polite, but almost the universal language of Europe, both with the philosopher and the gentleman. "By a proficiency in languages, other studies are with more facility acquired." One of which never, on any pretence whatever to be omitted, is Latin. This, though a dead language, "speaketh to all men." It is more particularly the language of philosophers than any other; every medical author, almost, who wishes his labours to extend, sends them into the world in this dress. This we find often practised in Britain, as well as on the Continent; nor is it a superficial knowledge of it, medical men ought to possess; they ought to have a critical discernment of its beauties; for as they should speak it with some fluency, so they should  
write



write it with tolerable correctness, neither of which can be well performed, unless their proficiency in it has been carried thus far.

Although we have few authors in Greek, of much importance, (for the works of the ancient physicians, even of Hippocrates, are not at this improved period of medical knowledge held in so great esteem as heretofore, since the introduction of experiment in this science) yet this language should by no means be overlooked. Many Greek phrases are to this day retained; many of the names in use, both in chymistry and anatomy, as well as in other branches of philosophy, are derived from thence; and to be unacquainted with their origin, would be unpardonable.

From what has been said, it will appear, that he who turns his attention to the practice of physic, should begin at an early period of his life to direct his studies to this end, since an education, so large, so extended, is required, before his purposes can be properly accomplished\*.

Besides,

\* The genius, and industrious application of some men will make amends for deficiencies here. Boerhaave, was upwards of thirty when he turned his thoughts to the study of  
of



Besides, the mind is then retentive of impressions, and, if well directed, will afterwards proceed in the proper path; or, to use the words of a modern poet, speaking of the importance of youth well directed, in forming the learned as well as the virtuous man \*.

'Tis granted, and no plainer truth appears,  
Our most important are our early years;  
The mind impressible, and soft, with ease,  
Imbibes, and copies what she hears and sees;  
And thro' life's labyrinth holds fast the clue,  
That education gave her, false, or true.

When a man has finished what is called a liberal course of studies, a polite education, such as entitles him to a Master of Arts Degree, he is only *then*, and not before, properly qualified to enter on the more extended study of medicine, which ranges in a yet wider sphere, turning its views to all nature,

of which we are speaking. It was seldom, however, he laboured less, as has already been said, than sixteen hours a day, throughout the greater part of his life after. He was bred indeed to the church, and had more than a superficial idea of school and university knowledge; hence his preliminary education was classical and complete.

\* Cooper's Poems. Vol. I. p. 59.



Nay, it is the opinion of a learned author, that to complete the education of a Physician properly, an education extensive beyond all others whatever, he should possess a tolerable notion of the law----and “ this,” he adds, “ to complete the character of general and extensive knowledge ; a character which their” ( Physicians ) “ profession, beyond others, has remarkably deserved \*.”

Such is the outline of a Physician’s education ; such are the great objects he has to grasp at ; such his education ought to be ; and such, we hope, it is for the most part found to be.

A recommendation, comprehending so many objects, and some of them that may seem, at first sight, altogether foreign to the science we have chiefly in pursuit, will be little relished by those, if any there are who may think a few months of one or two winters at the lectures of some medical teachers, whether in the metropolis, or an university, with a few years of an apprenticeship in some apothecary’s shop, are sufficient credentials to recommend them, as able practitioners, to the notice of the public. The credulity of

\* Vid. Blackstone’s Comm. on the Laws of England, Vol. I.



Our countrymen too often leads them to believe so ;---a credulity, which one would suppose endemial to Great Britain, and some of her appendages ; for it is in these only, of almost all other parts of Europe, where empiricism and credulity of this nature seem to hold their sovereign sway.

“ The Physicians in Chili,” we are told, “ blow around the beds of their patients, to drive away diseases.---The people there think that physic consists wholly in this wind ; and their *Doctors* would take it very ill of any body, who should attempt to make the method of cure more difficult. They think they know enough, when they know how to blow \*.”

But it will be said, what has all this to do with regimental Surgeons ? Our business, in these pages, was not to display the qualifications necessary for the Physician, but to point out the duties of the regimental practitioner. The more obvious parts of education, it will be said, are sufficient for him, since his business is more with external than internal diseases.



May it not be expedient to enquire into the truth of this position, and examine whether a regimental practice partakes most of physic, or, of what is commonly called surgery?

Something has already been said on the subject; and when every circumstance is maturely weighed, it must only serve farther to confirm the opinion, that the regimental practice requires more of the Physician's than the Surgeon's assistance; it must therefore follow, that the place should be supplied, not out of the number of the latter, as is most commonly done, but from the former; and, on this ground, the sketch we have offered of a Physician's education is tenable.

On examining the diseases that are most prevalent among soldiers, and in regimental practice, we find the far greater number of them to be, such as fall under this particular province.

The following may be enumerated among the Pyrexia. Fevers of all the different kinds. Typhus, Synochus, Intermittents, and all their variations, as remittents, &c. Every one knows the attention we ought to pay to the class of fevers; they appear at



least three times for once of most other diseases, and prove as often fatal. Among the Phlegmasia, we may reckon Ophthalmia, and even Phrenitis ; this may, and does arise in the army, from too much exposure to the rays of the sun, or what is termed Insolation. Cynanche tonsillaris ; Cynanche maligna, a very fatal, and no infrequent disease. Cynanche Parotidea, Cyn. Pharyngea. I pass over the Cyn. Trachealis, or Croup, as less frequent and more peculiar to children. Peripneumonia, Pleuritis, both frequent in the army. Gastritis, Enteritis, Nephritis, Rheumatismus, both of the acute and chronic species. As this disorder always arises from cold, and as the nature of a soldier's life is well understood, I need not say how frequently it is to be met with amongst soldiers.

Of the Exanthemata, we may enumerate the following ; Erysipelas, Variola, Rubeola, Scarlatina : I pass over the miliary fever. Among the Hæmorrhages, Epistaxis, Hæmoptysis, and its sequela Consumption, another disease very frequent, and almost always fatal. I say, almost *always* fatal ; for by the present fashionable modes of life, irregularities, and late hours, &c. it is often induced, and but  
seldom



seldom we find it cured. As the important part in the obviating, or removing of all diseases, is the beginning; and as this complaint, particularly, creeps on slowly, and without giving such uneasiness as to create alarm to the patient, it has generally arrived to a growth, difficult by the most judicious treatment to be stopped, before any assistance from the faculty is sought for, and is, I fear, too often confirmed and rendered past remedy, by the injudicious treatment that many of these unfortunate patients experience from those into whose hands they resign themselves. Indiscriminate bleeding, purging, and a low diet, are the means in general use, even among the greater number of the regular and well-informed practitioners.

“ Mistakes in medicine always entail mischief. The danger of bad treatment never appeared more fully than in that dreadful epidemic, of this island, the Pulmonary Consumption. Thousands have been literally sent to the grave by the lancet and low diet. And innocent as milk may be, it has, in the hands of medical men, been converted into a most destructive poison. False notions of nourishment have given rise to false medical practice;



practice; and practitioners have imagined that they were supporting their patient, whilst they were feeding his complaint\*.” This is a disease, wherein regimen in all its parts strictly adhered to, and judiciously laid down, in which I include a *nice attention* to the temperature of the air, and its salubrity, can do more than all the drugs ever administered in it.

“ Medicine is but a secondary aid---a substitute for the natural powers of food, of diet, and of regimen.---Unhappily, however, Physicians have reversed the view, and, instead of considering that the existence of the body in disease, as well as in health, is supported by the same agents, they have sought for the cure of disease on different principles---they have ransacked the three kingdoms of nature, and laboured in the very elements for their imaginary powers of physic---with what success the present state of practice, and uncertainty of cure, may tell.---“ I mean not,” continues this author, “ by these observations to debase my profession---on the contrary, I mean to insist upon an important truth, and wish to turn the attention of patients and Phy-

\* Dr. Kentish.



ficians to their proper objects. If both do not attend alike to the habits of life, neither can be benefited ; the patient cannot derive relief, nor the Physician credit.---When we act in concert with nature, we have much in our power---when we contradict her indications, all is mischief."---Many observations might be made on the present mode of treating Consumption, but this cannot be entered on here. That it is a disease frequently occurring in the army, and requiring the ablest of the profession, whose exertions too often fail, is all we want to establish.

But to return :---*Cystirrhæa*, *Hæmaturia*, *Hæmatemesis*, fall likewise under the Physician's department ; and among the *Profluvia*, *Dysenteria*, and *Catarrhus*, both chronic and acute ; here I also place that infectious species called *Influenza*, on which the reader will find a few observations, subsequent to this chapter.

Among the *Neuroses*, *Paralyfis* ; *Syncope* ; *Epilepsia* ; all which frequently take place ; *palpitatio*---*Asthma* : I pass over *Hypochondriasis* and *Dyspepsia*, as rarely occurring. *Pertussis* sometimes occurs ; *Colica* often, and  
is



is never without danger ; Cholera ; Diarrhea ; which as often prove troublesome.

Among the Cachexiæ, I have met with Atrophia in the army. Among the Aquosæ, Anasarca ; Ascites ; Hydrothorax. Among the Impetigines, Scrophula ; Syphilis. This last, as may be supposed, from the unrestrained use of unclean women, is very frequent. Scorbutus is likewise to be found in the army as well as at sea ; it may happen even in England. During the war preceding the last, it appeared among the French prisoners at Winchester, with all its malignity, though they had been four or five years at so great a distance from the sea coast \*. It appears very frequently in besieged towns ; for example, at Minorca, in the late war, and seems to have been one of the chief causes of the surrender of the troops to the enemy. Lepra likewise appears, and Icterus, which I have often met with.

Among the Locales, we may place Gonorrhea, one of the most frequent, and in general most troublesome in the army, as are all venereal complaints ; and also among the worst cured, though almost every one pre-

\* Vid. Brocklesby on Milit. Dis.



tends to a knowledge of them. We also meet with *Obstipatio*, *Ischuria*, *Herpes*, *Tinea*. I place *Bubo* among the venereal complaints. These are enumerated as the most frequent in the army ; many are omitted which may occur occasionally.

To ballance them, let us enquire what diseases appear in regimental practice, more immediately requiring the Surgeon's assistance. With respect to the pure surgical cases that occur in regimental practice, they are, for the most part, neither many, nor of a complicated or difficult nature. Now and then a phlegmon, ulcers, and *ulcuscula* ; by these I mean trifling ulcers, that require very little medical or surgical treatment. Small wounds ; for it is seldom that large wounds occur ; these may be slight cuts on the fingers, and contusions on the head. Sprains of the ancles, wrists, and shoulders ; dislocations ; but these last are what, I believe, seldom happen ; yet, since they may, we shall give them a place. Among the *Ectopiæ*, *Hernia* ; this again, if it does occur, which I acknowledge to have sometimes seen, is a complaint of such a nature, that it totally disables the man, so affected, from the service. And hence such  
are



are always discharged, unless it happens to Taylors, when they are kept for the purpose only of working in the regimental shop. Sometimes, among the surgical complaints, we find Hydrocele, also Schirrus, particularly in the testicles.

For the most part, neither wounds of the head are found so dangerous as to indicate the use of the trepan; nor do wounds of the extremities so large as to require amputation, ever occur; now and then a broken leg, from a fall, may happen. Large wounds happen often enough, we confess, after battles; but we have already mentioned how seldom battles on land are fought of any consequence, or magnitude; I mean where much of this practice is necessary. A Bunker's Hill battle, a battle of Jemappe, or such bloody conflicts as have been experienced in the campaign of 1794, it is hoped, and hoped too for the sake of humanity and the happiness of the world, will not take place every war; nay, nor every age, either among rude and savage, or polished and civilized nations. In long continued sieges they are to be found; yet the number of sick, from the beginning of the siege of Gibraltar, till its conclusion, have not

S 3
been



been many, when we consider the number of regiments, and of Surgeons, that were stationed there. From this view, we may learn how much more necessary Physicians in regimental practice are, than Surgeons, strictly so called.

In the war before our late unhappy and ill-judged contest with our American kindred, it appears from registers kept of the mortality produced by fevers of various kinds in military life, that eight times more men were lost by these, than fell immediately by their wounds, or in battle. This is a farther proof how necessary Physicians are; yet medical science continues to be much depreciated, and even thought unnecessary; while the department has been constantly consigned to the lowest sphere of the healing art\*.

In the last ten or fifteen years, I admit, that young men begin their medical career with a better education than was usual before this period; and many of them may even be styled well prepared for *clinical practice*, and the duties they undertake; but still the restrictions they lie under are too few, and open a wide door for *pretenders*. A young man

\* Vid. Mil. Dis. by Brocklesby.



may or may not be attentive to what is going forward in the *lecture*, or dissecting room : he may attend the hospitals, or he may not, just as his inclination dictates ; he pays the common admission fees : at the end of the course he is not called on to give an account of his proficiency ; he generally takes care, indeed, to call on the London teacher for a certificate ; and I believe there is no instance in which this has been refused ; no examination is required to obtain this ; no further enquiry is made : he may deserve it ; he may not : they do not profess to examine. He returns to the country, and commences doctor in all its parts, apothecary, man midwife, surgeon, physician, all united : he was in London ; he walked the hospitals, and has a certificate. This is enough.

Surgery and Physic are held distinct ; this is universally granted by the distinct incorporated societies into which the two branches are separated ; and what is of more importance, the education in many respects differs. The Surgeon generally contents himself with a much more circumscribed plan.

I know a late writer has doubted the propriety of distinguishing them into two separate



branches \* ; but till he can change the mode of education ; till he can bring the Surgeon to spend the same length of time in study, that the Physician is obliged to spend in college before he be licensed ; and till examinations be equally strict, and on the same subjects, it will be in vain to consider them as one and the same ; and to conclude that every man who can dress a simple wound, or make a few unguents, is equally capable of superintending fevers and the other diseases of the system which we meet with in the army, would be as absurd.

The generality of what are called Surgeons, *i. e.* who stile themselves such, are contented with serving an apprenticeship of a few years ; then go to London or Edinburgh a few months, in winter, to walk the hospitals ; return home and set up for themselves ; and this forms the whole of their medical education † ; the greater number never offering

\* Kirkland.

† In Ireland it is even more imperfect. What is stiled a regular Surgeon in Dublin, where the best in the kingdom are supposed to reside, only serve an apprenticeship to some Surgeon in the metropolis. Many, however, go now to Edinburgh from Ireland, to pursue their studies.

themselves



themselves as candidates for a Diploma in the branch they profess, as will appear by the small list of examined Surgeons published by authority from Surgeon's Hall.

Before I finish this head, I think it may not be out of place to mention the preliminary education of such as intend to study surgery, which is required by one of our continental powers; and if it be contrasted with the little attention that is generally bestowed on this part among us, I fear the comparison will be considerably against Great Britain, notwithstanding the fame she has justly acquired for her medical erudition. I shall give the account as I find it.

“ Madrid, May 4, 1787.—The King has approved of the establishment of a College of Surgery, in this capital, under the name of St. Charles, and under the immediate protection of the Royal Council, similar to those of Cadiz and Barcelona. This college will be composed of a President, eight Professors, and a Dissector of distinguished merit, elected from the number of those who travel at the Royal expence, for knowledge and improvement in the art of surgery. This school will  
admit



admit *none* but those who are furnished with certificates of their having studied Humanity, Logic, Algebra, Geometry, and Experimental Philosophy for a due time. Those certificates, besides warranting the life and manners of pupils, must contain the names of parents, place of birth, and be signed by Curates."

Here is an education becoming and proper; and a man studying surgery on such a foundation must practice with credit, provided he has been blessed with a due share of genius to improve by his opportunities; for it is both these united, that forms the man of professional skill. We so far agree, however, with the poet, that,

"Tho' nature weigh our talents, and dispense,  
 "To every man his modicum of sense,  
 "Yet much depends, as in the Tiller's toil,  
 "On culture, and the sowing of the soil \*."——

I know that the surgical department, when liberally studied, is as complicated in some of its parts as the Physician's; and requires both genius, application, and much reading; but the numbers that study it in this extended sense are few, when compared to the number of such as we hinted at above. Suppose sur-

\* Cowper's Poems. Vol. I. p. 212.



gical cases to be far more frequent than we find them in regimental practice, they are still few, and the treatment easy and simple, when compared to the diseases that belong properly to the care of the Physician. Soldiers, whether in peace or war, are every day of their lives exposed to the causes of the one; *i. e.* to what induce those diseases which we have ranked under the medical head; while on the other hand, they may not be exposed once in a life-time to that of the other.

What has already been said to prove that the practice requires more of the Physician's than the Surgeon's aid, we apprehend is sufficient to convince our readers of its truth; but it will appear still farther from the following fact, which, indeed, the public have been in possession of these twenty years. I quote it from an author who wrote so long ago as 1764, and who likewise touched on the same subject, and hence I am happy to have his testimony to corroborate my own opinion, that the regimental practice belongs more to the Physician than the Surgeon, or to use his words, "more than mechanical dexterity in dressing a wound, or even of cutting



ting off of a limb.”—“The fact,” says he, “was well vouched to me by a very ingenious and worthy man, who was seven years Surgeon to a regiment in the late war,” (i. e. in the war preceding our last) “during which, the corps had been two campaigns on very hard service, and had also sustained the severest shocks and losses which attended the tedious siege of the Havannah; yet the Surgeon declares, that in full seven years, he had not met with a hundred, properly, chirurgical cases in the whole regiment, though, in the course of that time, near two thousand men had gone through the regimental books, including 400 men draughted out of it into different corps.”—“May we not then justly conclude,” he goes on, “that in time of profound peace, the exigences of chirurgical dexterity compared to the objects of medical attention in any regiment, are at most one half less than they had been observed at two battles and a siege, besides the rest of the seven years; consequently, that the medical science requisite for a regiment is at least forty times more necessary to be in some measure practised, for once that any particular dexterity



terity in manual operation, or surgery is required\*.”

This granted then, which cannot be denied, is it not strange, that the army should be supplied with so few of the one profession, though their assistance be so frequently wanted, and with so many of the other branch, though there be in general so little need for operations in military practice, or of their assistance in other diseases, where it becomes their province to act?

However the present age may boast of literature and refinement; however, we may hold ourselves in high estimation above the ancients, both in respect of knowledge in war and philosophy, yet they seem to have taken a greater advantage of the science they possessed, and no doubt, reaped, as the fruits thereof, a proportionable success. Xenophon, in his history of Cyrus†, a general, who in the estimation of this historian, was the ablest of all antiquity, mentions, among his other qualifications for a general, that previous to a war, he wisely chose able Physicians, for the management of the sick, and dismissed them afterwards with honours, as well as

\* Vid. Mil. Dis. by Brocklesby.

† Vid. Xenoph. de Inst. Cyr. Hist. lib. 8. p. 167.



with the rewards earned by their services. It were well, if Britain copied his example : but it is too notorious how little attention is paid to this subject ; an over negligence both in choice, and in rewards, would seem a reproach on us. The small, and inadequate pay, is a sufficient proof of this ; or, their dismissal at the end of a war without any provision whatever. The naval medical gentlemen will join me in the observation, and corroborate the assertion ; more than two thirds of whom are then turned a drift ; the militia practitioners will confirm it likewise, who, though they have served the whole duration of a war, be it ever so long, are similarly treated, and unregardedly discarded ; and the regimental Mates, in the regular service, will also unite their testimony.

But to return ; the few Physicians that are appointed to the service, are seldom convenient to give their advice in medical cases, except, immediately, in the places where they remain : Such as at sieges\*, and large en-

\* Sieges are often very healthy. On the 24th of July, 1782, there were in Gibraltar 7234 privates ; the number of sick was only 265 ; and, some of these, we are told, appeared in the ranks occasionally.

*General Evening Post*, Oct. 5, 1782.

campments,



campments, where a general hospital is formed, there we find a Physician. During a period, perhaps, of twelve or more years, an army Physician never sees a regiment till it be brought to form part of an encampment. Does it stand in no need of a Physician all this time? Is his utility only to continue a few summer months, during an encampment, and solely in time of war! Strange supposition! This is placing great confidence, in the abilities of regimental Surgeons. Surely we should be apt to conclude that their capacities must be well known to Government, before such important charges could for so long a time be committed entirely, and without controul, to their disposal.

It will be said, there is a Surgeon-general to inspect the conduct of these gentlemen; but it is as seldom he visits regiments; nor, indeed, would it be possible for him, scattered, as regiments must be, over so large an extent of country. In summer he pays a formal visit to each encampment, and in each regimental hospital, if there be no general one, he stays a few minutes; but he is never seen more during the campaign. All this might be easily rectified, either by such a method



method as we have already ventured to point out, or some other which the wisdom of Government might devise.

It may be objected here to my recommendation of Physicians in place of Surgeons, for regimental practice ; that I am contending more for a shadow than a substance ; for a name than a reality. Far be this from me ! It is the same thing, as to the effect, by what name they go ; whether by that of Physician, or Surgeon, provided they be men of sense, and knowledge in their profession. Names can never change things ; they can never change a Physician to a Quack ; nor a skilful Surgeon to a Mechanic, though all the world in common conversation, should denominate them so.

“ What is a name ? ” says the Poet,  
 —“ That which we call a rose, by any  
 Other name wou’d smell as sweet, so Romeo  
 Wou’d, where he not Romeo call’d.”

And so will a man of medical knowledge, be still a man of medical knowledge, let him be called by what title the world pleases. But I do contend that he should possess the education of a Physician ; and of course, it were better if he had a Physician’s diploma in preference



ference to a Surgeon's, since the examinations that obtain them are on different subjects, and require a different direction of studies.

It is well known, that whoever studies medicine, studies at the same time the scientific parts of surgery, and is equally skilled in it with him who calls himself a Surgeon, except in handling the knife. With this it is not his province to interfere, as it would intrude too much on the profession of his brother; but if engaged in regimental practice it may occasionally be necessary that he should practice operations. It is absolutely incumbent on the Physician to acquire this knowledge in surgery, because he is frequently called where a great part of the complaint is surgical, and has besides, repeated opportunities of seeing operations.

In such cases, his opinion respecting the health of the system is required, and according to it the Surgeon acts, whether it be to operate or not; but it is not equally necessary for the Surgeon to study the practice of medicine. With anatomy both ought to be well acquainted, but both not always with physiology, general pathology, and those branches



mentioned above. Nor is it absolutely requisite for the Surgeon to study the *Materia Medica*, except so far as respects plaisters, unguents, fomentations, and the like. While I say this, I do not mean that they are, in general, found unacquainted with other parts of it; I only contend, that it is not considered as requisite for obtaining their surgical diploma.

Instances, it is said, have occurred during the late war, where Surgeons were raised to the office of Physicians by the mere word of a Commander in Chief. We shall not say that the knowledge of such were not sufficient for the office to which they were elevated; but we may be allowed to remind even commanders, that it is an unwarrantable step in them. It is an encroachment on the regular bred Physician, and on the prerogative of the University. It may likewise prove a discouragement from study, and examinations. As soon as such proceedings get abroad, and when it is found, that the lowest practitioners stand a chance to be advanced to the privileges of the Physician, and enjoy without study those emoluments he ought to receive, candidates for the army will spare them-



themselves the trouble of tedious preparations for examinations, as well as the expence of a Doctor's degree : they will remain contented with a Surgeon's diploma ; perhaps even never apply for this.

Suppose Generals were never to make such appointments without a recommendation, yet this is not enough ; the person to be promoted ought to have the sanction of an University, a lawfully instituted seminary of medical knowledge. A man may give universal satisfaction to officers by his manner of conducting himself ; or he may ingratiate himself into the favour of those that have power to serve him. If the promotion he obtains, be in his own line, it is well ; but when those bounds are broken down by an *ipse dixit*, then it becomes a fault. A General has as much right to create a Bishop, as he has to create a Physician, *i. e.* he can do neither ; it is beyond his proper sphere of action. It is just as absurd as if the College of Physicians should pretend to create a General, who never were bred to war, and possess neither practical knowledge in the art, nor lawful authority for such proceeding.



Surely he would never be acknowledged among general officers as one, though the University should meet and in the most solemn manner proclaim him such. It is just the same with a General who dubs a man a Physician, if an University, who have properly the power of such creation, never conferred on him this dignity; he may indeed give him the emolument, this he has in his power to do; but I will submit it even to himself, if this be acting with propriety, and for the advantage of his Sovereign's service. His Sovereign has delegated to him this power of commissioning medical people to relieve the complaints of the soldiery; not with the expectation that it is to be abused by the introduction of irregular persons. Such a station ought to be considered as the second in military life. When things go on in this manner, it is no wonder if Generals find their armies composed of feeble and unhealthy soldiers; or to use the words of Milton, "If they see the soldiers shed away from about their officers as sick feathers, though never so often supplied."

But to return; to recommend study, and to endeavour to point out the advantages of improving



improving the mind, to such as have the practice of medicine in view, and more especially, to regimental practitioners, who are chiefly the objects of these pages, cannot, I think, be censurable; and I hope my endeavours towards this end, however imperfect, should they not deserve applause, will, at least, be allowed to pass without the accusation of presumption, or the odium of arrogance, and self-importance.

In discharging a trust of such magnitude, of such consequence to the public welfare, as the practice of medicine, it becomes a duty of the first order to prepare ourselves with care and diligence, and to call to our assistance every aid we are able to procure. Nor, perhaps, is it beneath the wisest, the most informed, and experienced of the profession, to reflect, and that seriously, on the following sentiment, viz. that,—“it is, often, not from any deficiency in the engine when we fail, but from an error in us who wield it:”—Or, in the words of Pope,—that,

—————“if vain our toil,

The fault lies in the culture, not the soil.”

Were we to consider a knowledge of the sciences only, in the light of making us more



happy, independent of their assisting us in medical researches, this ought to be an inducement to cultivate them. For happiness is what every one has in view, however different the ways may lead, through which it is fought; and there is a pleasure in pursuing science, in searching for knowledge, not less to the mind engaged therein, though at first less apparent, than in the flowery and inviting paths of frivolous amusement, and dissipation; a pleasure too, that affords satisfaction on reflection, when those years are almost full, that require us “to be numbered with the dead.” which the other cannot bestow. Our various enjoyments through life are heightened by science.—“Science renders life less animal, less confined to the dust we tread on.”—And so great is the satisfaction of acquiring knowledge, “that, (so we are told) Archimedes absorbed by this pleasure, did not even perceive the soldier who came to plunge into his breast, the sword which ought to have protected him.”

I shall conclude the foregoing remarks with the sentiments of a distinguished author\*, on the superiority of the person whose mind is

\* Vid. *Lounger*, Vol. III. No. 100.

improved



improved and enlightened by literature, in what sphere of life so ever he be, over him who remains in the darkness of ignorance. After telling us, that the waste of time is a very calculable loss, but that depravation of mind is a waste of a much higher denomination, he goes on—"the votary of study, or the enthusiast of fancy, *may* incur the first, but the latter will be suffered chiefly by him, whom ignorance, or want of imagination has left to the grossness of mere sensual enjoyments. In this, as in other respects, the love of letters is friendly to sober manners, and virtuous conduct, which in every profession is the road to success and to respect."

"To the improvement of our faculties, as well as our principles, the love of letters appears to be favourable.—They give room for the exercise of that discernment, that comparison of objects, that distinction of causes, which is to exercise the skill of the Physician; to guide the speculations of the merchant; and to prompt the arguments of the lawyer; and though some professions employ but very few faculties of the mind, yet there is scarce *any branch of business* in which a man who can think, will not excell him who can



only labour. We shall accordingly find, in many departments where learned information seemed of all qualities the least necessary, that those who possessed it in a degree above their fellows, have found from that very circumstance, the road to eminence and to wealth."

"He who has mixed general knowledge with professional skill, and literary amusement with professional labour will have some stock wherewith to support him in idleness, some spring for the mind when unbent from business, some employment for those hours which retirement or solitude has left vacant and unoccupied."



A

SHORT DESCRIPTION

OF THE

INFLUENZA,

WITH ITS DISTINCTION

AND

METHOD OF CURE.



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## P R E F A C E.

THE following short Essay on the Influenza was written during the last epidemic attack of the disease, and published in June, 1782, before it had entirely disappeared in the neighbourhood where the remarks were made. It is republished here as connected in some measure with my observations on the medical practice of regiments.

A SHORT



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A

## SHORT DESCRIPTION, &c.

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THE inclemency and backwardness of the season \* have been remarked by some of the oldest people living, to be the greatest in their remembrance. The spring proved exceedingly cold, which checked vegetation; and in several parts of Scotland, numbers of cattle perished for want, as neither fodder nor grafs could be procured for money; many were killed for the same reason. Our accounts from Plymouth are nearly similar.

A Gentleman, who took for several months past an exact account of the state of the weather, assures us that he found the thermometer stand one degree lower on the 22d of May, than it did on the 22d of the preceding December; and that on Christmas-day last, and Whit-

\* Spring, 1782.

sunday,



funday, it stood precisely at the same height. For three months we have scarcely enjoyed a single day, without more or less rain.

About three weeks ago there was a dreadful thunder storm; the morning shone bright, and the day warm till about twelve, when it lowered on a sudden. The lightning and thunder were remarkable, accompanied with a shower of large hail stones. I took up some as they fell, examined their size, and am persuaded they would have measured upwards of half an inch round; the thunder lasted more than half an hour, and the hail continued to fall about a quarter of an hour or twenty minutes. It did not, however, spread to any great distance, for five miles from this no hail was perceived.

Since this it has thundered frequently, but the most remarkable was about the 24th of May. It began in the evening, a little before sun-set, and continued at least for two hours. The thunder at this place, however, was less remarkable than the lightning; I stood with a gentleman here to observe it nearly the whole time of its continuance. Preceding the thunder, it was a dead calm, and the day likewise



likewise by far the warmest we had experienced for a length of time before.

There was something awfully beautiful in the lightning. It did not appear in flashes in general, but in large balls, one rolling after another over the heavens northward of us, and now and then dashing one against another, driving off large sparks, producing a great and sudden glance, which enlightened the street of the village for an instant, as if the sun had shone forth; yet the thunder was at a considerable distance, as we could easily ascertain by the interval between the lightning and the peal. From this we concluded ourselves in no danger, and stood with the less concern to view the uncommon appearance it produced.

We presaged, that over the places where the fire balls past, there must be damage sustained, and almost the next post confirmed our suspicions; for not only houses were burned, but several persons lost their lives, and many trees were shattered to pieces.

Nearly about the same time the Influenza made its appearance in London, and the country round. It spread in a few days with great rapidity, insomuch, that a physician of  
extensive



extensive practice in the city, is said to have visited no less than one hundred and seven patients labouring under it in one day.

At St. Alban's it soon became prevalent; the soldiers that lay there seemed to be the first victims of its fury. Out of three companies quartered in that town, scarcely a single man was fit to do duty—the officers suffered in like proportion; for one only escaped the complaint.

In the neighbouring towns it raged with no less severity. I have seen seven in one family, nine in another, five in a third, and in a fourth, eleven seized with it. We had accounts, that in Sir Patrick Blake's family, fifteen laboured under it; and in the Duke of Marlborough's no fewer than twenty-seven.

This is allowed to be one of the widest spreading epidemics in the whole catalogue of diseases. It is not confined to those on land; at sea it rages with equal fury. The accounts we have from the fleets, confirm this remark. It is said, that 400 of one ship's company, and 300 of another, came lately on shore ill of it; nor does it seem to be confined to the human species; for it is said horses are in like manner



manner sufferers, as well as sheep ; but this I will not give for a fact.

In my journies to visit patients, I have observed both horses and sheep cough frequently ; I think others have observed the same in former similar epidemics ; how far this was connected with it, I dare not say.

The last time it made its appearance is yet fresh in the memory of every one ; it was but a few years ago ; at that time it spread in a short period over all Europe ; I am told it has at present reached the Continent ; and there is some reason to believe, from the experience we have in the disease, it will visit many parts before it ceases.\*

## S Y M P T O M S.

The first symptoms are a great cough, with straitness about the breast and considerable dyspnoea. The patients generally complain, as if they had something like a ball in their throat, about the head of the sternum ; to this they attribute the want of free respiration ; a

\* Since this was written, there are accounts of its having made its appearance at Stockholm and other parts of the Continent, where it rages with violence,



coryza, or running at the nose, always takes place, thin and acrid, excoriating the upper lip, and vellicating the membrana Schneideriana, rendering the inside of the nose extremely painful: this is always accompanied with a violent sneezing, which adds very much to the pain of the head. In general, among my patients, I found a foreness over the eyes, chiefly about the brows, which they said was seated in the bone, and rendered them stiff and painful to be opened, nor when open could they bear a strong light. A rheum also distilled from them, not unlike what we observe take place in the measles.

The head is also in this complaint much affected, especially the fore part, in the course of the frontal sinuses. This pain is much aggravated by coughing; at the same time are felt universal pains over the whole body, such as we often meet with in continued fevers; there is generally a febricula, which is known by the alternate heat and cold the patients feel; and in some cases the pulse is evidently accelerated, the fever running very high; but in the greater number of those that came under my care, this did not happen.

In



In many I could distinguish very little fever, by what remarks I was able to make on the pulse: in others, nevertheless, it was sufficiently evident, and many were weak thereby and faint. There is always some thirst accompanying it. In my own case, and in all those I visited, the pain on attempting to cough was felt about the head of the sternum, reaching as far down as its middle, but not spreading far on either side. I found very few who pointed at the seat of the pain as placed near the cartilago ensiformis. From this it appears to be entirely confined to the trachea, and its first ramifications; neither the pleura covering the lungs, nor their proper coat having much part in the affection.

In some who were valetudinarians, whose lungs were previously in an unsound state; or where there was an hereditary taint, laying an easy foundation for an affection, the case was otherwise. These were seized in a more violent manner, and the complaint here put on a more dangerous appearance.

The pain in the breast is seldom felt but on attempting to cough. Then it resembles the pricking of a thousand pins, almost totally checking the effort.



The throat and mouth burns with heat, with an uncommon smarting pain all over the fauces, and behind the velum pendulum palati. The tongue and fauces become dry, and considerably parched. In two patients this was remarkably the case. Some bled at the nose; and one patient had abscesses formed in both ears, which burst and have continued discharging for some time past.

As the complaint abates, the pain in the breast ceases; first gradually leaving the sternum and neighbouring parts, but continues fixed some time longer about its head, with a duller and less acute sensation on coughing, which very little now, if at all, impedes that effort of nature to free herself from something irritating.

In this stage, expectoration becomes more easy, the cough less severe, *i. e.* less painful, as was already mentioned, but not less frequent; the fit not ceasing till a quantity of mucus be pumped up. Though a diarrhæa be not a characteristic symptom, nor frequently met with, yet I have seen some few cases where it was conjoined. In some of these, however, it existed before the Influenza made its appearance.

The



The duration of this disease, in general, is not long. I have seen none very ill above a week: many not more than three or four days. Others, however, have been less mildly dealt with, and have laboured under it for upwards of fourteen. It generally leaves the body weak and debile, and for a considerable time unfit for much exercise.

A gentleman who left London a few days ago, told me, as he passed through the streets pretty early in the morning, that he observed many of those who cry things for sale, leaning their heads against the walls of the houses, and in this situation crying their goods; not being able to support themselves upright.

The seat of the complaint seems, from the history we have given of its symptoms, to be entirely placed in the mucous membrane of the trachea, sneiderian membrane, and that lining the frontal sinuses. That there is an inflammation induced in those, must also be obvious, and this greater or less, according to the violence of the disease, and the habit of the patient.



## D I A G N O S T I C.

It is no difficult task to distinguish it from an inflammation of the lungs, and pleura. The state of the pulse, which in this complaint is for the the most part soft and feeble, in the pleura generally full and hard, would of itself suffice for this purpose ; but the coryza, which never takes place in the pleurisy, will be still a farther mark : nor are there found in pleurisy those wandering pains over the body, so universal in this disease. It has, indeed, a nearer resemblance and connection with the catarrh. In both we often meet with coryza, pains in the head, and over the body ; but the sporadic nature of the one, appearing only in those persons who have been exposed in a particular manner to cold, and the epidemic nature of the other, attacking almost every one indiscriminately, without distinction of sex, age, or situation, will direct us in our diagnostic. Perhaps, we might add a previous constitution of the air, and state of the weather, at least, in giving a predisposition to it. A man who had a compound fracture of the thigh, and had been confined to bed by it for  
upwards



upwards of four weeks before the disease made its appearance, was seized with it, and suffered equally with the rest of the family. This is a strong proof of its epidemic and contagious nature. But the chief diagnostic mark is its arising from a specific contagion inducing a great degree of debility.

It has been supposed by some that pneumonic inflammation has been contagious from its appearing as an epidemic; but I am of opinion, we may, without great difficulty, distinguish between such an epidemic, if it ever does become so general as to put on the appearance of one, and the Influenza, from the difference both in the extent and rapidity of the spreading of this beyond the other, not to mention several other obvious distinctions to discriminate them.

## C U R E.

When the Influenza is skilfully treated, it seldom proves fatal;\* on the other hand, if

\* I have heard only of one person who died of it, since its present commencement: he was previously in a bad state of health,



unskilfully handled or entirely neglected, it may lay the foundation for consumptions. The inflammation may spread, may penetrate into the substance of the lungs; abscesses may be formed; the consequence of which must be absorption: the mass of fluids in this manner will be contaminated, and the patient at length sink under a confirmed hectic.

With respect to the method to be pursued; in this part of the country venesection is unsafe, unless in plethoric and robust habits. It yields in most cases to the other modes of removing inflammation. We are to administer plenty of thin, diluting liquors, such as barley-water with a little nitre, or acidulated with orange or lemon juice: sage tea, ground-ivy tea, balm tea, orange whey, weak negus made with oranges or tamarinds, lemonade sweetened with honey. Which ever of these we chuse to drink, it should be used somewhat warm. The relaxing powers of such liquids are greater when subtepid than either altogether cold or when made pretty hot. It should be a constant rule to sip of these drinks every now and then, whether thirst requires it or not. Our drinks may be sweet-



ened to our taste with honey, succ. glycyrrh. or liquorice-root, boiled in it.

Gentle diaphoretics ought not to be omitted to promote a free perspiration, on which a great part of the cure will depend. For this purpose sp. minderer. with a few drops of vin. antim. and a few of L. Laud. will answer. If our patients are not so bad as to be confined to bed, we should at least caution them to stay within doors; but it would be better still to advise them to keep in bed to encourage perspiration. The feet should be every night bathed in warm water. This will not only bring the determination of the blood from the bronchiæ, and of course relieve them, but a considerable absorption of the water will be made, and the blood even in this manner, if there be any degree of siziness existing in it, diluted, and the cohesion of its gluten loosened. When the cough is distressing and keeps the patient from rest, an opiate must be administered. I give them with great success: for admit there be present a considerable share of inflammation, yet the irritation occasioned by the cough more than over-ballances the heating qualities of the opiate; nay, a night's rest from coughing, wonderfully promotes ex-



pectoration. It is needless to mention mucilages, after what was said above on drinks. Solutions of gum arabic will prove here very serviceable. Costiveness is to be obviated by some of the milder laxatives ; perhaps cream of tartar made into an electuary with honey may supersede all others ; for the simpler our prescriptions are, so much the better. A multiplicity of medicines only breeds commotion and interrupts the action of one another. We may relieve the pain of the throat, by ordering the steams of warm water to be inhaled. This may be medicated with herbs as we may judge proper, though the warm water alone will answer nearly as well. If proper inhalers, such as described by Mr. Mudge, be not convenient, a tea-pot, wrapping the pipe round with a handkerchief or towel, forming a sort of tube, may answer as a substitute.

The food should be light ; rice or bread pudding ; thin broths ; sago ; to a pint of which, a glass of white wine may be added. Panado, to which likewise, if our patient be not very feverish, we may add a little wine.



If the appetite be not much impaired, which I have sometimes found to be the case, and the patient ardently wishes to indulge in some fresh meat, it should be boiled. Roast meat heats too much, as having its fat or gravy, in a great measure, retained in it by the constant rotation it undergoes in dressing.

As vegetables are laxative, and do not produce so much chyle as flesh meat to disturb the animal œconomy, we may allow our patients such of the olera as they chuse.

I seldom find it necessary either to bleed or blister \*; nor have I heard of any cases so treated in a circuit of between twenty and thirty miles round this place, save one Lady at St. Alban's, where the Surgeon thought it necessary, and whose blood indeed was considerably inflamed, as appeared by the coagulable lymph separated on its surface. I have been informed, however, that in London they both bleed and blister with advantage. In some parts of the city, however, I am authorized to say, bleeding did not answer. Dr. Rogers, Physician to the Finsbury Dis-

\* One Surgeon in this town tells me, he has applied blisters in a few cases where the difficulty of breathing was great, bending the body forward, and threatening (he said) suffocation.



penfary, Clerkenwell, whose opportunity of seeing the difeafe has been extenfive both in his public difpenfary and private practice, informs me, that in place of finding it accompanied in general with much inflammation, it rather verges towards the typhus type. In one cafe this was remarkable; fo that he was obliged to adminifter the bark in various forms. This patient was a Lady, and of a delicate habit.

My friend Dr. Willan likewise, Phyfician to another Difpenfary in the city, faw a cafe where a few ounces only of blood were taken away; the confequence of which was a depression of fpirits and lownefs of pulse, where the beats could with difficulty be diftinguifhed for three days after, notwithstanding endeavours to raife it.

Vomits too, in the beginning, have been faid to have very good effects; but in this country I have not feen a fingle emetic ventured on; and have heard only of two or three instances of it. They create great irritability; for this reason I fhould be afraid to venture on them. It is true, they open the pores of the furface, and relieve obftructed perfpir-



perspiration ; but this may be done with more safety without them.

With respect to bleeding ; the nature of this place and season, sufficiently caution against it. The country is woody ; the leaves of the trees now pretty fully opened ; hence they retain a greater quantity of moisture, and from their shade impede the free circulation of the air ; the rains for months past almost continual, and of course much stagnating water on the ground. A constant exhalation of vapour is daily more or less taking place ; by this means the atmosphere is loaded with moisture : and as the summer is now advancing, when the sun shines forth, it is with vigour, which raises the moisture still more. This variableness of weather, often in the same day, is sufficient to relax the most robust fibre, and induce debility in the strongest habits.

That this is the case is evident, from the number of intermittent fevers round this neighbourhood. Of numbers that dwell along the banks of a small rivulet that waters this, and several other villages in the course of twelve or fourteen miles, fevers of this type are to be found at present almost in every family,



family. I have seen children under them of six years of age, and one so young as two; nor is this, as I am informed, a rare occurrence. The typhus has likewise shown itself in several instances of late in this place; all these plainly point at debility; for these reasons, I have not bled in a single case, excepting in one, of the many I have seen under the present epidemic; nor indeed does the state of the inflammation in the least warrant its propriety\*.

In our practice among the poor, who are deprived of those conveniences to be met with in genteeler life, we may fully answer our purposes by the Sp. Minder. & Vin. Antim. as mentioned already, giving plenty of milk posset, made either with butter-milk, or in its stead good vinegar.

Mucilaginous drinks may be made cheap, and good enough with Rad. Glycerrh. Spanish juice, decoctions of common mallows, lint-feed tea, decoction of bran, made palatable with honey, or such like, the expence of

\* Since this was written, a gentleman of this place tells me, he has bled in some few cases with advantage; yet I examined the blood of one of his patients, and it confirmed what I advanced. The patient had insisted, however, on being bled,



which they may easily bear. Fifteen grains of nitre may be added to any of these, three times a day.

Whether we practice among the poor or otherwise, strong sudorifics should be avoided. —Hence Pulv. Dover. Camphor, and such like, are improper; these both heat and irritate too much. For the same reason we should avoid all the warm Alexipharmics. Some order to the poor, treacle posset, made with treacle and ale, and oftentimes adding butter. This surely is an unwarrantable practice; it must throw the patient into a copious sweat, and from such relaxation of the perspirable pores, he is in ten times the greater danger of catching a fresh cold. Lubricating and softening linctuses, will avail much in taking off the tickling cough, and allowing the mucus to thicken, these may be composed of Conserv. Cynosbat. ol. Amygdolar. Mucilage of Gum Arabic, and Paregoric Elixir, or Syr. Papaveris. Some add to this a few drops of Elix. Vitrioli: but I would object to this, as tending, perhaps, to check perspiration.

A very useful and cheap Linctus may be composed of Mucilag. Sem. Lin. Syr. Moror. and a few drops of Sp. Nitr. Dulc.

Spermaceti



Spermaceti mixtures likewise, if it is judged necessary, may be given ; but the Linctus seems to answer better.

By such means as these we may reasonably hope to obviate all the bad effects of the influenza, without the loss of blood in most instances, and restore our patients to their former health and vigour. Let us remember the proverb, *ne sanguinis humani prodigus*, at least before we use the lancet, let us weigh well the symptom that seems to indicate it.

As the Author's intention in this little tract is rather to appear useful than elegant ; he has therefore been at little pains with regard to diction, or ornament. To write plain, so as to be rightly understood, is all he aims at. The candid reader will, he is persuaded, easily forgive errors of that nature, in a sketch written in haste, and intended for immediate use ; and as he has consulted no author in drawing it up, nor opened a single book on the subject, his description is to be considered as solely made from his own observations, since the present commencement of the disease : for this reason he hopes he is not censurable, if all its variety of symptoms be not enumerated.

The



The young practitioner, who has not had an opportunity of seeing the disease before, as well as the patient, may perhaps reap some advantage from the short and imperfect account given of it here. And if this end be obtained, he shall be the less anxious, on the present occasion, respecting literary reputation.

*Luton, Bedfordshire, May 28, 1782.*

FARTHER



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London, Westminster, May 28, 1782.

J. MARTIN



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## FARTHER REMARKS

ON THE

## INFLUENZA.

IN addition to the foregoing observations, I shall add the following, as being connected with the same subject. They appeared in the Memoirs of the London Medical Society, but as that Publication may not be in the hands of the Readers of this Work, I thought it expedient, from their connection with this subject, to reprint them here.

From the first of January this year, 1782, till about the end of May, throughout most places in the kingdom, the weather was commonly unfavourable. Snow, frost, rain, wind, lightning, and thunder, in a great degree, by turns constituted the weather in the neighbourhood where I remained.

The spring was consequently cold, and the tillage of the land was retarded by the almost constant rains which about this time marked the season.



With regard to the time of its first appearance in the places where I then practised, as far as I could learn, it was in the first week of May. Doctor Grant dates its commencement in the suburbs of London, so early as March. For some time at least before it appeared at St. Albans, which is only 21 miles from London, our accounts from the capital told us of its commencement there. By the middle of April the Doctor says, it had spread itself all over London\*. Others however deny it to have been in London till May, and say that it raged most about the 20th of this month.

St. Albans and Luton are only 10 miles distant. It appeared several days sooner in the former than in the latter place. Luton does not lie on the great road from London, therefore the communication with it is less.

My practice took in the compass of several villages, viz. Colney, St. Albans, Redburn, Market-Street, Harpenden, Dunstable, Sundridge, Wheathamstead, Hatfield, and Bell-Barr. By this Means it lay in a large scope of country, many miles in circumference. This afforded me some opportunities of remarking the progress of the disease, and the symptoms with which it was attended.

\* Vide Grant on Influenza.



Between St. Albans and Redburn the distance is only four miles and a half ; yet it appeared later by some days in the last, than in the first-mentioned place, as far as I was able to learn.

Market-Street is about four miles from Redburn. Here likewise it was later in appearing than at the other.

Dunstable is between seven and eight miles northward on the same road ; and Luton five miles from it southward. At these two places it shewed itself much about the same time.

Harpenden stands halfway between Luton and St. Albans. This was not only the latest place where it appeared, but there were fewer ill here, comparatively, both of the inhabitants and the foldiers quartered in it, and under my care. Perhaps this may be, in some measure, owing to its situation favouring less its exciting and predisposing cause.

The houses in this village are scattered irregularly over a considerable piece of ground ; most of them not only stand separately, but at some distance from each other ; the street, if it may be called so, except in the north-end of the town, is in breadth nearly a musket shot ; a pretty wide common extending down it. In this common (or street) stand many trees, but not so close as in any degree



to prevent free perflation. At the fouth end of the town is a fpacious common, covered here and there with heath. The town ftands on an eminence, and the foil of a light dry nature, when compared to Luton, Redburn, and Dunftable.

Sundridge lies about two miles and an half to the fouth-eaft, and is more encompassed with wood. About the fame diftance, likewise, but in a more northerly direction, lies Wheathampstead. Fewer were ill in Sundridge, than Wheathampstead, according to the fize of the town.

Both Luton and Wheathampstead lie very low ; but chiefly Luton, which is buried in a fort of dell, formed by hills near it on the fouth-west and north-eaft. Through both runs a rivulet, the banks of which in many places are flat, fuffering its waters eafily to overflow. This always happens when rains fall more than ordinary, whereby marfhes are formed along them, which fometimes the heat of a dry warm fummer is not fufficient completely to exhale. In this part of the country there is alfo much wood.

North-west of Luton, on the road to Dunftable, it is flat. A large ridge of hills runs  
4 from



from Dunstable to Luton, facing the east, and of so chalky a nature, that in many places no sward grows to cover it. For a considerable way east of this ridge the country is flat, the river aforesaid winding down it. This and the wood always keep a greater quantity of moisture in these places ; hence the air is colder from the exhalation ; and the ground, if the weather be at all moist, is wet and dirty under foot. I would assign this as the reason for the greater frequency of intermittents along the banks of this stream, than in any other part of the country, space for space.

Dunstable is situated more on a flat than the two last-mentioned towns ; it may be said to lie in a large vale, formed by some hills at several miles distance. A large pond of water stands in the midst of the street, where horses are watered and carriages washed. In St. Albans we find a similar one. These may be considered as of no benefit to the health of the inhabitants, especially of those living near them, and more immediately in the way of their effluvia.

The water in the pond at Dunstable, as the weather grew warm, became very corrupt, which was denoted not only by its smell, but



by its green colour. I have likewise seen dead dogs lying in it; and indeed it is a receptacle for much filth tossed into it by the carelessness and inadvertency of the inhabitants.

Colney is on the great road, three miles nearer London than St. Albans. The disease appeared about the same time here as at St. Albans. The town is small, and like Harpenden, scattered. It is washed also by a river, and the soil around appears to me rather of a lighter nature than several of the places mentioned.

Hatfield is distant only five miles from St. Albans, and in a more northerly direction. It is situated on the great north-east road from London; stands partly on a hill, and partly on a steep declivity. Bell Barr is only two miles from it. The country all around is also thickly covered with wood. Though Hatfield is only 18 miles distant from London, yet the disease was later in commencing there than in the capital, notwithstanding the constant passing of so many strangers to and from London by the stage coaches, waggons, and other conveyances. The inhabitants and soldiers here suffered considerably. Each of these towns contain several hundred inhabitants,



tants. In several of them weekly markets are held. Saundrige, Bell-Barr, and Colney, are smaller than the others.

The disease did not appear in Yarmouth till the first week in June. This town is distant from London 122 miles to the north. Ipswich in Suffolk, is distant from the metropolis 70 miles on the north-east, or rather east road; it was also the first week in June when it appeared here; nor then, till it was brought thither from London. A surgeon at Ipswich happened to be in London at the time it raged there; he left it on the last day of May, and arrived at his house about eleven next morning. "I left town," says he, "the last day of May at night, and was then ill of it. I had none under my care then in it: a few days after I had several, but none so much debilitated as myself." From him it spread through all the town.

At Stamfordham, in Northumberland, it also appeared about the first week in June\*; according to my correspondent it shewed itself about the same time at Newcastle upon

\* My correspondent's letter is dated July 8th, 1782, and says, "The Influenza now rages among us."



Tyne. It disappeared about Stamfordham in the third week of August.

In the places already described, where my practice chiefly lay, it may be said entirely to have ceased about the middle of June. But just at this time, a few dry, windy, and colder days than what had preceded, succeeded our moist weather. This produced several peripneumonic complaints. Some not sufficiently aware of the distinction, and having their minds prepossessed with the prevalence of the late disease, mistook, or rather confounded, this intercurrent complaint with the other; though, as it seemed to me, the distinction might have been easily made.

In such as I visited under it, there were neither coryza, cough, sneezing, nor pains in the forehead, back, or loins; nor did that degree of debility, so characteristic of the influenza, attend it. Instead thereof, I found a strong full pulse, and short respiration, or a catching in taking breath, with fixed pains in the breast and sides.

The mistake was not however attended with mischief, for they bled their patients; found the blood fizy, and in some cases repeated it, they affirmed, with advantage.

The



The disease was still termed the influenza, and they now contended that V. S. in it was altogether necessary ; thus making the fizefness of the blood a pretext for V. S. and the criterion whereby they were to be guided.

But did we think it proper to enter on the subject here, we might with propriety contend, that it is not always to be held as the mark of the phlogistic diathesis prevailing in the habit.

### S Y M P T O M S.

As to the symptoms with which the influenza was attended, they were various in various persons, according to the state of the habit at the time of the attack. The first victims of its fury were the soldiers : And the first symptoms were, a great cough, straitness about the breast, with considerable dyspnæa. The patients generally complained of a stoppage in the trachea, giving them the sensation of a ball lodged there. A coryza, or running of a thin acrid mucus from the nose always took place, so as to excoriate the upper lip and vellicate the schneiderian membrane. A violent sneezing ; a pain of the head,



head, much encreased by this last symptom, and most severe in the course of the frontal sinuses; a foreness over the eyes, chiefly about the eye-brows, which they said was seated in the bone, was present. This rendered the eyes stiff, and painful to be opened; nor could they bear a strong light; a rheum also distilled from them, not unlike what we have seen in the measles. Universal pains over the body; but in most only a slight fever; in others it ran very high, with a considerable acceleration of the pulse. Faintness; some, though no great degree, of thirst; the pain of the breast seldom felt but on attempting to cough. Then it resembles the pricking of pins; but it was seldom or never felt so low as the cartilago ensiformis. The throat and mouth burns with heat, with an uncommon smarting over the fauces. These and the tongue dry, and somewhat parched. In two patients, I remember, a parched tongue was present to a great degree. Here the thirst was greater; some bled at the nose; and one of my patients had abscesses formed in both his ears, which burst, and continued to discharge for some weeks after. A diarrhoea was not a common symptom, yet I found it  
in



in several. Appetite was impaired in many ; a nausea also in several cases took place. Little sleep, and this little, for the most part, broken and disturbed, with incoherent dreams. Pulse by no means hard. In some, hoarseness and frequent hawkings up of mucus ; in others, little or none.

The heat that succeeded the cold, which more or less marks every febrile paroxysm, sometimes went so far as to be followed by perspiration. In many of my patients this did not happen. The skin remained dry. I seldom found the belly costive ; the face sometimes swelled, and the eyes appeared sunk in their sockets, as we often observe in the erysipelas. Weakness of the joints of the knees on motion, and a great prostration of strength, often happened.

In the neighbourhood of Stamfordham, and about the neighbourhood of Newcastle upon Tyne, my correspondent says, it was accompanied with cholic pains, and cramps in the abdomen and stomach. And some there also had a purging, some had ulcers in the throat and fauces ; but such as I had occasion to observe were very slight, and this was rather a rare occurrence. Many had a  
slight



flight vertigo, but few of my patients had delirium, though I have heard of its being found frequently in the practice of others. Though a great faintness and debility commonly took place, yet fainting fits, as mentioned by some, except in one patient, and that after V. S. seldom or never happened among my patients.

Fits, resembling an ague, have been mentioned as a concomitant of the disease, and in the more marshy parts of the island, I doubt not of their existence ; and that the influenza was frequently accompanied with a remittent fever ; while in the more dry and open situations, it would partake more of peripneumony. Huxham found this to be the case. “ I well remember,” says he, “ that the catarrhal fever, which spread through all Europe, under the name of influenza, in the spring 1743, frequently became *pleuritic*, and *peripneumonic* ; and as frequently after, two or three days, ran into a quotidian or tertian, the difference of the constitutions of the patients thus altering the nature and form of the disease \*”

In the villages where my practice lay, I do not remember to have met with any efflo-

\* Vide Huxham on Fevers, Art. Intermitt.



rescencies on the skin. I find this was a symptom observed during the epidemic at Bath, as well as a redness and soreness of the throat ; from which Dr. Faulconer imagines, that there is a similarity between it and the scarlet fever, as described by Dr. Withering of Birmingham \*. A Surgeon in Beccles informed me, that some of his patients had not only a foul tongue, but ulcers on the tonsils. He mentioned none that had red spots on the skin.

#### AGE AND CONSTITUTION MOST LIABLE TO THE INFLUENZA.

With regard to the age most liable to the disease among my patients, I think the middle age felt it most, *ceteris paribus*. I mean from 16 to 45, or so ; but few of any age, sex, or temperament, escaped it. When I speak thus, I am to be understood of those in good health before its attack ; for with regard to people in general, the infirm, the valetudinarian suffered most, and if old, so much the more in proportion.

\* Vide account of an influenza at Bath, by Dr. Faulconer.

I had



I had many opportunities of observing the influence of the weather in rendering it more violent. In a house where the husband, wife, and three daughters were ill at once; the wife was by much the most severely handled; and next to her the husband. They kept a public house, and had a brewery, to the latter of which they gave more attention than the daughters, whose employment consisted in waiting on their customers within doors.

A boy, of about twelve years of age, of a very active disposition, suffered severely, yet escaped the disease, though the rest of the family had been ill some time; till, after bathing with other boys in the river, and remaining there longer than prudent, when he was seized with the influenza. We may add to this, that he was a valetudinarian for a long time before, but had lately overcome all his complaints.

To corroborate the remark, that the weather, &c. had great influence in modifying it, not only at St. Alban's, but at other villages, the soldiers were first seized with it, and were more violently handled than most others. Soldiers are not only lighter clothed,



but worse fed, worse lodged, and more exposed to the vicissitudes of the weather, than most other descriptions of men.

An account from Aberdeen says, "The disease rages here, and it is rather singular that the soldiers are first attacked by it, and more ill of this description of men than any other. If we allow the same influence to the weather for which I contend, there will appear nothing singular in the case. In a word, the fact is now well established. The same remark was made at Dublin, for we find 700 soldiers there labouring under it at once, unable to do their duty at the barracks.

An account from Utrecht informs us of their having no less than 3000 ill of it.

With regard to the fleet, where the influence of the weather likewise prevails, as the crews are exposed to the open air, both our own, and that of other powers, were great sufferers by it.

Among others of our own vessels, the Stag and Stout privateers suffered greatly; for in coming into Dublin harbour, most of their crews were ill of it. From one of our ships, it seems, that no fewer than 300 were put on shore under it; and out of another 400.

In



In the *Nemesis* frigate, 70 were ill at once. This I had from an officer belonging to her, who was himself so ill, that he had not, at the time I saw him, recovered from its effects, though this was at the distance of four months from the attack.

Another instance that the weather had much influence in modifying it, is as follows:

A young gentleman at Luton, about 23 years of age, of a volatile turn, and lately a valetudinarian, but who, for eight or ten weeks, had so far recovered as to follow his amusements; and who, for this purpose, generally walked or rode, whether the weather was favourable or not, several hours a day; often, at the same time, indulging himself freely in the glass, was at last seized with the epidemic, and suffered severely. We may place this gentleman, in many respects, in the situation of a soldier, with regard to the irregularity of his life, and exposure to the vicissitudes of the weather.

The delicate also, and the valetudinarian, in all my observations, were great sufferers, and still greater in proportion as they were exposed to the vicissitudes of the weather.

Others



Others in different parts of England have also made the same observation. A Surgeon at Newbury, in Berks, writing to me on the subject, has these words, "A few infirm and bad habits funk," as hardly any valetudinarian escaped it: and as in these it generally appeared with the greatest severity, so, for the most part, it was attended with dangerous symptoms only in patients of this class. One woman at Luton fell into a phthisis pulmonalis after it.

Both the states of old age and infancy were more exempt from it than any other. I mean such as were in good health. At four years of age, or so, many suffered. A Surgeon at Beccles, in a letter to a friend, affirmed, that a child of his, only 18 months old, took the disease. This, however, is the only instance of the kind that came to my knowledge, though I have conversed with many, and made much enquiry on the subject, in many parts of England. I had an evident example afforded me to prove how far the depressing passions predisposed the body to be more severely affected by it; these always debilitate the habit by the constant uneasiness the mind undergoes.



A foldier in the Light Infantry was for some time violently in love with one of the cyprian nymphs that follow the drum. She was young and handsome, and had so far engaged his affections, that he offered to marry her, though well acquainted with her way of life. She preferred her liberty, and refused him. This had such an effect on his spirits, that from a stout well-looking young fellow, with all the health of a farmer's servant (for he was lately a recruit from the country) in a short time he became thin and wan; he took the disease, not however when the others had it, but in the beginning of June, when the regiment marched from the villages aforesaid to Royston, on their way to camp. A day or two before this he parted with his goddess at Luton. He suffered more from the disease than any other of my patients, and his case put on more of a remittent than any other I had seen.

CAUSE NOT IN THE AIR, BUT IN SPECIFIC  
CONTAGION.

I would not be understood by what I have said relative to the influence of the weather  
that



that the cause of the disease is to be looked for in the air alone. This is only a predisposing cause. Because cold air can give birth to a common catarrh, are we to conclude it can give birth to the influenza? Cold, moist air, renders, indeed, the application of a *materies morbi* more effectual.

We have many examples to prove, that the air cannot hold, nor yet convey contagion to any great distance. If it be mixed with the atmospheric air, it is soon dissipated; nay, it may be, perhaps, chemically decomposed, if it be a compound body, and thus its nature altogether changed. Experience shews, that contagions have always been communicated by contact with the infected, either *mediately*, or *immediately*, i. e. by persons who bring it on their clothes to the persons who receive it; or by its being conveyed to the infected in various kinds of goods. I mean here all specific contagions, such as the small pox, &c. or those from human effluvia, such as produce fevers of a dangerous nature. We are now very well assured, that the plague, the most infectious of all diseases, is not communicated by the air, but by contact.



The Europeans, who live in those countries where it is endemic, and do not believe in the destructive tenets of fatality, prudently shut themselves up in their houses, and with the utmost care shun the infected. By this precaution they escape. Hence the plague is found in one street raging with all its severity, while the inhabitants of the next remain unmolested.

Bad weather may, and does often act on the body so as to debilitate it, by which means it becomes more disposed to receive any disease that rages at the time. Whatever debilitates the body, we know, has the same effect. In countries where intermittents prevail, they attack the weakly and debilitated, while the more robust pass free.

The late Dr. Gregory was one of twenty-five young gentlemen who left Great Britain to study under Boerhaave at Leyden; all of them, one excepted, lived pretty freely. This gentleman drank water, for the most part, while the others drank wine; and he was the only one who suffered from an intermittent, during some years that they pursued their studies in this university.

We



We are told, by an accurate observer, that wet and cold weather is more injurious to our constitutions, than the same with moderate warmth. Though the moist and warm be the most productive of acute and fatal diseases, yet there is more danger, he tells us, in these respects, to our constitutions from the opposite. A steady set of any sort of weather, he adds, may be productive of particular diseases, and so is a quick transition from one extreme to another\*.

We have already mentioned the unfavourable weather of this spring. From a meteorological register kept by Mr. Becket, of Bristol, we find, that in this city, the month of April was, for the most part, cloudy and disagreeable. Rain part of seventeen days; two days of snow, and not one fair day. The wind chiefly from the north and east.

May was still worse. "This month," he says, "no doubt will be remarkable in all the meteorological annals of Europe, for its unusual degree of cold and humidity, with a gloomy and uncommonly disturbed state of the atmosphere. It rained there part of twenty days, and all the others were cloudy

\* Dr. Fothergill, vide Dr. Lettsom's Ed. 8vo.



and hazy; the wind generally between the south and south west, frequently strong.

The next month, June, we find very variable; in the beginning it was cold and rainy; towards the middle, about a week or ten days, fair and warm; the latter part variable. A remarkable change was noticed which took place between the 17th and 18th, for between one and two in the afternoon, the thermometer stood as high as 89 degrees in the shade; and next day, in the evening, it sunk as low as 55\*.

It has already been pointed out, that the attacks of the disease were not at the same time. If the cause lay in the air, all must have been seized at once; for, though it often spread rapidly, it was still progressively, sometimes slowly and gradually.

Others have alledged, that it took its rise from the influence of the two superior planets, Jupiter and Saturn, that appeared in a particular situation this year. An ingenious Surgeon at Plymouth, is among those who embraced the opinion, that the planets gave rise to the influenza which visited us some years

\* Vide Broughton on Influenza at Bristol. 1782.



prior to this \*. If this be admitted once, it may be admitted again, and therefore we ought to consider how far it is founded in fact, before we assent to it.

That they might, by their great attraction and influence, joined to those of the other heavenly bodies that affect this terraqueous globe, be a cause of the unseasonable weather we experienced, I shall not venture to dispute; but at the most, this will prove no more, than that this bad weather was favourable to the dissemination of any infectious disease appearing at this time. No writer, as far as I know, maintains, that it was always influenza that raged at those times, when the planets were in similar situations. Besides, the disease has appeared when they were very differently situated, so that recourse could not be had, with the same reason, to their greater influence on the earth. I pass over the opinion as too ridiculous, that the moth frequent about London, called by Curtis the brown tail moth, the caterpillars of which happened to be more than commonly numerous this spring, gave rise to the disease. Those

\* Mr. Geach, F. R. S.



who believed in this, must have very superficially considered the subject.

That the true cause sprung from another source, a particular materies morbi, a certain contagion, I think will not require many arguments to prove; the following few may suffice.

The first who were seized with it at Norwich (I have it from good authority\*) were two men lately arrived from London, where it then continued to rage. A serjeant of grenadiers, of the 10th regiment of foot, went to London on furlough; the disease then raged in the capital; he returned, in a few days, to St. Alban's, affected, and communicated it to the people in whose house he had his billet. This was the first time of its appearance there, and from thence it rapidly spread through all the town.

An officer of the same corps, being then in Dublin, told me he received the disease from a lady in whose company he sat at dinner. She was then complaining of indisposition from it; he sat next her. Before he left the room he was seized, and did not compleatly

\* Dr. Macqucen.



recover in two months, having lost his voice, and remained hoarse great part of this time.

One of Lord Bute's labourers, living on the banks of the river at Luton, happened to receive a compound fracture of his thigh, about the beginning of April, a month at least before the influenza appeared there. When the rest of the family were seized, though he had never been from his bed since the accident, yet he caught the disease, and suffered considerably. Here was no exposure to the vicissitudes of the weather. This fell under my own observation, as I attended him from the time of the accident, till after the epidemic had finished its career.

I escaped the disease myself, though daily visiting so many under it, till one day, when I was visiting at a Clergyman's, and being desired to give my advice to two of his servants then under it, and inspecting their throats, of which they greatly complained, I received their breath full in my face. I thought at the instant I smelled some thing disagreeable. Returning home about an hour after, I began to feel myself chilly, with a sensation as if something stuck in my throat. In ten minutes after, I had a discharge of  
thin



thin mucus from my nose, began to sneeze, and felt a pain in my head. Though I had only four miles to ride to my lodgings, yet by the time I arrived, I felt myself extremely ill. Here must certainly be contagion ; no quality of the air would satisfactorily account for this ; the disease might have been in my habit before, but this day rendered it active. Another example of its contagious nature might be drawn from the crews of the *Concert* and *Lizard* men of war, escaping it till they came to that part of the Thames near *Gravesend*, called *Long-Reach*\*.

We might prove it still farther, was it necessary, from its gradual attack. This was very observable in many families where I visited. The housekeeper of a gentleman on the opposite side of the street to that where I lived, was not seized till more than ten days after I recovered, though her master often visited me while I lay ill under it. The lady also of the clergyman already mentioned, and her two children, had the disease long before her maid servants were seized. Thus we find one was taken ill to-day, another to-morrow,

\* Vide London Medical Journal.



and a third, perhaps, not till several days after. Is not this the usual mode of seizure in all contagious diseases?

Besides, when we reflect on the symptoms of the influenza, we shall find them in general such as denote debility. Far more prostration of strength united with it, than we ever find attend catarrhs from cold alone; and I am led to think this forms one of its chief distinguishing symptoms. "A catarrh," says a certain writer, "from the situation of our island, and from the vicissitudes of the weather, with respect to heat and cold, may with the strictest propriety be looked upon as the endemic disease of Great Britain\*." But catarrhs from this source alone, never bring with them such loss of the powers of exertion and universal asthenia."

Whatever then may be the nature of this *materies morbi*, it is such as always produces great alterations in the operations of the nervous system, and the animal functions in general.

Few diseases, putrid fevers excepted, ever produced loss of strength and debility more

\* Vide Abuse of Medicine, p. 57.

suddenly



suddenly than this. The crew of the Fly sloop of war was an instance of this. The Captain affirmed, that 40 of his men fell ill in less than eight hours; several of whom, he declared, dropped down at the wheel as they steered the vessel. This circumstance obliged him to put back, and stand again for Yarmouth Roads, which he had only left a few hours before, with all hands apparently well, meerly for want of men to navigate the ship. The infection must have been received from shore, with which they had frequent communications.

The subject of contagion is an obscure one; were we to enter on it, much indeed might be said, but little at present with certainty. We might amuse ourselves with enquiring, wherein consists its difference, by which it can produce in the human body diseases specifically different? Why one kind seems to exert its force on the mucous membrane of the trachæa, nose, &c. and produce fever, as in the disease now under consideration? Why another spends its fury on the skin, and perhaps cellular texture connected with it, as in the small-pox? Why a third produces dangerous glandular swellings, both



externally and internally on the throat, with bright red eruptions covering the surface of the body, as in the scarlet fever? But these and other enquiries of this kind, it is proper to pass over here, as it is matter of fact, not conjecture, I wish to confine myself to. Such shall be left in the state we found them, enveloped in uncertainty and obscurity, from which it is to be feared our present limited knowledge of the various combinations of matter will not allow us to evolve them; yet as the knowledge of the human mind is progressive, and every year adds to industrious inquiries some extension of physiological investigation, I would not too rashly conclude them inscrutable. Was this inculcated, it would prove a check to industry, and become the nurse of ignorance. Several things familiar to-day, in the beginning of the present century seemed as inscrutable as the present subject; and another series of years may produce as material discoveries in the natural world.

*Of the FATALITY of the DISEASE.*

In all the scope of country in which I was employed, during its continuance, not one  
died



died immediately from it. My medical friends in London gave me much the same account. I find, however, by the bill of mortality published in the third volume of Medical Transactions, that there were a great increase of burials in May and June, which is attributed to it. Where it attacked weak and debilitated persons, and those far advanced in life, long labouring under chronic diseases, especially of the breast, it may doubtless have hastened their death.

In Kent we are informed, it was not dangerous. A gentleman residing near the sea coast says, "Few have escaped it, but I know not of a single instance of danger\*." It was said to be fatal in Jersey; but some doubt may remain concerning the disease, as every complaint was denominated influenza that appeared about this time. Mr. Friend, of Newbury, lost only one patient; nor was he altogether certain the disease simply was influenza. From a cursory account of her symptoms, which he then relates, "I am inclined to doubt in like manner. As this case happened," he adds, "in June, when the in-

\* London Medical Journal.



fluëza was prevalent here, I have been disposed to think it *partook* of the epidemic, though the symptoms were somewhat dissimilar." Four among Mr. Binney's patients, of the same place, died. Two of these, he says, were 60 years old and upwards, and *very infirm* before the influenza seized them; the other two were also in advanced life.

At Royston, I was told, that few or none died. In the neighbourhood of Cambridge I found a man who had lost his wife, and, I think he said three children by it; but this I am led to believe is likewise doubtful; it might likewise be compounded with the ague, a disease frequent there. At Yarmouth, on enquiry, I found that none died of it. I arrived there July 6th, very soon after it had ceased. My correspondent from Stamfordham, (Mr. Scott) says, It only proved fatal in this neighbourhood in three instances. At Ipswich in Suffolk, I cannot learn that it proved fatal in a single instance.

### C U R E.

Among the means of cure, various in various persons, which have been had recourse to, none is of more material consequence to



consider than venæsection. On this head we shall beg leave to suggest a few things : those who contended that they found it useful and necessary, generally gave the appearance of the buffy crust as one of their reasons. This, it is well known, is a very fallacious test. It appears, on many occasions, where V. S. is by no means warranted. We always find it in the blood of pregnant women, if their pregnancy be any thing advanced ; and we meet with it often in the last stage of a consumption, when the powers of the body are nearly exhausted ; it is likewise often found in dropsy, where we have little reason to suppose inflammation, and less still, that V. S. would prove useful.

Coagulable lymph may be separated in whitish or bluish streaks on the surface of the blood ; yet the crassamentum, if compared to the serum, may be very disproportionate. It may be smaller in quantity, perhaps a thin pelicle, and even sometimes not very accurately separated from the serum. The crassamentum, on this appearance almost dissolve on handling ; or the under side may be so loose as to fall in pieces when taken up for examination.

It



It is needless to mention here what every one knows who has attended to the subject, that the form of the cup the blood flows into, the size of the orifice, nay the very materials of which it is composed, with several things of this nature, are to be attended to in forming an opinion respecting blood\*. Hence neither the presence, nor yet absence of the buffy crust is an absolute guide to determine us for or against V. S. The density of the crassamentum, the small quantity of serum separated, with perhaps its greenish colour, even should no coagulable lymph appear, denote higher degrees of inflammation and greater activity in the arterial system, often times, than when the buffy coat covers the surface. The first drawn cup often shews none ; the second and third, perhaps, abound with it.

Inflammatory blood, denoting general V. S. is not only dense, but the lymph on its surface, when it shews itself, is tough and thick, still growing tougher by handling, contrary to what it does when it appears in debilitated habits. The crassamentum is often found contracted on its surface, somewhat

\* Vide Hay, on the Blood.



into the form of a cup, with the under-side of the cake solid and tough. Nor should we be led always to judge of the propriety of V. S. even from the pulse, without maturely weighing every circumstance of the case, and symptoms with which it is attended. A small pulse should not always deter us from the use of the lancet ; nor yet a large pulse, apparently strong under the fingers, urge us to it ; for the one, even from a trifling loss, a few ounces, will sometimes sink, and prostration and debility so rapidly follow, that all our endeavours may not be able to repair the injury occasioned by it : while the other rises as we begin to draw off the blood, and bears with manifest advantage a large loss of blood. A dyspnœa is another symptom for which V. S. has been commonly instituted ; but here, likewise, the same caution ought to be observed ; for it not unfrequently takes place from debility ; and this is manifested from its often following too much depletion ; every one who has seen it improperly instituted, and repeated for this symptom in rheumatism, will be fully convinced of the truth of this observation ; instead of remedying this symptom, every repetition encreases it ; and the anxiety also  
with



with which it is attended: and that on a corroborating plan being pursued, it is as gradually and effectually removed. These things duly attended to, should teach us caution, at all times, in the use of the lancet. To these may be added that the symptoms, as already observed in the influenza, were, for the most part, such as to deter the cautious from V. S. Even in those cases where it seemed admissible, it was to be done with care, and after nice observation.

We found that for the most part the pulse was soft, indeed very rarely hard; that it was small and debile; even seldom full, and betraying very little activity in the arterious system, with pains in the back and loins, vertigo, rigors, &c.

Some inflammation I will allow; the state of the mucous membrane proved, there was a degree of it present. We know a degree of it exists in a chronic rheumatism; yet V. S. is seldom advantageously used in this complaint. For if it be pushed to any degree, a paralytic affection might be the consequence, or rather marks of asthenia equally bad.



Who would at this day think of employing V. S. in the putrid fore throat ; yet we find from the authors who have treated on the subject, that the blood often shewed the buffy coat. Dr. Fothergill speaking on the subject, expressly says, after telling us the blood was of a fresh florid colour, and the crassamentum lax, &c. “ But it is often fizy when the disease has continued two or three days ; and in some instances that lately occurred, it was so soon after the first attack\* :” yet it is well known bleeding never cures the disease : nay, tho’ it relieves for a little time by taking off the sense of the plethora, and easing the breathing, it only serves, if often repeated, to weaken the system, and reduce the miserable patient still farther.

I call it plethora here, whether in relation to the increased quantity of blood, or other fluids ; or, in the diminished force of the heart, unable now to propel the blood, so as to dilate the artery with its accustomed ease. It is this last plethora that seems sometimes to exist in hectic habits, where V. S. serves only to augment the degree of debility. The

\* Vide Fothergill’s Works.



blood is therefore lessened in quantity, and thus the plethoric symptoms are, for a time, relieved; but the vessels soon accommodate themselves to their lessened contents, whereby a similar spurious plethora is again induced. V. S. is repeated with a view to remove this sensation, and so on, till the powers totally sink. I have somewhere read of an instance where the patient died under the operation.

In the peripneumonia notha of Huxham, we find him dissuading from V. S. though at the same time he admitted the presence of considerable inflammation. Practitioners in different parts of the island confessed, that in the epidemic, of which we are treating, little of the inflammatory crust appeared on the blood. This was the case at Yarmouth. The surgeons there found it always florid, and loose in its texture: they bled, however; but they observed, it never gave that permanent relief, which, from the straitness of the chest, they expected from it.

In a letter from Stamfordham I find that V. S. was pretty generally used there in the beginning of the epidemic; but they found reason to alter their practice, as they became more acquainted with its nature. “ But



“ now,” says my correspondent, “ the disease has taken another turn ; though the patient complains of aches and pains all over him, particularly about the breast ; and if you bleed him, the inflammatory crust, as it is called, manifestly puts on its appearance, yet notwithstanding all these symptoms which indicate V. S. the disease, at least, in our part of the country, does not bear bleeding ; for the pulse becomes weak, and there is great debility and languor hangs upon them.” In a second letter on the subject he says. “ At least it seemed to run a good deal into the low and putrid ; so that we were obliged to give cordials and antiseptics. Dr. Macqueen says, the only one that died there, was a man that had been *twice* bled, and he was of opinion this contributed to his death.

By what has been said I would not be understood to mean a total disuse from V. S. in every case. I doubt not but the phlogistic diathesis prevailed so much in many patients, as to indicate V. S. and that much relief was afforded by it. Patients were differently affected, according to circumstances of habit, place, &c. when V. S. was used, with proper circumspection to the nature of the epidemic,  
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the habit, &c. and in the robust and strong, no doubt can remain of its utility ; but this is far different from that promiscuous use of the lancet, which I fear too often took place. It happened frequently that patients insisted on being bled ; they never failed to find those who complied with their desire : “ Many were bled by my young man,” says a surgeon, “ without advice.”

I suffered from the disease severely, being ill upwards of three weeks, though but a few days confined to bed : the nature of my situation, and the numbers I was obliged to visit, prevented me from taking that care of myself which I recommended to others. My throat was much inflamed ; the external fauces considerably swelled, and other symptoms of a phlogistic diathesis presented ; yet, from universal pains on motion, a lowness of spirits, rigors, and a slight vertigo, I would not suffer myself to be bled. I trusted to gentle diaphoretics, laxatives, and diluting drinks acidulated, with a linctus to mitigate the burning heat and pain I felt in my throat. Dr. Macqueen told me he suffered also much by it, and being subject to catarrhal affections, which V. S. always relieved, he had recourse



to it ; but though he found it productive of some benefit to his head-ach for a short interval, yet his complaints rather recurred with additional force ; from which he concluded, that V. S. did not give that permanent relief in the disease, as, from the seeming inflammatory symptoms, there was reason to expect. We find it was frequently tried both at Bath and Bristol ; it did not answer in either place.\* Neither Sydenham nor Huxham speak favourably of V. S. in the influenza ; yet the latter especially had good experience, since he practised in no fewer than in three epidemics of the disease. Dr. Fothergill † speaking, on another occasion, of V. S. and dissuading from its free use, unless we be perfectly certain of considerable inflammation of internal parts, has these words ; “ This is only intended as a caution to some who have been taught to think, that copious bleeding is indicated whenever a patient complains of pain in any part of the region of the thorax,” And in another place

\* Vide Treatise on Influenza, by Broughton and Falconer.

† Lettsom's edit. of Dr. Fothergill's works, 8vo. v. 1. p. 219.



he cautions us to judge of its propriety, “ not from the appearance of the blood alone ; for this will often continue fizy, till more be taken away than is compatible with the patient’s situation in other respects ; for if we lessen the vires vitæ,” says he, “ by inanition too much, a disease then takes place, which probably will increase our difficulty, *i. e.* debility of the solids, and the consequent vitiation of the fluids ; the pulse, the heat, the cough, respiration, strength and age of the patient should all be taken into consideration. Many persons,” he adds, “ live free from complaints with fizy blood ; the condition, therefore, of the blood singly, ought not to determine us ; we should examine all the evidence. \*”

The recovery from the disease we always found slow, in such as suffered much from it ; so great was the debility, that it was weeks before the patient’s strength was recovered, though in others the disease was slight, and left slight marks of debility behind it. This is still a farther proof, that in general there was little of the phlogistic diathesis in the system.

\* Fothergill, vol. II. p. 136.



We never observe such great debility after pleurisy or peripneumony, except phlebotomy has been injudiciously prosecuted ; in such cases indeed, the patient will not only be weak long after, but obnoxious in such cases to ferous effusions. The dissections of industrious practitioners shew, that these often follow inflammatory diseases, where the lancet has been improperly used. " It is an undoubted fact," says a modern author, speaking on V. S. " that repeated bleeding without necessity has greatly injured many constitutions." The catarrh may frequently attack delicate relaxed habits, which are rendered highly irritable from excess of heat, and unhappily obnoxious to the disease, from exposure to cold. In these as in more robust constitutions the catarrh is often perfectly pure, unaccompanied with peripneumonic affections or such other symptoms as indicate bleeding\*.

Besides, I am apt to think our constitutions considerably changed within this last century in Great Britain. Luxury and its enervating effects, render the diseases of this island less inflammatory than perhaps they formerly

\* Abtse of Medicine, p. 60.



were. Diseases that in their nature were always, and even now are allowed to be phlogistic, have appeared within the space of these last 30 years, accompanied with a considerable degree of putridity, *viz.* the measles; we use less of the robuster exercises than formerly. Carriages are more frequent, delicacy greater: nay, many of our occupations introduced by philosophy within the last century, are of a sedentary kind. Our amusements are of a less active nature; our articles of diet are in like manner changed, and infusions of tea, a debilitating liquor, injurious to the nervous system, are in such common use, that even paupers feed on them. Many among the poor drink it three times a day, making it their chief subsistence, among whom, both from its quantity and bad quality, it is productive of injury. We may add the immoderate use of spiritous liquors; and of these much is to be attributed to gin. Many among the lower rank are so habituated to it, that both health and substance suffer; hence often proceed jaundice, schirri, and many diseases formed by obstructions in the nobler viscera. All these concur to strengthen an opinion I have for some time enter-



entertained, that our diseases partake much more of debility than of genuine inflammation, and that the system cannot bear the same evacuations as formerly were in use, even in diseases universally allowed to be of the phlogistic type.

To conclude, I am of opinion, that the fever which accompanied this catarrhal affection, shewed, in most places, more marks of asthenia than of phlogosis; that V. S. has not usually been attended with permanent relief; and that should we again be visited with it, under the same circumstances and train of symptoms, we should profit by our late experience, and use the lancet with caution, never letting slip from our minds the nature of the contagion, which certainly appears from its effects, to be of a debilitating nature; and since, to use the words of a certain author, "If V. S. be useful in preserving life, it is also powerful in destroying it.\*" Thus far of bleeding in the influenza.

The natural crisis of this complaint appears to be by the skin. Diaphoretics, therefore, and diluents constitute the chief part of the

\* Abuse of Medicine.



cure. Emetics, or rather nauseating doses of antimonials, when early used, seemed very serviceable: they are diaphoretic; they also prove expectorant when given in full doses; and in this sense they seem useful in the beginning of the disease. They generally prove laxative, cleansing the *primæ viæ*; nay, they become hypnotic, for generally speaking, the sleep of the succeeding night is sounder, especially when they have been exhibited in the evening. They open obstructions in vessels, whereby the different secretions are more equally performed; and thus by one simple medicine, we have often times various purposes answered: a happy choice of a simple, the dose, and time of exhibition maturely weighed, will, for the most part, answer better than a multiplicity of medicines jumbled in a prescription, and save the patient not only from much uneasiness, which would be created by loading the stomach too much with medicines it abhors, but from unnecessary expenditure of his money. A conscientious physician will also have this in view.

Considerable advantage has likewise been attained from the prudent use of opiates, where the cough was severe, as was mostly  
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the ease : they also determine to the surface. Though their chief use seems to consist in the respite they give to the cough, the removal of irritation, and thus allowing time to the mucous membrane to recover its tone ; by this means the discharge decreases, and the habit in the mucous glands to a vitiated secretion, is thereby checked.

Nitre has been celebrated for relieving the cough, and I, with others, have sometimes had recourse to it. I would, however, be cautious in its frequent exhibition, as it sometimes renders worse the very symptom for the relief of which it had been administered. Others have made the same observation. " I have known," says Fothergill, " the common dose of nitre, the saline draughts, and other cooling salts, encrease a cough by irritation \*"

I found a generous diet, where it was in the patients power to procure it, highly conducive to a more speedy recovery ; and even in the course of the disease, many bore a more liberal use of wine, than is generally given in catarrhal affections from cold alone.

\* Vol. II. p. 133.



After what has been said, I need scarcely dissuade from the warmer sudorifics, or stronger purges. These were always found as prejudicial, as diaphoretics and laxatives were useful.

A cautious discrimination between it and other diseases appearing sporadically at the same time, should most certainly be kept in view ; for where it becomes thus confounded, the method of cure must also vary ; and more or less of the inflammatory diathesis prevailing, may lead to mistakes with respect to the genuine nature of the disease. Not only the weather, situation, and constitution, but intercurrent diseases all unite to vary the appearance of the epidemic ; to all of which the cautious and prudent practitioner ought strictly to attend.

Pediluvium determines also to the surface, encourages a larger share of the blood from the head and superior parts, to the lower ; is generally followed by sleep, relieves delirium, moderates the cough, and removes sickness at the stomach, from the great sympathy between this organ and all parts of the body, but especially with the surface. Hence I frequently ordered it, and with advantage ; but



at first I was timid, considering the disease as of a more inflammatory nature, than a little practice taught me it was ; and therefore I never suffered the patient to sit in the water above a few minutes ; but from its inducing a quiet night's rest, and from its being often followed by a gentle diaphoresis, when assisted with a few drops of antimonial wine ; I continued it, in many cases, to nearly half an hour, taking care not to keep the water at so high a degree of heat, as to create too much stimulus, and produce an increased action in the arterious system. This is another remedy, powerful in producing different, and even opposite effects, according to the mode of its application, as is well known to practitioners.

I say nothing of blisters, as I had seldom occasion to use them in my practice. Others, I find, often tried them with good effects ; where vertigo or delirium occur, or where the breathing is difficult, they will doubtless have their utility, as also where langour prevails. They may raise the pulse where it is thought too low, by rousing the vis vitalis to greater action, or they may remove topical congestion. Though a blister may draw off



but a small quantity of serum, yet much relief may be derived from it to the turgid vessels; this will readily be granted, when we consider how large a portion of the finer vessels, so small a quantity even as half an ounce will fill, and how great an alteration will take place from thence in the balance of the system, by an over proportion to this amount in a given space; but whether their chief use was as evacuants, or antispasmodics, it is affirmed, they were followed by happy effects in this epidemic.

Practitioners in various parts found the bark useful. I doubt not but it was so where the disease put on more of the appearance of intermittent, or remittent, and where it was accompanied with symptoms of putrescency, which several affirmed it to be. In low situations, such as the fenny parts of Cambridgeshire and Lincolnshire, where fevers from marshy effluvia are endemic, the bark, and antiseptics and tonics, must be more requisite than in drier situations; but I forbear any farther remarks on the method of cure, for the same reason I omitted mentioning the other concomitant symptoms.

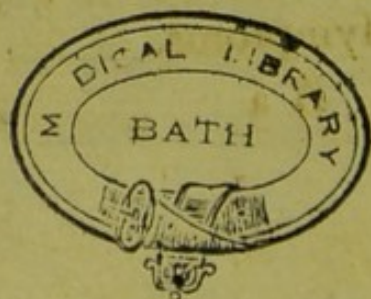


Although the disease, considered simply in itself, may be looked upon as of little consequence, since it was often mild, and seldom fatal, if not improperly treated, either by bleeding, or by the use of too heating and irritating medicines, or by entire neglect, yet its causes, progress, and mode of attack, may not be deemed altogether unworthy of the attention of the medical philosopher; and to afford some hints in furthering this enquiry, was my principal reason for collecting the foregoing observations.

I ought however to apologise for my prolixity on a subject where so much has already been said; but as I had early committed to paper a few thoughts on it, and laid them before the public\*, I judged it expedient to continue my researches, that I might be the better enabled to supply some circumstances which were omitted in my former publication.

\* Vide Short Account of Influen. by R. Hamilton, 1782.

T H E E N D.





E R R A T A.

V O L. II.

CHAP. XII. p. 57. l. 15. after *to be* add *more*— p. 73. l. 2. for *be* read the *delinquent*—p. 74. l. 8. for a *careful* read *carefully*.

CHAP. XIII. p. 84. l. 7. for *gafs* read *Gases*.—p. 130. note for *Tartanisat* read *Tartarisat*

CHAP. XVI. p. 209. l. 12. for *hese* read *these*

CHAP. XVII. p. 251. in note for *Cooper's* read *Cowper's*—p. 295. l. 1. for *Glcerrh* read *Glycyrrh*.—p. 300. l. 4. from bottom, for *Glycerrh* read *Glycyrrh*.—p. 307. l. 5. after *miles* read *North West*—p. do. l. 5. from bottom, for *in* read *near*—p. 309. l. 3. for *Sward* read *Swerd*—p. 311. l. 6. for 122 read 123



