

IV. *A Letter from J. Wall M. D. to Edward Wilmot M. D. F. R. S. and Physician to His Majesty, concerning the Use of the Peruvian Bark in the Small Pox.*

Read Nov. 5. <sup>1747.</sup> THERE is not perhaps any Disease more fatal than the Small-Pox, when attended with Hæmorrhages, purple Spots, and other terrible Symptoms. I think one might venture to affirm, that, in proportion to the Number of the Sick, fewer recover under these Circumstances, when treated by the common Methods, than do even from the Plague itself. A Remedy therefore in any Degree adequate to the Malignancy of the Disease, which could restore the broken Crasis of the Blood, and correct the putrid gangrenous Disposition of the Juices, must be of infinite Service to Mankind; and such a Remedy the *Bark* appears to be.

The first Author I meet with, who mentions the Use of the *Bark* in any Stage of the Small-Pox, is Dr. *Morton*; and he recommends it only in the (a) Decline of the Disease, when the secondary Fever is

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(a) Ubi viribus veneni, durante exanthematum eruptione, ptyalismo vel quovis alio modo ex parte fractis, licet non penitus deletis, atque inde usque ad stadium declinationis intus cohibitis et revirescentibus, febris *recidiva* indolem præbuerit benignam, periodicis exacerbationibus & remissionibus sese alternatim excipientibus (quem typhum in variolis mediis, prope ad malignas accedentibus, fere semper observare licet) curatio nulla methodo

is mild, and puts on the Type of an Intermittent. But as the *Primæ Viæ* are then very much loaded, even in the mildest Sorts of the confluent Small-Pox, this Remedy (if used only in that Stage) does not seem to promise much; at least, not till the *Saburra* in the first Passages be in some degree carried off. And accordingly, the learned and judicious (b) Dr. *Frewin* found that it did not at all answer, even under his Direction, till the first Passages had been emptied.

Since that time, the good Effects of the *Bark* in Mortifications and putrid Ulcers have been discover'd; and Dr. *Monro*, reasoning from thence, did some time ago (c) recommend it in the first Stages of the Small-Pox; as promoting the Maturation, and procuring a mild well-condition'd *Pus*. On his Authority alone, had I no other Reasons, I should have been induced to try this Medicine in some bad kinds of that Distemper, where the Suppuration does not proceed well; but having also seen the *Bark* of great Service in other Diseases, where the Texture of the Blood seem'd much broken; and particularly in Petechial and Purple Fevers, attended with Hæmorrhages,

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aut remedio certius ac felicius absolvitur, quam celebri antidoto, cortice sc. *Peruviano*, qui reliquias veneni subigendo, ut in cæteris quibuscunque *συνεχέσι*, certandi ansam tollit, atque inde lucam febrilem derepente componit; unde ægrotans post biduum vel triduum ἀπίσθη factus, illico sine quovis ærumnoso symptomate subsequente reconvalescit, &c. &c. *Morton Pyretolog. De Variolis, Cap. 10.*

(b) In his Letter to the late learned Dr. *Friend*. *Comment. de Febris, 5°.*

(c) *Med. Essays, Edinburgh, Vol. 10. Art. 10.*

rhages, and other terrible Symptoms; I was the more ready to conclude that it might be of great Use in the Small-Pox under the like Circumstances; more especially, as Dr. *Monro*, in the Paper above-mention'd, assures us, that, by its Use, '*Petechiæ*, in several variolous Patients, became gradually more pale-colour'd, and at last disappear'd.' I was the less fearful of making an Experiment which was new (at least in these Parts) in a Distemper attended with such fatal Symptoms, because scarce any recover under them by the common Methods. For, to use the late celebrated Dr. *Freind's* Words [*Epist. de Purgant.*], '*Ad has angustias cum ventum sit, nequaquam oportet dubitare, an anceps præstet dare remedium, an nullum: quod, utcunque anceps, potest fortasse vitam servare, potest saltem ad dies aliquot protrahere. Sed quid si non successerit? satis est, ut quis hoc Medicinæ genus jure experiri putetur, si id vel in millesimo corpore proficisse compererit.*'

The first Person to whom I gave the *Bark* in the Small-Pox, was one Mr. *Hall*, a young Gentleman of about 24 Years of Age, who lived within two Miles of this Town. After heating himself violently at a Ball, he was seiz'd with the previous Symptoms of the Small-Pox. The third Day of his Illness he sent for me; and before that time he had been blooded, had taken a few Salts and Manna, which had given him 2 or 3 Stools, and afterwards used the *Decoct. Nitros.* The Blood, which had been taken away, appear'd highly inflamed. When I saw him, I found the Pustules extremely numerous un-

der the Skin, and his Body cover'd with purple Spots: Beside this, his Nose had bled profusely, and he had had several bloody Stools; or, to speak more properly, he had voided large Quantities of Blood from the *Anus*; for it was merely Blood without Excrement. His Pulse was extremely quick, but rather weak, and the Pain in his Loins violent.

The Case appearing so desperate, I determin'd to give him the *Bark*; a Scruple of which he took every two or three Hours, and the *Tinct. Rosar. acidulat.* for common Drink. Within 48 Hours the purple Spots disappear'd, and the Hæmorrhages stopt intirely, his Pulse grew fuller and slower, and the Pustules came on well.

From this Time to the 9th Day after the Eruption, the Appearance of the Disease continued well in every Particular; and that whole Time he persever'd in the Use of the *Bark*, &c. and for two or three Nights had taken a little *Syr. e Mecon.* On the 9th Day in the Morning I saw him well, considering the Disease: His Spirits were good, and he spit well, but very largely. About the middle of the Day he dropt asleep, when his Nurse left the Room, and carelessly stay'd away a considerable Time (as I remember, whilst she eat her own Dinner). At her Return, he was found with his Head dropt from off the Pillow, and dead, suffocated, probably, by the Quantity of Phlegm, which, his Head lying accidentally low, he could not discharge without Assistance.

Though in this first Instance my Patient unhappily miscarried, I thought I had sufficient Reason to be pleas'd with the Effects of this Medicine.

Soon after this I was called to a Son of Mr. *Tates*, a noted Farmer at *Hampton-Lovat* in this County. He was about twelve Years of Age, and this was the sixth Day from the first Seizure. The Pustules were confluent, and appear'd like bloody Pimples: His Breast was cover'd with *Petechiæ* and purple Spots: He had a great Itching of the Nose, so that an Hæmorrhage from thence was to be fear'd. He had been delirious for two or three Days past, and his Pulse was very weak, quick, and trembling. I order'd him *Extr. Cort. Peruv.* ʒ Scruple every third Hour, and acidulated all his Liquors with *Ol. Vitriol.* well cover'd with *Syr. Sambuc.*

The purple Spots disappear'd, after he had taken two Drachms of the *Extract* (which nevertheless was continued on thro' the whole Disease). The Pustules came on very favourably, and the Distemper afterwards, in its several Stages, more resembled the distinct Small-Pox than the confluent: Yet I never saw one where the Pustules were more numerous, and more truly confluent, not on the Face only, but the Arms and the whole Body: For, in many Parts, the Skin was rais'd for a considerable Extent by the included Pus, as if it had been done by a blistering Plaster; particularly the Arms from the Elbows to the Wrists were intirely raw; the Skin, upon letting out the Matter, coming off like a Glove in one intire Piece.

About the same time I was call'd to a young Man of 21 Years of Age in the Parish of *Elmley-Lovat* in this County, who, during the Eruption of the Small-Pox (which appeared on the second Day of his Illness), had a violent Hæmorrhage from the Nose, Purples very numerous, and excessive Pain in  
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the Loins. He went well through the Disease by the same Method.—Neither of these two had any condary Fever.

In the Cases above-recited I trusted to the *Bark* alone; excepting only that I acidulated the Liquors with the vitriolic Acid; but lately I have joined Alum with it, and I think to Advantage: For, as the chief Efficacy of the *Cort. Peruv.* seem'd to me to arise from its styptic and antiseptic Qualities, whereby it not only strengthens the Solids, but gives a Firmness also to the Blood and Juices, and thereby prevents their degenerating into a putrid *Sanies*, I thought it might not unusefully be joined with Alum, a Salt of singular Virtue in the same Intentions, and which is well known to assist the *Bark* in other Cases, where it is order'd as a Styptic.

Mr. *Higgins*, of *Tedney* in *Herefordshire*, a young Man of about 24 Years of Age, after very violent Exercise in hot Weather, was seized with the previous Symptoms of the Small-Pox. The Pain in his Back particularly was very violent, and his Anxiety intolerable. On the third Day of his Illness, when I first saw him, his Skin was cover'd with purple Spots, many of them as large as a silver Penny; and his Pulse was small, and very quick. Notwithstanding this, as he was a sanguine young Man, the Weather hot, and the Sickness came after violent Exercise, I ventur'd to order a small Quantity of Blood to be taken from his Arm, which I found very tender and florid; and at the same time I directed for him as follows:

℞ Extr. Cort. Peruv. ℥ss. Alum. crud. ℥ii. Aq.  
Cinnam. ten. ℥vii. Syr. Cydon. ℥i. M. cap.  
coch. ii. larga alternis horis.

He had emptied this Bottle the next Day at Noon ; when I visited him again, and found him much better ; his Pulse being full and regular, and the Anxiety and Pain in his Back nearly gone.

The Small-Pox now began to shew itself, and the Purples declined apace. The Urine which he had made the Day before they had imprudently thrown away before I came ; but they informed me that it was extremely red, as if mix'd with Blood ; somewhat resembling, as they said, the Water in which fresh Meat had been washed. He had had several Stools ; so that, fearing lest that Discharge might be too violent, in the next Prescription I omitted the Alum, and substituted the *Terra Japonica* in its stead. This Mixture he continued through the whole Course of the Disease, and used no other Medicine ; excepting only that I found it necessary to give him a quieting Draught in the Evenings, containing a little *Syr. e Mecon.* a few Grains of Alum, and a Scruple of the *Extr. Cort. Peruv.*

All the bad Symptoms soon disappear'd intirely : He had no second Fever, but got thro' the Disease very easily.

Mr. *Bradford*, a Farmer at *Claines*, near this Town, about 21 Years of Age, was seized after the same manner, and got very well thro' the Disease, tho' it was confluent, by the same Method. I did not see him till the sixth Day of his Illness, and then

then his Juices were in so bad a State, that, besides the *Petechiæ*, which were very numerous, a Place on his Shin-Bone, about the Size of a Crown-Piece, which had been bruised a Day or two before his first Seizure, was now gangren'd; and the Edges look'd of a very deep Red, as if the Corruption was spreading further; his Throat likewise was so sore that he could scarce swallow at all.

I order'd him the same Mixture as above, *viz.* *Extr. Cort. Peruv.* ℥ss. *Alum. crud.* ℥ii. in about half a Pint of Liquid.

He took of this two large Spoonfuls every other Hour. It was not without great Difficulty that he got down the first two or three Doses; but he had Resolution, and persisted; and before he had finished the Bottle his Throat grew better, and he swallowed tolerably well. The next Day the *Petechiæ* began to fade away, and soon after disappear'd intirely; the Gangrene also stopt, and in a few Days separated. He continued this Medicine thro' the whole Disease, and needed no other.

Soon after Mr. *Bradford's* Recovery, his Sister (about 19 Years of Age) who liv'd with him, was seized with the confluent Small-Pox, attended with innumerable *Petechiæ* and purple Spots, together with a prodigious Hæmorrhage *ab Utero*, violent Pain in the Loins, a great Looseness, and Dejection of Spirits. She took the *Bark* with Alum in the same Method, through the whole Course of the Disease, and recover'd.

The *Diarrhœa* here appear'd to me to proceed from the putrid State of her Juices; and therefore, notwithstanding

notwithstanding that, I continued the Use of the Mixture, and this with good Success; for by it all the bad Symptoms were gradually mitigated, and, in a few Days, intirely carried off.

But one of the most remarkable Instances that has come to my Knowledge, both of the Efficacy of the *Bark* in this terrible Distemper, and the whole Course of the Disease is the following.

A Servant Maid, belonging to one Mr. *Buttor*, of this Town, was seized with the previous Symptoms of the Small-Pox; but as the Pain in the Loins was excessive, the Disease was unhappily mistaken for a Fit of the Gravel; and accordingly she had been blooded plentifully, and taken Opiates and saponaceous Medicines. It was the second Day of the Eruption when I was first call'd to her. The Pustules were then extremely numerous, small, and in Appearance like a violent Itch: Her whole Body, Arms, and Legs, were cover'd with broad Spots of a deep purple Colour, many of them as large as a Sixpenny-Piece; her Eyes were red, and full of Tears, and her Countenance express'd a great Anxiety (a Symptom not easy to be described, but a terrible Prognostic in all acute Diseases); her Throat was so sore, that she swallowed with the utmost Difficulty; by Fits she was delirious, and vastly restless: She had a violent Diarrhœa, a prodigious uterine Hæmorrhage; and a very quick small Pulse; in short, she seem'd just on the Brink of the Grave.

I gave her the *Bark* with Alum, in as large a Quantity as she could get down. In about 12 Hours her Throat grew better, and she swallowed

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tolerably well; after which she took half an Ounce of the Extract of the *Bark*, and two Scruples of Alum in 24 Hours. This Medicine I continued, without Variation, for three or four Days, when the Alum made her so sick, that I was obliged to lessen its Quantity, continuing still to give her the Extract as before.

Within this time the Purples had all disappear'd; the Hæmorrhage was stopped, and the Looseness considerably abated; the Pustules came on well, and she spit plentifully.

The Disease continued to proceed very well, till the sixteenth Day after the Eruption; but then, growing tir'd of her Medicine, she persuaded her Nurse to omit it; which she did for about 24 Hours. During this time she took but a very small Quantity of Liquids; for, as she seem'd to lie easy, and in a kind of dozing Sumber, her Nurse thought she ought not to disturb her. It was prodigious to observe the Alteration occasion'd by this Omission and Neglect: Her Pulse grew quick and weak, and the Humours acquired the highest Degree of Putrefaction; so that she died, perfectly gangrenous, on the 20th Day.

These are a few Instances, out of many others which I could produce, of the surprising Effects of this Antidote. Indeed I have given it to very many Persons in the first Stages of the Distemper, where the *Petechiæ* have appear'd before, or as soon as the Pustules of the Small-Pox; and to others in the Time of Maturation, where the Matter has been crude and watry; and, I can safely say, almost always with

with Success. I now usually continue it thro' the whole Course of the Disease, till, the Scabbing being perfected, I find it Time to cleanse the first Passages; and sometimes I order it in the Intervals betwixt Purgings for some time longer, where I find the Solids weak, or the Humours thin and acrimonious.

When I am called to a Person, and, from the Appearance of *Petechiæ*, purple Spots, Hæmorrhages, miliary Eruptions, or the like, find that the Texture of the Blood is broke, or in Danger, I immediately order the *Bark*. Nor does the Quickness of the Pulse deter me from its Use; on the contrary, I think it absolutely necessary to give it, where the Pulse is quick, if at the same time it be weak. Because, for very obvious Reasons, I judge that, in this Case, the Solids are weak, and the Fluids disposed to a putrid Acrimony.

From the Cases here recited, as well as from many others which I have met with, I think nothing more effectually or speedily cures a sore Throat in the Small-Pox than the *Bark*; nor did I ever find it at all check the Spitting in those Sorts of Small-Pox where that Evacuation is necessary.

If, in the first Stages of the Disease, the *Bark* seems to run off by Stool, so far from being prejudicial, I have commonly found it of Service. For, as † *Hoffman* well observes, that a natural Looseness often

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† Alvi fluxus licet copiosus non adeo pertimescendus est \*\* sc. sicuti in febribus malignis petechialibus, alvi profluvium morbi facit solutionem; sic

often carries off the *Petechiæ*, so that produced by the *Cortex* herein imitates the kindly Efforts of Nature; in that respect assisting the Physician in his principal Office, which is to be *Naturæ Minister*.

In most of those, to whom I have given the *Bark*, I have found the Maturation of the Pustules forwarded by it, and the Disease shortened in its Duration; an Article surely of no mean Consideration. I commonly use the Extract (made by boiling down a Decoction of the *Bark*, without the Addition of any alkaline Salt) preferably to the gross Substance; as being, I think, of equal Efficacy, and less apt to load the Patient's Stomach. In Children and delicate Persons, who are apt to nauseate this Remedy, I have with Success given it mix'd up with thin Chocolate; which, if sufficiently sweetened, disguises it better than any thing I know of.

What the *Bark* might do, as preventive, or preparative for this Disease I know not; but in the latter Intention I should think it would prove of Use.

I suppose I need not take notice, that when I recommend the *Bark*, I would not be thought to decry or discountenance the Methods or Medicines usually order'd in this Distemper; on the contrary, I think, in so terrible a Situation, nothing ought to be

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sic etiam in mali generis variolis idem evenire experientia docet. *Hoffm. de feb. variolos. Thes. patholog.* § 12.

Alvi profluvium non nocet, quando petechiæ pariter ob valde irregularem anni constitutionem complicantur, ut potius remedio sit, et malignos humores optime expurget. *Id. ibid. Cautel.* § 16.

be omitted which can any way alleviate or assist the Patient. Dr. *Monro* has already made proper Remarks on this Head, and to his Words I refer the Reader.

I would not obtrude the foregoing Paper on the World, as containing any new Discovery ; but as I think the Efficacy of all Medicines is best to be known from repeated Trials, and communicated by accurate and authentic Histories of their Success, on these Accounts, I thought proper to offer these Observations to the Public, hoping that they may at least serve as a Commentary to the Papers already published on the Virtues of this justly celebrated Drug.

*Worcester, March 10,*  
1746-7.

J. Wall.