

**An account of the preparation and management necessary to inoculation /
[James Burges].**

Contributors

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A C C O U N T

○ F T H E

Preparation and Management

NECESSARY TO

I N O C U L A T I O N .

By Mr. *JAMES BURGES*.

— *Sublato Jure nocendi.*

HOR.

Æqui pauperibus prodest locupletibus æqui.

HOR.



L O N D O N :

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best way, to make his cases himself, that by this means he would be sure they would fit exactly, and not disappoint his reader. I am afraid there is too much truth in this assertion; a lively imagination will easily dispose a man to lay down hypotheses, and on their unstable foundations to raise fantastic structures, which delight and surprise both the architect, and those that through inattention, or ignorance, are incapable of examining the fabric by the proper criterion of truth, assisted by experience, which, destroying the foundation, dissipates the incoherent superstructure into air.

How many books on the subject of physic have been published, of great learning and ingenuity, without any knowledge? How many volumes full of deep speculation, that have amused greatly, without conveying any instruction? What works have not so many learned professors published, what subject have they not exhausted; yet how little have they added to the improvement of their profession? and how little wiser have they made mankind? In short, how much have they wrote, and how little have they known?

One of the greatest names amongst those physical writers, who has been the lawgiver to the medical republic for half a century, owns himself ignorant of the use of blisters, and seems likewise not thoroughly instructed in the use of the bark.

In some, the want of experience, but in other very ingenious men, the want of candor is more to be lamented, and, I am afraid, that pleased with the ingenuity

nity of their own imaginations, and unwilling to part with the pleasing delusions; they have rather followed Dr. Pellet's rule, and made cases to fit their theory, than endeavoured to establish a just system of practice, drawn from (the true fountain of knowledge,) experience; in some, the fondness for the marvellous has so far prevailed, that they have indulged themselves in relating what is strange, without regarding enough what is true. There is likewise reason to think, that it oftentimes happens, that those who have been employed in teaching medicine, have advanced falsities for the sake of concealing their absurdities, and for fear of appearing to their pupils (who are accustomed to revere their omniscience) ignorant in those things, in which it is no shame to be so.

When a man of solid understanding has been long conversant in practice, the prejudices of education wear off, the respect for great names diminishes, his judgment takes place of his imagination, and experience puts an end to all theoretical reveries. In this situation if he applies himself to write, how dry will the language of truth appear, the simplicity of a few wise instructions, to encourage the timid; some cautions to restrain the bold; a candid relation of what has appeared before his eyes, or come within his knowledge; and a faithful account of what observations he has made, as well in diseases, as in the methods of cure, related with clearness and exactness, will be the produce of his labours, whilst truth and utility will be the only objects he has in view: Such have been the productions of a Sydenham, and the labours of a Mead, which they have
consigned

consigned to the benefit of futurity, and which will always remain monuments of their judgment and integrity. While the voluminous works of many of their cotemporaries will probably infold spices, their only security from the worms.

It were greatly to be wished, that the writers on medicine had, instead of telling us what they thought, only informed us of what they knew. A few matters of fact being of much greater real use to the art of medicine, than the most ingenious hypotheses supported with the greatest learning and subtilty.

Those men of practice that have transmitted their observations to posterity, have alone enriched their profession; a collection of such observations, founded on experience, and delivered with exactness and honesty, is a real treasury of art, into which it would be a real service to the public, if those that are qualified would throw their mite. This is at present my ambition, for which purpose I have chosen a subject, nullius ante trita manu, on which I shall endeavour to communicate in the plainest terms what has come under my inspection relative thereto; and at the same time declare what methods I have found successful; and where I pretend to reason, shall only make my deductions from matter of fact, and derive my physiology from the most apparent phenomena, and the known laws of the animal economy.

*The practice of inoculating the small-pox has found employment for many writers. Superstitious and weak
minds*

minds were alarmed at the first introduction of it, whilst those that were influenced against the novelty opposed it, with all the arguments their wit and prejudices could furnish. On the other side, those that patronized the practice, to establish its credit had recourse to calculation, by comparing the numbers of those that died in the natural way, with that of the persons that miscarried under the inoculation, by demonstrating how small the chance was of escaping the distemper, and how little the hazard incurred from this new method of contracting it; this way of managing the dispute carried such conviction with it, as soon confounded their opposers, and established the practice,

Whilst practitioners were thus engaged in proving the usefulness, and setting forth the advantages of the new method, there is no one that I know of, who has given an account of its progress through the various stages of the distemper, of the different consequences from the particular manners of treatment of it, or endeavoured from his own observation or the general practice to form such a system of management of the inoculated persons, as would be conducive to their security; or if it has been done, it is so cursorily, that no method of practice can be established from any account that has yet been published.

This is the end and intention of the following sheets, in which if I have advanced any thing that can be useful to the public, and add to the safety of the practice of inoculation, by pointing out those neglects or mistakes

takes which have not hitherto been sufficiently attended to, I shall think myself happy. If I am mistaken in any thing, as I have no design to deceive, I shall be glad to see my errors corrected. All I ever intended is to be useful.

The inoculation of the small-pox has been the occasion of the greatest happiness both to the public and individuals, as it adds to the strength of the nation by preserving numbers of the people, and is the foundation of security and quiet to the minds of all those who have overcome the danger, and are past the fears of the distemper. To add to the security of this practice is certainly a commendable attempt, and, in which if I have succeeded, it is well; but however I may have otherwise fallen short of my purpose, I shall enjoy the satisfaction of having well intended.





CHAP. I.

Of the origin of Inoculation.



THE irruption of the Saracens, amongst the many evils it spread in the world, introduced the small-pox, a distemper till that fatal period entirely unknown, but which in its progress has made greater havock amongst mankind, than even their religion, and the fury with which it inspired their arms.

The art of medicine during so many centuries has not been able to put a stop to the rage of the distemper, by finding out either an antidote against the infection, or a certain cure for those that are attacked by it. Providence has indeed kindly ordained, that our frame, after having once supported the dreadful shock, should remain for ever secure from its fury.

But this security is obtained with the greatest danger, the infection seizing all ages, and sexes, under all the various circumstances the differing situations of life expose mankind to; such as dis-

tempered habits, child-bearing women, &c. and those affected with the greatest poverty and distress; and what makes it still more dreadful is, that the poison lies concealed in the blood, while perhaps the unhappy subject, ignorant of the approaching calamity, is urging the latent venom into action, and rendering his constitution unequal to the attack.

Mankind for several ages continued in this unhappy state, under the continual dread of the distemper, without any possibility of preventing its attack or alleviating its violence, till it pleased the divine goodness by the means of the most barbarous and illiterate nation in the world, to suggest to the rest of mankind, the method of lessening the hazard, I might say of preventing the danger of the small-pox, by inoculating the distemper at the age and season when the body is in the best condition to receive and encounter the disease.

I cannot help thinking that the small-pox was derived originally from the nations bordering on the Caspian sea, as it is first taken notice of about the time the Turcomans, and other neighbouring nations, drawn by the distractions of the Eastern empire, first made their appearance in Asia, which was about the time the Saracens began to grow formidable, with whom they united; and whoever considers the slow progress of this infection, will find it of a very different nature from the rapid venom of those pestilential diseases, that owe their rise to a Southern climate, and a scorching sun.

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But, from what quarter soever the disease derives its origin, it is from those parts we have received the practice of inoculation, which has proved almost an antidote to the malignity of its poison.

The Circassians, who live between the Euxine and Caspian seas, have for many ages carried on the infamous traffick of selling their daughters to the Turks and Persians for their seraglios, and as they were remarkable for their beauty, the parents derived great profit from their unnatural trade. But the small-pox often carrying off their children, or, what they thought equally prejudicial, spoiling their faces, and rendering them unfit for sale, to avoid these disappointments, as they observed the age of infancy to escape best from the distemper; and that even when they suffered most severely at that age, time wore off the marks of the disease; they endeavoured to communicate it to their children at that period of life, and meeting with success have continued the practice down to this day: the other Christian nations in the East have since followed their example, and adopted this method of securing themselves and their children from the violence of the infection.

From them the Lady Mary Wortley Montague having informed herself of its success, whilst she continued in Turkey with Mr. Montague, ambassador at the Porte, brought the practice over to England, and recommended the use of it to her own countrymen. On this account, this lady is certainly to be mentioned with honour; for if the Romans judged him worthy of a civic crown, who

preserved the life of a single citizen, how much more doth she merit, who has been instrumental in conferring health and life to thousands, by bringing into her own country a practice, of which ages to come will enjoy the benefit? And it has pleased God Almighty to bless the practice with such success, that I think we cannot without unthankfulness condemn it, as it has contributed so much to the public as well as private felicity, and as to it we owe the security of the Royal progeny. It is to this practice so many illustrious families who wisely copied their monarch's example, are beholden for the pleasing prospect of the continuance of their names and houses. I will not tire my reader with recounting the happy consequences, which have and must necessarily attend this practice, which if properly followed will demonstrably put an end to the distemper itself.

C H A P. II.

Objections to the practice considered.

THERE are two objections to this practice; the first is started on a religious principle, *viz.* that it is a temptation of providence to bring a distemper on ourselves, or innocent persons, and exposing them to an unnecessary danger, which possibly they might never incur; this has been sufficiently and properly answered, by an excellent and learned prelate already. I shall only add, that no man deserves blame for running an inconsiderable

siderable present hazard, to secure himself from a future probable evil, or, what is equivalent, the continual fear of it; and I believe we may act with the same submission to the divine will, and implore God's blessing on our attempt in this as well as any other instance, where we act to the best of our judgment with a good intention.

The other objection is, that with the matter of the small-pox we may insinuate other distempers. I know of no instance in so many years as this practice has subsisted, where such accident has happened; therefore, I think it may be presumed no such thing can happen, but that the matter of the small-pox is a poison *sui generis*, and can admit of no other mixture. I know of one instance, where the matter was taken ignorantly by the surgeon from a young woman, who coming up to St. Thomas's Hospital to be salivated for the venereal distemper, fell ill of the small-pox. Three patients were inoculated from this matter, and had the small-pox in the most favourable manner, nothing particular happened about the wounds. They all grew up healthy; two of them are now alive, the third died of a violent fever at sea many years ago.

C H A P. III.

The advantages of Inoculation considered.

THE great danger that arises from the small-pox, is in part owing to the accidental circumstances of the body that receives the infection, and

and in part to our ignorance of the approaching danger. How many are seized when the blood is heated with exercise or debauchery, when the habit is weakened with fatigues, or the spirits affected with the passions of the mind; when the secretions are interrupted, and the pores obstructed by scorbutic, scrophulous, or other diseases? All these accidents add fuel to the flame, and heighten the virulence of the infection.

Yet could we possibly know when the infectious poison first insinuates itself into the habit, we should be able in many instances, by a proper management, to moderate the violence of its efforts before it begins to exert its effects.

But the misfortune is that the infected person is for a week at least so insensible of his danger, that during that period, he is generally doing every thing that can increase it, and add force to his distemper; which he does not discover till sinking under its malignity.

Experience has taught us, that after the insertion of the matter, the infectious particles continue to mix imperceptibly with the mass of the blood till being impelled in large quantities into the minute vessels of the membranes, and not finding a free passage through those narrow channels, they irritate their nervous fibres, and produce those spasms that occasion violent pains, vomiting and deliriums in adults, and convulsions in infants, until nature being assisted by the fever, pushes off the obstructing matter upon the surface; where part finding a free passage escapes through the pores of the skin;

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the remainder obstructs, inflames, and breaking the texture of its vessels, forms those abscesses, which are the pustules of the small-pox.

If during this progress of the infection, the outward temper of the skin is moderate, the belly is gently open, or kept so by proper assistance, and the urine in due quantity; of a lemon colour about the middle of the period; changing wheyish or paler, with a whitish sediment, about the time of the eruption; the pustules will be few in number.

But if the skin is hot and dry, the belly costive, and the urine in small quantity, and of a high colour, the number of pustules will be considerable, as well as the hazard of the patient's well doing, the danger of the distemper being generally determined by the number of the pustules.

From the preceding account, which is merely of matter of fact, we may make the following inferences: First, That it is necessary that the body should be kept in such a proper temperament, that the grosser parts of the infectious matter may be carried off by the more apparent secretions, being separated with the bile into the bowels, or washed off with the urine through the kidneys; and, secondly, that we should take care by a proper management of diet, air, rest, &c. to keep the vessels in such a state, as is necessary to permit the morbid particles an easy passage through their channels, and the skin so perspirable as to yield them a free exit through its pores.

How far it is in our power to assist nature, in attaining these ends, I shall endeavour to explain,

and to likewise shew that inoculation enables us to obviate most of those accidental circumstances that add to the danger of the small-pox itself; as in the first place, it puts it in our power to determine the season of the year, the age of the patient, and to be sure that the constitution is properly disposed to receive the infection; it likewise gives us time to remove or correct those habitual, or accidental disorders, that might render the event of the distemper precarious.

C H A P. IV.

The necessity of a proper preparation considered.

AS the small-pox is a distemper of the skin, on the surface of which it makes its final discharge, and by that discharge perfects its crisis; I have already observed, that when the pores are open, and perspirable, great part of the matter flies off through those out-lets; but when the skin is so obstructed, that the matter cannot find a passage through its pores, and nature wants force to bring on a proper suppuration, the infectious particles being reformed by the blood, occasion those obstructions in the smaller vessels, that generally end in a mortification.

These considerations evidently shew the advantage of keeping the skin in a perspirable state, and avoiding as much as possible all those things that either clog the pores, or weaken the force of the vessels, necessary to keep up the secretion through the skin; in the natural small-pox these precautions are

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are impracticable, as the appearance of the distemper is the first notice of the infection; in the inoculation, our previous knowledge enables us to arm against the approaching danger, and prepare for its attack; and no man surely without being guilty of the greatest rashness or folly can neglect making such preparation, as is by this means so happily in his power, and taking all the precautions that reason and experience suggest to be necessary for the safety of his patient; such as chusing the time when the body is in a proper state, or endeavouring to bring into such a state, by keeping the secretions in a due regularity, to enable the habit to support and throw off the violence of the poison, that the vessels may give it a free passage through their channels, till its final exclusion on the skin. And further to improve our advantage, by making choice of the time of the year, when the body is naturally in the best condition, and when the constitution of the season is most favourable for the insertion of the distemper.

C H A P. V.

Observations on the methods of preparation.

THERE have been two mistakes equally dangerous, relating to the preparation necessary for the inoculation of the small-pox.

The first is from the too great caution of some practitioners, who observing that the strongest, and most sanguine constitutions, suffered most severely from the small-pox,, endeavoured to remove

their patients as much as they could from that state, which they had experienced to prove so dangerous : thinking they could hardly reduce them enough, to venture on trusting them to the distemper, never considering that by weakening the habit too much, they robbed nature of the strength that was necessary to clear the constitution of the infectious matter, and to produce the proper crisis of the disease ; the consequence of which has been either a severer degree of the small-pox, or else some chronical disorder ; when the matter not being properly discharged on the skin, has returned back on the habit, and lodged in the cellular membrane, or stopped in the vascular folds of the glands, where it has produced invincible obstructions.

On the other hand, some have represented all preparation as idle, formal, and unnecessary, probably to enhance the merit of the practice ; but this is rather more absurd than the other, as it is throwing away those advantages, that the practice is supposed to procure, by giving us such previous notice of the access of the distemper. This is indeed casting away our shield at the approach of the enemy : the hazard of the approaching fever will certainly be less, if the body is in a cool and temperate habit, the bowels unloaded, and the skin in a perspirable state ; those that affect to explode the necessity of preparation, must be either grossly ignorant, or obstinate, to deny this ; and such it is not worth while to confute.

In very lax habits, such as children, and delicate young women, the hazard is less, as such constitutions

stitutions are in some degree in a natural state of preparation; but in most others the want of a proper precaution is generally of bad consequence, as I have been convinced by repeated experience from the frequent inflammations, such as ophthalmies, erysipelas's, rashes and abscesses, that have been the manifest consequence of such neglect; but which those that have precipitated the operation have never considered, while by lessening the ceremony of the course, they have persuaded greater numbers to submit to it, and if they could but bring their patients to a state of taking purging physic, never failing to shuffle off all future accidents on other causes, than their own injudicious and improper management.

I shall illustrate these assertions by two cases, that have fallen under my care, that serve to point out the consequences of these different errors, in the treatment of those that are to be inoculated.

H I S T O R Y I.

A young gentleman about sixteen, in perfect health, having determined to be inoculated, as his family had suffered severely by the small-pox, resolved to be in what he thought a proper state to elude the danger, for which purpose he reduced his way of living some months before-hand; and once or twice a week purged himself with salts, in the country where he lived. When he came to town he appeared to be in health, though somewhat reduced, so that there being no apparent

reason against the operation, he was inoculated: till the eruption, he was treated with the usual caution, as to diet, &c. he seemed low at intervals, but as this was judged to be the consequence of his fears, it was not so much attended to, till the distemper came on with the usual symptoms of headache, vomiting, &c. beside a great anxiety about the precordia: the pustules at the proper time appeared, but thick and coherent; and after their appearance the anxiety and dejection continued; the pulse was quick, but low and fluttering, the pustules advanced but slowly, and the matter formed in them very disagreeably; but at last opiates, joined with proper cordials, lulling his fears, and giving force to his blood, brought on the happy crisis on the 13th day, the matter flowing freely into the pustules, which it formed into large bags; besides this he had several boils, which were carried off by bleeding and purging, since which he has enjoyed a perfect state of health.

H I S T O R Y II.

A youth of a sanguine constitution, of about eighteen, who laboured chiefly in the open air, having an offer of being inoculated, resolved to accept it; his opportunities of preparation were few, and those not much improved, he keeping to his work till a very few days before the operation; after it was performed he was blooded, and managed with all proper caution; just before and about the time of the eruption, his nose bled freely,
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and continued to do so during three or four days. On the sixth day from the eruption, his face swelled, the pustules of the small-pox, which had all along appeared florid, distinct, and were of a very large size, on the seventh day were full of very good matter, but on the hands and feet, which then puffed up considerably, they appeared whitish and flat, and the surface of the skin round them which was swollen and tight had an intense red look inclining to purple; at this time he complained of faintness and giddiness in his head, his pulse was low and labouring, on which I ordered him to be bled, which gave him immediate relief, and his nose very soon after bursting out a bleeding, and discharging a large quantity, the distention of the hands and feet subsided immediately, the pock on them filled with laudable matter, the pustules on the body and limbs suppurating regularly, the young man recovered perfectly without any further accident.

In the foregoing cases I have only mentioned so much of each of them as relates to my present subject, and as they shew the effects of too much or too little caution in preparing the body for the operation. And shall proceed to the method of preparation, and the considerations necessary to it.

C H A P. VI.

Considerations relative to the preparation.

FROM what has been said it will appear, that by preparation is not merely understood keeping a patient low, or giving him physick; but taking care that the whole frame is in a proper state for receiving and getting rid of the distemper; that it is neither too low to support the attack of the infection, or so loaded and overcharged as to obstruct the expulsion of it, or so heated as to conspire with the malady in raising the flame to too great a height. There are likewise three other points necessary to be attended to, which require the regard of the person who has the direction of those that are to be inoculated, *viz.* the choice of the proper age, the best season of the year, and the constitution of body that is rightly qualified to receive the infection. What these are I shall endeavour to explain.

Of the proper age.

In infancy (by which I mean the first seven years of life,) the habit is laxer, as the vessels and other parts that constitute the human fabric are in an extensible state; besides as the nourishment peculiar to that state is more simple, and easier digested, the exercises are constant and moderate, the passions of the mind trifling, the temperament of the body carefully attended to, and seldom unequally expos-

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ed to heat or cold ; the secretions are more regularly performed, and the viscera not so liable to be obstructed, the force of the heart is vigorous, and the arteries elastic ; therefore the habit (at this age) is naturally better qualified both to receive and expel the infection.

As the years advance, these advantages lessen ; the body acquires a firmer texture, as the diet grows stronger, the exercises more violent and irregular, the passions more impetuous ; and as the external circumstances of heat and cold are less attended to, the secretions are more liable to be interrupted. As more or fewer of these circumstances concur, the infection will find greater or less obstruction in its course of separation and exclusion from the habit.

I shall not say any thing of old age, as I believe it is not likely that persons declining to the verge of life should think it worth while hazarding themselves to get rid of their apprehensions. I am sure, I shall never be the person that advises it.

Of the seasons of the year.

Excessive heat or cold are equally pernicious in the small-pox. As heat, by rarefying the blood and dissipating the moisture, and inflaming the habit to too great a degree, renders the separation of the variolous matter more difficult ; so cold, by obstructing the pores, and constringing the vessels, brings such an overcharge on them, that they become unable to get rid of the load. Therefore,

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except in certain circumstances, such as anticipating the infection that approaches us so near that it appears almost impossible to escape it; or, when the season is remarkably gentle and favourable to the distemper; or, when the sort of small-pox is universally mild; inoculation should never be performed in the middle of winter or summer.

Of the other seasons, the spring is preferable to autumn, for this reason though there were no other; that whatever accidents happen, the general mildness and gentle warmth of the approaching summer, the advantages of country air and proper exercise, will all contribute their kindly powerful assistance to carry off the remains of the distemper, if we have occasion to call in their help.

Of the accidental circumstances of the constitution.

Besides old age, heat and cold, there are several circumstances in the person, or constitution to be considered. Though childhood is the properest age, yet even that age at some times is in a situation when it would be wrong to venture on the operation. When childrens teeth begin to push forward in the gums, a flux of humours falls on the salival glands, which discharges itself freely from the mouth by dribbling; but if these glands are obstructed, a purging often succeeds, and the humours are carried off by the intestines; both these discharges are natural, that is, such as nature makes use of successfully to facilitate the breeding of the teeth, and prevent the consequences of the inflam-

inflammation the sharp points of the tooth occasion in forcing its way through the membranous fibres that surround and cover it. But in case neither of these discharges happen, the child grows uneasy and peevish, tampering his lips, grating his gums together, and forcing up his hands with violence to his mouth, which feels hot to the touch: He is likewise at times affected with various feverish symptoms, starts, and is disturbed in his sleep. In this situation though I have known some venture, yet as the child is then liable to convulsions, and in danger of a fever, that will continue its effects after the symptoms of the small-pox disappear, the accidents of which will be confounded with those of the inoculated disease, surely no prudent man would hazard either the safety of his patient, or his own character, (which must be always in some degree dependent on his success,) by adding the greater danger of the tothing fever to the otherwise trifling one of inoculation. In this case it is always better to wait either till the inflamed gums subside, or the teeth have made their way through them, either by their own force, or the assistance of the knife.

But if, after the inoculation, the gums should grow uneasy and spread much, whilst proper means are used to subdue the fever, or relieve whatever other consequences proceed from the impulse of the teeth, it will be right to divide the gums, not scratching them superficially with a lancet, but cutting down to the tooth with a strong hand and proper instrument.

I have said so much on this subject, as I have observed it less attended to than it ought to be.

Hard bellies, from whatever cause they proceed, as also cutaneous eruptions render a child an improper subject for inoculation, till those disorders are removed.

The chief objections to inoculating grown persons arise from particular accidents. Women with child ought not on any account to be inoculated, as the distemper most likely will prove fatal both to the mother and the child. Hectic and scrophulous persons, and those that are troubled with obstinate eruptions on the skin, are improper objects to expose to the malignity of the variolous venom.

Even the most healthy constitution is not to be inconsiderately hurried into inoculation. Any one that considers the nature of the human frame may know, that a man may be in a perfect state of health, yet the least unnatural force on his constitution may raise terrible commotions. It was the observation of Hippocrates long ago, that the highest health was a state of the greatest danger. All the functions of life may go on with the greatest vigour, the heart and arteries act with strong and regular force, and the fluids circulate freely, when the smallest interruption or preternatural irritation shall be able to produce such immediate disorder through the whole system, as will not cease but with its total destruction. For when the constitution exerts its full natural force, the least excess must prove pernicious.

These are the chief accidental circumstances that require our attention, before we resolve on the inoculation of the small-pox.

I shall now endeavour to point out the precautions proper to be used, after the resolution is taken, till the time of the operation, which is properly the preparation for it.

C H A P. VII.

The method of preparation.

WHEN a grown person is determined to submit to the operation, he must resolve to forbear all excesses, he must be regular and moderate in his exercise, and his rest. He must, if he has a good stomach, abate somewhat of his quantity, and also of the strength in the quality of his nourishment, especially if he has led an active life, as nature will be unable to digest the same quantity without her usual assistance. Some kind of exercise is necessary to promote the natural secretions, and to render the body light and easy; much will dispose the blood to inflame.

Children want fewer restrictions and less preparation; yet as they are apt to eat voraciously, some attention should be paid to the quantity of nourishment they take, and the stated times of their meals regulated.

The manner of feeding children is so different, that what would be keeping some children low, would be pampering others; so various are the humours of parents, and so differing their systems of management. Therefore I shall set down particularly

ticularly what method I have known practised most successfully, and what seems to me to be the most reasonable.

Let them dine on chicken, rabbit, veal, or fish, drest plain every other day ; the intermediate days let them have turneps, potatoes, asparagus, or light pudding or tarts. If they are inclinable to be costive, let their supper be roasted apples, or stewed fruit, or gruel with raisins or currants boiled in it. If not, bread and butter, with milk and water for their drink ; milk-pottage, or any kind of gruel for their breakfast ; the drink for dinner may be small-beer, if used to it, or else barley-water, or water with bread well toasted and soaked in it.

I would not strictly confine grown persons to this diet, some regard must be paid to custom, and their former manner of living. Besides, as the apprehensions of grown reasoning persons are stronger, and their spirits more liable to be depressed, it is necessary in some cases to indulge them with a glass of wine. But the deviations from the course before-mentioned must not be very wide.

The opinions relating to the time necessary for preparation are various. If the person to be inoculated is in health, a very little time will be sufficient to fit the habit to receive this distemper. All that is required being to bring it by a gradual transition from a state of activity to a state of rest, in which it is necessary the body should be when it receives the infection ; and keeping during that time a proper proportion between the quantity of

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the humours and the strength of the vessels, taking care that while we are increasing the one we do not diminish the other.

This I judge may be done in three weeks, if the patient is in health; if there is any fault in the constitution to be amended, it is impossible to determine what time is necessary.

At the end of the second week it will be proper to give a purge, which should be of the gentler kind, *viz.* a preparation of senna, with manna and some soluble salts, which will unload the bowels without disordering the habit too much. This should be repeated three times, at the distance of every third day; except the discharge weakens the patient; in that case it may be necessary to omit the repetition. To children a proper dose of manna, or syrup of roses, will be sufficient.

During this period the patient should be entirely disengaged from business of all kinds, and avoid all application, and close attention, should not sit long to reading; but endeavour to pass the time agreeably with a few friends. In the day-time, when the weather is serene and mild, he may take the air, and even walk a mile or two according to his strength, taking care to avoid equally all fatigue of body and anxiety of mind, keeping regularly to the usual hours of rest. Nothing of this kind can be practised with children, as these cautions have no relation to their common course of life. It is only necessary to restrain them as much as you can from exerting themselves with too much violence

violence in their play, and to moderate their passions.

There is nothing in this course that is either difficult or troublesome, yet it is such as I have always found sufficient to answer the purpose of preparing the body for inoculation, much more has been oftentimes prejudicial: I think the whole may be included in three words, *viz.* temperance, quiet, and chearfulness; the natural consequences of which are, that the patient being in a proper state both of body and mind, will pass safely through the distemper, as his habit will be cleared from those obstructions, that so often prove dangerous to them who have neglected the opportunity of being properly prepared for the reception of the infectious venom.

C H A P. VIII.

Of the operation, and its accidents.

ALL things being thus circumstanced, and the patient thus prepared, the operation may be performed: let a slight incision of about an inch long be made on each arm, through the cuticle, into the skin; but not through it so as to wound the cellular membrane; let a thread saturated with the variolous matter be laid along the whole length of the wound, and covered with a pledgit of digestive ointment, fastening it on with an adhesive plaster, and binding it on with a thin linnen roller; let this dressing continue on two days, on taking it off the third day, the wound will appear slightly inflamed; and in two or three days after, the edges of
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the wound will look whitish, the certain sign the inoculation has taken place: from the time of performing the operation, to the seventh day, the patient discovers no alteration; but about that time, or soon after, begins to be sensible of chilliness, with slight shiverings, pains in the back and limbs, weight and pain in the head, with sickness, and a disposition to vomit: young children grow drowsy and heavy, the mouth, especially about the lips, is seized with frequent convulsive motions, which sometimes spread through the whole habit, and produce those universal convulsions called fits: on being kept in bed some time, and supplied with warm liquids, these symptoms abate, and the whole body gradually becomes disposed to sweats, which on the second day from the first attack of the distemper, often throw out an eruption resembling flea-bites, which are sometimes so thick as to put on the appearance of the scarlet-fever; but if the patient is kept quiet, and supplied with soft liquids, moderately warm, a profuse sweat succeeding carries off the eruption; and about the fourth day all the other symptoms decreasing, the small-pox appear in small red spots, which by the beginning of the fifth, rise apparently above the skin: by this time the head-ach, vomiting, sickness, and all convulsive motions ceasing, declare nature discharged of her load, and the eruption complete. From this time the pustules rise daily higher above the skin, the red circumference of the basis decreasing, the pimples gradually changing from red to a whitish-yellow hue; at last on the seventh day
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from the eruption, they become pustules, charged with matter on the face; and by the ninth day admit the same alteration upon the limbs, from which time all outward marks of inflammation ceasing intirely, the skin of the pustules shrivels, the matter contained in it thickening into a scab, declares the distemper totally at an end, and the patient out of danger.

This is the regular course of the distemper; but besides these symptoms young children will be attacked in the beginning with a purging, and those more advanced in years with a bleeding at the nose; but neither of these discharges, which are generally salutary, ought rashly to be checked, except the strength of the patient be manifestly impaired by such discharge. Convulsions being almost the certain consequence in the first case; as the bilious matter will be thrown back on the membranes, and particularly those of the brain and diaphragm; in the other case, if the hæmorrhage be stopped, the blood, which at that time is pushed on impetuously, being denied its proper discharge, will load the arteries of the head, and produce a delirium or phrenitis, except art relieve the oppressed vessels of their over-charge, by other evacuations: but as in this case the attempt is not always successful, it will be better to leave nature to her own management, in attempting to throw off the superfluous load.

C H A P. IX.

Management after inoculation.

AFTER the operation is performed, a stricter care becomes necessary, as the poison now begins to mix with the blood; we must also begin to remark the habit with greater attention, the patient should now be confined to his apartment, and after the third day totally abstain from meat, that the stomach and bowels being charged only with such aliment as being of a loose texture is more easily soluble into chyle, there may be no danger of its overloading, or obstructing the vessels: if the patient is low, or too apprehensive of the approaching distemper, a little wine may be added to his drink; but this allowance to be used with caution: On the seventh day, when the symptoms begin to shew themselves, and the patient is seized with pains, giddiness, and sickness, he should be put to bed; during this period, *viz.* from the time of inoculation, to the appearance of the disease, it is necessary that the belly should be kept open, if inclined to be costive, with roasted apples, the juice of currants, boiled in a bag, and squeezed into water-gruel, or the fruit boiled in oatmeal or barley-gruel; if these are insufficient, a clyster should be given on the sixth day, or a gentle purge of manna, or syrup of roses, with the infusion of fenna, added to it, in proportion to the age and strength of the patient.

As the secretions of bile, sweat, and urine, abound with salts, when these secretions are inter-

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rupted,

rupted, the salts are imbibed by the serous part of the blood, and being circulated with it, obstruct the smaller vessels, irritate the nervous fibres of the membranes, and contribute to break the texture of the blood itself; the consideration of which circumstances shews the reasonableness of the diet proposed, *viz.* such as abounds the least with animal, the most active of all salts, while soft diluting liquids promote the action of the kidneys, and at the same time sheath and wash off the irritating particles from the vessels; and also shews the necessity of putting the patient to bed, that the external air may not obstruct the perspiration, and prevent the exclusion of the infectious matter; but the most useful, and most necessary precaution, is to keep the body open, as the salts of the bile are the grossest, and seem to have the greatest connection with the various symptoms of the distemper.

From the opportune use of purging, in the beginning of the disease, I have observed great advantages accrue through the whole progress of it, as the bilious salts being discharged by their proper channel, the humours (not being impregnated with them,) have had less acrimony, and the irritation has of course been diminished: for this reason, even a purging in the beginning of the distemper ought not rashly to be checked, except it apparently exhaust the strength of the patient.

If the head is greatly oppressed, and the breathing very difficult; if the pains are acute, or the heat of the body intense, it will be right to take away a proper quantity of blood, even though the pu-
stules

stules are appearing, the eruption of which will be promoted by the evacuation, as (the tension being taken off,) the heart and arteries will be enabled to act with greater force.

Children at the approach of the distemper are often seized with fits; though this is a symptom that usually carries more terror than real danger with it, yet if, in the convulsive paroxysm, the spasms are violent, and the fit continues long, it will be necessary to bleed, and even to blister, and give those medicines that are appropriated to this purpose, amongst which the valerian, foot drops, and some chymical preparations of amber, are certainly the best; but above all it is absolutely necessary to keep the belly open, through the whole time of their continuance, which precaution will oftentimes of itself, remove all the ills that attend this symptom.

It has been the usual custom to give a vomit in the beginning of the symptoms of the small-pox, for which the reason is very hard to be assigned. Those reachings to vomit, that denote the approach of the eruption, manifestly depend on the tension and irritation of the membranes of the brain, seldom coming on but when the head is moved (which is then always very giddy); as the action of vomiting doth certainly force the blood violently on those membranes, that are already distended and irritated, there is very little reason to expect that the shock of the vomit will impel the variolous matter through their vessels, but much to fear lest it should burst those slender delicate tubes

already to much affected by the disease. I have within this year met with two disagreeable instances, that seem strongly to justify this supposition.

H I S T O R Y I.

A. B. a youth about nineteen years of age, before I was called to him, had been blooded and taken a vomit; when I visited him I found his head confused; but as the eruption was just appearing, I only considered it as one of the usual symptoms of the distemper; but on the fifth day, the eruption being complete, I was surprized to find the delirium increased: I blooded and blistered him, but in spite of these, and other proper evacuations, his delirium continued till his death, which happened on the ninth day, with every external appearance of a good sort of small-pox.

H I S T O R Y II.

Y. Z. a lad about sixteen, who had been also blooded and vomited; when I was called in to take care of him, the eruption was very forward, yet his head greatly disordered; but luckily after having bled him twice, and kept up a successive discharge by blisters on different parts, about the thirteenth day from the eruption, as near as I could calculate, the matter effusing itself plentifully into the pustules, so as to form large bags of matter of them, his delirium went off, and he escaped the danger,

As I never saw the delirium continue after the eruption was complete, but in those cases where vomiting had been previously used; I think there is some reason to suspect this operation as accessory to the subsequent symptoms. I can see no more reason for vomiting in the access of the small-pox, than in a fit of the stone, or the case of a fractured skull, which are always attended with a disposition to vomit.

C H A P. X.

Management after eruption.

AFTER the eruption of the small-pox is complete, the patient feels himself very easy, and continues perfectly well for two or three days; sometimes he feels no farther uneasiness through the course of the distemper, especially if the number of the pustules is small, and the inflammation does not run high; but if, when the pock begins to suppurate, the inflammation occasions a restlessness, from the smart and foreness of the pustules, the patient will be easily relieved by a quieting medicine; there is rarely any after-fever in this species of the disease.

Although after the appearance of the pustules, every thing appears favourable, and promises a happy period to the distemper; too great security ought not to embolden us to lay aside the proper caution, which is always necessary to the safety of the patient, who should be kept quiet in bed till the crisis, that is, until the matter is entirely separated

rated from the blood; and not only the swelling of the face, but likewise that of the hands and feet, is subsided: except the weather should prove hot, or the quantity of matter so small, as to leave no reason to fear any mischief from its return back on the habit. In either of these cases, the patient may be taken out of bed, and sit up for an hour or two in the middle of the day; always using due circumspection that he does not catch cold, either by an improper and irregular admission of the air, or by carelessness or neglect in cloathing.

From the time the patient is first confined to his bed, to the end of this period, it is requisite that he should abstain from all strong nourishment, especially of the animal kind. He should drink barley-water either alone or mixt with milk, milk-pottage and gruel, balm-tea, and small-beer; his diet may be toast sopped in beer, toast and butter with tea, light biscuits, or bread with his gruel; nor ought this method to be changed till (after the conclusion of the distemper) the bowels (which are generally costive through its progress) are unloaded; then, by a gradual transition, the patient may return to his accustomed manner of living.

C H A P. XI.

The particular consequences of Inoculation.

INoculation, besides the disorder it excites internally by producing the distemper, and its usual train of symptoms, seems to affect the skin in a peculiar manner, and spread its infection through its whole

whole surface: this does not immediately shew itself, but rather appears to affect it in such a manner, as to give it a disposition to inflame on particular occasions. Sometimes in the beginning of the distemper, after the patient is put to bed, and (on drinking warm liquids) begins to sweat, the skin will appear covered with a rash, that in the natural way would threaten a severe sort of small-pox, yet by the continuance of the sweats (which will grow profuse) this rash will vanish, and immediately the pimples of the distemper itself appear in the most favourable manner.

It is likewise to be observed, that the violent sweats at this time (which in the natural way are prejudicial, by occasioning too great a dissipation) are of service, as they clear the skin of the rash, and bring forward the eruption of the small-pox; at the appearance of which they abate, and go off with the other eruptive symptoms.

At this time it is proper to keep the chamber, the covering of the bed, and all other external circumstances in a regular and moderate temperament: not so close or hot as to occasion an uneasy sensation from the heat; or so open and cool, as to produce a degree of chilliness sufficient to check those sweats that are in this state of the distemper quite necessary. After the eruption it sometimes happens, that the humours passing freely through the skin at the beginning, many of the pustules which nature pushed out in the first effort, shall die away without any appearance of matter in them, and only some few suppurate regularly; yet except

it can be imputed to some sudden accident, there is no occasion to be alarmed at this appearance; or rashly to have recourse to warm medicines to keep them out (as it is called) especially if the patient is easy, and the pulse even and of a proper strength.

If the rash does not appear in the beginning, or is checked by any accident, if proper care is not taken thro' the course of the disease to keep up an equal perspiration, that disposition of the skin to inflame above-mentioned will shew itself, and at the latter end of the distemper the bases of the pustules will have an erysipelous appearance, which especially on the legs will sometimes inflame greatly, and degenerate into troublesome sores; sometimes it will appear in a rash all over the skin; and at other times, which is most common, pour its whole venom upon the wound, the cure of which will often prove a tedious disagreeable piece of work to the operator, as well as the patient. These considerations will be sufficient to warn any prudent person against rashly or carelessly exposing the patient to cold, as by it the expulsion of the matter through the skin is prevented; or else being repelled back from the skin on the cellular membrane, will produce boils or inflammations in the glandular and membranous parts of the body, which I shall illustrate more particularly in my next section. It is likewise necessary to be cautious how we load the stomach, by indulging the patient too soon with improper nourishment, which from the inability of nature weakened by the distemper to digest
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and assimilate it, will by obstructing the vessels produce slow fevers, and other nervous and chronical disorders.

It does not come within the design of my present treatise, to enter into a particular detail either of these disorders, or the method of curing them. It is sufficient to point out the causes, which will be sufficient to caution every practitioner to endeavour to prevent those accidents which 'tis so difficult to remedy.

As I have had occasion in the course of these papers to mention the danger of repelling the matter back from the surface of the skin upon the cellular membrane. I shall here add some observations on the nature of that membrane, and such an account of the insensible perspiration of the skin as will in some measure serve to explain what I have before asserted, in which I shall make use of what has been written on those subjects by two eminent authors, as their words are perfectly clear and pertinent towards illustrating the subject.

According to Hoffman, There is no part of the human body either solid or fluid, that preserving its own texture can contain and conceal a foetid vapid humour so long as the fat ; in which the seeds of the small-pox, measles, and purples, will for a long time be concealed and lie hid. To shew further how necessary it is to guard against the intropulsion of the humours from the skin, the same author observes, When the humour cannot transpire freely through the little tubes and pores of the skin, it settles in the cellular membrane, and becomes acrid

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by its continuance there; and corroding, pricking, and inflaming the nervous fibres of the skin, it produces various pimples and pustules on its surface. If this be true, as it probably is, this membrane not only lodges those humours that it receives from the blood, which, when put into action, urge their way on to the skin; but it likewise receives into its cells those humours that being obstructed in their passage through the skin, are forced back upon it, whence they communicate their malignant effects to the circulating fluids. These considerations are surely sufficient to convince any unbiaſſed person of the neceſſity of keeping up the perſpiration, in a cutaneous diſtemper. As there is no word ſo generally miſunderſtood as perſpiration, moſt people confounding it with ſweating; and as a treatiſe of this kind is intended for general uſe, for the information of one part of my readers I ſhall inſert the following Aphoriſms of Sanctorius, which will fully explain that matter.

A P H. 5.

Inſenſible perſpiration is either made by the pores of the body, which is all over perſpirable and covered with a ſkin like a net, or it is performed by reſpiration through the mouth, &c.

A P H. 21.

The perſpiration which is moſt beneficial, and clears the body moſt of ſuperfluous matter, is not that which goes off in ſweat, but that inſenſible ſteam or vapour, which in winter time exhales to
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about the quantity of fifty ounces in the space of one natural day.

A P H. 24.

By how much more subtle and with less apparent moistness perspiration is made, it is by so much more healthful.

A P H. 40.

Whensoever nature is disturbed in the business of perspiration, she soon becomes defective in many more of the animal functions.

From this account of the nature and use of perspiration, it is easy to comprehend the necessity of having a regard to it in the distemper we are now treating of, which has so much need of this secretion through all its stages.

C H A P. XII.

Of the operation.

IN the infancy of the practice, it was the custom to cut the incision through the skin into the cellular membrane, from a prejudice then generally established, that one of the advantages of inoculation was securing a drain for the humours by the wound, which in that case generally continued its discharge for a considerable time after the distemper was over. But it was found that the incision which was at first only considered as an issue, was too often attended with several very troublesome symptoms, such as inflammation and swelling of the whole arm, which was reduced with much difficulty, the wound continuing a troublesome sore to the surgeon, and a

painful one to the patient for a long time, especially in the legs, where some operators chose to make the incision. Besides, it was no unusual thing at the same time for the person to be seized with other inflammatory disorders, that seemed to point out the cause and seat of the evil. I remember to have seen the scrotum inflamed, and in one instance the whole cellular membrane so affected as to produce swellings in the interstices of the muscles through the whole habit, which would vanish after proper evacuations, but returned again from the different accidents either of catching cold, or the changes of the seasons. I have observed besides, many other casualties to which I can impute the beginning of ill health in many subjects that have come under my cognizance, plainly deducible from this mistaken practice. But it is needless to be particular in mentioning the consequences of a method now universally exploded, the merit of which is owing to the sagacity of Mr. Ranby, to whose judgment and penetration the art of surgery is beholden for other useful and important improvements: he first observed the ill consequences of deep incisions, and perceived how unnecessary they were for the admission of the infection, whose subtilty was sufficient to penetrate through the smallest puncture or slightest wound, and exert its effects on the whole mass of the human fluids: he first instituted the slight scratch through the cuticle, instead of the deep wound before made use of, the advantage of which so soon discovered itself, that the practice became generally adopted, and all those inconveni-

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encies that formerly attended the operation, are entirely unknown in the present practice; as the mischiefs that attend the insinuation of the matter into the cellular membrane, are now sufficiently evident to every experienced practitioner.

C H A P. XIII.

Of the accidents and management of the Incision.

THE incision during the first six or seven days makes a very small discharge, and when the symptoms of the small-pox begin to come on, it frequently appears quite dry, the inflammation about the wound continuing just visible. After the eruption, as the pock advances to maturation, the fores seem in some measure to keep the same pace, enlarging by degrees, looking foul, with jagged edges, having a slough in the middle spreading in proportion to the enlargement of the wound; nor is there commonly any considerable suppuration from the fores till after the pock is turned, when the slough begins to digest out, and in about a week more or less, leaves the fores well digested and clean.

But the fores do not equally enlarge themselves in all subjects; in some the slough extending itself both in breadth and depth will form in the middle of the wound, which will effuse an ichorous pus, corroding and inflaming the adjoining parts, and extending the inflammation down to the cubit; in others the wounds will be very well conditioned, and the discharge moderate. The accidents of the
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fores being differently determined by the various circumstances, both of management and constitution.

Generally the wounds continue running about a fortnight or three weeks after the turn of the small-pox, or even longer, and then by common dressings proper to wounds heal up kindly. Sometimes the wound in one arm will dry up soon, while the other shall continue its discharge for a considerable time.

But when from the sharpness of the humour the arm is much inflamed, it will be necessary to use a poultice of white bread and milk with ointment of elder; this if the habit be not bad (proper regard being had to the diet, &c.) with bleeding and gentle purging repeated according to the strength of the patient, will by degrees dispose the wound to heal, and dispel all its accidents.

In those cases where the flux of humours on the fore is very large, we should not be too hasty in endeavouring to check the discharge; but rather in some cases, and some constitutions, to promote its continuance by putting a pea into the wound, and keeping it open as an issue; but this is to be done only on necessity, as the least of two evils, the repulsion of the humour being always of ill consequence. Draftic or mercurial purges ought not to be used in this case, but upon very mature consideration: it is generally better, always safer, to endeavour to correct the humours and restore the habit, by sweetening and absorbent medicines, decoctions of the woods, and asses milk. These methods

methods will often do the work quicker, than the most violent evacuations.

It sometimes happens that after all external appearances of the disease are vanished, a rash shall appear, attended with heat and itching, affecting chiefly the arms, legs, breast, and back, which will be covered with small pimples, that being scratched emit a watery humour, sharp enough to fret the skin, and spread a slight inflammation over it; this symptom (where I have seen it) has been probably a consequence of too quick a transition to a stronger diet than was proper. It is necessary to bleed, and give cooling purges in this case, and to correct the acrimony of the humours, and cool the heat, by remedies proper for that purpose: testaceous and nitrous medicines joined, are generally sufficient to answer this end. Asses milk will be a necessary conclusion, as by its cooling and nourishing qualities, it will temperate the heat and sharpness, and at the same time recruit the reduced constitution.

It will not be amiss to mention here, what should have been before observed; for young women that have had the menses, the best time to undergo the operation will be two or three days after the time of their discharges is over, by which means all the symptoms of the small-pox will be over before their return, which will then be of use in clearing the habit of the remains of the inflammation: I have known it happen sometimes at different periods of the disease, but, by proper care, without any ill consequence.

C H A P. XIV.

Of the different ways of Inoculation.

BESIDES the present method of making superficial wounds in both arms, beginning below the insertion of the deltoid muscle, and making a slight incision in a straight line downwards; and the deep incisions formerly cut in the arms or legs, the inconveniences of which, I have already mentioned; there have been practised several other ways of inserting the matter. Dr. Mead has described and condemned the Chinese method of thrusting it up the nostril, as too violently affecting the head. The people of the Levant use the puncture; some have affected to wound but one arm or leg, and some to make the incision transverse; of late the method of insinuating the matter by friction has been proposed and recommended.

Men of leisure and curiosity will find matter of employment, in considering the advantages, and disadvantages, of these several practices, and may in time settle all controverted points on this head, and determine whether any good will arrive from adopting a new method of conveying the infectious matter into the blood: therefore until some new one is established by the authority of repeated experiments, it will be safer to go on in the beaten road of practice; especially as the present manner of performing the operation seems to be least liable to accidents or disappointments. I shall just observe, that wounding one arm is generally sufficient to propagate

propagate the infection, yet as it may by accident happen, that one of the incisions shall not be affected, it is always the better and securer way to open them in both arms.

C H A P. XV.

Observations where the operation seems to fail.

IT sometimes happens, that the patient does not catch the distemper, though the operation is properly performed, and the matter is good and properly taken, the incisions healing in a few days; when this is the case, the patient is not secure from the danger of contracting the disease afterwards; but if the sores keep open, and the feverish symptoms come on at the usual time, though not a single pustule should appear, I am convinced that the patient is as secure from ever having the small-pox, as if there had been a plentiful eruption; at least there is no instance that has been ever produced, where it has happened; even though the utmost endeavours have been used to procure a second infection, on a supposition that the first had been imperfect. To quiet the minds of those who have fallen, or may fall, under the like circumstances; I have added the following remarkable case.

About years ago two children were inoculated together, from the same matter, *viz.* a boy years old, and his sister; the feverish symptoms came on in both of them at the usual time very favourably, attended with those profuse sweats which generally precede the eruption, during which, or rather when the sweats abated, a slight

rash appeared upon the boy's skin, which is no uncommon forerunner of the eruption; however, the fever subsiding, the sweat went off, and the rash totally disappeared; nor had we one single pustule to supply its place: the sores on the arms made the same progress as if he had had the eruption, sloughing, and gradually widening, about the time that we might suppose the distemper would have been at the height; the sores digested and discharged more matter than is usual, and continued the discharge, though lessening gradually for at least six or seven weeks afterwards.

It is to be observed that the moment the fever left the patient he seemed perfectly well, nor did he ever complain of any thing but his arms; I mean the sores, which were tenderer than usual: it may be easily imagined that the parents of the child were not so well satisfied as if he had had the eruption; it was, therefore, resolved to put him to bed to his sister when the small-pox came to turn with her, which was accordingly done for a whole night, but without any effect.

Two years afterwards another son and daughter of the same family were inoculated, and the boy abovementioned was brought home from school on purpose to be with his brother and sister, to try once more if he was safe from infection: he was almost constantly in the room with them, and when the distemper came towards the height, was often upon their beds, stroaking their hands and arms, for several days following, but all to no purpose; he has continued perfectly well ever since, and is as fine a boy as any in the kingdom. I

I am beholden for this history to a friend whose integrity is a sanction to every thing he says, with all that know him; I have chosen to give it preferably to several of the same kind that have come under my own observation, as the methods taken to procure satisfaction were so remarkable.

I have now given my reader those observations I have made in several years practice on the subject of inoculation. I have to the best of my power fairly stated the accidents that usually attend the practice; and described the means from reason and experience I have found most effectual either in preventing them, or obviating their effects. And I believe most of those inconveniencies that have hitherto attended it, may be either lessened or avoided by the management I have laid down. I have not published these observations, merely from the vanity of being an author, but by the encouragement of some friends both in and out of the medical way, who were pleased to encourage me in communicating them, as believing they might be of public use.

I am convinced that inoculation has a direct tendency to the good of mankind, as the small-pox left to its natural course generally destroys a seventh part of those that are infected by its venom, which a very small part of mankind entirely escapes; whereas by this practice, hardly one in a hundred suffers from its violence. As to the accidents, they are near equal in both ways, to those that escape the distemper. Those that depend on the inoculation,

may be lessened, those in the natural way rarely any human care can prevent.

I cannot conclude my subject without mentioning, as a Briton, my gratitude to His Majesty, who, besides his constant care exerted for the good of his subjects in their civil and religious rights, as a true father of his people has extended his care in a most unparalleled instance to their health and preservation. How much do we owe to Him and his late Royal Consort, who by generously submitting their royal offspring to the reasonable, though then almost unexperienced, events of the operation, opened the way to the safety and happiness of their subjects. Some have ascribed to princes both in this and a neighbouring kingdom an imaginary merit from a pretended power of healing, founded on superstition. It is one of our king's glories (the Almighty seconding his endeavour) that by his means thousands of his subjects live to bless his name, as owing their present existence and security to his royal influence and example.

F I N I S.





