

**Observations on fevers, especially those of the continued type; and on the scarlet fever attended with ulcerated sore-throat, as it appeared at Newcastle upon Tyne in the year 1778. Together with a comparative view of the epidemic with the scarlet fever as described by authors, and the angina maligna / By John Clark.**

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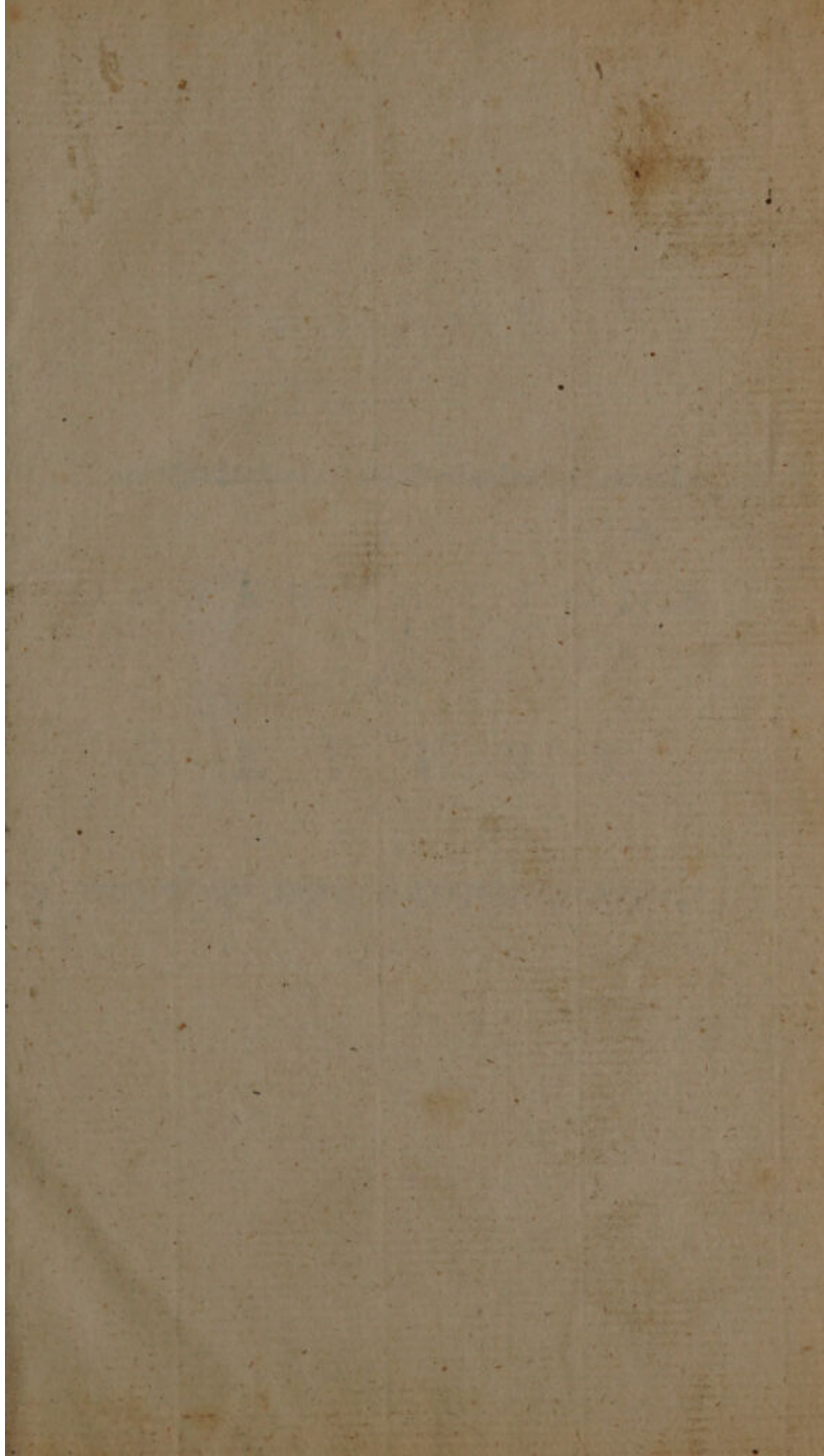
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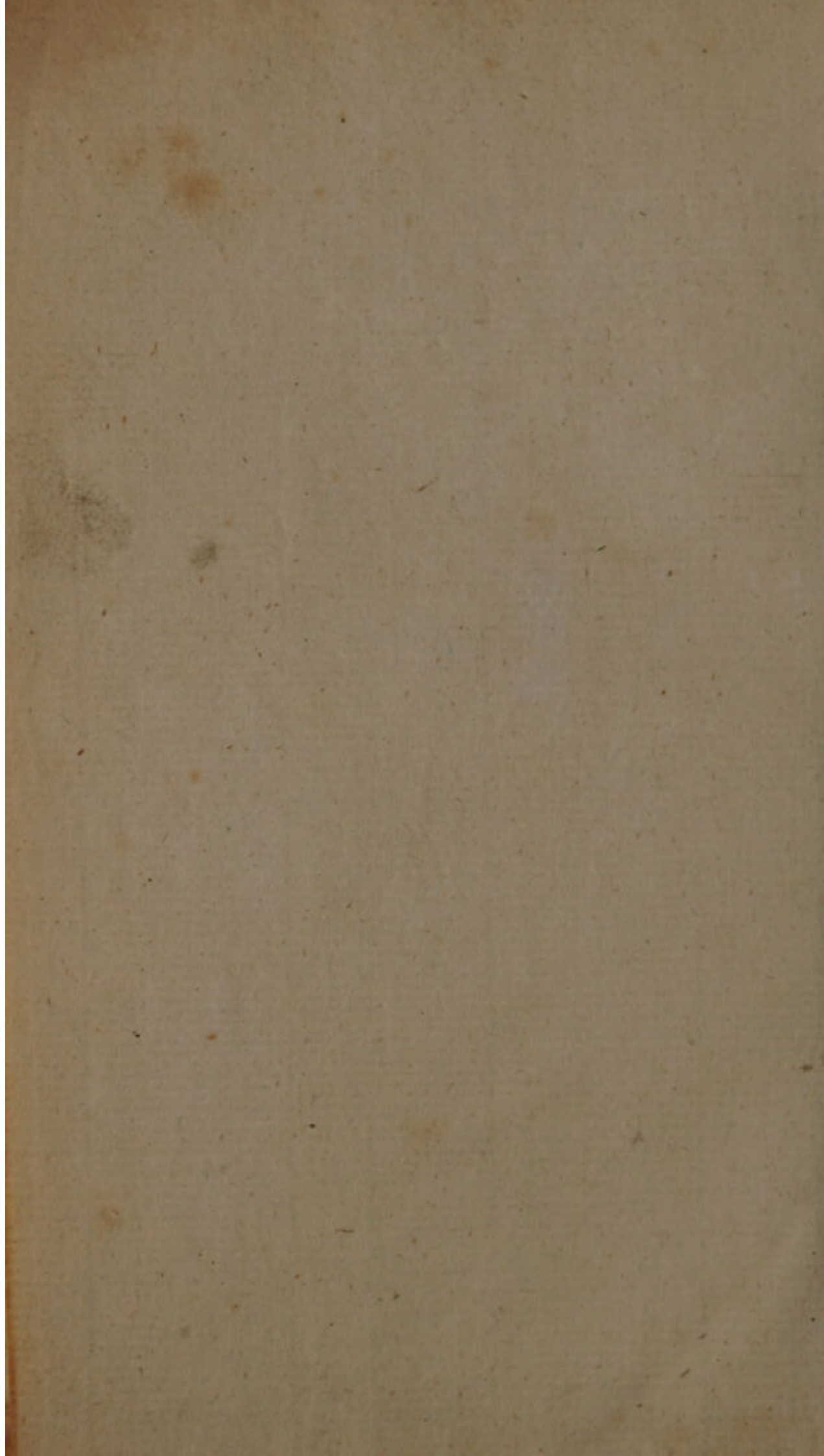


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O B S E R V A T I O N S

O N

F E V E R S.



THE HISTORY OF THE

REIGN OF

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OBSERVATIONS

ON

THE REVENUE

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IN THE

REIGN OF

43053  
OBSERVATIONS

ON

FEVERS,

ESPECIALLY

THOSE OF THE CONTINUED TYPE;

AND ON THE

SCARLET FEVER

ATTENDED WITH

ULCERATED SORE-THROAT,

As it appeared at NEWCASTLE UPON TYNE in  
the year 1778:

TOGETHER WITH

A comparative View of THAT EPIDEMIC with  
the SCARLET FEVER as described by Authors,  
and the ANGINA MALIGNA.

By JOHN CLARK, M. D.

One of the PHYSICIANS to the Newcastle Dispensary.

L O N D O N :

Printed for T. CADELL, in the Strand.

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MDCCLXXX.



OBSERVATIONS

ON

FEVERS

ESPECIALLY

THOSE OF THE CONTINUED TYPE

AND ON THE

SCARLET FEVER

ATTENDING

ULCERATED THROAT



As it appeared in the year 1788

TOGETHER WITH

A comparative view of that kind of  
the Scarlat Fever as described by authors  
and the Angina Maligna.

By JOHN CLARK, M.D.

One of the Physicians to the New-England Dispensary

LONDON:

Printed for T. Cadell, in the Strand.

MDCCCLXXXVIII

T O

JAMES GREGORY, M. D.

FELLOW of the ROYAL COLLEGE  
of PHYSICIANS,

A N D

PROFESSOR of MEDICINE

I N T H E

UNIVERSITY of EDINBURGH.

S I R,

**Y**OUR distinguished abili-  
ties, and the honourable  
station you hold in one of  
the most celebrated medical  
schools in Europe, would, of  
themselves, have made me  
ambitious of prefixing your  
name to the following pages.

Other

Other motives, however, influence me on this occasion, To your Father, the late illustrious Dr. GREGORY, both as a Friend and a Professor, I owe the greatest obligations; and if my labours be fortunate enough to merit the approbation of the public, I shall ever gratefully impute my success to the advantages I received from his instructions.

Permit me, therefore, to embrace this public opportunity of expressing the high veneration I have for the memory

mory of your Father; and allow me also to request your acceptance of this dedication, as a slender mark of the sincere respect and esteem, with which I have the honour to be,

S I R,

Your most obliged

Humble Servant,

NEWCASTLE,  
*Feb. 15th, 1780.*

JOHN CLARK.

memory of your Father; and allow me also to request your acceptance of this dedication, as a slender mark of the sincere respect and esteem, with which I have the honour to be, Sir, your most obliged

Humble Servant,

JOHN CLARK

## P R E F A C E.

**A**CCURATE attentive observation, and collecting useful facts, are the principal means of improving the practice of medicine. By this method Hippocrates, justly stiled the father of physic, formed it into a science; and had his successors continued to cultivate their art in the same manner, it had long before this arrived to a greater degree of perfection.

But unfortunately the majority of Physicians who succeeded him, deserting the study of nature, and indulging their imaginations in delusive and extravagant hypotheses, too frequently rendered the noble art of medicine fluctuating, mysterious, and fallacious. In proof of this assertion, we need only appeal to the various and contradictory theories which have prevailed in different ages, and which, upon the proposal of more ingenious conjectures, have sunk into disrepute and oblivion.

In the present century, indeed, ideal hypotheses are universally rejected; and the authority of system begins to decline. In our schools of medicine, every branch of the healing art is taught in the most liberal and judicious manner; and no theory is admitted, as a foundation for practice, unless supported by obvious facts. Some of our most eminent Physicians too, following the rules and example of Hippocrates and Sydenham, have recorded the result of their personal experience; and societies have been formed, for the laudable purposes of communicating practical instruction. In short there seems to be a rapid progress towards improvement in every department of medicine; and if we confine our researches to the business of observation, experiment, and close inductive reasoning, we may entertain the pleasing hopes that more effectual methods of treating diseases will be ascertained.

With

With a view of contributing my mite towards promoting so desirable an end, I have submitted the following work to the candid consideration of the public. Its only merit consists in being collected from actual observation on the symptoms of diseases, the cases of patients kept from day to day, and the effects of the medicines which were prescribed.

The first part of the work contains observations on primary fevers, especially those of the continued type; and on a variety of fever, prevalent at *Newcastle* in 1777 and 1778, attended with cough, and miliary eruptions. Some of my readers, I am confident, will wonder that I should adopt a similitude of treatment in diseases, which have hitherto been esteemed to be of a nature so extremely different. On this subject, however, I must beg leave to remark, that the opportunities which I have had of making observations, in



different climates, have convinced me that FEVERS are essentially the same in every country, and differ from each other only in the violence of their symptoms. The method of cure which I had found most beneficial, in every degree of latitude to the *East Indies*\*, has also been attended with the most happy success in this island; and it is probable that it will succeed in every age, and every country.

In the second part of the work, an account is given of a singular species of Scarlet Fever, which prevailed in Newcastle, in 1778 and 1779. At the time this disease appeared, I had perused no English Author, who had written expressly on the subject, except Dr Morton; and indeed the epidemic differed very much from his description. This induced me to attend, with the utmost care to the investigation of its nature.

\* See Observations on the Diseases in long voyages to hot countries, particularly on those which prevail in the East Indies.

nature. In practice I soon found the necessity of dividing this disease into different states, according as the fever was attended with symptoms of strong action in the vessels, with symptoms of debility or putrefaction. Thus, even amongst eruptive fevers, we have an illustration of the propriety of the distinctions which we have endeavoured to establish in primary fevers.

In the course of this work I have thrown out my sentiments with great freedom. But as no speculative system has been adopted, as my own observations have been delivered without finding fault with those of other Physicians, who differ from me in opinion, and especially as nothing has been advanced unless supported by facts, I hope I shall, at least, meet with a candid perusal.

In the Appendix I have offered some remarks, and specimens of Tables for the improvement of MEDICAL RETURNS.

The

The reader will easily observe how much I have been indebted to the ingenious Doctors Percival and Haygarth. But whether, in the various establishments for the relief of the sick, returns upon this plan can be adopted, I do not pretend to decide.

I cannot prevail upon myself to conclude this preface, without requesting, the indulgence of my readers for the mistakes and inaccuracies which may have escaped me, in the publication of this work; which has indeed been transcribed in the hurry of business, and often interrupted by the avocations of my profession. If, however, it shall be thought, by impartial and unprejudiced judges, that I have contributed any thing of importance to the general stock of medicine, I shall esteem the labour and anxiety, which it has cost me in making the following observations, amply rewarded.

## INTRODUCTION.

SINCE the establishment of the Dispensary at *Newcastle*, which afforded an opportunity of making the most valuable part of the observations contained in this work, similar institutions have been adopted in other large towns in the kingdom: and with a view of promoting their extension, I shall, without farther apology, give an account of the rise and progress of that charity.

*A short account of the rise and progress of the Newcastle Dispensary.*

In the populous and commercial town of *NEWCASTLE*, many thousands of industrious labourers and mechanics are continually employed. Whilst enjoying health, they have it in their power to obtain, at least, a temporary subsistence for their families; but when visited with sickness, they become exposed to all the direful attendants of disease and indigence.

Fevers, with other frequent and fatal distempers, to which this useful class of people are most peculiarly subject, cannot, with propriety, be admitted into an Infirmary, on account of their infectious nature; and many other distempers are too rapid and violent in their attacks, to admit of the delay of the weekly mode of admission. Children cannot, without inconvenience, be separated from their parents; and the presence of many of the latter is so essentially  
neces-

necessary at their own abodes, that they cannot avail themselves of these charitable institutions.

But farther, it must be observed, that the chief design of County Infirmaries, is to administer relief to those who suffer by accidents, and require the assistance of surgery; or to those who labour under such distempers as will admit of the removal of the patients from a considerable distance, without injury. Were not this the case, these excellent establishments would never answer the intentions of their benevolent supporters.

Influenced by such considerations, and reflecting on the advantages resulting from the institution of Dispensaries in the metropolis, a few private gentlemen, in the month of April 1777, proposed a plan for establishing a DISPENSARY in *Newcastle*, as an auxiliary to the Infirmary.\* But as mankind are seldom unanimous concerning the merits of a new charity, it had various obstacles to encounter; and notwithstanding the activity and attention of the subscribers, it could not be opened for the admission of patients till October following.

At its first establishment, the annual subscriptions only amounted to 143*l.* but since that period

\* The Infirmary was established, in 1751, for the relief of the Sick and Lame Poor in the three populous counties of DURHAM, NEWCASTLE, and NORTHUMBERLAND; and is limited to cases in surgery, and such medical cases only as cannot spread their influence by infection.

riod its funds have gradually been increasing. It is however to be lamented, that its income, even at the end of the second year, has been found inadequate to answer the numerous and urgent applications of the indigent. But in a town, which has ever distinguished itself for acts of humanity and charity, when the great importance of the institution is sufficiently attended to, it may be reasonably presumed that it will gain a greater share of the public liberality.

The records of the NEWCASTLE DISPENSARY have already afforded the most incontestable evidence in its favour. By the state of the charity published at the end of the second year, it appears that *one thousand three hundred and sixty-four* patients had been admitted, of whom *one thousand and eighty-five* were CURED. It also appears that 725 laboured under fevers and infectious diseases, which could not be admitted into the Infirmary; that 446 were afflicted with diseases which would not admit of the delay of the weekly mode of admission; and that the remainder, 193, were improper for an Infirmary, either because the sick were too infirm to go for advice as out-patients, or from the circumstances of their families making their presence at home indispensably necessary.

But although the Dispensary has been productive of such singular advantages to the poor confined to their own houses by sickness in general, yet it is to be regretted, that the natural

Small

Small Pox continues to commit dreadful havock amongst them, and that every endeavour to extend the blessings of inoculation has proved unsuccessful. With a view to excite the attention and compassion of the humane to raise a fund for encouraging inoculation in *Newcastle*, the Governors published the following estimate in October 1779.

*An estimate of the mortality occasioned by the Small Pox in NEWCASTLE, and of the advantages of promoting Inoculation.*

To judge in what degree the Small Pox proves fatal to the inhabitants of this town, where the registers of deaths do not mention the diseases of which persons die, recourse must be had to the accurate bills of mortality established in other places. In the town of *Manchester*, which is not so populous as *Newcastle*, during the period of six years, viz. from 1768 to 1774, although the Small Pox was only twice epidemic, the deaths by it alone amounted to *two* out of *thirteen* occasioned by all diseases whatever.\* In the city of *Chester*, during six years previous to 1778, it was proved by the certificates of the Clergy, that 378 persons had died of the Small Pox, and that the whole number of burials during the same period was 2522. The proportional mortality of the Small Pox, to that occasioned by  
all

\* See Dr. Percival's *Essays*, Vol. III.

all other diseases, is therefore more than *one in six*.\*

The annual medium of burials by the church registers of *Newcastle* and *Gateshead*, for six years, previous to 1779, is 673. But great numbers of the poor are buried at the *Ballast Hills*: the computation of annual burials there is 300. This last sum added to the former, will make the annual medium of burials amount to 973.† And if we suppose that a *seventh part* only die by the Small Pox, the yearly average of mortality by this disease will amount to 139.

By different observations it appears, that the number of persons who die by the natural Small Pox, bears a greater proportion to the number that recover, than that of *one to six*. But if we admit this proportion, it will follow, that 834 persons in this town annually, upon an average, take the natural disease, this sum being six times the number of those that die. If 834 appear too large a number, then it will follow, that the proportional mortality is greater than that of *one to six*.

On the other hand, by the improved method of inoculation, not above *one in five hundred* dies.

C 2

But

\* PROPOSALS for preventing the mortality of the Small Pox, in *Chester*.

† The sum of annual deaths, according to this calculation, cannot be over-rated: For if we allow that one in thirty of the inhabitants die annually, the whole number of inhabitants in *Newcastle* and *Gateshead* will only amount to twenty-nine thousand one hundred and ninety.



But if even we allow that amongst the poor, from their not paying strict attention to directions, and from other causes, *one* in *fifty* dies, yet could the practice be rendered general, it appears that, instead of 139 persons dying out of 834, only 16 or 17 would die, and consequently 122 lives would be annually saved in this town.—A very important number, when it is considered that the victims of the natural disease are the young, whose lives would prove of most benefit to the community.

Hospitals, were they established, could never render inoculation general. By their regulations children under seven years of age are excluded. In large towns however few escape the Small Pox till this time of life. By the bills of mortality at *Manchester*, it appears, that nearly *three-fifths* of those who are carried off by the Small Pox die under two years of age; and that of 589 persons who died, only 39 were above five years of age. Of 136 who died of the Small Pox in *Chester* in the year 1777, seven only arrived at seven years of age, of whom only three were natives. The same accounts are confirmed by the records of the NEWCASTLE DISPENSARY. Of 45 patients in the Small Pox, eight were above seven years of age, *one* of whom only was a native. But if nurses were provided to attend younger children, Hospitals would never answer the purpose: The expence would be too great; and few of the poor would suffer their tender offspring to be taken from them and placed in an Hospital. The

The general inoculation of the poor, for these reasons, can only be performed at their own houses. And no solid objection can be made to the practice in this town, where the natural disease *always* exists; and where those of better rank are in the constant practice of inoculating their children, at various times in every year.

It is universally admitted, that the quantity of infection is in proportion to the number of pustules. A hundred inoculated patients, upon an average, will scarcely have fifty pustules each; whereas the body of a miserable confluent patient is covered with thousands. It is therefore evident, as inoculation becomes general, the natural contagion will be extinguished, and in time this disease will cease to be dreadful.

It is, indeed, an unfortunate circumstance, that the poor of this town have hitherto disregarded every benevolent offer to promote inoculation amongst them. Ill-founded prejudices prevent numbers; and the labour of many of the poorest class of women is so necessary to support their families, that they cannot, without exposing themselves to want, afford time to nurse their children during the period of inoculation. From these considerations, the Governors of the Dispensary, last year, resolved to give five shillings to the most indigent parents, as a reward for nursing their children; but the funds of the charity not admitting of this, little progress

gress has been made in the inoculating department.\*

REWARDS given to the poor have, in other places, removed their prejudices to this salutary practice. By this means alone the present EMPRESS of *Russia* rendered inoculation general amongst her subjects. And we are informed by Dr. Haygarth, a Physician of great eminence and humanity in *Chester*, that the *Society for promoting general Inoculation, and for preventing the natural Small Pox*, instituted there last year, has already found rewards productive of the desired effects.

Having given a short account of the charity which afforded an opportunity of making the following observations, it may not be improper to conclude this introduction with a description of *Newcastle*, and the manner of the living of the inhabitants, so far as these circumstances seem to be connected with health, or to influence the course of diseases.

#### DESCRIPTION of NEWCASTLE.

*Newcastle*, lying in  $55^{\circ}$  north latitude, and in the longitude of  $1^{\circ} 17'$  west from *London*, is situated on the northern banks of the river *Tyne*,  
about

\* By the advice of the Physicians, nineteen patients have been inoculated by the Surgeon of the Dispensary; and although the children in general lay in rooms with their brothers and sisters who had the confluent Small Pox, (which proved very fatal) yet every one of those inoculated passed through the disease in the mildest manner.

about nine miles from the sea. The tide flows about six miles above the town. It is furrounded by a wall, whose circuit is above two miles; but there are several buildings and streets continued without the walls. It is joined, by a bridge, to *Gateshead*, which stands on the steep banks of the opposite side of the river; and therefore they may be properly considered as constituting one large town.

The number of inhabitants in *Newcastle* and *Gateshead*, are reckoned to amount, at least, to thirty thousand, which is nearly in the proportion of ten persons to each house. In our calculations from the bills of mortality, the sum is indeed less;\* but in a town so populous, and where so many families live under one roof, it is probable that the above estimate is not over-rated.

The lower and most populous part of *Newcastle*, and the extensive suburb of *Sandgate*, are placed by the water side. The streets are narrow, and the houses close built. The lanes and alleys, commonly called *chares*, are extremely narrow and dirty; and those by the *Quay* and in *Sandgate*, being over-topped by rising banks and houses to the north, have no free circulation of air. The antient town *Pandon* or *Pampedon*, united to *Newcastle* in 1299, lies, within the walls, in a deep hollow. The houses here, as well as in *Sandgate*, and many *chares*  
by

\* See note page xix.

by the Quay, are ill built and crowded with inhabitants.

In ascending from the river, the banks are exceedingly steep, and the streets narrow. The whole of the high town stands on a fine airy situation. Many of the streets are broad, the houses well built, and in general have gardens behind them.

The whole of the town stands on a deep clay soil. The fields in its environs are open; the country around populous, well cultivated, and fertile. The markets are therefore stored with flesh, fish, fruit, herbs, roots, and all other kinds of provisions. The town is supplied with water from the river, and from public fountains, called *Pants*: several houses also have water conducted into them by pipes. It must be observed, however, that few of the springs brought into the town answer every culinary purpose. Some are too hard, and others too much impregnated with an alkaline salt.

Besides the mechanics and labourers which every populous town requires, a great number of men are employed in the coal-lighters, commonly called *keels*;\* in the several glass-houses, sugar-

\* Each keel holds 20 tons, and is worked by three men and a boy. Above 460 of these boats are constantly employed in carrying the coals to the shipping at *Shields*, the port at the mouth of the river. The collieries lying at various distances from Newcastle, on each side of the river, few of the pitmen live in the town.

sugar-houses, foundaries, iron, steel, white lead, and other manufactories.

The higher class of people live much in the same manner as in other opulent towns. But the laborious part of the inhabitants, while in health, perhaps live better, and eat more animal food than those of the same station in any other part of the kingdom. Their common bread is made of coarse wheat-flour fermented, and sometimes of a mixture of wheat and rye. Their drink is well-hopped beer.

The upper part of the town enjoys a pure and salubrious air; and even the lowest and most confined places are, in some degree, ventilated by the constant motion of the tides, and the successive breezes collected from the sloping banks of a large river. When diseases appear amongst the poor, from neglect of cleanliness and other causes, they frequently become malignant and contagious. But several circumstances concur to render them more healthful than could be imagined, upon taking a superficial view of their miserable and crowded habitations. Having plenty of coals, and keeping good fires, a stagnation of the air is prevented in the most confined rooms, and its putridity corrected by the acid arising from the fuel. Besides, the women being employed in carrying burdens, and their children running about, a great part of their time is spent out of doors. Hence they are in general robust and strong.

Upon the whole, *Newcastle* may be esteemed more healthy than most towns of an equal size in the kingdom. Persons of better rank enjoy almost a total immunity from fevers, and other contagious diseases; and except the Small Pox, Measles, the Cattarhal Fever, and Scarlet Fever attended with Ulcerated Sore-Throat, no distemper has prevailed epidemically in this place for many years.

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P A R T I.

O B S E R V A T I O N S

O N

F E V E R S,

ESPECIALLY ON THOSE OF THE

C O N T I N U E D T Y P E.

*Apparet, hos morbos varietate quidem infinitos  
ratione symptomatum, tamen ex origine non adeo  
compositâ pendere; neque tam varia medicamen-  
ta, medendive methodum requirere.*

BOERHAAVE.

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PART I.  
OBSERVATIONS  
ON  
FEVERS, &c.

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SECT. I.

CHARACTER OF FEVERS.

**F**EVERS are known by beginning with chillness or shivering, succeeded by frequency of pulse, preternatural heat, and weakness of voluntary motion, without deriving their origin from Local Inflammation, Specific Eruptions, or other primary diseases which produce symptomatic fever.

The ancient Physicians believed heat to be the essential character of fevers. They, however, very judiciously made a distinction betwixt primary fevers, and those diseases,

in which fever is symptomatic, from the affection of a particular part\*.

Boerhaave, Van Swieten†, and other Physicians of the present century, are of opinion, that quickness of pulse constitutes the essence of fever; and that it is the only symptom to judge of the presence of the disease; as heat, and the other phenomena, do not attend through the whole course; but only exist in different stages of fever. But to this opinion objections may also be made: For in some states of fever, especially in those which have been usually denominated Nervous, the pulse, sometimes, does not in quickness exceed the standard of health. As all fevers, unless those temporary ones, which derive their origin from violent exercise, fits of passion, or a debauch, begin and are attended with the

\* *Febribus vexari Veteres dicebant ægros, qui absque aliquâ inflammatione, vel abscessu, aut dolore, aut erysipellate, aut, simpliciter loquendo, absque aliquâ parte præcipuè affectâ, male habebant. Si vero, vel propter lateris, vel pulmonis, aut alterius cujusdam similis inflammationem febricitarent, non vocabant illos febricitantes, neque febribus vexatos sed pleuriticos, peripneumonicos, hepaticos, &c. Galen. Comment. in Aphor. 73.*

† Van Swieten Comment. Aphorism. 570, 571.

the symptoms already mentioned; they will easily be distinguished by the character which has been given them.

When fevers are once confirmed, a very numerous train of symptoms arise: the nervous system is in general disordered, and all the functions of the body perverted: The mind is often affected with delirium: Want of appetite, thirst and inquietude generally prevail; and the salutary secretions and excretions cease to be regular. But whatever attention these, and other Phenomena merit in the history of the disease, as fever may exist without them, they ought not to be admitted into the definition.

## S E C T. II.

### OF THE DIFFERENCE OF FEVERS.

**F**EVERS have been divided into many genera, and various appellations have been given to them both by the ancients and moderns, derived from the time of their duration; from some remarkable predominant symptom; from the state of the fluids;

## 6 OF THE DIFFERENCE OF FEVERS.

and from other circumstances\*. But, unfortunately, the many names to be found amongst Authors, not only load the memory, perplex the unexperienced, but answer no real advantage in practice.

After several years careful attention to the symptoms and nature of fevers, as they have occurred in different climates, I freely confess that I have never been able to follow authors through their numerous divisions and subdivisions. And I am fully convinced, that although many varieties happen according to constitution, season, situation and climate: yet every where fever is essentially the same, or, in other words, consists only of one *Genus*; and that the only species which can be well ascertained, are the following, viz. *Intermittent*, *Remittent*, and *Continued* Fevers. This opinion, it is presumed, will be proved in the most satisfactory manner by examining the

\* Hence amongst the antients the names of *Ephemera*, *Synochus*, *Typhus*, *Lipyria*, *Affodes*, *Causus*, *Synochus Putris*, *Synochus Imputris*, &c. And amongst the moderns, *Inflammatory*, *Nervous*, *Putrid*, *Bilious*, *Petechial*, *Miliary*, *Malignant*, *Pestilential*, &c.

the essential symptoms of these species of fever.

An Intermittent Fever, whether quotidian, tertian, or quartan, begins with coldness and shivering; the countenance looks pale; the skin is shriveled; the nails grow livid; the head aches; respiration is quick and the pulse weak, frequent and oppressed. This stage is succeeded by excessive heat: the pulse becomes hard, quicker, and stronger; the urine high coloured; the thirst intense: and at the height of the hot stage, if not before, the imagination is confused, and frequently a delirium ensues. As the sweat flows, the pulse becomes softer, and less frequent; and all the symptoms abate. At last a perfect intermission succeeds, and the patient continues well, till the return of another paroxysm, which is again ushered in with shivering.

A Remittent Fever begins in the same manner as an Intermittent; only the cold stage, in general, is not so severe, nor so long continued. In the hot stage, the head-ach, the thirst, the frequency of the



8 OF THE DIFFERENCE OF FEVERS.

pulse, the delirium and other symptoms are often more violent. At the decline of the hot fit a sweat comes on; the pulse becomes less frequent; and all the symptoms abate for a few hours. After the remission, another paroxysm returns; sometimes with a shivering fit, and frequently without it.

A continued Fever begins in the same manner. The attack is frequently as violent as in an Intermittent; and, for some days, the heat, the head-ach, and the quickness of the pulse are equally excessive. Sometimes, indeed, the attack begins with a slight chillness instead of shiverings; and when the fever is formed, instead of the strong action of the vessels, which attends the paroxysms of Intermittents and Remittents, the heat is not much increased; and the pulse continues weak, quick, and unequal.

Most authors have supposed that a continued Fever runs on without any sensible remissions, till the disease terminate in recovery, or in death: but in a former publication,

tion\*, I observed that alleviations and exacerbations might always be perceived; and that all Fevers of this type suffered an exacerbation towards night; and that therefore it was the nature of every Fever to remit, if not accompanied with local inflammation. Since that period I have had no reason to alter my sentiments.

In this sense the term is applied by Hippocrates. "A continued Fever, says he, is sometimes violent from the beginning, and becomes worse: but about the crisis, and at the time of the crisis, becomes weaker. It sometimes begins mildly and secretly; but increases daily, and has exacerbations, and, about its height, and at the time of the crisis, breaks out vehemently †." In this sense the term is also employed by Dr Willis ‡; and Dr Cullen observes

\* Observations on the Diseases in Long Voyages, &c. p. 120, 121.

† Hippocrat. De Morb. Vulg. p. 963. Edit. Foës.

‡ Febris continua est cujus accessio ad plures dies sine apyrexia portenditur: sua habet remissionis, et exacerbationis tempora, intermissionis vero nequaquam: exardescencia modo est remissior, modo intensior, usque tamen febricitant ægroti, donec à crisi, aut insensibili convalescentiâ morbus in totum solvitur.

observes, that, in a long course of practice, he had never seen a continued Fever which is supposed to consist of one paroxysm only\*.

Continued Fevers, therefore, do not seem to differ more from the remittent than the last from the intermittent type. Their frequent changes into each other†, shew them to be of the same genus; and the variety of their forms seems, in a great measure, to depend upon the difference of climate, constitution, &c. but more particularly on the concurrence of the remote causes of fever, viz. a moist warm state of the air, marshy effluvia, and human contagion: the two former commonly producing the intermit- tent, or remittent; and the latter almost al- ways the continued type.

#### Modern

\* First lines of the Practice of Physic. Vol. I. art. 28.

† The type of Fevers is sometimes changed in their course. When this happens, it is generally in the following manner. Both tertians and quartans change into quotidians, quotidians into remittents, and these last become often of the most continued kind.—From all this a presumption arises, that every fever consists of repeated paroxysms, and differs from others only in the circumstances, and repetition of the paroxysms.

Ibid. Art. 30, 31.

Modern medical writers have supposed that continued Fevers consist of three genera, viz. the *Inflammatory*, the *Nervous*, and the *Putrid*; and many Physicians, fond of multiplying names, have divided each of these genera into many species and varieties. Although I decline entering into any dispute about names, yet it may not be improper to give my reasons for rejecting these divisions of fever.

If we nearly examine these supposed genera, we shall find that they only express different states of fever; and that the symptoms which characterize them, equally attend fevers of the intermittent, and remittent type.

The *Inflammatory* Fever, for example, is defined to consist in intense heat, frequent, strong, hard, and full pulse, with high-coloured urine. Many fevers, in their incipient state, are attended with these symptoms, which however prevail more in the paroxysms of intermittent, and remittent fevers, than in those of the continued type. Even the depressing powers of contagion do

do not always guard against symptoms of strong action of the heart, and arterial system. Gillchrist, describing the *Nervous* Fever, observes, "that in some the seizure, "and symptoms, on the first days were violent: such as vomiting, nausea, head-ach, "full, strong, and hard pulse, heat, and "redness of the eyes\*." Except by the tremors of the hands, even the Jail or Hospital Fever is not to be distinguished from any common fever, and the pulse in the beginning varies in strength, and in fullness. Sir John Pringle, in this fever, and Huxham, in the *Putrid* fever, advise bleeding, to moderate the strong action of the vessels. For these reasons, whatever attention this state of fever may merit in practice, as it equally attends intermittent, remittent, and continued fevers, it ought not to be admitted as constituting any generic difference.

The term *inflammatory*, in my opinion, ought only to be applied to fever when it is the concomitant of inflammation; and I must confess, that, however contrary the  
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\* Edinburgh, Med. Essays, Vol. IV. art. 23.

assertion may be to the authority of Physicians of the first eminence, I have never met with an inflammatory fever, independent of local affection. The very name, as it leads to bleeding and evacuations, ought to be admitted with caution.

The fizy appearance of the blood which has, so universally, led to the opinion of fevers being inflammatory, deserves particular notice. In local inflammations it is well known that the blood, when drawn, is, very frequently, covered with a crust of coagulating lymph. Whilst the theory, which referred the cause of inflammation to lentor and obstruction, prevailed, it was not surprizing that this circumstance was brought to confirm the doctrine. But Dr Fordyce asserts, that notwithstanding the apparent visciduity of the blood after it is drawn and suffered to cool, yet whilst it flows in the vessels, it is more fluid than in the ordinary state previous to inflammation. From the experiments of the late ingenious Mr Hewson, who has supported this doctrine, in a very able manner, it also appears, that inflammation, instead of

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14 OF THE DIFFERENCE OF FEVERS.

increasing the disposition of the blood to coagulate, really lessens it, at least that part which forms the crust\*.

But whatever be the cause of this appearance of the blood, or whether it proceeds from tenuity or viscosity, it has been frequently observed in diseases quite the reverse of inflammation. Doctor Heberden has often seen the blood covered with a buffy coat, in erysipelatous gangrenes, in the Putrid Sore-Throat, and when drawn from exhausted and dying persons †. The same appearances have been observed, when the blood has been taken from persons in the Jail Distemper ‡. De Haen has many times seen the blood of those covered with a very thick crust, who have laboured under malignant diseases; nay even in the most Putrid Fevers. “Centies viderunt Mei  
 “Auditores, sanguinem malignis in morbis  
 “spissum, ingentique corio tectum; ita quidem  
 “dem ut in febre cum pulsu debilitatem simulante,  
 “cum urinâ sive naturali sive foetidâ,  
 “cum extantibus aut *Petechiis*,  
 “&c.

\* See Dr Fordyce's Elements of the Practice of Physic Vol. I. and Mr Hewson's Experimental Enquiries.

† Medical Transf. Vol. II.

‡ Pringle on the Diseases of the Army. P. 307.

“ &c. In febribus putridissimis, quarum his  
 “ miliaria, illis *petechiæ*, aliis iterum variolis  
 “ prodierunt, sanguinem nobis olim frequen-  
 “ ter visum esse, aut condensatum duntaxat,  
 “ aut crasso corio tectum: idque æque in  
 “ paucioribus qui tandem obirent, atque in  
 “ illis quibus rediret postmodum salus\*.”

I have also seen the blood covered with a buffy coat in a patient who died of an encysted dropfy, and in another who laboured under the Ulcerated Sore-Throat; but I must confess in both these instances the crassamentum was of a loose texture. And I have frequently given Bark, with success, in fevers where the blood, previous to my attendance, has been pronounced to be very fizy.

These circumstances will prove, in the most convincing manner, that the fizy appearance of the blood, is not a certain criterion of inflammation, and without being joined with other symptoms, which more uniformly characterize inflammation, can be of little use in directing the method of cure.

When

\* Rat. Medend. Continuat. Page 86, 88.



When continued fevers are attended with a weak pulse, prostration of strength and spirits, and much disorder in the nervous system, they have been denominated *Nervous*; and when symptoms of a dissolved state of the blood appear, they have been called *Putrid*. Every symptom characteristic of the nervous fever, I have seen attend *Remittents* of hot climates; and even all continued fevers, in this country, are, in general, sooner or later succeeded by this state of fever. And in some fevers, although from the beginning the fluids have appeared in a dissolved state, yet putrescency, is more frequently an effect of fever, than a cause, and equally attends intermittent, remittent, and continued fevers. There appears, therefore, great impropriety in confining the terms to continued Fevers; and still more so in establishing them as different genera.

In other diseases were we to form distinct genera, from the different states of the fluids, and other attending circumstances, as has been the case in continued fevers, we

we should very much multiply distempers which are essentially the same. The small pox, for example, is almost always attended with fever, which, in some patients, is accompanied with strong action in the vessels; in others with symptoms of debility and nervous distress; and in others with those which denote a tendency in the fluids to putrefaction. Nay even the same patient (which is also the case in continued fevers) will, in a few days, go through the different states of fever which attend this disease: yet every physician knows that the distemper proceeds from the same specific contagion: and that these varieties express no generic difference.

It is evident from what has been advanced, that all primary fevers are attended with the same essential symptoms; and that the only difference is, that, in some of them, the intermissions and remissions are perfect; in others so obscure, as justly to entitle them to the name of *continued*.

They likewise differ from each other, in being attended, sometimes, with strength and activity of the vascular system; sometimes

with symptoms of debility; and sometimes with those which denote a tendency in the fluids to putrefaction. It is therefore reasonable to conclude, as the great Boerhaave does on another occasion, that  
 “those diseases, though infinitely various  
 “with regard to their symptoms, do not  
 “arise from so complex an origin, nor  
 “require so great a variety in their remedies or method of cure.”

The cure of intermittent and remittent fevers, in all their varieties, by the Peruvian bark, is simple, efficacious, and the practice universally established. In a former publication, I have shewn that there is great danger in waiting for remissions; and that this noble febrifuge may be given, with the greatest success, not only in the remissions and exacerbations of fevers in hot climates, but even when they become continued.

Having, it is presumed, had sufficient experience of the utility of the same mode of practice, in the continued fevers which usually occur in this island, I shall now proceed to make some observations upon them.

SECT.

## S E C T. III.

## OF THE CURE OF CONTINUED FEVERS.

**A**LTHOUGH great variety obtains in continued fevers, with respect to their symptoms and degrees of danger; yet, in practice, I judge it principally necessary to attend to the following distinctions, or states of fever.

I. Continued fevers frequently, in the beginning, are attended with strong action of the vascular system; and this state may be distinguished by the following symptoms: The pulse is quick, strong, hard, and full; the heat of the body intense; the urine high-coloured, and often small in quantity; and the senses and spirits remain tolerably clear. If the fever continue, or if not prevented by the method of cure, afterwards to be mentioned, it is for the most part, sooner or later, succeeded by the following state.

II. Continued fevers are more frequently, from the beginning, or soon after their formation,

mation, attended with debility and depression of the vital powers; and this state may be distinguished by the following symptoms: The pulse is weak, quick, and frequently unequal; the urine commonly pale; the heat not very intense; and the strength and spirits prostrated. Watchfulness and delirium are added, and as the disease advances, the delirium terminates in Coma. *Subsultus tendinum* ensue; the stools and urine frequently glide off involuntarily; and the patient is apt to faint on the least motion.

III. Both the preceding states of fever are frequently succeeded by, or attended with, a disposition in the fluids to putrefaction, which is distinguished by the following symptoms: The tongue becomes dry, and black; the breath and stools fetid; *petechiæ*, purple, or livid spots appear; hæmorrhages happen from the nose, and various parts; and, before death, the body, very frequently, emits a cadaverous smell.

Continued fevers, which are propagated by infectious *miasmata*, in particular states of the atmosphere, besides being accompanied

nied with the usual symptoms of fever, are also attended with those which denote pneumonic inflammation. Such a fever was prevalent amongst the poor in Newcastle, in 1777, of which an account shall be given in the following section.

Having thus distinguished continued fevers; and having given the characteristic symptoms, by which their most important states may be known; without entering into a detail of the accessory and extraordinary symptoms which frequently occur in particular instances, I shall now briefly describe the method of cure, which I have found most beneficial.

I. In the first state of fever, I give emetic tartar \* in such doses as to vomit gently, and afterwards to open the belly, directing the patient to drink moderately of any tepid, diluting drink most agreeable to his taste: By this means the stomach and intestines are cleansed; perspiration or a sweat produced;

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and

\* In my *Observations on Diseases in long Voyages to hot Climates*, &c. reasons are offered why *Emetic Tartar* ought to be preferred to every other antimonial preparation.

and the velocity of the circulating fluids diminished. If, however, excess of heat, quickness and strength of pulse continue, it will be proper, for some days, to give the antimonial in such a manner, as to keep the secretions open: and, should it fail to operate downwards, a decoction of tamarinds, a solution of manna, or Rochelle salts ought to be added.

As soon as the strong action of the vessels is reduced (for, if called in the beginning of this state of fever, we ought not to wait till the symptoms of debility ensue) the bark should be given, in as large doses as the stomach of the patient will bear, without regard to the remissions or exacerbations. If this method be timely applied, I can say with much confidence, that the disease will seldom terminate in the other states of fever; or in other words, become *nervous*, or *putrid*.

In some cases of continued fever, the affair, after the use of antimonials, may be trusted to nature: I have frequently done so, when the disease has shewn no disorder of the nervous

vous system, and where there has been no suspicion of its having arisen from contagion. But, in doubtful cases, after the fever has continued to the end of the fourth day, it is the safest method to commence immediately with the bark; for while the disease continues, there is no certainty, by any other method, to guard against the alarming and fatal symptoms, which frequently and unexpectedly come on.

I am sensible that, in the beginning of fevers, venesection is the most powerful means of abating the force and activity of the vascular system; and that it has been universally recommended by physicians in this state of fever. But as all fevers, at least such as have occurred in my practice, are in general soon succeeded by debility, or symptoms which denote a tendency to putrefaction in the fluids, this evacuation ought to be used with caution. There may be some cases of fever, indeed, that may require venesection in the beginning, particularly when there are evident signs of topical determinations of blood to the head, lungs, or any other part; when the patient



is vigorous and plethoric; and when the disease derives its origin from other causes than contagion. The exhibition of tartar emetic, in the manner already directed, will however, in a great measure, supersede the necessity of venesection. In seven years practice, I have only had occasion to direct this evacuation twice in continued fevers, unaccompanied with symptoms of local affection: and I can add, that I never lost a patient from the omission.

II. In the second state of continued fever attended with debility and depression of the vital powers; when called in the beginning, if the skin be hot and dry, I give antimonials as directed in the former state; but never continue them so long as to produce profuse evacuations. But when the patient has been much weakened, or the disease advanced, antimonials are unsafe and ought to be omitted entirely: and with respect to other medicines, I place the whole stress of the cure on the Peruvian Bark, without waiting for remissions.

III. In

III. In the last state of fever, which is accompanied with symptoms of putrefaction, the bark ought to be given in very liberal dozes, together with the vegetable or vitriolic acid, ripe fruits\*, wine, and other antiseptic liquors. The use of the bark in this state of fever, is so agreeable to the established practice, that there is not the least occasion to insist upon its efficacy.

If the above method of cure be employed in the different states of fevers, during the first week, it will very frequently remove them. But, after they are once confirmed, they will, for the most part, run their course in spite of every medicine. All that can be expected from the bark, in such cases, is to obviate debility; counter-act

\* “The juice of ripe fruits, as Van Swieten observes, requires no preparation, removes thirst, allays heat, promotes stools and urine, and affords the greatest relief to the stomach languishing under putrid bile.” Comment. Tom. 1. p. 126.

Ripe fruits, indeed, are not only cordial, but the most powerful correctors of putrefaction; and in my opinion, in fevers attended with a dissolution of the fluids, are much to be preferred to the present fashionable modes of exhibiting *fixed air*.

act putrefaction; and to prevent fatal determinations to the viscera; the chief causes of death in fevers\*.

Distressing symptoms frequently arise in the course of fevers, which may require a va-

\* Upon the dissection of those who have died of fevers, there have been found inflammation, abscess, and mortification, in the brain, and other viscera. These symptoms, however, are only to be considered as the consequences, and not the cause of the disease. Such appearances are very generally found upon examining the bodies of those who die of putrid fevers. We are informed by Sir John Pringle, that when the jail fever proved fatal, it terminated in actual mortification of some part; that the intestines, in particular, were apt to mortify; and that abscesses were found in the brain. In the putrid remitting fever of Minorca, Dr Cleghorn found the intestines of those that died, either entirely mortified, or partly mortified, and partly inflamed. Bartholine also informs us, that the stomach and duodenum of those who died of the fever which was epidemic at Copenhagen in 1652, were always found inflamed and mortified. From the numerous dissections of those who died of the plague at Marseilles, and of the malignant fever at Rouen, some of the viscera were always found in an inflamed and gangrenous state. See Sir John Pringle's Treatise on the Diseases of the Army. *Traité de la Peste*, part. 1. Le Cat's Account of the Malignant Fever at Rouen. *Phil. Transf.* Vol. 49. Part 1. Hoffman de *Febrilib. Petech.* &c.

As such fatal determinations, have very seldom happened in my practice, either in the fevers of hot climates, or in those of this country, the prevention of such symptoms can only be imputed to an early and liberal use of the bark.

a variety of remedies; however, in the general cure of fevers, I place great confidence in, and use as auxiliaries along with the bark, the following articles, viz. the *pediluvium*; the free admission of cold air; taking the patients out of bed; light cloathing; keeping the belly regular; and, in some cases, the use of opiates and blisters.

In the beginning of fevers, while no great debility prevails; especially when the skin is dry, or the head affected, nothing is attended with more advantage, than the use of the *pediluvium*, and every night, at least, the patient's legs ought to be immerfed in warm water. This method not only prevents delirium, but frequently removes it, after it has taken place. When the patient is not able to sit up, warm fomentations ought to be applied to the legs and feet.

The chambers of the sick ought to be kept exceedingly clean, and, at all times, well ventilated; and as soon as the strong action of the vessels is abated, cold air ought  
to

to be freely admitted by the doors and windows.

The patient should be allowed to get up, and sit out of bed at pleasure; and even when symptoms of debility, or putrefaction prevail, great advantages are derived from taking the patients out of bed: but in such cases it will be always prudent, to place them gently upon a couch in an horizontal posture, in order to prevent the risk of fainting.

Opiates, although they produce the most happy effects in some cases of fever, yet their use must be admitted with caution. When fevers are attended with debility, and nocturnal exacerbations with delirium, opiates are very proper. When the skin is dry, I generally combine the opium with emetic tartar, or give it in the form of Dover's powder, at bed time. Opiates also are the only remedies to be depended upon, when a diarrhoea is not critical; or when the bark runs off by stool.

With respect to blisters, I am very far from being an advocate for their general use;

use; and believe that, even in nervous fevers, where they have been most universally recommended, they too frequently produce bad effects. If the method of cure which has already been advised be early adopted, there will be, very seldom, any occasion for their application. But when fevers have been neglected, and delirium comes on, attended with weak pulse, and a dangerous comatose disposition, I have frequently seen a blister, applied to the head, attended with the best effects. They are also peculiarly serviceable, when fevers are complicated with pleuritic or peripneumonic stitches.

In every state of fever the diet ought to consist of farinaceous substances, such as gruel, panado, &c. and both when the action of the vessels is strong, and also when there is a tendency in the fluids to putrefaction, ripe fruits of all kinds ought to be allowed. Whilst the activity of the vascular system continues, the drinks should be taken moderately warm: but when symptoms of debility or putrescency prevail, the drinks ought to be cold, and acidulated with lemon juice, currant jelly, or  
any

any other vegetable acid; to which a sufficient proportion of generous wine must be added. In such circumstances, malt liquors also, as they are powerful resisters of putrefaction, constitute a very proper drink. And when the patients long for cold water, it ought to be allowed: and every other inordinate craving should be indulged.

Having made these observations on the principal remedies, which I have used in continued fevers: I shall now subjoin particular histories, selected from a great number of similar cases, which have come under my care.

### CASES OF CONTINUED FEVERS.

#### CASE I.

HENRY YOUNG, aged twenty-four, of a strong, and healthy constitution, after being indisposed for two days; on the third of *October*, 1772, was seized with shivering, head-ach, and lassitude. In the afternoon he was obliged to take to his bed; and at nine o'clock in the evening I visited him. His skin was hot, though he still complain-  
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ed of chilness; his tongue was white; his pulse beat one hundred pulsations in a minute; he was exceedingly restless, and had an inclination to vomit. His feet and legs were ordered to be immersed in warm water, and a draught, containing a grain of emetic tartar, was prescribed. In half an hour, his countenance became flushed; his fever increased; and he vomited a considerable quantity of bile. At eleven o'clock his pulse was strong, and beat 120 pulsations; and his skin was moist. I left him with directions to take another antimonial draught, at one o'clock in the morning.

*2d day.* He sweated and slept some in the night. At seven o'clock in the morning he was seized with a shivering, which was succeeded by an increase of his former febrile symptoms. Half a grain of tartar emetic was prescribed; and he soon fell into a moderate sweat. At noon he found himself so much relieved, that he dressed himself, and, contrary to directions, went down into the kitchen. He had not continued long out of bed, till the feverish symptoms recurred. At three o'clock in the afternoon I found  
his



his skin very hot; his pulse one hundred pulsations; and he complained of an excruciating head-ach. At four he had a chilly fit; soon after his fever ran high, and he became very restless; his respiration was very quick, and he emitted frequent involuntary sighs. A quarter of a grain of emetic tartar was prescribed every two hours, after the use of the *pediluvium*.

3d day. He sweated in the night, and had two stools from the antimonial. When I visited him at eight o'clock in the morning, he complained of a great head-ach; his eyes were watery; his pulse 120, full and hard; and his countenance was flushed. Ten ounces of blood were taken from his arm, which had no fizy appearance: he bore the evacuation well, and thought it gave him some relief. At nine o'clock, however, he had a severe accession of fever, preceded by rigors. Emetic tartar was repeated as formerly: at four in the afternoon he was in a profuse sweat; his pulse beat 100 pulsations; and his urine was high-coloured. In the evening he had a slight return of chillness. At eight o'clock his skin was exceedingly hot,

hot; he tossed much; his eyes looked wild; and his pulse was 108, soft, and equal. Five and twenty drops of Laudanum were added to the antimonial draught, which was directed to be taken, after having his feet immersed in warm water. A draught, containing two ounces of a strong decoction of the bark, was also prescribed every two hours.

*4th day.* He slept till four o'clock this morning, when he took the draught with the bark; and at five he had an exacerbation of fever, preceded by chilness. At eight o'clock his pulse was 110; his countenance flushed; his tongue dry, and parched. Being costive, a clyster was injected, which procured a stool. The feverish exacerbation became very severe about twelve o'clock, and continued with unabated force till nine at night. He had then taken twelve ounces of a strong decoction of bark. The anodyne draught was repeated; and half a drachm of the powder of bark, with two ounces of the decoction, was ordered to be given every two hours, in the morning.

*5th day.* He had some rest last night. At eleven, when I visited him, he had taken four of the draughts with the bark; his pulse was 108; his skin was very hot; and his head-ach excruciating. As he was constive, a clyster was injected, which operated properly. His fever, however, increased; his pulse became 120 pulsations in a minute; and he was delirious. At seven in the evening, his senses returned; but he was very restless, and complained much of head-ach. A draught, containing a quarter of a grain of emetic tartar, and fifteen drops of Tinct. Thebaic. was prescribed. At ten o'clock, he was in a gentle moisture, and was in every respect much relieved. A draught, containing one drachm of the bark, was ordered to be repeated every two hours.

*6th day.* He rested so well in the night, that his nurse had only an opportunity of giving him one draught. In the morning, his skin was pretty cool; his pulse 104; but he complained much of head-ach. Through the day, he was frequently insensible; but he continued to take the bark

regularly. At eleven o'clock, his pulse beat only 90 pulsations in a minute; and he became perfectly sensible. This day he took an ounce of the bark in powder, and fourteen ounces of the decoction.

*7th day.* He rested well in the night; but in the morning had an exacerbation of fever, which went off with a gentle sweat. At noon, his skin was cool; his pulse only 98; and his tongue became a little moist about the edges; but he still complained of great weakness, and his urine continued of an amber colour. At nine o'clock at night, his pulse was only 74 pulsations in a minute.—He took six drachms of the bark this day.

*8th day.* At several different observations, his pulse did not exceed 70 pulsations in a minute. He had no feverish heat; but his tongue continued dry and chopped in the middle. The bark draughts were ordered to be continued.

*9th day.* His urine was turbid, and he had no complaints unless feebleness. The same medicines were continued.

*10th day.* He quitted his apartments; and, contrary to directions, passed the whole day in the kitchen with his fellow-servants. At night he complained of lassitude, and of soreness in his throat. These complaints, however, disappeared by the application of the volatile liniment round the throat, and by drinking some warm wine whey at bedtime.

In a few days more he returned to his employment; but he was advised to take some dozes of the bark daily, with a view to prevent any danger of a relapse; a precaution, however, which he neglected.

Soon after this he relapsed; being confined by a fever, which I caught during my attendance, another gentleman was consulted, who prescribed venesection, antimonials and blisters. At the end of a fortnight, his patient becoming daily weaker and worse, and observing remissions, he at last ventured to give him the bark. His recovery, however, was tedious; and his left arm pined, and remained paralytic for twelve months.

It is a remark worthy of observation, that on the second, third, and fourth days of this fever, the patient had a paroxysm twice in the twenty-four hours; a circumstance frequently attending fevers of the continued type: but, in them, the exacerbation is seldom preceded by a cold fit. Allowing, however, the cold fit to be the distinguishing characteristic of the paroxysm of an intermittent; yet this fever had a tendency from the beginning to become continued, and was actually so on the fifth and sixth day of the disease. After taking the bark freely, on the seventh day he had a perfect remission of fever. This is an effect which I have frequently seen produced by this medicine, when given during the first week of a fever.

In the summer and autumn of the year 1770, passing my time in *Roxburghshire*, during the interval of my voyages to the East Indies, I was consulted by several patients, who laboured under a fever. In whatever manner the disease began, it was soon succeeded by debility, and nervous distress.

After cleansing the first passages, the bark was prescribed liberally: the fever, however, ran its course; but, in every instance, the termination was successful. My notes being not so complete as I could wish, none of the cases are inserted in this collection.

## C A S E II.

Robert Ellis, aged fourteen, on the morning of the 9th of April, 1773, was seized with chillness, head-ach, and universal pains.

On the 11th he was confined to his bed; and I visited him, by desire of his mistress. His pulse was small, and frequent; he complained of giddiness; and was exceedingly dejected. I prescribed an emetic, and some other medicines, but being sent home to his mother's house, he was bled injudiciously the day following, and none of my directions were complied with.

On the 13th of April, being the fifth day of his disease, I was desired by his mistress to attend him. I found his countenance flushed;

flushed; his eye-lids swollen, and closed; his skin dry, and hot; and his pulse 120 in a minute. His teeth were furred, and his tongue covered with a horny crust. He had considerable nausea; and some degree of delirium. The room in which he lay, was ill aired and dirty. The doors and windows were directed to be kept open; and a draught, containing a sixth of a grain of emetic tartar, was prescribed every two hours.

*6th day.* No sensible alteration could be observed; but as his pulse was pretty strong, the draughts were continued.

*7th day.* He was very delirious in the night. His pulse was only 100 pulsations, soft and rather feeble. The swelling of his eye-lids subsided. His medicine vomited him twice, and procured some stools. He had *aphthæ* in his mouth, attended with some degree of salivation. A draught, containing a scruple of the bark, and two ounces of the decoction, was prescribed every two hours. The windows were kept open,



and port negus was ordered for common drink.

8th day. Several *petechiæ* were observed upon his body; his breath was fetid; and the salivation encreased. A detergent gargle was prescribed, and the bark draughts continued.

9th day. He was very delirious in the night: his pulse, when I visited him at twelve o'clock, was weak, fluttering, and so quick that I could not number it. His medicine had been neglected, and the windows had been kept shut. After giving him some wine, and supplying the room with fresh air, in half an hour his pulse became regular, and beat only 112 pulsations in a minute. Soon after, however, his pulse rose to 120. Being costive, a clyster was directed, and the bark also ordered to be persisted in.

10th day. In the morning he was comatose; his eyes were dull; his tongue black; and the *petechiæ* inclining to a livid colour. The salivation continued. At six in the evening,

evening, when I visited him again, I found him exceedingly weak, and without an attendant. Upon enquiry, I was informed, that his mother, from her necessitous circumstances, had left him for some hours; during which time his medicine and wine were neglected, and fresh air had not been admitted. Perceiving that the patient must fall a victim, unless the remedies were regularly applied, I from this time attended him three times every day, and betwixt intervals, sent a servant to see that my directions were punctually executed.

*11th day.* He was comatose; his pulse, at different visits, did not exceed 110 pulsations; his tongue and palate were covered with a black crust, notwithstanding a detergent gargle was frequently injected. He took the bark and wine very freely.

*12th day.* He was nearly the same as yesterday; only he took nourishment with more pleasure. As he now expressed great aversion to the bark in substance, a strong decoction was substituted; and two table  
 spoon-

spoonfuls acidulated with *sp. vitr. ten.* were directed every hour.

13<sup>th</sup> day. His pulse beat only 100 pulsations in a minute; his tongue became moist about the edges; but his palate still continued black. Besides the decoction, he took half an ounce of the bark in powder.

14<sup>th</sup> day. He slept well last night. His skin was moist; his pulse only 100 pulsations, pretty strong; and his urine deposited a thick sediment. The bark was continued.

In three days from hence, the fever totally left him; and a thick black slough, of the size of a halfpenny, separated from his palate. He was allowed a nourishing diet, and from this time he gradually recovered.

### C A S E III.

Mr D. aged seventeen, on the 14<sup>th</sup> day of June, 1773, was seized with a shivering fit, succeeded by the usual symptoms of fever. Next day he was able to go abroad, and continued out of bed for three days more,

more, though he had a return of rigors, and constantly complained of a dull pain in his head.

On the 22d of June I first visited him. He had been confined to his bed for four days. His fever was now constant; his pulse was 130; his respiration frequent and laborious; and his tongue and teeth covered with a brown furr. His eyes were dull; his cheeks flushed; and, I was told by his attendants, that in the night he had been generally delirious. He lay in a confined wooden bed, and in a small ill-aired room. By my advice, he was immediately removed to a larger room; but the bed was of the same nature, and only admitted air by two small folding doors. The windows of the room were desired to be kept open; and as he was costive, two table spoonfuls of the following mixture \* were prescribed every two hours.

- \* R. Mann. Opt. unc. i.  
 Aq. Bullient. unc. vi.  
 Tart. Emet. gran. ii.  
 Aq. Cinnamom. Simp. unc. i. M.

5th day. He passed a restless night. The medicine vomited him twice, and procured three loose stools. His skin was still hot; his pulse 130, with slight *subsultus tendinum*; and he was delirious. Wine was allowed in his panado; and a drachm of bark was prescribed every three hours.

7th day. His fever still continued with little or no mitigation; his urine was pale; but he was more sensible. He had taken an ounce and a half of the bark. The pediluvium was used every day.

9th day. His teeth were more furred; his pulse was 120; he was deaf; and had considerable stupor. A clyster was directed, and his medicine continued.

10th day. He was more insensible; his skin was dry and hot; the bark was ordered in a saline draught; and, after the use of the pediluvium, the following draught was prescribed at bed-time\*.

12th

\* R. Calcis Antimon. Illot. gran. xv.  
Aq. Cinnamom. Simp. unc. i.  
Syr. Limon. unc. fs. M.

12th day. He had little or no sleep last night. The *subfultus tendinum* was more urgent. He had constantly lain in bed for two days; and, notwithstanding my directions, his relations refused to take him out of his confinement; and also kept the windows of the room shut. A draught containing a scruple of musk, was prescribed every eight hours, and the bark was continued in the intervals.

13th day. His urine was of an amber colour; and the musk draughts did not mitigate the *subfultus tendinum*. The bark was continued.

15th day. His fever still continued; but the *subfultus tendinum* was less frequent. He now took his medicine with reluctance. As his relations refused to continue the bark, I left them, with directions, to give him strawberries, and oranges; and to keep the room well aired.

On the 10th of July, I was again desired to visit him. It was now the twenty-third day

day of his disease, reckoning from the time he was first confined. He was reduced to the greatest pitch of weakness, lay in a stupid, senseless state, and had constant tremors of the hands. From the time, I last visited him, he had never been out of bed; neither had he taken any medicines. Being persuaded that there was still some chance of recovery, I insisted upon his being taken up; and after having a couch brought into the room, I placed him upon it, with my own hands, as I could get no assistance from his relations, who, imagining his death inevitable, did not chuse to have him disturbed: After this I staid with him some hours, kept the windows open, as the weather was very hot, and gave him two dozes of the bark, containing one drachm each; and from time to time supported him with a little wine. Before I left him he became sensible, and his eyes had a more lively appearance. The alteration for the better, indeed, was so visible, that his relations, now joyfully promised to comply with every direction. A drachm of the bark was ordered to be given every two hours; and I  
advised

advised them to take him out of bed every morning, and lay him upon the couch.

On the day following, his skin was moist; his urine turbid; his pulse 108; and he took his medicine freely: next day his pulse was only 90; he had no symptom of fever; but was so weak, that when he lifted his hands, they shaked. From this time he gradually recovered; but it was several weeks before his strength returned, notwithstanding a nourishing diet, and exercise on horseback, as soon as his strength would permit.

#### C A S E IV.

On the 7th of July, 1773, I was desired by Mr O. to visit his maid, a young woman of a healthy and vigorous constitution. She had been feverish for three days; and imputed the cause of her disease, to her having visited a female acquaintance, who laboured under a fever, in the same village, with the patient, whose case has been just related. Her pulse was very quick and feeble, her eyes were heavy; she  
com-



complained much of head-ach, and pains all over her body. Small dozes of emetic tartar were prescribed every two hours, which cleaned the first passages, and produced a moderate sweat.

Next morning she began the bark, and took one drachm of it every two hours. Each doze of the medicine she said gave her fresh spirits, and in three days her fever totally disappeared.

### C A S E V.

Mrs —, a near relation of mine, was seized with head-ach, lassitude, and pains all over her body; but being engaged to go to an assembly, concealed her complaints.

On the morning following, she was much indisposed; and in the afternoon had severe shivering fits, which were succeeded by great thirst, oppression, and head-ach. In the evening, her feet were immersed in warm water, and weak wine whey was ordered for common drink.

On

On the morning of the 3d day, her countenance was flushed; her pulse 120; and she complained much of head-ach. Emetic tartar was prescribed in small doses. The medicine operated properly, but gave her very little relief; and she passed the following night without getting the least refreshing sleep.

On the morning of the 4th, her pulse was 120; her ideas were confused; the head-ach continued with violence; and her urine was of a pale colour. Maturely weighing every circumstance, and dreading the continuance of her complaints, I prescribed the bark. This day, I gave her six drachms with my own hands; and had the pleasure to find her considerably relieved, and her urine turbid.

*5th day.* She slept pretty well in the night; and when I visited her in the morning, her pulse was only 100; she had little head-ach, but complained of being giddy when she sat up. This day she took an ounce of the bark. At night her pulse was

E 90;

90; and her urine deposited a thick white sediment.

On the following day, she had no complaints, unless some degree of giddiness. For four days longer she continued the bark, and soon recovered her wonted health.

By some it may be conjectured, that the two last patients might have recovered, in the time mentioned, whether the bark had been taken or not. The first case, however, derived its source apparently from contagion; and the latter was early accompanied with symptoms which portended danger. But it is not to these two cases alone to which I could appeal: repeated observations have confirmed me in the opinion, that most fevers, on their commencement, may be removed by a similar treatment; or at least that their danger may be obviated.

### C A S E VI.

Miss —, aged twenty-three, on the 27th day of November, 1773, was seized with

with slight interchanges of heat and cold, which were succeeded by head-ach, want of sleep, and dejection of spirits. On the 3d day of December, I was desired to visit her. She complained of heaviness and confusion of her head, and faintness. Her tongue was dry; her cheeks flushed; her pulse small and quick; her skin hot; and she had slight *subfultus tendinum*. Her urine was pale; her belly costive; and she totally despaired of recovery. Half a grain of emetic tartar was prescribed; and ordered to be repeated in an hour, if it failed to operate. The next morning two table spoonfuls of the following mixture of the bark\* were directed to be taken every two hours.

8th day of the disease. The patient living at a distance, I did not visit her till the afternoon. Her tongue was covered with a brown furr; she was feeble, giddy, and more dejected. The room in which she lay

E 2 was

\* R. Aq. Menth. Vulg. Simp. unc. vii.

Pulv. Cort. Peruv. unc. i.

Aq. Nuc. Moschat. drachm. vi.

Syr. e Cort. Aurant. unc. ss. M.

was airy; but she had kept the curtains of the bed close pinned. She was allowed wine, and cold drinks; the windows of the room were desired to be opened at times; and a regular perseverance in the bark was enjoined.

*10th day.* In the afternoon I found her in a gentle moisture; her pulse regular and more firm: but when she sat up, or was taken out of bed, she became feeble and faint; which still made her despair of recovery. She had taken three ounces of the bark from the time I first visited her; it was desired to be continued.

On the 12th day I found her skin cool, her pulse 72, and her urine turbid. She had slept most of the night; and was totally free from fever. The bark was continued for a few days more, and she recovered rapidly.

## C A S E VII.

Miss —, aged twelve, the sister of the patient whose case has been related above, laboured

laboured under a fever, at the same time, with similar symptoms; only the action of the vessels was stronger, when I first visited her. Emetic tartar was directed, in small doses; and, after its operation, the bark was prescribed, in decoction.

*8th day of the disease.* Her pulse was small, feeble, and beat 120 strokes in a minute; her eyes were dull; she had considerable delirium, and some degree of stupor. As she could not be prevailed upon to take the bark, a pleasant cordial julep was substituted: wine whey, acidulated with lemon juice, was allowed for common drink; and her feet were directed to be bathed in warm water, with a little vinegar.

*10th day.* The delirium continued, with frequent *subsultus tendinum*; and her teeth were covered with a black furr. The decoction of the bark was again prescribed; and her mother was requested to exhibit it regularly. As she lay in a bed which did not admit the air freely, the windows were desired to be kept open; a direction which had not hitherto been complied with.

12th day. The symptoms were exactly the same as at my last visit. As she took her medicines with great reluctance, I was informed by her mother, that she wished to trust the disease entirely to nature, and to the regimen I had directed.

On the 20th of December, I was again desired to visit her: it was now the 23d day of the disease. She was reduced to the utmost pitch of weakness: and for many days she had passed her stools and urine involuntarily. She had a muttering delirium; was quite deaf; and kept picking at the bedcloaths. The bed in which she lay being very offensive, after giving her a little wine, she was removed into another. Soon after, I gave her two table spoonfuls of the decoction of bark, and encouraged her mother to persevere in its use, as the only probable means of preserving her life. She continued her medicine with regularity; took wine more freely; and in a few days the fever left her, without any sensible crisis. But being much reduced by the continuance of her

her disease, it was about six weeks before she was able to go abroad.

A younger sister also laboured under the fever: but having distinct remissions, she recovered in a few days, by the use of the bark.

The mother of these patients, from her constant attendance, was seized with a shivering fit, succeeded by sickness, violent head-ach, and lassitude, which obliged her to take to her bed: but the formation of the fever was prevented, by the bark in large doses.

### C A S E VIII.

John Cranston, aged seventeen, had been confined to his bed for eight days, by a fever, which, as I was informed, he caught by contagion, from a patient who died of the disease. On the 12th of December, 1773, I was desired to visit him. He laboured under a muttering delirium; his mouth was covered with black viscid mucus; and his pulse beat 120 strokes in a



minute, was very feeble, but equal. He had constant nausea; reaching to vomit; slight hiccup; *subfultus tendinum*; and passed his urine without giving notice. A gentle emetic was prescribed, and, after its operation, four table spoonfuls of a strong decoction of the bark every two hours; together with an anodyne draught at bed-time.

9th day. I visited him in the evening. He had some rest last night; the hiccup had vanished; but the *subfultus tendinum* and delirium continued; and several *petechiæ* were observable upon his breast and arms. He was desired to be taken out of bed, and to be laid in another which was open to the admission of air; wine and ripe fruit were allowed; and, besides the continuance of the decoction, half a drachm of the bark, in powder, was directed every three hours.

10th day. To the former symptoms was added a hæmorrhage from the nose; and he seemed weaker and more comatose, although he had taken the bark freely, as I was acquainted by the schoolmaster of the village, in which he lived; and who  
from

from motives of humanity visited him frequently. But I was informed that he had never been taken out of bed, which from its construction, prevented the free admission of air. He was removed to another bed, while I was present; and soon appeared refreshed. As he took the bark in substance with reluctance, four table spoonfuls of the following preparation\* were prescribed every three hours.

For the following six days, he continued the medicine regularly; and passed an hour daily out of bed. The *petechiæ* disappeared; he was at times sensible; but his fever continued.

17<sup>th</sup> day. The fever and delirium increased; his urine was pale; his pulse feeble; and he had frequent *subfultus tendinum*, and tremors of the hands. Half a drachm of the bark was added to each dose of the mixture, and he was freely supplied with wine.

These

\* R. Decoct. Peruv. unc. viii.  
 Tinct. Cort. Peruv. unc. ii.  
 Sp. Vitriol. Dulc. unc. fs.  
 Ten. gutt. xl. M.

These medicines were continued till the 21st day of the disease, when I found him free from fever; and, from this time, he daily recovered his strength.

### C A S E IX.

On the 3d of December, 1773, I visited John Gray, a farmer's servant, aged twenty-four, of a strong and healthy constitution. The following account I had from his mistress, a very intelligent person. Several days before he took to his bed, he had paroxysms resembling the cold fit of an ague; and though he went about, his senses were observed to be imperfect. At last he was obliged to be confined, and became so violently delirious, that his attendants had great difficulty to manage him.

I found him restless, tossing from side to side in his bed, and quite insensible. His countenance was wild; his eyes blood-shot, and his pulse 120, equal and soft. His skin was dry and parched; his tongue and teeth furred; and he had been costive  
for

for some days. His disease had now been of a week's duration. The windows were directed to be kept open in the day time, and two spoonfuls of the following\* were ordered to be given every two hours.

9th day of the disease. His medicine vomited him several times, but still he was costive. In the night he was very delirious. To day his senses seem to be more clear; but he has frequent *subfultus tendinum*, and passes his urine involuntarily. A drachm of the bark was prescribed every two hours, and a clyster was directed. His drinks were acidulated with lemon juice, and wine was allowed freely.

10th day. After I left him yesterday, he became so delirious and unmanageable, that the nurse could not exhibit the clyster. He kept constantly starting up in bed; but he took his medicines and drinks, when offered him. At noon the delirium continued,

\* R. Tamarind. unc. ii.

Aq. Puræ. unc. x.

Coque ad unc. viii. & colaturæ adde

Tart. Emet. gran. v.

Man. Opt. unc. i. M.

nued, with considerable stupor; his pulse beat 120 pulsations, and he kept constantly muttering to himself. A clyster was exhibited, while I was present, which operated properly; but without his giving the least notice. Two drachms of bark were immediately given; and one drachm was desired to be continued every two hours, when awake.

*11th day.* No alteration, unless that his teeth and tongue were more crufted, and some small ulcerations were observed upon the tonsils. The bark was continued; and his drinks were ordered to be acidulated with the following drops\*.

*12th day.* The stupor was much increased; and he kept constantly picking at the bed cloaths. The feverish heat was intense; but his pulse was only 100 in a minute. I gave him two drachms of the bark, which he took without reluctance; but hitherto he had only taken two ounces of

\* R. Sp. Vit. Dulc. drach. vi.

Ten. drach. ii. M.

of it, owing to the obstinacy of a relation who waited upon him.

13th day. Less stupor, but still makes his urine insensibly. Being costive, a clyster was directed.

15th day. In the evening I visited him. He had two stools from a dose of calomel, which was given over night, as he was costive. The delirium still continued, with *subfultus tendinum*; and his teeth and tongue were covered with black fordes. His sister now came to attend him; and being told that there was still a chance for his recovery, provided his medicines were given regularly, she promised to comply with my directions. One drachm of bark was prescribed every three hours in a saline draught.

For the three following days he took his medicine punctually. His senses became clear; his pulse strong, and not above the healthy standard; his urine deposited a sediment; and a desire for food returned.

On

On the 15th day of December, his relations having some quarrel with his master, he was conveyed to his own residence in an open carriage, at the distance of six miles; and though it was in the middle of a storm of snow, his removal was attended with no ill consequence: on the contrary, he rather seemed to recover more speedily.

On the 10th of February following, he called upon me, and gratefully returned thanks for his recovery. He was then very healthy, but had not recruited his usual strength.

### C A S E X.

Mrs B. aged about thirty-six, of a healthy constitution, had laboured under a fever for eight days: on the 6th of April, 1775, at night, I visited her. Her skin was hot, and her pulse small, quick, and intermitting. Her countenance was wild; her breast was covered with miliary eruptions, interspersed with *petechiæ*; she had a low delirium, and voided her stools without giving notice.

She

She lay in a large room; and I was informed she had been kept cool from the beginning.

Mr Davidson, her Surgeon, now settled at *Kelfo*, and I agreed to adopt the following plan of treatment. The windows and the door of her apartment were ordered to be kept frequently open; wine was allowed freely; a cordial julep was directed to be given in spoonfuls when faint, and the bark on the following morning.

*9th day of the disease.* When we visited her she was still delirious, and no alteration for the better could be perceived. Two drachms of bark were given at noon, which her stomach retained; and as she refused to take it from the nurse, Mr Davidson waited on her the whole day, and gave her the medicine frequently.

For four days following, she continued much in the preceding state; only at nights her delirium ran so high, that she got out of bed, and exposed herself to an open window. As she returned always more composed, the  
nurse



nurse was desired not to prevent her from getting out of bed when she pleased.

14th day. The miliary eruptions and *petechiæ* were almost gone; her pulse was very quick and feeble; the delirium continued, and a mortification was observed upon her hip.

16th day. Her senses returned, and her fever became moderate. During the last three days she had taken three ounces of the bark: but she now absolutely refused to take any more medicine.

On the 18th day of the disease, she complained of a pain in the right hypochondrium. The mortified parts on her hip sloughed off, and the sore looked clean; but she had more fever. As the pain seemed to depend upon constipation, a clyster and a draught with rhubarb were directed.

Next day she had two loose stools, and the pain vanished. She was now persuaded

to

to take the infusion of bark\*; in a few days more the fever totally disappeared; and, though she was much emaciated, she soon recovered her usual health.

C A S E X I.

Master —, aged about sixteen, after being indisposed for above a week, was, on Saturday the third of November, 1775, seized with chilness, pain in his head, back and bones; which were succeeded by a slight cough, defluxion from the nose, and some other symptoms of the epidemic cold †.

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\* For the general *formulae* of medicines, referred to in this essay, see the Appendix.

† About the 22d of October, 1775, an epidemic Catarrhal Fever appeared at Newcastle, and became so general, that few of the inhabitants escaped feeling more or less of its effects. In about 18 days it spent its force, and soon totally disappeared. By accounts, from different parts, it appeared, that the disease, about the same time, spread itself over the island.

The distemper, in general, began with listlessness, weakness of the limbs, stiffness of the throat, head-ach, and universal pains. To these symptoms were added a cough, defluxion from the nose, giddiness, heat; and frequently prostration of strength and spirits. The tongue was white; the thirst moderate; and the stools, in general, bilious.

When the disease was mild, confinement and diluting drinks were sufficient to effect a cure. When it was ac-

He was bled by Mr Keenlyside, one of the surgeons to the Newcastle Infirmary; had taken a saline julep, and an oily emulsion.

On the 6th of November I was desired to visit him. His pulse was 110; tolerably full, and very soft. When he sat up, he was very giddy, and still complained of a tickling cough: his skin was dry; and he was considerably oppressed. Two table spoonfuls of the saline julep, with a small proportion of emetic tartar, were prescribed every two hours; and he was allowed weak wine whey for his common drink.

*5th day of the disease.* In the morning his pulse was 100; he had a gentle moisture upon his skin; and his urine deposited a thick sediment.

6th

accompanied with heat, and much fever; promoting a sweat, and keeping the belly open with antimonials, together with opiates to appease the cough, became necessary. By these means the disease generally disappeared in three or four days.

None died of the distemper, in this place, as far as I could learn, unless the old and asthmatic. Some who neglected the disease, a few weeks afterwards, fell into pleurisy, which required large, and repeated bleedings, with the use of blisters. And in some instances, about the end of the epidemic, the distemper terminated in low fevers, with delirium, which yielded to the bark.

*6th day.* His cough had ceased; his urine was turbid; but, I was informed, he had been very restless in the night. The fever still continued; and his pulse began to flag. Wine was allowed more freely; and half a drachm of the bark, in a saline draught, was prescribed every two hours. Being costive, he took a few grains of rhubarb at bed-time.

*7th day.* He had a slight hæmorrhage from the nose, which scarcely tinged the cloth on which it dropt; his pulse was feeble, and about 100 pulsations; and the rhubarb had procured two stools. An anodyne draught was directed to be taken at bed-time, and the bark was continued.

*8th day.* He had a gentle moisture upon his skin the whole night. In the morning his pulse was only 78; and he had no complaints, but weakness. In the afternoon, a little blood dropt from his nose.

He continued his medicine for a few days longer; his appetite returned; and he soon recovered his strength.

## C A S E XII.

Master —, aged fourteen, had been confined to his bed by a fever, for nine days, which was attended with debility, and great distress of the nervous system. On the 5th of June, 1776, I was desired to attend him along with Mr Gibson, one of the surgeons to the Infirmary. The patient's skin was hot, his pulse 116 in a minute, and his urine pale and crude. He had been constantly delirious for two days past; and at present laboured under *subfultus tendinum*, and picking at the bed-cloaths. His feet were immersed in warm water; wine whey was directed; and as he had been costive for two days past, and refused every medicine, a small proportion of emetic tartar was ordered to be given in his drinks. At six in the evening the delirium and other symptoms continued; and for the most part of the day he had refused the wine whey, and every other drink. At eight o'clock he had a stool from a clyster; as there was no possibility of getting him to take medicine, a blister was directed to be applied betwixt his shoulders.

10th day. He was exceedingly delirious in the night; but he took as much of the emetic tartar, as operated both upwards and downwards. At ten this morning the *subfultus tendinum* was less frequent; but the other symptoms continued. The windows were desired to be kept open; and three table spoonfuls of the following preparation of the bark \* were prescribed every two hours; as he now refused nothing that was offered. At night the delirium and *subfultus tendinum* were very urgent. The bark was continued; and a draught with a scruple of musk was prescribed every six hours. On the 11th day he took his medicines freely; but no alteration for the better could be observed.

12th day. He had several refreshing sleeps last night. When Mr Gibson and I met in the morning, we found the patient perfectly sensible, and asking for a drink of wine and water: his pulse was only 100;

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but

\* R. Pulv. Cort. Peruv. unc. i. fs.

Aq. Fontan. unc. xvi.

Coque ad unc. viii. addendo sub finem

Gum. Arab. drach. iii.

Colaturæ adde

Aq. Nucis Moschat. unc. fs.

Syr. e Cort. Aurant. unc. i. M.

but he still had slight *subfultus tendinum*. Four table spoonfuls of the decoction were ordered to be given every two hours. At six in the evening his pulse was 116, and the delirium returned. Having finished the whole quantity of the decoction since the morning, it was ordered to be repeated; and his feet were directed to be immersed in warm water.

13th day. The fever and delirium ran high in the night. At ten in the morning his eyes looked wild, and the insensibility and *subfultus tendinum* were urgent. Warm fomentations were ordered to be frequently applied to his feet; and, besides the decoction, half a drachm of the bark, in a draught, was directed to be given every four hours. At nine at night he had a severe exacerbation of fever. I found the bark draughts had been neglected in the day. Being costive, a clyster was directed, and I strongly enforced the absolute necessity of continuing the medicines punctually.

14th day. He had a very restless night. Took five of the draughts with bark. At  
ten

ten at noon his pulse was 100 in the minute, and he had a muttering delirium: at times he knew his relations; but in a moment would talk wildly, and gathered the bed cloaths. Through the day he continued his medicine regularly; nevertheless, every symptom was aggravated at night.

*15th day.* He was so delirious in the night, that he was with great difficulty kept in bed. In the morning, when Mr Gibson and I visited him, his pulse was only 100. He did not know his relations; kept constantly muttering to himself; picked at the bed cloaths; grasped at objects in the air; and voided his urine involuntarily. He took a drachm of bark in two ounces of the decoction, while we were present. And that the medicine might have a fair trial, in so desperate a case, I visited him frequently in the day, and gave him, with my own hands, six drachms of the bark: the whole of which, together with two drachms from the nurse, his stomach easily retained. A musk draught, with fifteen drops of *Laudanum*, was given at bed-time.



16th day. In the beginning of the night he was very insensible; during which time, his father gave him two drachms of the bark. He fell asleep at five o'clock in the morning, and did not awake till mid-day. At this time I was sent for; and had the pleasure to find him perfectly sensible, free from tremors and *Jubfultus tendinum*, and his pulse only 92. He had several refreshing sleeps in the afternoon. He took six drachms of the bark this day.

17th day. Rested well last night: His pulse only 80, and he had some desire for nourishment. He took an ounce of the bark during the day.

The bark was continued thrice a day for some time longer, with a view to prevent a relapse; and notwithstanding the violence of his disease, he was very speedily restored to his usual health and strength.

The novelty and success of the practice in the above case, as well as in several others which occurred soon after I came to reside in

New-

Newcastle, became the subject of much conversation amongst *the faculty*. The use of the bark, before this period, had been limited to that state of continued fever, in which symptoms of putrescency appear. The ingenious and candid gentlemen with whom I attended patients, tried this method of practice in similar cases: its credit was soon established: and I believe it is now adopted by every Physician in this town.

### C A S E XIII.

John Dorman, aged fifty, on the 3d day of September, 1776, was seized with shivering, pain in his back, and sickness; which were succeeded by heat, thirst, and great restlessness.

On Friday, September the 6th, by desire of his master, I visited him along with Mr Leighton, his surgeon. His skin was hot and dry; his eyes dull and heavy; his teeth covered with black slime; his tongue brown and parched. He kept constantly moaning; and was delirious at nights; and, moreover, had got no sleep from the beginning. His pulse

pulse beat 120 pulsations in a minute; his skin was excessively dry; and he was costive. His feet were ordered to be bathed in warm water; and two table spoonfuls of the following\* were directed every hour. The room in which he lay was small, low, and ill aired; and in this confined place his wife and five children constantly resided. When I visited him in the evening, he had a gentle moisture on his skin. The medicine had operated upwards and downwards. Barley water, acidulated with lemon juice, was directed for common drink.

*5th day of the disease.* He was delirious in the night. In the morning his pulse was still 120; he was very restless; moaned much; was giddy when he sat up; and his hands were affected with tremors. A drachm of bark, warmed with a little spiritous water, was prescribed every two hours.

6th

\* R. Tamarind. unc. i.

Crem. Tart. drach. i.

Coq. ex Aq. Pur. unc. xii. ad unc. viii.

*Colaturæ Adde*

Tart. Emet. gran. iv.

Man. Opt. unc. i. fs. M.

*6th day.* At ten o'clock his skin was pretty cool, and his pulse 108: but the anxiety and restlessness continued. He had taken six drachms of the bark: it was ordered to be regularly continued. At night his pulse was only 108, and much firmer. He was allowed a little ale, which he longed for; and, as he was costive, a clyster was directed,

*7th day.* When I visited him in the morning he was in a sound sleep; but I was informed by his wife, he had been very delirious in the beginning of the night. The bark was ordered to be continued. He was out in the open air for an hour in the afternoon, by my desire, and found himself refreshed. At seven in the evening his pulse was only 80.

*8th day.* He had a restless night from gripes, which he imputed to a draught of four beer, which he had taken in the evening. At ten o'clock, when I visited him, his pulse was only 86, and the heat of his skin was little more than natural: his urine was clear, and he still complained of great prostration of strength. This day he was not able to  
be

be carried out, but sat at an open window for two hours. At night being very feeble, he was ordered wine. He had taken four ounces of the bark during the last four days. It was directed to be continued; and as three of his children were confined by the fever, and lay in the same room, he was advised to be assisted to the open air next day.

*9th day.* He was in a gentle sweat when I visited him, and quite free from fever. The bark was continued. He went daily out into the open air, and from this time recovered rapidly.

Three of his daughters, aged twelve, ten, and seven years, labouring under the fever, accompanied with delirium, and very quick pulse, were treated in the same manner, and speedily recovered.

#### C A S E XIV.

Mr —, aged thirty, on the 24th of July, was seized with every symptom of fever, for which he took an emetic by my direc-

direction. On the 25th he found himself able to go abroad; but at night he became very feverish; his pulse beat 120 pulsations in a minute, and he complained of a bitter taste in his mouth. One-fourth of a grain of emetic tartar was prescribed every four hours.

*3d day.* He vomited much bile: but as he had not had a stool, and as I was abroad, Mr Leighton ordered a dose of salts to be taken.

*4th day.* He was exceedingly feverish; complained much of head-ach, and bitter taste in his mouth. As he had been costive for three days, a solution of Rochelle Salts, and manna was prescribed, to be taken by spoonfuls.

*5th day.* He had some bilious stools yesterday, but was very delirious and restless in the night: at ten, when I visited him, his pulse was 120, feeble; his skin very hot; his countenance dejected; his eyes were dull; his respiration quick; and he was very faint, whenever he attempted to move.

One

One drachm of bark was prescribed every two hours, and wine allowed. At night he had taken one ounce of the medicine.

*6th day.* He was delirious last night. This morning he was very sensible; had some moisture on his skin; and his urine deposited a thick sediment: his pulse was only 100; but his strength was much reduced, and he complained of faintness.

The bark and wine were continued in large doses. In two days more his fever totally left him: but being weak, it was judged requisite to continue the bark for a few days longer.

His wife and child, who caught the fever, also recovered by the use of the bark.

### C A S E XV.

Mr —, aged about thirty-eight, on the 22d of July, 1776, was seized with a fever, for which he had been bled, and had taken neutral juleps, which afforded no relief.

On the 28th of July, I was desired to visit him along with Mr Carr, then assistant to Mr Tyzack, Surgeon in Newcastle. We found him exceedingly dispirited, and much afflicted with a pain in his head, and especially in the right temple. His tongue was dry and furred; his pulse not above 90; but his skin was exceedingly hot. For three days past, he had been frequently troubled with hiccup; he was giddy and feeble in an erect posture; and from the beginning had severe exacerbations of fever, with delirium at night. He was at present sensible, but dreaded very much the return of the nocturnal paroxysm. Being costive, a clyster was ordered to be given, and a drachm of the bark, with four grains of rhubarb, was prescribed in a saline draught, every two hours. Spirit of nitre was also directed to be taken in his common drink.

*8th day of the disease.* In the morning his pulse was only 72; he was in better spirits; his skin was cool and moist; the hiccup seldom troubled him; and I was told he had passed a better night than



than usual. He still had some head-ach: the bark was ordered to be continued.

*9th day.* At twelve last night, he was seized with a severe feverish exacerbation, which continued for seven hours, accompanied with great thirst, and excruciating head-ach; during the whole paroxysm, he continued his medicine with the utmost regularity; and about eight in the morning, he fell into a sleep. When we visited him at twelve, at noon, we found his pulse only 74; his skin cool and moist; but he still complained of debility and slight hiccup. His urine of an amber colour. Since my first visit he had taken two ounces of the bark; it was ordered to be regularly continued.

*10th day.* The exacerbation of fever returned, as usual, last night; and he was for some time insensible. At ten, when we visited him, he was free from fever, his pulse was only 70, and he had little or no hiccup. His tongue was moist about the edges, and his urine deposited a thick sediment. Two scruples of the bark were directed to be continued every two hours in

two table spoonfuls of the following julep\*. After taking a dose of his medicine, he slept for four hours. At seven in the evening he had few complaints, except weakness. As he had taken half an ounce of the bark since the morning, it was ordered to be given only every four hours.

11th day. He rested well in the night; pulse only 60 pulsations in a minute; urine depositing a thick sediment; hiccup almost gone. His medicines were continued.

He persisted in the use of the bark for three days longer: after this he had no return of the nocturnal exacerbations; the hiccup totally left him; and he was speedily restored to health.

## C A S E XVI.

Mr —, aged thirty, oppressed with misfortunes and family distress, after being indisposed for three weeks with lassitude,

G

pains

\* R. Sal. Absinth. drach. ii.  
Succ. Limon. unc. iii.  
Aq. Alexet. Simp. unc. vi.  
T. Cort. Huxham. unc. i. M.

pains over all his body, and slight interchanges of heat and cold, on the 28th of January, 1776, was seized with a shivering fit, succeeded by great head-ach, sickness, thirst, and other febrile symptoms. From this time he had a constant vomiting, notwithstanding a variety of judicious remedies, prescribed by Mr Gibson.

On the 1st of February I was desired to visit him. His pulse beat 104 pulsations in a minute, and his skin was hot, notwithstanding he sweated profusely: his thirst was intense, and he complained of universal pains over his body: he was feeble, weak, and giddy when he sat up; his countenance was dejected; and he had a diarrhoea. Two table spoonfuls of the following \* were prescribed every two hours; and as the room in which he lay was very small, fresh air was ordered to be admitted frequently.

6th

\* R. Pulv. Cort. Peruv. unc. i.

Coq. ex Aq. Pur. unc. xvi. & ad unc. viii. colatura adde

Sal. Absinth. drach. i.

Succ. Limon. q. s. ad saturationem.

Aq. Nuc. Moschat. unc. i.

*6th day.* He rested ill in the night; however he retained his medicine, and only vomited once since he began its use. In the morning his pulse was 100; his urine turbid; but he still sweated excessively, without finding relief from it. His linen was ordered to be changed frequently; the door of his chamber was kept open; his medicines were repeated; and he was allowed wine in his lemonade and panado. Being costive, a scruple of rhubarb was prescribed at bed-time.

*7th day.* He had several bilious fetid stools in the night. In the morning he complained of great thirst, and some degree of nausea. His belly was also inflated, and he was exceedingly dispirited. A saline draught, with Huxham's tincture of the bark, was prescribed every three hours.

*8th day.* He had two bilious offensive stools in the night. He complained much of thirst and internal heat. He was very giddy whenever he lifted his head from the pillow, and his belly was tumid. Half

a drachm of rhubarb was prescribed in a saline draught. He purged six times in the day, and found himself relieved. Being restless, a grain of Ipecacuanha, and half a grain of opium, were prescribed at bed-time.

As the room in which he lay was very small, and ill aired, his wife was desired to procure other lodgings.

*9th day.* He rested well in the night; and when I visited him in the morning, his fever was very moderate. He however complained much of internal heat, and had a reaching to vomit. Five grains of Ipecacuanha were prescribed, which discharged a considerable quantity of green bile. After its operation, four spoonfuls of a strong decoction of the bark were directed to be taken every two hours. At nine at night he had two loose stools; was very faint and dispirited; his pulse 100, soft, but steady and equal. An anodyne was ordered at bed-time.

*10th day.* At ten o'clock in the forenoon, Mr Gibson and I visited him. He did not appear

appear so much oppressed as formerly; but his tongue was dry, his teeth crusted, and several petechiæ were observed. His wife having procured an airy room, though at the distance of near a quarter of a mile, he was advised to be removed. He was conveyed in a chair, and bore the fatigue much better than could have been expected. Having sweated much since the beginning of his disease, the room was directed to be kept cool; and the decoction of the bark was continued.

*11th day.* I could not see him till the evening. Since my last visit he had passed four very fetid bilious stools. His tongue was dry and parched; he faltered in his speech; his temples were covered with a cold clammy sweat; his pulse was weak, and only beat 96 in a minute. Wine was advised to be given freely, and a scruple of bark was ordered in each dose of the decoction, with a few drops of Laudanum, to prevent its running off by stool.

*12th day.* He had some refreshing sleep in the night; and when I visited him in the

morning, he was free from the diarrhoea and clammy sweats. His pulse, however, was very feeble, and only 96 in a minute; his eyes were very dull; he was sensible, but much dejected, and despaired of recovery. He had taken half an ounce of the bark in the night, besides the decoction. The same medicines were continued.

13th day. He slept from eleven last night till five o'clock this morning. His pulse was only 90; he was faint at times, and complained of a *tinnitus aurium*: his urine deposited a light-coloured sediment. He took an ounce of the bark, besides the decoction, during the last twenty-four hours.

14th day. His urine deposited a thick sediment; very little fever; pulse 96; and no *petechiæ* to be observed: but he was clammy about the temples, and now and then troubled with slight hiccup. Took an ounce of the bark last 24 hours.

15th day. He slept well in the night; in the morning he had a reaching to vomit, with some hiccup. His urine very turbid;  
no

no stool since yesterday. The bark was continued.

*16th day.* He complained of sickness and hiccup in the morning; and sweated much. At ten, when I visited him, his breast and belly were covered with white miliary eruptions. He was in better spirits, and complained of nothing but the hiccup. Having taken six drams of the bark since last night, a draught, containing a scruple of musk, was prescribed. In the evening the hiccup increased to a violent degree; the musk draught was ordered to be repeated, to which were added fifteen drops of *Laudanum*.

*17th day.* Notwithstanding the draught the hiccup continued with violence till three o'clock in the morning, and frequently brought on a reaching to vomit. At nine o'clock when I saw him he had little fever, but complained of a stitch in the right side; and the hiccup was so violent, that it made the bed in which he lay shake. The miliary eruptions were still very numerous. The weather being cold and frosty, he

G 4

desired



desired to have a little fire in the room, which was complied with. Six grains of ipecacuanha were prescribed, soon after swallowing it, the hiccup stopped. He vomited twice, and brought up a considerable quantity of viscid phlegm. The hiccup returning with as much violence as ever the musk draught with opium was prescribed, and a blister was applied to the side where he complained of the stitch. I visited him thrice this day; his fever was gone, and he had no complaint but the hiccup, which continued with violence. Musk having no effect, a few drops of the oil of cinnamon were directed, and an anodyne camphorated epitheme was applied to the pit of the stomach. Two table spoonfuls of the following\* were also ordered every two hours.

*18th day.* In the night the hiccup returned frequently, but was always mitigated either by taking a few drops of the oil of cinnamon, or a little orange juice. During  
this

\* R. Deco&. Cort. Peruv. unc. viii.  
Conf. Cardiac. drach. ii.  
Sp. Lavend. Comp. unc. fs.  
Syr. Cort. Aurant. unc. fs. M.

this day his pulse was never above 90; and was firmer than formerly. He continued the decoction of bark. Being costive, a clyster was ordered at night.

*19th day.* In the morning Mr Gibson and I visited him: he was in a gentle sweat, his pulse 80, his tongue clean, and the miliary eruptions scaling off. He complained of a pain in one of his heels, which was a little inflamed: a poultice was directed, and the bark mixture continued. He was free from the hiccup the whole day.

*20th day.* His urine deposited a flocculent sediment; he was cheerful; and his pulse, this day, not above 80 at various observations.

*21st day.* Beginning to recover.

*22d day.* He had a desire for nourishment; and was perfectly free from fever.

*23d day.* Last night he was seized with a cough, and stitch in his right side extending to the breast; which still continued so violent

violent as to affect his respiration. His pulse beat 100 pulsations; but was very small and feeble. A blister was ordered to be applied to the part affected.

*24th day.* The blister had discharged well, and totally removed the pain of his side. The cough, however, continued; and his right eye was blood-shot. Two table spoonfuls of the spermaceti mixture with paregoric elixir, were prescribed every two hours.

*25th day.* He was easy in the day; the cough being troublesome, an anodyne draught was prescribed at bed-time.

*26th day.* He expectorated some frothy matter tinged with blood: being still weak, and subject to sweating, the infusion of bark with spirits of vitriol was prescribed.

In fourteen days, he was able to go into the country, and, in a few weeks, returned in perfect health.

## C A S E XVII.

—, a bricklayer, aged twenty-three, had laboured under a fever for fourteen days, which derived its source from contagion. On the beginning of the second week, as I was informed by his surgeon, Mr Gibson, he had many symptoms, which indicated great disorder of the nervous system. The bark had been prescribed; but he had only taken three drachms of it.

On the 21st of February, 1777, at ten o'clock at noon, I first visited him. His cheeks were flushed, his eyes wild, and the vessels of the *tunica albuginea* appeared as if they had been injected with a yellowish red. His tongue was black and swelled, his teeth furred, and he faltered in his speech. He had a constant convulsive motion of the lower jaw, incessant tremors, and *subfultus tendinum*. He kept constantly gathering at the bed cloaths, but answered questions rationally; though in a moment he would become delirious. He was deaf, and for some days past voided his urine without giving notice. His pulse only beat 100  
pul-

pulsations in a minute, and the vibrations of the arteries were weak and fluttering.

His disease being so far advanced, I had little hopes of his recovery: wishing, however, to try the effects of large doses of the bark, I gave him two drachms of fine powder, in a glass of port wine, before I left the room, which he swallowed easily, but did not seem to be sensible of its taste. I desired the same quantity to be repeated every two hours; and encouraged his wife to persevere regularly in its use. Fomentations of warm water and vinegar were directed to be applied to his feet; and, as a stimulus to rouse his sinking strength, a blister was laid betwixt his shoulders. At six o'clock in the evening, the convulsive motion of the jaw had abated: the other symptoms were the same as in the morning. He had taken the medicine regularly, but loathed the last dose. It was now time to give him another; and when I was about to mix it, I found the paper to contain half an ounce of the bark. He had taken three doses containing the same quantity. To prevent every possibility of mistake, I applied to the young gentleman

man who made up the powders, who informed me that he had sent four papers containing each half an ounce of the bark. I can, therefore, with the utmost certainty affirm, that he took an ounce and six drachms of this medicine in the space of six hours. A drachm was ordered to be given every two hours through the night.

15th day. The preceding symptoms much the same, except that the convulsive motion of the jaw had totally disappeared. A little of his urine was saved in the morning, which deposited a flocculent sediment. Having taken seven doses of the bark during the night, it was prescribed at ten o'clock in the following form\*. At seven in the evening the *subfultus tendinum* was very frequent; his eyes were listless; he was comatose; and made his urine without giving notice: his pulse was sunk, and he was very delirious. His head was ordered to be shaved, and blisters were applied to the ankles: a draught

\* R. Aq. Alexet. Simp. unc. vii.

Nuc. Moschat. unc. i.

Pulv. Cort. Peruv. unc. i.

Syr. e Cort. Aurant. drach. vi. M.

Cap. Cochlear. ii. alternis horis.

draught with a scruple of musk and a little of the volatile *Alkali* was directed; and the bark ordered to be persisted in.

16th day. He was comatose in the night, and muttered to himself. He became sensible at ten this morning; but his tongue was so dry and black, that he faltered exceedingly in his speech. The mixture of bark was repeated, and a tea spoonful of equal parts of the *Sp. Lavendul.* and *Sp. Salin. Arom.* was ordered frequently in a little wine and water. At night the stupor, the wildness of his countenance, and delirium recurred. A large blister was applied to each temple, and the musk draught was repeated.

17th day. The symptoms were more favourable. The mixture of bark was repeated. Through the day I gave him his medicine thrice. The *subfultus tendinum* increasing at night, the musk draught was repeated with twelve drops of *Laudanum*.

18th day. He rested well in the night with the opiate; and in the morning I found him

him in a calm sleep. At five in the afternoon, his pulse was 90; the *subsultus tendinum* had vanished; and he was perfectly sensible: his tongue was moist about the edges; but the *velum pendulum palati* and *uvula* were covered with an aphthous crust. Being costive, a clyster was directed immediately; the anodyne draught was repeated at bed-time, with a dose of the *Pulv. Eccoprot.* to prevent constipation.

19th day. He rested well in the night. At nine o'clock in the morning his pulse was only 84, soft, equal, and pretty full. He still passed his urine, at times, without giving notice; but the greatest complaints which remained were, weakness, and pain from ulcerations on the edge of his tongue. The bark mixture was repeated.

20th day. His tongue being still very much ulcerated, *Mel Rosac.* and *Borax*, were ordered to be applied to the part. The mixture with the bark was repeated.

21st day. His skin was cool; his pulse only 72; and his urine deposited a thick white sediment. The mixture was repeated.



22d day. His tongue was quite clean, and beginning to heal. He still continued to take an ounce of the bark daily.

On the 23d, he was seized with a flatulent stitch. As he was costive, a clyster was directed, and a mixture with rhubarb, which removed that symptom. On the 25th, he complained of severe pains in his feet; and an ulceration, the consequence of lying so long on his back, was observed upon the *sacrum*. The mixture of bark was continued, with a little rhubarb to keep his belly gently open. On the 26th, having a *diarrhoea*, the rhubarb was omitted. On the 27th he still complained of pains in his feet and toes; his appetite returned, and his pulse was sedate. He continued to take the bark thrice a day. On the 28th he was able to walk across his room. In a few days more he went abroad, and was speedily, from the greatest state of emaciation, restored to perfect health.

In a former publication \* I observed, that musk, given to the quantity of a scruple every

\* Observations on the Diseases of long Voyages, &c.  
P. 142.

every four hours, seldom failed to abate the hiccup, and other nervous symptoms which occurred in fevers; and to act as a powerful cordial and diaphoretic. The cases in which I tried this medicine chiefly occurred at *China*, where I was at great care to procure it unadulterated: since that period I have frequently given it for the removal of similar symptoms, which happen in the fevers of this country; but seldom or never with any remarkable advantage, unless when joined with opium. This will appear from several cases in this collection, as well as in the last case which has been related. In my later practice, for this reason, I have entirely laid aside the use of so precarious a remedy.

Since these cases occurred, in obstinate hiccups remaining after fevers, I have given a solution of *asa fetida*, conjoined with the *volatile alkali*, with the best effects.

C A S E XVIII.

Mr T——, aged eighteen, on the 10th of July, 1777, was seized with the common symptoms of fever; for which a vomit, and afterwards a purge, were prescribed by Mr

H

Carr.

Carr. On the 7th day of his fever, the symptoms becoming alarming, my assistance was desired; but being from home, Dr Brown was consulted. He found him labouring under a diarrhoea, slight tremors, and *subfultus tendinum*. The Doctor ordered a blister to be applied betwixt the shoulders, and barley water, with gum arabic and spirit of nitre, for common drink.

On the 18th of July, I was desired to visit him along with Dr Brown. We were informed that the patient had passed the preceding night with restlessness and some delirium. His tongue was dry and furred; his eyes dull; his pulse was feeble, and only beat 108 pulsations in a minute, and he had frequent *subfultus tendinum*, and picking at the bed-cloaths.

I proposed the use of the bark, which the Doctor approving of, was prescribed in the following form\*:

10th

\* R. Pulv. Cort. Peruv. unc. ii.

Aq. Puræ lib. ii.

Coque ad lib. i. injiciendo sub finem

Gum. Arabic. drach. ii.

Colaturæ turbidæ adde

Syr. e Cort. Aurant. unc. ii. M.

Sumat Cochlear. iv. tertiâ quâque horâ.

*10th day of the disease.* We visited him at eleven o'clock, and were told that he had passed a tolerable night, although he was at times delirious. The symptoms being the same as yesterday, half a drachm of the powder of bark was ordered to be taken in each dose of the decoction. A pint of port wine was allowed, in his drink, and panado, in the 24 hours. At night he had three loose stools. Dr Brown being from home, I prescribed an anodyne draught.

*11th day.* He slept well in the night. When Mr Carr and I visited him in the morning, his fever was moderate; but he was feeble, and still had tremors of the hands. The quantity of the bark was ordered to be increased.

*12th day.* He was very delirious in the night; and towards the morning had four fetid stools. His pulse was only 100; his skin temperate; his teeth were crusted; and many *petechiæ*, of a purple colour, were observed upon his arms. The tremors and picking at the bed cloaths almost vanished. The windows were kept up in the day

from the time I visited him. Strawberries were allowed, and two table spoonfuls of the decoction of the bark, with half a drachm of the powder, were prescribed every two hours, with the addition of five drops of *tinct. thebaic*, in case of the medicine running off by stool.

13th day. The *petechiæ* more numerous; the *diarrhoea* gone; pulse 84. During the last 24 hours he took a pint of the decoction, and half an ounce of the bark in powder. An ounce of the bark was prescribed in an eight-ounce julep, with some nutmeg water; the whole to be consumed in 24 hours.

14th day. At eleven o'clock Mr Carr and I visited him. We found him sitting up in a chair; his eyes however looked very dull; and he had frequent tremors. His pulse was only 90; he was very feeble, giddy, and much dispirited: his skin was hot and dry; but the *petechiæ* were rather better coloured. The mixture was repeated. He slept much in the afternoon: at nine o'clock at night his sides were full of white miliary  
erup-

eruptions. The windows were shut this day, as it was windy; but one in the staircase adjoining the door of his room was kept open.

15th day. At twelve o'clock I visited him along with Dr Brown. His pulse was only 76; his tongue was moist about the edges; his eyes looked more lively; he was free from tremors; and almost all the miliary eruptions had disappeared: his belly was natural: his urine clear. Cyder was allowed for his drink.

For the five following days he took an ounce of the bark daily. The *petechiæ* totally disappeared, and he had few complaints except weakness. On the 20th day his urine dropt a thick sediment; his appetite daily returned; and he was speedily restored to health.

### C A S E XIX.

On the 22d of August, 1777, I was desired by a farmer, who resided a few miles from *Newcastle*, to visit his son, daughter, and two of his servants, who

laboured under fevers. But for the sake of brevity, I shall only relate one of the cases, in a particular manner.

Sufanna Hamsworth, the dairy-maid, had been confined to her bed, by a fever for fourteen days, which, soon after its formation, was attended with prostration of strength and spirits, and delirium. Mr Keenlyside had prescribed a saline julep with cordial confection early in the disease; but she refused to take it, or any other medicine. When I visited her, I found her pulse 130 in a minute, her tongue dry and brown. The delirium was now constant, with frequent *subfultus tendinum*: She was very deaf; and I was told had voided her urine for some days, without giving notice. She had sweated much, and her breast and neck were full of miliary eruptions. The bark was immediately prescribed; a clyster directed; cold wine and water was allowed for her beverage; and the window of the room was ordered to be opened.

On the following day, she appeared to be rather more sensible, her pulse stronger and  
less

less frequent; although she still had a muttering delirium. She had taken six drachms of the bark; it was ordered to be continued.

17th day. The fever still continued; but she was free from *subfultus tendinum*, and the miliary eruptions had disappeared. She longed for milk, which was allowed; and the family was directed to indulge her in any thing else she might fancy.

For some days following she slept much, and on the 21st was free from every complaint but weakness. Her appetite returned, and she recruited her strength much sooner, than could have been imagined.

The bark being prescribed early in the disease for the other three patients, its malignity and danger were prevented; and the whole of them recovered in seven days after my first visit.

A young woman, who came to wait upon the above patients, was sometime afterwards attacked with the fever. The



disease was far advanced before she took the bark. She however recovered; but for many months afterwards, was subject to a *profluvium mensium*.

## C A S E XX.

Miss —, aged seventeen, had laboured under a fever for eight days, attended with great prostration of strength and spirits. On the third of October, 1777, I was desired to visit her. I found her exceedingly restless, and anxious; her skin hot; her tongue dry, and her pulse 128. She complained much of head-ach; her eyes were dull and heavy, and her belly constipated. As she refused to take any medicine, small doses of emetic tartar, were mixed in her drink, and her feet were directed to be immersed in warm water twice a day.

9th day. I visited her along with Mr Keenlyside, the family surgeon, at ten o'clock this morning. We were informed that she was very restless, and at times delirious in the night. Her pulse was 130, her cheeks flushed, and she had considerable *subsultus tendinum*. The antimonial was increased,

increased, as it had occasioned no evacuation. At night when I visited her she had vomited once, and had passed one loose stool. Her face and neck were moist; her eyes looked wild; and her pulse was much quicker than formerly. As she had a total aversion to every kind of medicine, I became very anxious about the result of her case: I, therefore, directed two table spoonfuls of the following pleasant preparation of the bark\* to be given every two hours; and ordered wine whey, acidulated with lemon juice, for her common drink.

10th day. She was delirious in the night; in the morning her pulse beat 130 in a minute. She had frequent *subsultus tendinum*, and complained of a troublesome cough. I gave her three spoonfuls of the infusion of the bark as above directed. Mr Keenlyside gave her another dose at noon. At night her tongue was dry, and her teeth furred; the *subsultus tendinum* was more urgent; and her fever much increased. I gave her a dose  
of

\* R. Pulv. Cort. Peruv. unc. i. fs.  
Aq. Cinnam. Simp. Bullient. lib. i.  
Macerate per noctem, & cola.

of her medicine, and requested that it should be continued regularly.

11th day. No material alteration in the morning. She took her medicine pretty freely through the day. In the afternoon the *subsultus tendinum* was less frequent. Being costive a few grains of the *Pulv. Ec-coprot.* were directed at bed-time.

For the two following days, little alteration could be observed. On the 14th and 15th day of the disease, she slept much; her tongue became moist; the cough ceased; and she had a gentle perspiration. She took her medicine without reluctance. On the 16th day she was perfectly free from fever, although her urine was pale. The infusion was continued. Next day her urine deposited a white sediment; and she was soon restored to perfect health.

### C A S E XXI.

Mr —, clerk to a Merchant in *Newcastle*, was, on the 14th of April, 1778, seized with a shivering fit. He, however,  
went

went about drooping for three days; but on the 17th was obliged to take to his bed.

On the 22d of April, being the 6th day from his confinement, I was desired to visit him, at ten o'clock at night. I found him labouring under a coma and low delirium, with his pulse only 100, small and feeble. He kept almost constantly picking at the bed cloaths; had strong *subfultus tendinum*; at times, universal tremors; and, for three days past, had voided his stools and urine involuntarily. Mr Lambert, the Surgeon, had prescribed antimonials in the beginning, and afterwards the decoction of the bark, with Laudanum; which checked a profuse diarrhoea. A draught, containing two scruples of the bark in powder, was prescribed every four hours; and the decoction was directed to be continued in the intervals.

7th day. He was exactly in the same situation as yesterday. Fomentations were ordered to his feet and legs; wine was allowed freely; and the draughts were continued.

8th day. In the night he refused both his wine and medicines. At ten this morning his pulse was low, but did not exceed 90 pulsations in a minute: the tremors and *subfultus tendinum* were very threatening, and the stupor was so great, that he was with difficulty roused. Blisters were ordered to be applied to the ankles; and two table spoonfuls of the following julep\*, were prescribed every two hours. In the afternoon his pulse was firmer, he had taken the whole of the julep, and drank wine freely. He also took three drachms of the bark before night: At nine o'clock, however, I could observe little mitigation of the symptoms.

9th day. In the morning the tremors and *subfultus tendinum* were less frequent; his pulse was 100; and the heat of his body not much above the healthy standard. He was still comatose; but he spoke sensibly when roused. At seven in the evening his pulse

\* Aq. Puræ unc. v.  
 Cinnam. Simp. unc. i.  
 Sal. C. C. Volat. Scrup. ii.  
 Sp. Lavend. Comp. drach. ii. M.

pulse was 116, and all the symptoms increased. Through the day, his feet and legs were frequently fomented; and he took a drachm of the bark in a draught every two hours. Being costive, a clyster was directed at bed-time.

*10th day.* He continued comatose the whole day; and his pulse, at various observations, was never above 116. The draughts were continued, and the clyster was repeated in the evening.

*11th day.* No alteration could be perceived; a few grains of rhubarb were added to the draughts with bark, as he was costive.

*12th day.* Last night the delirium and convulsions, by his nurse's account, were more violent than ever. In the morning he had more stupor; but his pulse was 100, and pretty firm. The draughts prescribed yesterday procured three very fetid stools, which he voided involuntarily. A large blister was ordered to the head; and the bark draughts were continued with the addition

dition of 20 drops of the volatile tincture of valerian.

13th day. The stupor was less threatening; his pulse 100; but he was delirious the whole day; had frequent *subfultus tendinum*; and his urine continued of an amber colour. The draughts with the bark were ordered to be regularly persisted in.

14th day. He passed an easy night, and was free from *subfultus tendinum*. This morning his pulse was only 88; and he had little stupor. The bark was continued.

15th day. He was quite free from fever, but his intellects were very weak; and his urine continued clear and pale.

On the 17th day his pulse was only 60, and his senses began to return, although at times his ideas were still confused. The bark and wine were continued.

From this time he recruited his strength daily. On the 21st day of the disease, he  
was

was able to walk across the room: In a few days more he went abroad, and was speedily restored to his usual health.

To relate every instance of the success of the practice which has been recommended, would far exceed the limits of this publication: I shall therefore conclude this section, by transcribing a few cases of fevers from the records of the *Newcastle Dispensary*.

C A S E XXII.

James Dryden, Mariner, aged forty-four, was admitted to the Dispensary on the 1st of October, 1778. Three of his children had laboured under a fever; and from lying in the same room, he caught the infection. It was now the third day of his disease; his pulse was 130; and he complained of violent head-ach and thirst. Two spoonfuls of the *Julep. Emet.* were prescribed every two hours.

4th day. The medicine operated upwards and downwards. The action of the vessels being much abated, a drachm of the bark was prescribed every two hours.

5th



*5th day.* He was delirious last night; but perfectly sensible this morning. His pulse was 120, soft, and rather feeble; and his spirits were dejected.

*6th day.* Being costive, a few grains of rhubarb were added to each dose of the bark.

*7th day.* He was very delirious in the night. This day he was sensible, but his fever continued.

*8th day.* Perfectly free from fever.

*9th day.* His appetite began to return.

From the 4th day of the disease, he took an ounce of the bark daily. But as his wife caught the fever from him, in order to prevent the danger of a relapse, the medicine was continued thrice a day. He recruited his strength daily; and on the 21st of October, returned thanks for his cure.

## C A S E XXIII.

Elizabeth Ferney, aged thirteen, on the 10th of October, was seized with the usual symptoms of fever; but was not admitted to the Dispensary till the 16th. From the beginning she laboured under a constant nausea, violent head-ach, and thirst, which, on the 5th night, were succeeded by gripes and bilious stools. Her pulse, when I visited her, was feeble, and beat 120; her tongue was covered with a white furr; and the sickness and diarrhoea continued. The emetic julep was ordered, and an anodyne draught at bed-time.

*7th day.* The medicines operated properly; her stools were large, bilious, and fetid, preceded by violent gripes. The emetic julep was continued, in smaller doses, and her beverage was ordered to be acidulated with lemon juice.

*8th day.* The fever was moderate, but the gripes and bilious purging continued. She took the julep through the day, and the anodyne draught at bed-time.

*9th day.* She was delirious in the night; the diarrhoea still continued; and the feverish symptoms were increased. Two table spoonfuls of the mixture of the bark were ordered every two hours.

*10th day.* Her eyes were dull; her pulse exceedingly quick, and fluttering; she had a constant muttering delirium; and her stools were more offensive, and still frequent. Three table spoonfuls of the following\* were prescribed every hour, as she refused to take the mixture of the bark. Ripe fruit was allowed, and Port negus for her drink.

*11th day.* Her delirium continued; her tongue was dry and brown; but the diarrhoea was moderate. The infusion was repeated, with an addition of an equal part of the mixture of the bark.

*12th day.* Her eyes looked very dull; her tongue was covered with viscid slime, and she had a slight hæmorrhage from the nose. Since the bark was prescribed, she  
had

\* R. Infus. Peruv. unc. viii.  
Sp. Vitriol. ten. gutt. xl. M.

had taken two ounces of the powder, and a pint of the infusion.

*13th day.* She was inclinable to sleep; but still had a muttering delirium; her pulse was firm; and her belly regular. The medicines were ordered to be repeated.

*15th day.* She passed a very restless night; and notwithstanding her mouth had been constantly cleaned with sage tea, honey and vinegar, yet her tongue and throat were covered with an aphthous crust. The common gargarism with a little *borax* was ordered; the bark was continued; and as she had three stools, an anodyne draught was prescribed at bed time.

For the three following days, Mr Stuart, the Apothecary to the Dispensary, attended her, and ordered the bark to be continued.

*19th day.* I found her exceedingly deaf; and still delirious; but her throat and tongue looked much better; and her pulse was firm. Her urine was of a pale colour, without any sediment.

She continued her medicines with great regularity, and on the 24th day of the disease, her pulse was firm, and she had very little fever. On the 25th she complained of a cough; which disappeared next day by the use of a spermaceti emulsion. For the two following days she slept much; but, although every symptom of fever had disappeared, she continued very weak, and for above 14 days was not perfect in her senses. The bark was continued thrice a day; her appetite returned, and she was soon restored to health.

After the cessation of fevers, especially of those which have been attended, in their course, with much debility and nervous distress, it not unfrequently happens, that some degree of foolishness, or *mania* shall remain for a few weeks. Such complaints I have always seen disappear as the patients recovered their strength, by a nourishing diet, the free use of wine, and moderate exercise.

#### C A S E XXIV.

Mary Hunter, aged thirteen, on the 12th of January, 1779, was admitted to the Dispensary.

penfary. She had been confined to her bed for eight days by a continued fever. Her pulse was very quick; her teeth were black and furred; her eyes dull; her skin was covered with *petechiæ*; and ſhe had a tickling cough. The following medicines\* were preſcribed.

9th day. She was exceedingly deaf, very delirious, and the *petechiæ* looked worſe. Half a drachm of the bark was directed to be given, in each doſe of the infuſion; and 20 of the following drops † in every draught of her common drink.

She perſiſted in the uſe of theſe medicines, with the greateſt regularity, through the whole courſe of the fever. The *petechiæ* ſoon diſappeared; and on the 14th day of

I 3

the

\* R. Infus. Cort. Peruv. unc. xii,  
Extract. Glycyrrhiz. drach. iii.

Cap. Cochlear. ii. alternis horis. M.

R. Miſt. e Sperm. Cet. drach. vi.

Tinct. Thebaic. gutt. vi.

Vin. Antimon. gutt. xx. M.

F. Hauſt. H. S. S.

† R. Sp. Vit. Tin. drach. i.

Dulc. drach. iii. M.

the disease her senses returned; and her pulse became fuller and less frequent.

From the 14th to the 22d day, she slept almost constantly, unless when medicines, and nourishment were given. On the 22d she was perfectly free from fever, and had a desire for nourishment; but her stomach was so weak that she did not retain her victuals. Two table spoonfuls of the following mixture\* were prescribed every two hours. The vomiting, however, continued once or twice a day, till the 27th. From this time she digested her victuals well; and in eight days was able to go abroad.

### C A S E XXV.

John Hunter, aged ten, was seized with the same fever on the 15th day of January, 1779. The symptoms were exactly similar till the 12th day of the disease, when an aphthous crust was observed upon his throat. He took the bark very liberally from the beginning; and on the 15th day  
he

R. Julep. Salin. unc. vii.  
Tinct. Cort. Peruv. unc. i. M.

he was sensible, and free from fever. Having given over his medicine, in two days he relapsed; the bark was again prescribed; and in five days more the fever totally disappeared. Soon after this he was seized with vomiting, which was treated in the same manner, as in the above case; and on the 16th of February he was discharged perfectly cured.

C A S E XXVI.

Thomas Hunter, aged seven, the brother of the above patients, whose cases have been related, was seized with the same fever, on the 2d day of February, 1779, and was admitted to the Dispensary on the 3d day of the disease. The action of the vessels being strong, three grains of the *Pulv. Antimonial.* were prescribed every two hours; and after its operation he was ordered to take three table spoonfuls of the decoction of the bark every three hours.

*4th day.* The antimonial operated well, and he passed two long worms of the *teres* kind; his fever, however, continued with-



out the least abatement. The decoction was continued.

*5th day.* The fever still continued, although he had taken the decoction of the bark freely. Being costive, 12 grains of the *Pulv. Mercur.* were prescribed at bed-time.

*6th day.* He had two stools with the powder, which, however, discharged no worms.

For the two days following, no material alteration could be perceived. On the 9th day he vomited a long worm of the *teres* kind; and several petechial spots were observed upon his arms and sides. The bark was continued, and the mercurial powder was ordered to be repeated at bed-time.

He voided no more worms; and his fever continued without any mitigation. On the 14th day of the disease he was comatose; his cheeks were flushed; his pulse was 120, and the cuticle began to peel off in mealy scales. The scarlet fever and fore-  
throat,

throat\*, being still in the town, from the beginning, I very minutely observed this patient's complaints; but he had at no period of the disease, either the efflorescence, or the least affection of the throat. The decoction of the bark was continued.

On the 15th day of the disease, I found him perfectly free from fever. On the 17th he had a desire for nourishment. On the 18th he complained of nausea, and vomited at times; judging these symptoms to depend merely upon debility of the stomach, the tincture of bark, with weak spirit of vitriol, was prescribed. The vomiting totally left him in two days. He however continued weak, and the cuticle kept peeling off till the 27th day of the disease. On the 7th of March he was discharged perfectly cured.

In fevers, worms are frequently voided, in consequence of the heat and putridity of the intestines rendering their residence uncomfortable. The same occurrence also happens in the small pox, measles, and in every

\* See Part II.

every other disease or accident which induces febrile commotion in the constitutions of young subjects. Even the *worm-fever*, as it has been called, is, in my opinion, almost always unjustly imputed to worms, and therefore can seldom be removed by anthelmintics. In such cases after the exhibition of a puke, and a dose of calomel and rhubarb, which may be repeated when indicated, I immediately commence with the bark: by this means, the nervous symptoms, which so frequently accompany fever, in the delicate habits of children, are, for the most part, happily obviated.

### C A S E XXVII.

Anthony Westgarth, aged twenty-seven, was admitted to the Dispensary, on the 24th of May, 1779. He was seized with a severe shivering fit, and had been confined to his bed for three days. He now complained of head-ach, pain and foreness of the throat. His pulse was 120, soft, and not very strong; and his tonsils appeared inflamed, and a little swollen. The volatile liniment was directed to be applied externally, and the *Julep. Emet.* was prescribed, which

which by operating upwards and downwards, almost instantly removed the complaints of his throat.

He sweated the whole night, and next morning I found him perfectly free from fever; but as one of his children lay in the same room, and was just recovering from a fever, which I imagined was infectious, I desired him to take the bark: He however neglected my advice, as he thought he had no farther occasion for medicine.

On the day following, he had a slight chilly fit, which was soon succeeded by fever, with delirium at night. On the 28th of May, which I shall account the 3d day from the formation of the fever, I was sent for. His pulse was very frequent, weak and feeble; he was sensible, but much dispirited; laboured under tremors, and became faint in an erect posture. Two table spoonfuls of the mixture of the bark were directed every two hours; and wine was ordered to be given freely, which his recommender humanely supplied him with.

4th day. He was delirious in the night: this day when I visited him, his senses were imperfect, although he answered some questions rationally. His pulse was only 100, but very feeble. He took an ounce of the bark since yesterday; it was ordered to be continued.

5th day. His tongue was dry and brown; he faltered in his speech; his pulse was still sunk, and he had a muttering delirium.

6th day. He was exactly in the same situation.

7th day. He had frequent *subsultus tendinum*; his eyes were exceedingly dull and heavy; he was comatose, and whenever he fell into a slumber, the muscles of his face were convulsed. His pulse beat 112, was soft and equal. He had taken three ounces of the bark from the beginning; it was ordered to be continued regularly; and a blister was directed to be applied, to the head.

8th day. The blister discharged well, but it was suffered to lie on for 12 hours longer. The bark was continued.

9th day. At ten o'clock in the morning I found him in a gentle sweat, and his tongue looked moist. He was more sensible but still had slight *subfultus tendinum*.

10th day. He rested well in the night; and this morning, I had the pleasure to find him free from fever. But as he was very weak, he continued to take the bark daily to the 20th; he was then able to go abroad, and soon recovered his usual strength.

### C A S E XXVIII.

Margaret Westgarth, the wife of the former patient, on the 23d of June, 1779, was seized with the fever; but did not procure a letter to the Dispensary till the 7th day of her disease. In the evening I found her pulse 108, very feeble, her cheeks flushed, and her skin very hot. She had a low delirium, complained of sickness, sometimes vomited, and had a *diarrhoea*. An Emetic with *Ipecacuanha* was directed; an anodyne draught was prescribed at bed time, and in  
the

the morning early, four table spoonfuls of the decoction of the bark, to be repeated every two hours.

8th day. No alteration was observed, except an abatement of nausea; half a drachm of the bark was ordered to be given in each dose of the decoction.

9th day. She was more delirious; faltered in her speech, had frequent *subfultus tendinum*, and her pulse was sunk. She refused the powders, but took the decoction of bark freely. As her skin was dry, and as she was very restless, a draught with some drops of *Antimonial* wine and *Laudanum* was ordered at bed time.

10th day. She slept for six hours last night. Her pulse was still feeble at noon, and the *subfultus tendinum* continued. A blister was laid betwixt her shoulders, as her relations had a prejudice to one being applied to the head. She used about a pint of the decoction of the bark daily; but could not be prevailed upon to take it in substance.

11th day. Exactly the same. The decoction was continued.

12th day. Her senses began to brighten; and the *subfultus tendinum* had almost vanished.

On the 13th and 14th day she slept much, but took the decoction freely when offered. Though delirious she longed for butter milk, which was ordered to be procured, and to be given her immediately.

15th day. She sweated much in the night. At noon her pulse was not quicker than natural, but was still feeble; her urine was pale; and she had some degree of delirium.

16th day. Her pulse was 80, much firmer, and several white miliary eruptions were observed upon the breast. The decoction of bark was continued.

17th day. She was perfectly sensible, and had a desire for nourishment.

From



From this time she began to recover daily; although her legs swelled much to the 27th day of the disease. On the 22d of July she was discharged perfectly cured.

In this section, I have endeavoured to give as much variety of continued fevers, as its limits would admit. Some of the most dangerous cases, which occurred in practice, have been purposely selected, that it might appear what confidence ought to be placed on the bark in the cure of fevers. Those cases which terminated unfortunately, shall be taken particular notice of, when an account is given of the general success of the practice, which has been recommended.

I shall now proceed to offer some practical observations on the fever which was prevalent in *Newcastle*, in the latter part of the year 1777.

SECT.

## S E C T. IV.

OF THE CONTINUED FEVER WHICH PREVAILED IN NEWCASTLE, IN THE LATTER PART OF THE YEAR 1777.

**T**HE spring of this year was late and cold, and the summer remarkably cool, with frequent showers. In the last part of July the weather was very wet, and the air moist, even when it did not rain. In August and September, the weather was very sultry, but in October, after the first, or second week, it was for the most part foggy, rainy or hazy.

In July, August, and September, several families amongst the middle and lower class of people, both in the town and neighbourhood, were seized with fevers, which were soon attended with symptoms of debility, and frequently with those which denote a tendency in the fluids to putrefaction, of which some cases have been related in the last section\*.

K.

In

\* See cases, No. xviii, xix, xx.

In October, November, and December, the fever was attended with cough, and sometimes peripneumonic symptoms, and was very prevalent amongst the poor in the lowest and moistest parts of the town\*. The disease became less frequent when the cold weather came on at Christmas; though several still continued to labour under it till April 1778.

As this variety of continued fever, does not appear to me, to have been sufficiently taken notice of by medical writers, without entering into its nature, or the investigation of its cause, I shall briefly describe its symptoms, and illustrate the method of cure which I adopted, by subjoining a few cases.

The

\* Although some instances of the disease occurred in different parts of the town, yet in the months of October, November, and December, of sixty-two patients admitted to the Dispensary, under the article of fevers, forty-six laboured under this fever, in the narrow lanes by the *Quay*, *Pandon*, and parts adjoining. In January, February, and March, 1778, it crept into the populous suburb of *Sandgate*; but was by no means very prevalent, as, during these months, I only attended eighteen patients who laboured under the disease. See the Description of *Newcastle* in the introduction.

The disease began with listlessness, or shivering, sickness at stomach, and universal pains. The pulse in the beginning was, in general, very small and frequent. Upon the invasion some complained of a cough, stricture and oppression of the breast, attended with slight stitches of the sides, and wheezing respiration: but for the most part these symptoms did not appear till some days after the formation of the fever.

In whatever manner the disease began, in a few days the strength and spirits of the patients were prostrated, the tongue became dry, brown, or black; and the teeth were covered with a thick furr. A low delirium, stupor, or coma, in general, soon appeared; and these symptoms often remained for several days, after the fever had vanished.

About the 8th or 10th day of the disease, sometimes sooner, and sometimes later, both white and red miliary eruptions were observed upon the neck, breast, and sides of the patient; and sometimes a more universal red rash, resembling the measles. Besides these eruptions *petechiæ* were fre-

quently discovered; and in some the whole body appeared marbled. In many the countenance was bloated, and the eyes dull and blood-shot; the throat covered with an aphthous crust, and the stools involuntary, bilious and putrid.

Several patients had the fever without any peripneumonic symptoms: but in most of those a distressing cough came on, after the fever was removed.

The duration of the disease was uncertain; and some relapsed into the fever, which, however, in this state never proved fatal. Sometimes the crisis was brought on by a gentle sweat; but it more frequently happened, that the patient imperceptibly wrestled through the disease, in a comatose or sleepy state.

The disease was evidently contagious. It seldom or never appeared amongst the poor, but the whole family were attacked; and in the Dispensary patients, it was easy to trace the infection from house to house.

The following was the most successful method of treating this fever. In the beginning emetic tartar, given in such doses as to vomit effectually, and afterwards in such a manner as to produce a gentle sweat, together with *elix. paregoric.* to appease the cough, sometimes removed the fever at once. But after the disease was confirmed, although antimonials, when the strength of the patient would admit of their use, were still serviceable, yet the only medicine which proved of singular advantages was the Peruvian bark in as large doses, as the stomach would retain\*.

K 3

When

\* In the *Febris Nova* of the year 1685, which seems to have a great analogy to the fever above described, *Sydenham* advised the bark, when it was attended with *aphtæ* and hiccup, or when intermissions happened. But with respect to the more general use of the bark, in the cure of this fever, we meet with the following observations. “ The  
 “ Physicians, who had learnt from experience, that all such  
 “ fevers as did in the least intermit, and those which frequently did not intermit, from the year 1677 to the  
 “ beginning of the year 1685, certainly yielded to the  
 “ Peruvian bark, treated this fever with the same medicine.  
 “ But however rational this procedure was, it did not  
 “ succeed so well as in the foregoing years. For having  
 “ made the strictest inquiry, I found that though the bark  
 “ was given liberally, yet it seldom removed the distemper.  
 “ I should, therefore, rather ascribe the recovery of the  
 “ patient to some happy termination of the disease, than to  
 “ the

When the disease was left to nature, but especially, when large evacuations by bleeding were used in the beginning, I met with too many examples of its fatality. But when the lancet was withheld, and the disease properly treated, few died. Of sixty-four patients, who came under my care at the Dispensary, I had the good fortune to lose only two.

## CASES

“the efficacy of the medicine.” *Schedula Monitoria de nova febris ingressu.* From the latter part of this quotation it would appear, that the author expected the bark to be as speedily effectual in the cure of *continued fevers*, as he found it in *intermittents*.

But to indulge a reflection of a different nature: The celebrated *Sydenham*, had the honour of being the first, who gave the bark in large doses, and even at a time, when the disputes of contemporary Physicians, had almost expelled it from the *materia medica*, as a pernicious, or at least an useless drug. In many parts of his works we observe him extolling its virtues and innocence, and recommending its liberal use in fevers. When tertians degenerated into *continued fevers*, he did not scruple to give the bark in the most continued of this sort; and he remarks that the nearer the intermittent approaches to a continued fever, either spontaneously, or from too hot a regimen, the more necessary it is to exhibit a larger quantity of the bark. “Cum  
“ autem Febres quæ jam apud nos grassantur, etsi post se-  
“ cundum tertiumve paroxysmum reponere se in classem  
“ Continuarum nitantur, tamen ad Intermittentes debeant  
“ referri; nulla mihi est religio *Corticem* vel in maxime  
“ *Continuis* hujus speciei sumendum proponere, qui dicto  
“ more iteratus ad apyrexiam certò ægrum perducet, modò  
“ assiduus Lectuli calor, & intempestivus Cardiacorum usus

“ conti-

CASES OF THE CONTINUED FEVER WHICH  
PREVAILED IN NEWCASTLE, IN 1777.

C A S E I.

JANE GRAY, aged thirteen, who lived  
in a narrow lane by the Quay, was admit-

K 4

ted

“continuitatem Febri non conciliaverint; quo in casu Pe-  
“ruvianum corticem nihil quicquam profecisse plus semel  
“observavi. Neque mihi unquam contigit ut viderem Vi-  
“num in quo propinatur Cortex (quod jure quis possit sus-  
“picari) febricitanti obfuisse; è contra verò calor, sitis,  
“cæteraque Febris Symptomata ut plurimum post assump-  
“tam hujus remedii quantitatem sufficientem, mox evanes-  
“cent, vino haud obstante. Hic autem observandum,  
“quò quo magis Febris sive sponte suâ, sive regimine ca-  
“lidiori ad Continuitatem accedat, eo major Corticis  
“quantitas exhibenda; ita ut nonnunquam viderim mor-  
“bum hunc non nisi sesqui-uncia, vel unciis ejusdem duabus  
“cessisse.” *Epist. Responsoria. 1. Sydenham. Op. p. 268.*

In the *febris depuratoria*, which is still a very common  
variety of continued fever in this island, our celebrated au-  
thor, towards the conclusion of this epistle, adds, “Whe-  
“ther the bark will cure this fever, as certainly as it com-  
“monly does intermittents, I cannot say: but if it be given  
“in the *Plague*, and the continued epidemic fevers, which  
“will regularly follow this, we must expect the same effects  
“from it, which we now find it produces in the *pleurisy*,  
“*peripneumony*, *quinsey*, and the like inflammatory fevers,  
“in which it is evidently pernicious.”

That the bark will produce pernicious effects in *plauri-  
sies*, and other local inflammations we readily allow: but  
cannot subscribe to the opinion, that it would prove dan-  
gerous in the *Plague* and continued epidemic fevers; for in  
certain stages of those diseases, it will be found to be the  
most valuable of all medicines.



ted to the Dispensary on the 5th of October, 1777. She had been confined to her bed for eight days, during which time she had been almost constantly delirious. Her eyes were dull, her teeth covered with a black furr, and her pulse beat 120. Her skin was dry, and she was costive. Three grains of the *Pulv. Antimonial.* were prescribed every three hours.

*9th day of the disease.* She had three bilious stools in the beginning of the night; and fell into some rest towards the morning. At noon, when I visited her, she was still delirious; and her pulse was very frequent and feeble. Wine was ordered, and two table spoonfuls of the decoction of the bark every two hours.

*10th day.* No alteration, except that she was troubled with a cough. The decoction of bark, acidulated with *sp. vitriol. ten.* was ordered to be given in large doses.

*11th day.* Her complaints were the same. A table spoonful of the mixture of the bark was prescribed every two hours, and, as she

she was costive, a dose of the *pulv. eccoprot.* at bed-time.

12th day. She moaned much, was delirious at times, and incapable of moving herself; but her pulse was stronger, and much diminished in quickness. The mixture of the bark was continued.

13th day. Her pulse was very little quicker than natural; but her cough was more troublesome. The bark was continued.

14th day. In the morning her tongue was moist; she had three stools; and slept much during the day. The bark was continued.

On the 16th day her tongue was clean, she was perfectly sensible; and the cough was easier; but she was exceedingly emaciated. From this time she gradually recovered; but it was judged proper to continue the bark for some days longer.

On the 19th of October she was able to go abroad, and was soon restored to her usual health.

The

The father of this patient, was seized with the fever, on the 24th of October, he was treated in the same manner, and the fever left him on the 15th day; but he was afflicted with a cough for about a week afterwards.

## C A S E II.

Mary Knox, aged twenty-seven, who lived in a narrow lane by the *Quay*, had laboured under the fever for eight days, attended with a hæmorrhage from the nose, and nocturnal exacerbations with delirium. She was admitted to the Dispensary on the 7th of October. Her pulse was feeble, and beat 110 pulsations in a minute; and her body was spotted with livid *petechiæ*. Two table spoonfuls of the mixture of bark were prescribed every two hours, and imperial was ordered for her drink.

9th day of the disease. Her pulse was 116; she had a constant nausea, vomited some of her medicine, and had passed two fetid stools in the night. The room in which she

the lay was small, and ill aired: The window was directed to be kept open, and four table spoonfuls of the following preparation of the bark\* were ordered every two hours.

10th day. She sweated profusely in the night. In the morning her pulse was only 90, and the diarrhoea moderate. The medicine was repeated.

11th day. She had a very restless night, and purged frequently. Her pulse was 100; she was much dejected; and the *petechie* continued. Two table spoonfuls of the mixture of the bark, with a few drops of *laudanum*, were prescribed every two hours.

12th day. She had two stools in the night, but got some rest. At noon her fever still continued. Having finished the mixture, which contained an ounce of bark, it was ordered to be repeated.

13th

\* R. Infus. Cort. Peruv. unc. xii.

Sal. Tart. drach. i.

Sp. Vitriol. ten. q. f. ad saturationem.

13<sup>th</sup> day. The purging had disappeared; but as her fever continued, the mixture with the bark was repeated, without the *laudanum*.

14<sup>th</sup> day. She slept well in the night; was in a gentle moisture in the morning; the *petechiæ* began to disappear; and she had less fever. The mixture was repeated.

On the 16<sup>th</sup> day she was free from every complaint, except weakness. The bark was now only ordered thrice a day. On the 20<sup>th</sup> her belly being rather tumid, a dose of rhubarb was prescribed. From this time she recovered rapidly, and was able to return her letter to the Dispensary on the 21<sup>st</sup> of October.

The daughter of this patient received the infection. On the 11<sup>th</sup> day she was admitted to the Dispensary, and, by the same method of treatment, recovered from the fever on the 17<sup>th</sup> day of the disease.

## C A S E III.

Elizabeth Wegent, aged forty-seven, was admitted to the Dispensary on the 7th of October. She had been confined to her bed for nine days. The disease attacked her suddenly, and was succeeded by sickness, prostration of strength and spirits. When I visited her, she was very feeble; her pulse beat only 100; and I was told, that for two days past she had laboured under gripes and purging, and that her stools were very offensive. The decoction of bark, with *laudanum*, was prescribed, and port wine was directed in her drinks.

10th day. The purging was moderate; her pulse was firmer; and her tongue was moist about the edges. The decoction of bark was ordered to be repeated; and a dose of rhubarb was prescribed at bed-time.

For two days more she continued the decoction of bark. On the 13th day her fever increased: she was giddy and faint in an erect posture, and totally despaired of recovery.

covery. The purging had disappeared. A drachm of the bark was ordered every three hours.

For the three following days no material alteration could be observed.

On the 18th she was perfectly free from fever; but was much enfeebled, and had a constant cough, without any expectoration. Two table spoonfuls of the *Mistura Oleosa*, with *paregoric elixir*, were prescribed every three hours.

In two days more the cough disappeared, and she was soon restored to perfect health.

This patient lived in a narrow confined lane by the Quay, called *Plumber Chare*; in which place this fever had been frequent, and fatal to many who trusted the disease to nature.

#### C A S E IV.

Jane Cook, aged thirty-eight, living on the same floor with the patient whose case has

has been just related, was admitted to the Dispensary on the 10th of October. She had laboured under the fever for eleven days. Her pulse was feeble, and beat 120 pulsations in a minute; her eyes were blood-shot; her tongue dry and brown; and her teeth black: she had a constant delirium, incessant cough from the beginning, but expectorated nothing but mucus. She was costive; passed her urine insensibly; and she lay in a small closet. A quarter of a grain of emetic tartar was prescribed every two hours till it should produce vomiting; and wine whey, with *oxymel simplex*, was directed for her common beverage.

12th day. The antimonial vomited thrice, and operated gently downwards; but produced no alteration of her complaints. Three table spoonfuls of the decoction of bark were prescribed every two hours.

13th day. Her pulse was fuller and less frequent; her countenance, however, looked bloated, and the cough and delirium continued. Two table spoonfuls of the mixture of bark, acidulated with *sp. vitriol. ten.* were ordered to be taken every two hours.



*14th day.* The delirium was constant; her eyes looked very wild; and she still voided her urine without giving notice. Her mouth was full of viscid mucus, and her breathing was sonorous and wheezing. A gargle was ordered; the mixture with bark was repeated; and a bottle of old port was sent to be mixed occasionally with her panado and drinks.

*15th day.* She spoke sensibly for the first time since I visited her; but in a few minutes muttered and became delirious. Her pulse was only 80; her eyes were dull, and she still gave no notice of her urine. The mixture with bark was repeated.

*16th day.* Her pulse was 90; and she was exceedingly deaf, and comatose. The mixture of the bark was repeated.

*17th day.* She was very delirious in the night. This morning her fever was moderate; her tongue was moist, and her teeth looked cleaner. The mixture was continued.

18th day. She gave notice of her urine; but was comatose, and muttered much. The cough being very troublesome, a spermaceti draught, with *paregoric elixir*, was prescribed at bed-time.

19th day. She had slept all last night. In the morning she was quite free from fever, but was very deaf.

20th day. She had no complaints, except debility and the cough. The following medicine \* was prescribed.

On the 23d day her cough totally disappeared; she was able to sit up; and soon afterwards was restored to health, and returned thanks to her recommender.

## C A S E V.

Ann Stuart, aged forty-seven, living in the same house with the last patient, was admitted to the Dispensary on the 10th of

L O C T O

\* R. Mist. e Sperm. Cet. unc. viii.  
Elix. Paregoric. drach. ii. M.  
Cap. Coch. ii. quarta quaque hora.

October. Three of her children had recovered from the fever, and it was now the 9th day since she was attacked. Her respiration was frequent and wheezing; she complained of stricture, but of no pain of the breast, and of violent head-ach. Her tongue was dry, her eyes blood-shot, and she had much nausea; her pulse was 100 pulsations in a minute, low and sunk; and she had frequent *subfultus tendinum*. Wine was allowed, and two table spoonfuls of the squill julep, with a small proportion of tartar emetic, were prescribed every two hours.

10th day of the disease. The medicine vomited her, which relieved the stricture of her breast. She was in a warm equal moisture this morning; her pulse was only 100; and she was in every respect much relieved.

11th day. The cough was loose, and she expectorated a considerable quantity of mucus. A mixture with half an ounce of the bark, acidulated with *sp. vitriol. ten.* was prescribed.

On the 14th day she was totally free from fever, but continued very weak.

On the 16th the cough increasing, two table spoonfuls of the spermaceti mixture, with *paregoric elixir*, were ordered every three hours.

On the 20th the cough totally disappeared, and in a few days more she was dismissed perfectly cured.

## C A S E VI.

Robert Cormick, aged nine, was admitted to the Dispensary on the 14th day of October. He lived in a narrow lane by the *Quay*, and had been confined to his bed for five days. When I visited him he complained of sickness, vomited much bile, had a violent head-ach, and his belly was bound: his pulse was only 116; his skin dry and hot; and I was told all his complaints, together with a delirium, were aggravated at night. Three grains of the *pulv. antimonial.* were ordered every three

hours; and a powder with *calomel* and *rhubarb* at bed-time.

*6th day of the disease.* He vomited several times, and had one stool; but was very insensible in the night. His pulse beat 120, the nausea continued, and he puked whenever he moved his head from the pillow. Having omitted the dose of *rhubarb* and *calomel*, it was given while I was present.

*7th day.* He was very delirious last night: his pulse was 100 this morning. The following preparation of the bark was prescribed\*, and twelve grains of the *pulv. ecoprot.* to be taken at bed-time.

*8th day.* He had a very restless night: his pulse was feeble, and beat 118: he was insensible at times, and picked at the bed cloaths; and several *petechiæ* were observed upon his body. The mixture of bark was repeated, and the powder, as formerly, at bed-time.

He

\* R. Julep Acid. unc. iv.  
Pulv. Cort. drach. ii. M.  
Cap. Coch. i. alternis horis.

He continued much in the same state till the 14th day of the disease, although he took his medicine regularly. The fever then totally left him; but he had a troublesome cough.

On the 15th day of the disease the cough increased. The oily mixture, with *paregoric elixir*, was prescribed.

On the 18th day the cough left him, his appetite returned, and he was soon restored to health.

## C A S E VII.

Richard Yeoman, seven years of age, was admitted to the Dispensary on the 13th of October. He lived in a narrow lane by the *Quay*. His sister was just recovering from the fever, and some other patients belonging to the Dispensary were ill in the same house. He was delirious; his pulse beat 140 in a minute; his skin was hot; and his countenance flushed: he had no cough; but his respiration was frequent and labo-

rious: his belly was costive. One-sixth of of a grain of emetic tartar was prescribed every hour.

*4th day of the disease.* He sweated in the night; but the antimonial produced no other evacuation. At noon he was sensible, and his pulse 130. The medicine was continued.

*5th day.* His pulse was 120; his tongue furred and white; but he was perfectly sensible. He was allowed small beer, for which he had a desire, for common drink.

*6th day.* His fever continued, and his pulse was very soft. The windows were ordered to be kept open, a spoonful of the mixture of bark was prescribed to be taken every two hours, and as he was costive, a dose of the *pulv. eccoprot.* at bed-time.

*8th day.* He was very feverish, and insensible in the night. Having had no stool, although he took a little calomel over night, the *infus. sennæ* was ordered to be taken by  
spoon-

spoonfuls; and, after its operation, he was desired to persist in the use of the bark.

10th day. He rested well in the night. At noon his skin was moist, his pulse 100, and his tongue looked clean. Several miliary eruptions were observed upon his neck and breast.

He continued the bark; the miliary eruptions disappeared; but his skin felt rough.

On the 16th day he was perfectly free from fever, and his appetite began to return. On the 19th he was so well, that I thought it unnecessary to continue my visits.

### C A S E VIII.

Nicholas Hanson, aged seventeen, who lived by the *Quay*, was admitted to the Dispensary on the 23d of October. He had been confined to his bed for ten days; during which time he had been almost constantly delirious, and much troubled with a cough. His pulse was only 100 in a minute, and very feeble; his eyes were dull, his temples co-



vered with a clammy sweat, and his throat with an aphthous crust; but he swallowed without difficulty. His breast was full of *petechiæ*, and he had been costive for some days past. A gargle was ordered to wash his mouth and throat; and two table spoonfuls of the following mixture were prescribed every two hours\*.

11th day. He was very delirious in the night, and coughed much. This morning his tongue and teeth were black, and he had a loose stool. One drachm of the bark was ordered to be given as frequently as his stomach would bear it.

For three days following he took an ounce and a half of the bark daily.

On the 14th day, after a restless night, I found him in a profound sleep; from which he was desired not to be disturbed.

On the 15th his skin was cool, his tongue clean, and his pulse was only 70. But he

\* R. Mist. Peruv. unc. viii.

Pulv. Rhei, scrup. ii. M.

complained of a troublesome cough, and foreness of the throat, which, however, upon inspection, appeared perfectly sound. The bark was continued.

In a few days more the cough left him, without any other medicine being prescribed. His appetite and strength daily returned, and on the 5th of November he was desired to return thanks for his cure.

### C A S E IX.

Love Dickson, aged thirteen, lay in the same room with her brother in law, the patient whose case has been related. On the 13th of November, being the 10th day of her disease, she was admitted to the Dispensary. Her eyes were dull, her teeth black, and *petechiæ* were observed on her body: her pulse beat 120; she had a wandering delirium, and a very troublesome cough, which had attended her disease from the beginning: her skin was dry, and she was costive. Two table spoonfuls of the following \* were prescribed every two hours, and her

\* R. Julep. Emet. unc. vi.

Elix. Paregoric. drach. i.

her feet were ordered to be immerfed in warm water.

11th day. The medicine vomited her five times, and operated gently downwards. Her cough was lefs troublefome, but ſhe had frequent tremors. The delirium was more urgent, and her tongue very dry and chopped. Three ſpoonfuls of the decoction of the bark, with a few drops of the *paregoric elixir*, were preſcribed every two hours.

12th day. She ſlept ſome in the night: her pulse this morning beat 120, and ſhe moaned and muttered much: her tongue was covered with black viſcid mucus, and her throat with an apthous cruſt: ſhe faltered in her ſpeech; and the *petechiæ* continued. A detergent gargle was ordered, and three ſpoonfuls of the following mixture of the bark every two hours\*.

13th day. Her throat was better; the other ſymptoms continued as yeſterday.

14th

\* R. Infuſ. Peruv. unc. x.

Pulv. Cort. Peruv. unc. ſs.

Sp. Vitriol. q. s. ad gratam aciditatem M.

14th day. She rested well last night. This morning her tongue looked clean, the cough was moderate, and her speech natural: the *subfultus tendinum* had disappeared, and her pulse was 100, and pretty firm. The mixture was ordered to be repeated with double the quantity of bark.

15th day. She rested well in the night; and this morning her pulse was below the healthy standard. The mixture of the bark was repeated.

For three days her recovery was protracted by a vomiting without any sickness. Her appetite being very keen, and her stomach weak, she was desired to eat moderately, and to take a few drops of the *elixir of vitriol* thrice a day.

On the 21st day the vomiting totally left her; and she speedily recovered her usual health.

## C A S E X.

Mary Lambly, aged fifty-five, of a delicate constitution, after being troubled with  
a slight

a slight cough for a month, had been seized with a shivering, three days before I visited her, which was succeeded by violent head-ach, and a stitch in her side. She lived in a narrow lane by the *Quay*; and had been frequently exposed to infection, from visiting the sick. Having procured a letter to the Dispensary, I first visited her on the 24th of October. Her pulse was 112 in a minute, small, feeble, and fluttering; she complained of violent head-ach, coughed much, and the stitch continued; but her strength was so much prostrated, and she was so faint, that I did not venture to prescribe venesection: A quarter of a grain of emetic tartar was directed to be taken every three hours, in two table spoonfuls of the spermaceti mixture; and a blister was ordered to be applied to the side.

*4th day of the disease.* She vomited a considerable quantity of bile, and had two stools with the antimonial; which gave her so much relief that she did not apply the blister. At noon her pulse was 100; the stitch was removed; but she complained much of gripes. The medicines were continued;

tinued ; and she was allowed wine whey for her drink.

*5th day.* Her belly was costive, and she complained of a pain in her stomach and bowels. Her pulse was 100; and her head-ach continued with violence. A blister was ordered to be applied behind each ear, and two table spoonfuls of the following mixture \* were directed every two hours.

*6th day.* A red rash was observed upon her breast, interspersed with some petechial spots ; her pulse was soft, and very feeble ; she coughed frequently ; had no pain, but some oppression in her breathing. Three table spoonfuls of the decoction of bark were prescribed every two hours.

*7th day.* She had many stools in the day ; at night when I visited her, she was exceedingly feeble ; and her tongue was dry and black. Twelve grains of the *Pulv. Dover.* were directed at bed-time ; and the bark was ordered to be continued.

*8th*

\* R. Julep. Salin. unc. vi.  
Pulv. Rhei. drach. i. M.

8th day. She slept well in the night. In the morning she was in a moderate sweat, and the purging had left her. The medicines were continued.

9th day. She had three bilious stools; passed a very restless night, and was at times delirious. At noon, her pulse was 118; she had slight *subfultus tendinum*; and she coughed and wheezed much in her breathing. The rash had almost disappeared. Wine was allowed freely, and the decoction of the bark was continued, with the *Pulv. Dover.* at bed-time.

10th day. Her breathing was very difficult, and her pulse very frequent and fluttering. A julep with *acetum scilliticum* was prescribed, and the blister ordered to be applied betwixt the shoulders.

11th day. The cough was easier; but the *subfultus tendinum* and delirium were very urgent, and the *petechiæ* more numerous. Four table spoonfuls of the decoction of the bark, with *oxymel scillit.* were ordered every two hours.

12th day. She was quite delirious, her pulse was very much sunk, and she coughed frequently, but had no expectoration. Half a drachm of the bark was ordered in each dose of the decoction.

13th day. Last night she made her stools and urine involuntarily. This morning her pulse was 120, very feeble; she had constant convulsive spasms on her face; and her neck and breast were full of white miliary eruptions. As she was incapable of taking the bark, strong wine whey, acidulated with lemon juice was ordered; and a cordial julep, with a little *oxymel scillit.*

On the 17th day, her hands, arms, and the whole trunk of her body were covered with white miliary eruptions; her respiration was wheezing and rattling; and a mortification was observed upon her hip. For four days past she had been incapable of taking medicine. About seven in the evening, her left arm was swollen and emphysematous, and she died about twelve o'clock at night.



## C A S E XI.

Richard Wilkes, of *Pandon*, aged 35, about 14 days before I visited him, had been confined by a fever for five days. On the 25th of October he was again attacked with a shivering fit, which was succeeded by the usual symptoms of fever; and on the 27th, he was admitted to the Dispensary. He complained of great prostration of strength, his pulse was small and quick, his tongue was foul, he had a frequent cough, and was much dispirited. The following emetic\* was ordered, and as he had got no rest for three nights past, 12 grains of Dover's powder were prescribed at bed-time.

4th day. He vomited a considerable quantity of bile, and had four stools last night. At noon his pulse was 100, and exceedingly feeble. He complained of head-ach, giddiness, and a bitter taste in his mouth. Two scruples and a half of the *pulv. eccoprot.* were

\* R. Pulv. Ipec. gran. xii.  
Tart. Emet. gran. i. fs.  
Aq. Puræ. unc. i. M.

were directed immediately. At night he had passed three bilious fetid stools; his fever was moderate, but he totally despaired of recovery. The following draught\* was ordered at bed-time; and wine was allowed freely.

*5th day.* He was very delirious in the night. In the morning he was in a gentle sweat; his skin was temperate; his pulse 100, and his urine dropt a thick sediment. Two table spoonfuls of the mixture of the bark were ordered every two hours; and the draught at bed-time, if the *diarrhoea* should return.

*6th day.* He had three stools yesterday afternoon, and one this morning. At noon he complained of a pain in his stomach, but his pulse was only 92. The mixture of the bark was repeated; and the draught ordered at bed-time.

*7th day.* He was delirious in the night. This morning he purged frequently, and

M com-

\* R. Pulv. Dover. scrup. i.

Antimonial. gran. iii.

Aq. Puræ. unc. i. M.

complained of tenesmus, and pains in his bowels. A dose of rhubarb was ordered in a saline draught, and the former medicines were continued.

For the two following days the pains in his bowels were easier. He rested pretty well in the night, and the diarrhoea was moderate; but he still entertained no notion of the possibility of his recovery.

On the 10th day his teeth became black, and furred; his skin was hot, but his pulse was only 84. On the 11th day he sweated much; his pulse was 100; and he was at times delirious.

On the 12th day his pulse beat 100; his countenance looked wild; and he had several involuntary putrid stools, preceded by gripes. An emetic was ordered, and afterwards the infusion of bark with *inct. thebaic.*

For the three following days the above symptoms continued, although, besides the infusion of bark, he took boluses with *Ipecacuanha* every three hours.

On

On the 15th day of the disease his breast and sides were full of white miliary eruptions. On the 16th his abdomen was tense, his tongue black, and the putrid diarrhoea continued: he had a hiccup, and was incapable of taking medicine.

On the 17th the integuments of the abdomen appeared livid, his extremities were cold, and he died in the evening.

## C A S E XII.

Elizabeth Johnson, aged twenty, who lived in *Pandon*, was admitted to the Dispensary on the 25th of October. She had laboured under the fever with a diarrhoea for ten days. Her pulse was 100, and feeble; her tongue was dry, her teeth cruſted, her eyes looked dull, and she had a low delirium. Two table ſpoonfuls of the mixture of the bark, with a few drops of *tinct. thebaic* were ordered every two hours.

*11th day of the disease.* She was very delirious in the night, and had a ſlight hæ-

morrhage from the nose. In the morning the purging was moderate, but she complained of a hiccup. The mixture of the bark was repeated without the *laudanum*.

12th day. No material alteration could be perceived. As her stomach did not retain the mixture of the bark, four table spoonfuls of the infusion were directed every two hours.

13th day. The hiccup was less troublesome, but the fever and delirium continued.

14th day. The hiccup had disappeared; she was sensible; her pulse beat only 80; but she was very feeble. The infusion of the bark was continued.

15th day. The cough being very troublesome, the spermaceti mixture with *elix. peregoric.* was prescribed.

16th day. She slept almost constantly.

17th day. The hiccup returned; her tongue still continued dry; she was very comatose and stupid, and when she sat up  
her

her head nodded. She had an inclination to vomit. Her pulse was only 60, and her skin temperate. A gentle emetic was prescribed, mint tea with spirit of nitre was ordered for common drink, and she was allowed as much wine as she pleased.

The hiccup continued, at times, for three days more; however in the intervals she slept much; but took the infusion of bark, with pleasure, when offered.

On the 22d she had no complaint unless the cough. A desire for food returned. On the 27th she was able to walk across the room, and from that time gradually recovered her health and strength.

Two of the sisters of this patient laboured under the fever at the same time. The youngest, aged ten, was afflicted with a cough, delirium, and diarrhoea: she took the bark freely, and recovered on the 18th day. The eldest, aged seventeen, besides the above symptoms, had a pain in the breast, slight stitches, wheezing respiration, and a large crop of miliary eruptions. By

the same means her fever disappeared on the 18th day; but she was so much reduced by the disease, that it was several weeks before she regained her usual state of health.

### C A S E XIII.

Thomas Lillie, aged eight, who lived in a lane by the *Quay*, had been confined for six days by the fever. His pulse was 120, the action of the sanguiferous system strong, and he had an exacerbation every night with delirium. Two grains of the *pulv. antimonial.* were prescribed every two hours.

*7th day.* His tongue was parched, his skin very hot, but the strength of his pulse was considerably reduced by the antimonial powders, which operated eight times by stool. The infusion of the bark was ordered to be given as frequently, and in as large doses as his stomach would bear.

*8th day.* He was very delirious in the night. This morning his pulse beat 120; his breast and neck were covered with a red  
miliary

miliary rash; and he had a frequent troublesome cough. The infusion of bark, softened with a solution of spermaceti, was repeated.

On the 9th day little alteration could be perceived. On the 10th day the cough was easier; he was perfectly sensible; his pulse beat 118; but the rash continued florid.

12th day. His pulse was 120, his tongue dry and brown, and he had a constant nausea. An emetic was prescribed, and the infusion of bark continued.

14th day. He slept well last night. This day the efflorescence looked dull, and began to scale off.

On the 15th day he continued free from febrile symptoms, but the cough was very distressing. The spermaceti mixture with *paregoric elixir* was prescribed.

In five days more the cough left him, and he was soon restored to health.



## C A S E XIV.

Thomas Boag, aged fifteen, who lived in a narrow lane by the *Quay*, was admitted to the Dispensary on the 25th of November. He received the infection from his mother, who, trusting to nature, died of the disease, and had lain in the same bed with two of his brothers, who were upon the recovery. It was now the 7th day of the disease. He was, at times, delirious; his pulse 120; and his skin covered with a miliary rash, interspersed with *petechiæ*: his belly was bound, and he complained of thirst and head-ach. The windows were desired to be kept open. He was allowed small beer for common drink, and wine in his panado. Two table spoonfuls of the mixture of bark, with a little rhubarb, were prescribed every two hours.

8th day. He slept some in the night. At noon his pulse was firmer, 115 in a minute, and he complained of a tickling cough. Having had two stools, the mixture was repeated without the rhubarb.

*9th day.* He was delirious in the night. In the morning his pulse was 104; and he coughed frequently.

*10th day.* His pulse was only 90. Being costive the mixture of the bark with rhubarb was ordered to be repeated.

*11th day.* His pulse was 92; the miliary eruption began to disappear; his eyes, however, were blood-shot: he complained of foreness of his throat; and was costive. Having taken four ounces of the bark since my first visit, it was desired to be given less frequently; and a bolus with calomel was ordered at bed-time.

On the 13th day of the disease, after a very restless night, I found his pulse only 72, and his tongue moist and clean. The cough had left him, but he still complained of uneasiness in his throat, although it looked perfectly well.

For four days following, being very weak and feeble, he continued to take half  
an

an ounce of the bark daily. On the 20th day he was so well that I thought it unnecessary to continue my visits; and in a week more he returned thanks for his cure.

### C A S E X V.

David Patterfon, Watchmaker, aged thirty-six, who lived in a narrow lane in the neighbourhood of the *Quay*, was admitted to the Dispensary on the 30th of November, being the 9th day of his disease. He laboured under a low delirium, with *subfultus tendinum*, but spoke sensibly between whiles. His pulse was sunk, his belly was costive, and he had a frequent loose cough. Powders with emetic tartar were prescribed, and after their operation, he was ordered to take two spoonfuls of the following mixture\* every two hours.

10th day. No material alteration could be perceived; he was still costive; had taken some of the mixture of the bark, but from mistake had omitted the antimonial powders.

\* R. Mist. Peruv. unc. viii.

ders. They were ordered to be taken immediately till they produced vomiting.

11th day. He vomited twice with the powders, and had one loose stool. In the morning his pulse was a 100; he was still delirious, moaned much; and his tongue was dry. The mixture of the bark was repeated.

12th day. He was exceedingly delirious and restless in the night. This morning he had a perfect remission of fever, and was free from the *subfultus tendinum*. The mixture of the bark was repeated.

13th day. He was very delirious last night. This morning, I found him sensible and in a gentle sweat. His pulse was only 90, but he complained of a cough. The mixture was repeated.

On the 14th day he was perfectly free from fever; but continued very weak till the 19th. He persevered in the use of the bark three or four times in the day; and in a few days more, was discharged perfectly cured.

## C A S E XVI.

Soon after the above patient recovered, three of his children were taken ill with the fever. His eldest daughter, aged thirteen, besides delirium and symptoms of debility, was from the beginning affected with cough, stricture and pains in the breast. On the 8th day her skin was marbled, and many petechial spots appeared; her tonsils were also covered with aphthous ulcerations. In the beginning antimonials were prescribed, and afterwards a free use of the bark, antiseptic gargles, wine and ripe fruits; by which means her fever totally left her on the 15th day, and she gradually recovered.

The other two children had the disease in a milder manner, and, by a similar treatment, were speedily restored to health.

## C A S E XVII.

Jane Thomson, aged sixteen, who lived in *Pandon*, was admitted to the Dispensary  
on

on the 9th of December; and on the 14th day of her fever. I was informed she had been constantly delirious for eight days past. Her pulse was 120, very feeble; her tongue and teeth were black, and her cheeks flushed. Her skin was very dry, her belly was costive, and she had considerable stupor. One fourth of a grain of emetic tartar was prescribed every two hours, till it should produce some sensible operation.

15th day of the disease. She had several bilious stools. In the morning she was still delirious and did not seem to know her mother, and had almost constant *subfultus tendinum*. Two table spoonfuls of the following mixture\* were prescribed every two hours.

16th day. She swet much in the night; and towards the morning slept for several hours. Though the windows were kept open in the day, from the time I first visited her, and though she drank nothing but cold

\* R. Mist. Peruv. unc. x.

cold drinks, her neck, breasts, and sides were covered with white miliary eruptions. The mixture of bark being finished, it was ordered to be repeated.

*17th day.* The delirium still continued; but her tongue was moist about the edges; the cough was almost removed, and she continued to take the bark liberally. In the morning she passed a large worm. The mixture was ordered to be repeated.

*18th day.* She was very restless in the beginning of the night; but slept calmly for several hours towards the morning. Her pulse was 84, her skin temperate, the miliary eruptions had almost totally disappeared; but she was still very deaf, and delirious between whiles. The mixture was ordered to be repeated; and being costive, a bolus with calomel was directed at bedtime.

*19th day.* In the night she was insensible, and coughed very frequently, but expectorated nothing but mucus. In the morning her pulse was only 76, her skin was

was temperate, but she had still a muttering delirium. The bark was ordered to be continued.

For the four following days she slept almost constantly; as she had taken a large quantity of the bark, her mother was desired not to disturb her.

Although she had no febrile heat, nor the least quickness of pulse, she was at times insensible till the 24th day of the disease. On the 25th her appetite began to return; but she was still a little deaf. On the 28th she was able to sit up. From this time she recovered rapidly, and in ten days more came to my house, and most gratefully returned me thanks for my attendance.

### C A S E XVIII.

Mary Law, aged nineteen, living in a lane near the *Quay*, was admitted to the Dispensary on the 19th of December. She had laboured under the fever for 12 days, accompanied with delirium and diarrhoea.

She



She was now reduced to the greatest pitch of weakness. Her pulse beat 100 pulsations in a minute, small and fluttering; her teeth were black, her tongue chopped, and the internal parts of her cheeks were ulcerated. She coughed much; rattled in her breathing; her arms and breast were covered with broad livid *petechiæ*; and I had no expectations of the possibility of her recovery. A detergent gargle was prescribed, and the mixture of the bark with a few drops of *laudanum*, to check the diarrhoea. The windows were ordered to be kept open, and she was freely supported with wine.

13th day of the disease. The *petechiæ* looked worse; the purging, however, had disappeared; but she now refused to take the mixture of the bark. Four table spoonfuls of the following preparation \* were prescribed to be taken every hour.

14th day. She was more sensible, and in every other respect appeared better. The infusion of the bark and the gargle were ordered to be repeated. 15th

\* R. Infus. Cort. Peruv. lib. i.

Sp. Vitriol. ten. q. s. ad gratam aciditatem.

15th day. The petechial spots were dusky; she had a convulsive motion of the lower jaw, and coughed frequently: but her mouth looked clean, the ulcerations were almost healed, and her pulse was only 100, pretty firm. Half a drachm of the bark was ordered every four hours, with a continuance of the infusion in the intervals.

16th day. She appeared much better; had taken half an ounce of the bark since yesterday, besides the infusion. The medicines were ordered to be regularly persisted in.

For the two following days she continued much in the former situation; only she was very deaf, and coughed frequently. On the 20th the *petechiæ* began to disappear, and her tongue was clean and moist about the edges.

On the 22d day she was free from fever, but had a very distressing cough. The spermaceti mixture was prescribed. From this time she recovered her strength gradually; the cough disappeared; but it was the 20th of

January, 1778, before she was able to walk abroad.

In order to shew the nature of the disease amongst patients who were well lodged, and had the benefits of good nursing and early medical attendance, I shall conclude this section with the two following cases, selected from those which occurred in private practice.

### C A S E XIX.

Miss —, aged eleven, residing at a boarding-school in *Newcastle*, had laboured under the fever for nine days. She was bled in the beginning by Mr Ingham, partner to Mr Lambert, and had taken antimonials and a saline julep. A diarrhoea coming on, and her case appearing alarming, Dr Brown was consulted, who prescribed an absorbent mixture, a blister betwixt the shoulders, and a decoction of the bark: the last medicine, however, did not agree with her stomach, and seemed to increase the diarrhoea.

On

On the 29th of September I was desired to visit her, at twelve o'clock, along with Dr Brown. We were informed that she had purged frequently since the morning, and had lost a considerable quantity of blood from the nose. Her pulse was very feeble, and beat 120 in a minute; her countenance looked ghastly; her eyes were dull, her tongue black, her teeth furred, and she laboured under a low delirium, with *sub-sultus tendinum*. A draught with the decoction of bark, and the jelly of starch, with a few drops of the *tinct. thebaic*, was ordered to be given immediately; and afterwards as large doses of the infusion of the bark, in cinnamon water\*, as her stomach would bear. At seven in the evening we found her exactly in the same situation as in the morning. Her stomach did not retain the draught. The infusion being now prepared, it was advised to be tried immediately; and she was allowed as much claret as she pleased to drink.

10th day of the disease. She was very delirious in the night, and we were informed

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by

\* See the *formula*, Sect. III. p. 105.

by the nurse, that she had picked frequently at the bed-cloaths. In the morning she had a loose stool, which was very offensive. Her eyes were dull, the *subsultus tendinum* was frequent, and her pulse was weak, feeble, and fluttering, although she had taken a considerable quantity of claret, and had finished a pint of the infusion of the bark, which sat easy upon her stomach. At noon the hæmorrhage of the nose recurred, which brought on faintness. Equal parts of the *tinct. rosar.* and claret were ordered for common drink. At nine o'clock, at night, no alteration could be perceived, only the hæmorrhage had ceased, and the diarrhoea was moderate. Her medicines were ordered to be regularly persisted in.

11th day. She was comatose in the night, and at times delirious. She had a loose offensive stool towards the morning. One scruple of the bark was ordered to be given in each dose of the infusion. At night her pulse was firmer, the bark sat easy upon her stomach, and in the day she had only two stools.

*12th day.* She was very comatose, but when spoke to answered rationally. She had only one stool; and, at three different observations this day, her pulse did not exceed 100 pulsations in a minute. She continued to take the medicines liberally.

*13th day.* She slept much in the night. In the morning her pulse was only 88; her skin was temperate; she was perfectly sensible; but her tongue continued black, and her teeth crusted,

*14th day.* Her pulse was pretty firm and soft, and not above 80; but her teeth and tongue looked as yesterday, although they were cleaned frequently with the tincture of roses and claret. The infusion and powder of bark were continued.

*15th day.* She was delirious in the night. This morning her skin was dry and hot, her pulse was 100, and she had a muttering delirium. Her back, where the blister had been applied in the beginning of her disease, was inflamed, very painful, and discharged

much. She had three stools in the day; and at night her fever was much increased. A draught with a few drops of the *vin. ipecac.* and *tinct. theb.* was prescribed at bed-time; and the bark was ordered to be continued in the same form as before.

*16th day.* In the morning she had a hæmorrhage from the nose. Her tongue was dry, black, and ulcerated about the edges. At night she was delirious, but her pulse felt pretty firm. She took the infusion with pleasure, but now refused the bark in powder. Having had one loose stool, the anodyne draught was ordered to be repeated; and as she tired of the claret, old hock and water was directed for common drink.

*17th day.* She slept well in the night. In the morning we had the pleasure to find her pulse only 80 pulsations in a minute. Her eyes had regained their lustre; and she had a desire for food. At night we were surprized to find her pulse 120, and every other febrile symptom increased; but upon enquiry were informed, that she had been fatigued by conversing much with a messenger

senger who came from her father. To allay the hurry of her spirits, an anodyne draught was directed at bed-time.

18th day. She passed a very restless night, and was delirious. In the morning her breast and sides were covered with white miliary eruptions, though the windows of her apartment had been kept open in the day, from the time I visited her. The inside of her lips, the *fauces* & *velum pendulum palati* were covered with apthous ulcers, and her pulse beat 120. Having taken little of the bark for two days past, it was ordered to be given more liberally in infusion, as her stomach now would not retain it in substance.

19th day. The *fauces* and throat looked worse, her pulse was 120, and the miliary rash more plentiful. A gargle was ordered with *mel. rosac.* & *sp. sal. marin.* the infusion of the bark was continued, and wine whey, acidulated with lemon juice, was directed for her common drink.

20th day. The same as yesterday. In the morning I gave her a scruple of the bark



amongst the infusion, which her stomach again retained; and these medicines were continued regularly through the day.

21<sup>st</sup> day. She had a remission in the morning, but her fever returned in the evening. Hock and water was given for common drink, which she preferred to the wine whey.

22<sup>d</sup> day. She was free from fever; the *fauces* looked clean, and the miliary eruptions were scaling off.

23<sup>d</sup> day. Her skin was cool, her pulse natural, but she was afflicted with a tickling cough, and was reduced to the utmost pitch of weakness. The bark was continued.

24<sup>th</sup> day. She sat up for an hour, and had a desire for food. Her back, where the blister had been applied, was now almost healed. The bark, in powder and infusion, was ordered only thrice a day.

For the five following days her cough continued very troublesome; on which account a draught with *sperm. ceti* & *elix. paregoric.* was ordered at bed-time.

In

In six days more she went home to her father, who lived above 60 miles from *Newcastle*; and although she was very weak, performed the journey in three days; and I had the pleasure of being informed, that she soon regained her usual health and strength.

C A S E XX.

Mr —, aged twenty-two, after having been indisposed for a week, was attacked with the fever on the 20th of October. He was bled in the beginning by Mr Hawdon, his Surgeon; had taken a puke, a sweat, and some other medicines.

On the 31st of October I was desired to visit him. I found him deaf, and very much reduced: his pulse was 104; he coughed frequently; his skin was rough from a miliary eruption, which was now scaling off; and he became faint in an erect posture. Fresh air was desired to be gradually admitted by the windows; wine and water was recommended for his drink; and three table  
 spoon-

spoonfuls of the decoction of the bark were ordered every two hours.

12th day of the disease. He had six stools in the night, and passed one of them without giving notice. This morning his countenance looked ghastly, his pulse was feeble, and his cough was loose and hollow. A few drops of *laudanum* were directed to be given in each dose of the decoction of the bark. At night he had only taken one dose of the medicine. He had passed two fetid stools; his eyes were exceedingly dull; the cough was more troublesome; he voided his urine without giving notice; his pulse was sunk, and large drops of sweat trickled down his temples. A blister was applied betwixt the shoulders; wine was ordered liberally; and his sister was requested to give him the bark punctually.

13th day. After he began the medicine the diarrhoea was speedily checked, and he slept some in the night. In the morning he was in a gentle moisture; his pulse was firmer, and beat only 80 strokes in a minute; but his breast was covered with a fresh crop  
of

of miliary eruptions. Having taken ten ounces of the strong decoction of the bark, with 30 drops of *laudanum*, the medicine was ordered to be exhibited in substance in the day, and in decoction in the night.

14th day. He coughed much in the night; sweated profusely; and was at times troubled with a hiccup. In the morning, when I visited him, he was in a slumber, but had a convulsive motion of the under lip. At night his pulse was 100, the hiccup was distressing, and his eyes looked sunk. The bark and wine were ordered to be continued.

15th day. He rested well in the night. At noon his pulse was firm; he heard better; and made his urine sensibly, which was of an amber colour. The decoction of the bark was ordered to be repeated.

16th day. He slept almost constantly.

17th day. He purged five times in the night, and passed some of his stools without giving notice. This morning his pulse was feeble; his countenance looked more ghastly; and

and he slept with his eyes half open. A bolus, with a grain and a half of *ipecacuanha*, was ordered to be taken every four hours, and the decoction of the bark with *laudanum* was continued.

18th day. He slept almost constantly. The diarrhoea was moderate; but he swet profusely, notwithstanding the windows were kept open. The cough had almost disappeared.

For the two following days he slept much. On the evening of the 20th, being costive, a dose of rhubarb was prescribed.

On the evening of the 22d day, his urine deposited a thick white sediment. The bark mixture was continued. Next day, though very weak, he was free from fever; and from this time he gradually recovered.

From several cases in this, as well as in the last section, it will appear, that the miliary eruption is frequently produced in fevers, notwithstanding the free admission of air, and indulging the patient in cold drinks.

I never, indeed, observed this eruption to be critical, and believe it to be always symptomatic; but I cannot agree with those Physicians, who maintain that it is invariably the effects of a hot regimen.

## S E C T. V.

### OF THE SUCCESS OF THE PRACTICE WHICH HAS BEEN RECOMMENDED IN CONTINUED FEVERS.

**A**LTHOUGH, from the cases which have been already related, some judgment may be formed of the great efficacy of the method of cure which has been recommended in Continued Fevers, yet, in order to determine its success from the result of general practice, it will be proper to give an account of the proportional number of patients who recovered, to those who died. In doing this, I shall confine myself to the cases of fevers which came under my care at the Dispensary; not that the success has been greater than in private practice, but merely because the numbers who are admitted to the benefits of a public charity, and the event of the diseases, whether in recovery

covery or death, can be ascertained with greater precision.

Since the first establishment of the Newcastle Dispensary, an accurate register of the names, ages, diseases of the patients, and the event of their cases have been kept: the letters of recommendation are also carefully preserved, containing a short account of the symptoms of each distemper from day to day, and the effects of the medicines employed. By the records of the charity it appears, that *two hundred and three* patients, labouring under Continued Fevers, have come under my care, from the 1st of October, 1777, to the 1st of October, 1779; of whom *one hundred and ninety-six* have been discharged perfectly cured; *six* died; and *one* was dismissed for being irregular.

I. The first case which terminated fatally has been related in the last section, No. X. The fever was complicated with inflammation of the lungs, which prevented the exhibition of the bark in large doses.

II. Richard Wilkes, a detail of whose case has been given in the last section, No. XI.  
took

took the bark liberally for two or three days; it however had no effect in preventing the malignity of the disease.

III. James Bryan, aged fifty-three, was admitted to the Dispensary on the 13th of May, 1778, being the sixth day of his disease. This poor man had lain in the same bed with his wife, who laboured, for several weeks, under a deep gangrene of the hip, and who was attended by Mr Anderson, Surgeon to the charity. We were both of opinion, that he contracted the disease from his wife, as he always removed the dressings, which were very putrid. When I visited him, his pulse beat 108 strokes in a minute: he had laboured under a diarrhoea with offensive stools for three days, and being destitute of every necessary, was reduced to the greatest pitch of weakness. A dose of rhubarb was directed, and an anodyne draught at bed-time; he was freely supplied with wine, and ordered to take the decoction of bark in as large doses as his stomach would bear. For the four following days little alteration could be perceived; and having a total aversion to medicine, he had  
only



only used a pint of the decoction from the time I first visited him. On the 11th day of the disease he was comatose, his tongue black, and a red rash was observed upon his breast; he was delirious between whiles, and had frequent *subsultus tendinum*. At night his temples were bedewed with a clammy sweat; he could not swallow; and expired early on the following morning.

IV. Ann Tease, aged fifty, was admitted to the Dispensary on the 16th of September, 1778. Her fever was of five days standing, and was ushered in with a severe shivering. When I visited her, she complained of a violent head-ach; her skin was hot; her pulse feeble, 112 pulsations; and she had a frequent tickling cough. She was very faint in an erect posture; and I was informed that, previous to her present complaints, she had laboured under a profuse uterine hæmorrhage. The decoction of the bark was ordered with the free use of wine; and as she was costive, a little rhubarb. On the following day her strength was more prostrated, and her countenance was wild and ghastly. On the 8th day of her disease, her  
pulse

pulse was sunk, and the inside of her thighs were livid; she was incapable of swallowing, and died at ten o'clock at night. On the following morning I examined her body: the neck, hips, and thighs were livid; and the smell of the corpse was offensive.— From the time I visited this patient, she only took a pint and a half of the decoction of the bark.

V. Mary Whiteoak, aged twenty-two, in the last month of her pregnancy attended her husband, labouring under a putrid fever, who recovered by the care and attention of Dr Pemberton, one of my ingenious colleagues: she was seized with the fever on the 31st of December, 1778, which brought on labour, and she was delivered on the 4th of January following. On the 9th, being the 10th day of her disease, she was admitted to the Dispensary. For some days past she had been afflicted with severe pains in her belly, a putrid diarrhoea, and other symptoms of the *puerperal fever*, together with a profuse discharge of the *Lochia*. Her pulse was exceedingly quick, and feeble; her countenance wild and ghastly; her

temples were bedewed with a clammy sweat; and her breast and arms thickly covered with broad livid *petechiæ*. Although every symptom denoted a speedy dissolution, in order to appease the pains and tension of the belly, and to moderate the diarrhoea, a draught with *pulv. e bolo cum opio*, was prescribed, fomentations and the volatile liniment were ordered to be applied to the abdomen; and the decoction of the bark was directed to be given frequently, with a few drops of *tinct. thebaic.* in case of its running off by stool. The draught gave her a little respite from her pain; she was incapable of taking any other medicine, and died on the following morning at ten o'clock.

VI. Ann Scorfield, aged nine, was seized on the 18th of February with a shivering fit, succeeded by sickness at stomach, and violent head-ach: she had some mitigation of her complaints in the morning, but I was informed that she had always been delirious at night. On the 23d of February, being the 6th day of her disease, she was admitted to the Dispensary. She was exceedingly hot and feverish, and the  
nausea

nausea continued: antimonials were directed, and the decoction of the bark was prescribed on the following morning; but she could not be prevailed upon to take the medicine. On the 9th day of the disease her pulse was much diminished in quickness, was strong and pretty full; her eyes however were dull, her teeth furred, and she had a low delirium. Three grains of the *pulv. antimonial.* were prescribed, which vomited her twice, and gave her some relief. For the three following days she continued much in the former state, only her pulse began to sink, notwithstanding the use of wine. She was frequently tried with the bark, but could never be prevailed to take it. On the 14th day she was comatose, her teeth and tongue were black, and some aphthous ulcerations were observed on the *fauces* and tonsils. From this time she got nothing over but what was injected into her throat with a syringe: the aphthous ulcerations soon spread over her throat, a putrid diarrhoea came on, and she died on the morning of the 18th day of the disease.

The patient dismissed for being irregular was Elizabeth Dickman, aged fifty-three, of a delicate constitution. She had enjoyed a bad state of health for eight months, and was seized with a shivering fit, succeeded by the usual symptoms of fever, on the fifth of August, 1778. On the 5th day of the disease she was admitted to the Dispensary. She complained of great prostration of strength, head-ach, and nausea. Her pulse was feeble, beat 100 strokes in a minute, and she had been costive from the beginning; a saline julep with a little rhubarb was prescribed. On the 6th day the bark was ordered in infusion, which she continued, but in trifling doses, till the 11th. On the 12th day, her lips began to strike out, her pulse was 112, and she had a cough. Being tired of taking medicine, she was dismissed at her own desire; and in a few days more I was informed of her death.

Having given a detail of the event of the case of every patient, labouring under continued fevers, who came under my care at the Dispensary, I have only to add, that,  
if

if I have been particularly successful, I do not impute it to any superior abilities, but to the care and attention with which I marked down every symptom, which occurred in the course of each fever. By this method the proper opportunities of exhibiting the bark may be ascertained: for I am of opinion, if it be given indiscriminately at every period of continued fevers, without regard to symptoms, such a procedure will not only terminate in the disgrace of the medicine, but, it is to be feared, in the destruction of the patient.

But let the directions, which have been given in this treatise, be timely and properly applied, I am confident that *Fevers* will seldom terminate unfortunately than any other disease of consequence, to which the human frame is liable.

if I have been particularly successful, I do not impute it to any superior abilities, but to the care and attention with which I ranked down every symptom, which occurred in the course of each fever. By this method the proper opportunities of exhibiting the bark may be ascertained: for I am of opinion, if it be given industriously at every period of continued fever, without regard to symptoms, such a procedure will not only terminate in the discharge of the medicine, but it is to be feared, in the destruction of the patient.

But in the directions, which have been given in this matter, be directed persons applied, I am confident that fewer will labour towards insupportable than any other distaste of company, or which the human frame is liable to.

PART II.  
OBSERVATIONS  
ON THE  
SCARLET FEVER  
ATTENDED WITH  
ULCERATED SORE-THROAT,  
AS IT APPEARED AT NEWCASTLE  
IN THE YEAR 1778.



*Est tamen præter SYDENHAMI Scarlatinam  
alia, quæ natura sua etiam vera maligna dici  
queat, variis in Europæ plagis observata.*

DE HAEN.

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PART II.  
OBSERVATIONS  
ON THE  
SCARLET FEVER  
ATTENDED WITH  
ULCERATED SORE-THROAT, &c.

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INTRODUCTION.

**T**HE summer of this year was uncommonly dry and sultry, and the autumn rainy, but in other respects temperate. In November and December, the wind was generally from the south west, and neither frost nor snow appeared.

On the 31st of December, at night, there was a very remarkable storm of wind and rain from north west, which threw down many chimnies and unroofed several houses. The wind suddenly shifted to the east; and on the first of January, 1779, some snow fell,

fell, and the frost was intense. This state of the weather, however, only continued for a few days, and the remainder of the month was unusually temperate.

The air, in the first week of February, was mild, though rather moist. From this to the end of the month, the weather was serene, the sky clear, and the winds south westerly. The fields looked verdant, and trees and shrubs began to shoot out their leaves in luxuriance.

In the first week of March, the nights were frosty; but in the day-time, the weather was warm, and frequently sultry. On the 17th and 18th days, some rain fell. The rest of the month was exceedingly pleasant, the winds westerly, the weather warm and dry; and the same temperature prevailed during the month of April.

Such was the constitution of the air, in part of the years, 1778 and 1779, and so mild a winter and spring, never happened in this country, in the memory of the oldest person.

A particular kind of Scarlet Fever appeared at *Newcastle*, in the beginning of June, 1778, and soon after extended itself to many towns and villages in the neighbourhood; both in the counties of Durham and Northumberland. It was most frequent in August, September and October; and was upon the decline after December\*, a few instances of the disease, however, occurred till August, 1779.

The disease was peculiar to children, and young persons; several adults, however, exposed to the contagion did not escape. The distemper was not prevalent in genteel families, but raged with great mortality amongst the lower orders of people. The small pox was also frequent at the same time; and some cases of the inflammatory fore-throat, and erysipelas occurred. The  
measles

\* The observations on this epidemic were drawn up, from the materials in my possession, in January, 1779, but before they were sent to the press, it was judged necessary to insert every case, which occurred at the Dispensary during the winter and following summer. The distemper was prevalent in some villages in the neighbourhood of *Newcastle* in the summer, and autumn of 1779, and, as far as I had an opportunity of observing did not differ materially from that of the former year.

measles appeared in January, 1779, and succeeded this disease as an epidemic.

From the following table, formed from the number of patients admitted to the Newcastle Dispensary, under the care of all the Physicians, it appears, that children under ten years of age were most liable to the disease; that under twenty years of age, the number of males and females was almost equal; but that above this period, the number of females greatly exceeded that of males, a circumstance which may easily be accounted for, when it is considered, that the former were more exposed to contagion, from being employed in attending the sick.

TABLE.

T A B L E.

Ages.	Males.	Females.	Total.	Months.
Under 1 year	6	1	7	1778.
From 1 to 10	44	47	91	June 14
10 to 20	12	13	25	July 6
20 to 30	4	14	18	August 18
30 to 40	0	2	2	September 33
40 to 50	0	3	3	October 34
				November 12
				December 15
				1779.
				January 2
				February 1
				March 5
				April 1
				June 4
				August 1
	66	80	146	146

In treating of this epidemic, the following method shall be observed: 1. The leading symptoms of the disease shall be briefly described, and its cause investigated. 2. It shall be compared with the Scarlet Fever of Authors, and with the Angina Maligna. 3. The method of cure shall be proposed. 4. Several cases shall be subjoined; and a particular account given of the success of the practice recommended.

SECT.

## S E C T. I.

DESCRIPTION OF THE SCARLET FEVER  
ATTENDED WITH ULCERATED SORE-  
THROAT.

**N**O epidemic, the small pox excepted, was ever observed to vary so much, in different patients exposed to the same contagion, as the Scarlet Fever attended with Ulcerated Sore-Throat. In some it was so mild, as to require little aid from medicine; nay, many recovered by the unassisted efforts of nature; whilst in others it was so malignant, as to yield to no plan of treatment. In a short compass, it would be difficult to comprehend every circumstance of the disease. I shall therefore only point out the leading symptoms, leaving the irregular appearances to be accounted for in the relation of particular histories.

The disease, in general, began with sickness, lassitude, chillness, or shivering. The patient soon complained of head-ach, and pain and foreness of the throat. The skin became

became hot, the pulse very quick, often full and firm; but sometimes it was small and feeble, though generally hard. At night the fever ran high, and the patients were restless, and often delirious.

Soon after the attack, the tonsils, *velum pendulum palati*, and *uvula* appeared inflamed. The swelling and redness in these parts increased; white specks and sloughs were soon discovered, which afterwards became so many ulcers. Deglutition was painful, and frequently exceedingly difficult, and respiration quick, and often laborious. The breath was hot, though not offensive. The tongue was soon covered with a white furr, resembling cream; the mouth and *fauces* were loaded with viscid mucus, and together with the tumefaction of the throat, occasioned, even early in the disease, rattling breathing. Such was the usual progress of the disease, during the first three days; but in many cases these symptoms were ushered in with vomiting, purging, and delirium.

When the disease began with great severity, the scarlet efflorescence was often observed



served on the very first day; but, in general, it did not make its appearance until the second or third day, and sometimes not until the fourth. The eruption consisted of innumerable little pimples running together, and tinging the skin of a dull red colour. The redness was first perceivable on the face, neck, and breast, and was often universally diffused over the whole body, which appeared in some degree tumified. In others the eruption was scattered here and there in blotches, but the thighs, legs, and arms were, in general, covered with it; and the hands and fingers were often œdematous, and painful when pressed.

The duration of the efflorescence was uncertain; it however, in general, turned brown in three or four days; the skin became rough, and peeled off in branny scales, and very frequently in large, thick, and jagged pieces. In one patient, the desquamation was so complete, that the nails cast off; and in many the cuticle kept peeling off after the 30th day of the disease, accounting from the febrile attack.

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The efflorescence seldom afforded any relief. When the disease was malignant, the sloughs increased; the maxillary and parotid glands swelled; the eyes became dull and heavy; the face and neck often bloated and œdematous; and the patient either laboured under inquietude, delirium, or coma.

In the milder cases, after the skin began to peel off, the fever subsided, the ulcerations healed, and the patients were speedily restored to health. Several, however, who even had the disease in a mild manner, fell into anasarcaous swellings, and the true *hydrops pulmonis*, or dropsey of the cellular substance of the lungs. Some, after shewing signs of recovery, kept drooping, and though free from fever in the day-time, passed hot and restless nights. In such cases, the countenance looked pale, the face puffy, and the maxillary, or lymphatic glands of the neck continued swollen. Pale thin matter ran from the nose and ears; and at last suppurations took place in the *Eustachian* tube, which destroyed the *tympanum*; and some patients lost the *auditory* bones.

When the sick applied late for assistance, the inflammation communicated to the *trachea* and lungs, occasioning hoarseness, incessant cough, wheezing, and rattling respiration. A child was admitted to the Dispensary in this situation, even so late as the 14th day of the disease; and I saw several other miserable objects, who had survived to as late a period, with ulcerations which had perforated the *velum pendulum*, and excoriations of the mouth, lips, and parts near the *anus*.

The length of the disease was uncertain: there was seldom any sensible crisis. Some soon recovered. Others had no favourable signs till the 12th or 16th day. Five only that I attended died before the 8th; four on the 9th; and in all the other cases that proved fatal, the patients protracted their miserable existence to the 13th, 15th, 16th, 17th, and sometimes to the 19th day of the disease, even when it was not succeeded by dropfical swellings. Soon after death, the bodies of all those whom I examined became of a livid, or violet hue; and putrid gore sometimes issued from the mouth and nostrils. During

During the prevalence of this epidemic, some patients had an erysipelatous inflammation of the throat, without ulceration; others had ulcerations of the tonsils, without any rash; and some had the scarlet eruption and fever, without any affection of the throat. In common fevers, several patients had a mealy desquamation of the cuticle, without any eruption. Ulcerations of the tonsils were also observed in a few cases of the small pox, and measles. And some instances of the *erysipelas*, and *angina maxillaris*, or mumps occurred.

From the above description it appears, that the Scarlet Fever and Sore-Throat has a great analogy to the *angina maligna*: the distinction, indeed, betwixt them, in many instances, cannot be well ascertained, and therefore they may, with propriety, be accounted of the same *genus*.

From the materials in my possession I have been at much pains to ascertain the different states of this epidemic. Of thirty-six patients, whom I attended in private practice, twenty-six had the Scarlet Fever accom-

panied with mild ulcerations of the throat; in one it was succeeded by dropsy; and nine had the disease attended with every distinguishing symptom of the *angina maligna*; yet in all these cases the sources of contagion were apparently the same. Of ninety-five patients who came under my care at the Dispensary; forty-nine had the Scarlet Fever with a mild Ulcerated Sore-Throat; in twenty-two, the disease was attended with consequent dropsy; and in twenty-four it was accompanied with *malignant angina*. The proportion of those, therefore, who had the disease in the form of *angina maligna*, was as *one* to *four*, in all the patients who came under my care. But when it is considered, that great numbers had the distemper in such a mild manner as to require no medical assistance, and that application, even in private practice, as well as at the Dispensary, was only made for the advice of a physician, when the patients were severely attacked, perhaps the malignant cases ought not to be estimated higher than as *one* to *twenty*, in all who took the disease.

But,

But, in most patients, our epidemic differed from the *angina maligna*, or Putrid Sore Throat in the following particulars. In the beginning it was accompanied with stronger action of the vessels; and the ulcerations were of a milder nature. The patient seldom in the beginning complained of debility, or faintness; the efflorescence was commonly more plentiful, and the desquamation of the cuticle more complete.

In the *angina maligna*, as described by authors, the patients most commonly die on the 3d or 4th day, and when the disease is severe few have strength enough to live over the 7th; whereas in the Scarlet Fever, even attended with gangrenous ulcers in the throat, they generally survived to a much latter period. But above all, this epidemic had a great tendency to terminate in dropsy, a disease which no author mentions as being the consequence of the *angina maligna*.

The Scarlet Fever although it begins, like the measles, with sickness and vomit-

ing, yet it may easily be distinguished from the latter disease by attention to the following circumstances. The measles, from the beginning of the eruptive fever, are attended with hoarseness, frequent, dry, cough, some inflammation and heat of the eyes, a defluxion of tears, sneezing and running from the nostrils; whereas catarrhal symptoms never happen till late in the Scarlet Fever. The eruption is likewise different; in the Scarlet Fever, it is redder, less uniform, and more equally diffused over the cuticle, than in the measles. Besides the former is almost always attended with a Sore-Throat, a symptom which but rarely occurs in the latter.

The Scarlet Fever, like the small pox and measles, can *only* arise from specific contagion; but how it was introduced into the town of Newcastle, is a circumstance which cannot be determined. This much, however, was certain, that few or none took the distemper, who were not exposed to the *effluvia* of the sick, and that when it made its appearance in any family,

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all the children were generally infected, and even old persons did not always escape. It is therefore reasonable to consider specific contagion, introduced into the system, chiefly by inspiring the breath and *effluvia* of the infected persons, as the only occasional cause of the disease. But to enquire into its immediate cause, and to attempt to explain in what manner the infectious *effluvia* produce the various symptoms, would only lead to a labyrinth of conjecture and uncertainty.

It is evident, however, from the account given of the disease, that the contagion was in a peculiar manner determined to the throat, and very soon, in general, occasioned a putrescent state of the fluids, as well as of the *sauces*, and neighbouring parts. For although such symptoms have not been found to accompany every species of Scarlet Fever, and although many instances happened in our epidemic, of the disease being mild, yet this diversity may be owing to the difference of the virulence of the contagion, the quantity received, the variety of constitution, and to the operation



of other remote causes. Such circumstances occasion varieties in the small pox, measles, and other contagious diseases; and even the *plague* has been found to be attended with various degrees of malignity, in different seasons, situations, and constitutions.

The remote and external causes, which had the most obvious influence in rendering the epidemic malignant, may be reduced to the following, viz. The heat and moisture of the air, and the *effluvia* arising from many persons crowded in one house, and frequently in one room.

It was observed, in the beginning of this essay, that the summer was remarkably hot and dry, the autumn rainy and moist, and the winter uncommonly temperate. Observations in all ages and countries have proved, that such a state of the atmosphere is a powerful promoter of putrefaction, and productive of malignant diseases. And in small houses, where there is great want of free air, where the families of the poor are much crowded, and where little regard is paid to cleanliness, the *effluvia* arising from the perspiration

piration and breath of a number of persons, have frequently become so virulent, as to generate the most infectious fevers. Many instances of this kind have happened in jails, hospitals, and other confined places.

The concurrence, therefore, of such powerful causes, with the contagion of the Scarlet Fever, will account for the malignity, and frequency of the epidemic amongst the poor.

In order to shew the various forms which the Scarlet Fever has assumed in former periods, and in different places, I shall present the reader with a short comparative view of the disease, as it has been observed by some of the most approved authors.

## S E C T. II.

### COMPARATIVE VIEW OF THE ABOVE EPIDEMIC WITH THE SCARLET FEVER OF AUTHORS, AND THE ANGINA MALIGNA.

**T**HE Scarlet Fever is not to be found in the works of Hippocrates; neither are the *exanthemata febrilia* described by any of the  
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the ancients as distinct species of fevers, but only as accidental symptoms. We meet, therefore, with no accurate account of this disease till the seventeenth century; and its malignity in the present age renders it an object of the most serious attention to the faculty.

The great Sydenham, possessed of every talent to constitute an accurate observer, gives the following account of the Scarlet Fever\*. It may happen at any time of the year, but generally makes its appearance at the close of summer; when it seizes whole families, but especially children. In the beginning it attacks with chilness, and shivering, but without great sickness; afterwards the whole skin is covered with red spots, which are larger and redder, but not so uniform as those which constitute the measles. These spots continue for two or three days, and after the cuticle has peeled off, there remains branny scales dispersed over the body, which fall off, and come on again, for two or three times in succession.

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\* Sydenham, Oper. Sect. 6. Chap. 2.

The treatment which he advises is very simple. He refrained from bleeding and the use of clysters in the beginning; and judged it sufficient for the patient to abstain from animal food, and all kinds of spirituous liquors, to keep his room and not be always in bed; and, after the desquamation, to take a gentle purgative. By this method, he adds, that this disease (in *name* only) is easily cured without trouble or danger. He observes, however, that in children, and young persons, convulsions, or *coma*, sometimes happen about the eruption, which require a strong blister to the neck, and a *paregoric* every night during the illness.

Prosper Martianus gives an account of a Scarlet Fever which was frequent at Rome above a century and a half ago, called by the common people *Rossilia*. The disease was equally mild as that described by Sydenham, for the author adds, “ At experientia docet nullum fere ex Rossalia interire, et nisi miraculo quodam, et ob errata maxima, quæ aut ægri committant, aut

“ aut medici ; potissimum vero sanguinem  
 “ mittentes \*.

Several other writers, both in England and on the Continent, have likewise described the Scarlet Fever, in this mild state, without any affection of the throat.

The Scarlet Fever was epidemic in London during the summer 1689, the very year that Sydenham died. The celebrated Morton, in his *Pyretologia*, gives us an account of this disease, which, however, he only considers to differ from the measles in the mode of the eruption †. He comprehends both diseases in the same description ; and although he seems to be fully acquainted with the symptoms that distinguish them ‡, yet he says that Leucophlegmatia

\* Comment. in Epid. Hippoc. lib 2. Sect. 3.

† “ Hunc morbum (utut universali medicorum consensu  
 “ titulo peculiari donetur) prorsus eundem esse cum mor-  
 “ billis censeo, et solo efflorescentiæ modo ab illis distare.”  
*Pyretolog.* Par. 2. Ed. 1694. p. 69.

‡ In morbillis, “ Interstitiis etiam interpuncta est hæc  
 “ efflorescentia, macularum similibus, incerta admodum  
 “ magnitudine & figurâ oblongâ scilicet quadratâ multan-  
 “ gulâ præditis, indeque ab efflorescentia Febrem Scarlati-  
 “ nam comitante discernitur, ubi tota cuticula continuatâ  
 “ quâdam rubedine, quasi vino rubro perfusa tingitur.”  
*Ibid.* p. 39.

matia and Ascites follow both diseases indiscriminately: these affections however, it may be affirmed, are more peculiarly consequent on the Scarlet Fever.

When he comes to give examples of the Scarlet Fever, he relates five cases, in which the disease was accompanied with direful *pestilential* symptoms; such as remarkable swellings in the parotid glands, occasioning difficulty of breathing, running of corrosive matter from the nose, ears, and *fauces*. In one patient he mentions a painful tumor being formed in the left arm pit, which ulcerated, and discharged matter for several days. He then proceeds to take particular notice of the affection of the throat; such as swelling of the tonsils, *uvula*, *fauces*, and ulcerations of the glands of the nose, *fauces*, &c. The malignity which accompanied this Scarlet Fever is so strongly depicted, after the case of a lady aged about seventy, that I shall not attempt a translation, but give the whole in the author's words. “ Verum Domina  
 “ *Barnardiston*, cum ad plures dies male se  
 “ habuisset, et omnem remediorum usum  
 “ neglexisset, tandem post sex vel septem dies  
 “ elapsos,

“ elapfos, carcinomate paulo fupra pubem  
 “ corripiebatur, quod fpatio unius vel al-  
 “ terius diei præ virulentia veneni per par-  
 “ tem affectam excreti gangræna tentabatur.  
 “ Alexipharmacis autem & epifpaficis dili-  
 “ genter adhibitis, & auxiliis chirurgicis pe-  
 “ rite applicatis, præter fpem adftantium ab  
 “ hac peste, licet difficulter admodum evafit,  
 “ atque poftea ad tres annos fuperfuit. A  
 “ *pefte* (inquam) evafit, quoniam venenum  
 “ morbi prædicti, peftilentialis fermenti ma-  
 “ lignitatem adæquabat; & fi quando vene-  
 “ num iftiusmodi morbillofum crisi perfecta  
 “ per cuticulam propelli haud potefit, tan-  
 “ quam venenum peftilentialiale glandulas  
 “ fponde petit narium, faucium, inguinum  
 “ & c. easque inflammat & exulcerat, nec  
 “ non carcinomata, bubones & parotidas ex-  
 “ citat. Quantum tonfillas, uvulam, fauces,  
 “ nares, & quamdiu intumuiſſe vidi! quam  
 “ turgida nonnunquam labia! & quam for-  
 “ dida fcabie obducta & exulcerata ab ea-  
 “ dem caufa animadverti! ut nuperrime fi-  
 “ liolo Domini *Blaney* accidit, qui poft ef-  
 “ florefcentiam peractam febre, comate, &  
 “ prædicto fymptomate diu affligebatur\*.”

The

\* Ibid. p. 86, 87.

The author recommends the same method of cure in the Scarlet Fever, as in the Measles. In the beginning, when the disease is malignant, he cautions against every evacuation, which reduces the strength; and particularly against bleeding, unless some uncommon symptom require its use. In three cases, indeed, on the 4th or 5th day of the efflorescence, where the vibration of the arteries was strong; and where the lives of the patients were in immediate danger, from difficult deglutition, occasioned by swelling and inflammation of the parotid glands, he advises bleeding, but with a sparing hand\*. The chief medicines in which he places any dependance, are blisters, alexipharmacs, such as contrayerva and snakeroot, and the Peruvian bark in liberal doses, when the fever remitted. Neither does this author seem to have neglected internal applications to the Throat; for in the second history, he prescribed a gargle of Aq. Plantag. & Mel. Rosac. to be injected with a syringe into the *fauces* of a child, who laboured under a Scarlet Fever.

\* Ibid. p. 85.



The learned De Haen, late celebrated Professor of Medicine in the university of *Vienna*, in his Treatise intitled *Theses sistentes febrium divisiones*, observes, that, besides the mild Scarlet Fever of Sydenham, there is another species of a malignant nature, which has appeared in various parts of Europe. After mentioning that Morton saw this kind in *England*; Christ. Joan. Langius in *Saxony*; and Nerucci in *Italy*; he gives an account of one which came under his personal observation at the *Hague*, in 1748 and 1749, and which carried off a great number of children, many young persons, and adults†. The disease began with sore throat, and was attended with ulcerations of the *fauces* and cheeks, caries of the jaw bones; and sometimes with inflammation and induration of the parotids. The Scarlet Fever becoming epidemic at  
*Vienna*

\* Ibid. Historia II. p. 85.

† Anno autem 1748 & 1749, pessima Scarlatina Hagæ Batavorum fuit, cum valida angina inchoans, plurimosque infantes, tum & bene multos juvenes, atque adultos occidens; imo fauces, carnesque buccarum, in ulcera maligna, ossa maxillarum in cariem pessimam convertens, similiaque etiam producens in cruribus. Nonnunquam parotis, non juvenis, sed indurescens, aderat. *Thes. Sist.* p. 25, 26.

*Vienna* in the winter of 1771, afforded the same author a large field for observation; and he relates three cases very minutely, in which the disease was malignant.

As this author, next to Morton, afforded me the most useful hints of treating the Scarlet Fever and Sore-Throat, I shall present the reader with the most particular circumstances mentioned in these cases, as the whole detail is too prolix for quotation.

I. A Boy, five years old, after complaining for eight days of pain, redness and swelling of the left ear, pain in his feet and belly, on the 14th of February 1771, was seized with fever, and in the same evening the scarlet rash made its appearance. On the 3d day after the eruption, deglutition was impeded, and his eyes and face were red. On the 5th day his hands were painful and swelled; and the joints of his fingers tumefied and red. The efflorescence was of a more intense colour on the superior parts of his body, and he got sleep neither day nor night. On the 6th day the redness of his hands abated; the pain of the *fauces*,

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however,

however, continued; his flesh was hot, his nostrils stopt up, and his voice scarcely intelligible.

From this time to the 16th day he had a severe exacerbation of fever every other day, accompanied with quick respiration, nocturnal cough, watching, and delirium. On the 19th, the paroxysm being violent, he was bled, and blisters were applied to the legs. On the 21st day, one ounce of the extract of bark was ordered in a mixture sweetened to the taste; and he took this quantity for many days successively. On the following day three large pustules were observed on the internal part of the right cheek; on the 25th they disappeared, and he was soon restored to health.

A scrophulous tumor of the neck, which first appeared in this disease still remained; and the cuticle began to peel off from the soles of his feet on the 24th day of March. His younger brother and sister were likewise seized with the Scarlet Fever, which was mild and free from malignity\*.

II. The

\* Vide Rat. Medendi Continuat. Tom. p. 44, &c.

II. THE FATHER of these children, aged forty-three, was taken ill on the 25th of February, 1771. The first symptom was a foreness of the throat; he passed the night without rest; and early on the morning of the 2d day his body itched, and was universally covered with the scarlet rash: the *plagæ* or blotches were broad, equal, and slightly elevated; his thirst was great, and the *angina* increased. On the morning of the 3d, a laxative with *sal. sedlicens.* was prescribed, which vomited and purged severely. An opiate was ordered at night.

4th day. He slept from five to seven o'clock in the morning. The Scarlet efflorescence now occupied the inferior and superior parts of his body. A grain and a half of opium was given, at two doses, in the evening.

6th day. He slept spontaneously in the night, and his skin was moist with a very fetid sweat, which relieved him greatly. His feet and hands began to swell. On the following morning he took a drachm of rhubarb.

On the 8th day, the tumified skin of his hands began to wrinkle; his urine was turbid and of a dark colour: he had less alacrity and vigour than on the former days; and the swelling of his feet continued. The malignity of the disease being manifest, and the dropfical tumors having proved fatal in several cases, recourse was had to the bark. He therefore took half an ounce, in powder, daily for the space of 21 days; and two scruples of rhubarb every 4th day.

The swelling of the feet continued without abatement till the 14th day of his disease; and almost totally disappeared on the 20th. The skin peeled off from his hands and belly, sometimes in branny scales, sometimes in large shreds for 14 days; and the whole desquamation was not completed till the 40th day of the disease and later. At last, however, he was restored to perfect health\*.

III. THE CHAMBER-MAID of the same family, aged twenty-three years, (who had passed

\* Ibid. p. 48, 49.

passed through the measles and small pox in her infancy) subject to hæmorrhages from the nose, and to *angina*, but in other respect healthy, was seized with fever on the 24th of February, and on the same evening with the scarlet rash and fore-throat. On the morning of the 2d day she took a laxative; drank plentifully of antiphlogistic drinks; and gargled with the same. The fever and efflorescence, however, encreased, on which account venesection was ordered. On the 4th day she was twice bled;—the catamenia appeared at the usual period. In the evening the tonsils were very red, and so much swelled as to touch each other; her pulse was very quick and compressed; and she slept almost none in the night.

On the 5th day she vomited much. Her pulse was sometimes very quick, sometimes free, sometimes obscure; and she had great pain in her throat, thirst and lassitude; a gargle was injected into the *fauces*, and she took a laxative which procured three small stools. On the 6th day the swelling of the throat was less, but the pain and vomiting were the same. She had laboured under

a suppression of urine for 24 hours; the *catheter* was introduced, and a pound of turbid urine drawn off. Another pound and a half was drawn off in the evening. At night her pulse was very quick, and her respiration difficult. An opiate was ordered; but she scarcely slept an hour.

On the 7th day her pulse was very quick, compressed, but equal; respiration more difficult. The swelling of the *fauces* was indeed less, but the pain more severe. Fourteen ounces of blood were taken, which was very fizy, but occasioned fainting. Her eyes became painful; at night she could not open her mouth, and was at times delirious. An acrid cataplasm was applied round the throat, and she slept well with an opiate.

On the 8th day her pulse was less frequent, freer, and she breathed easier. In the afternoon she voided her urine spontaneously, which became quickly fetid; she swallowed with ease; her respiration was frequently difficult, but as it was instantly relieved by gargles, it seemed to depend upon glutinous slime lodged in the *fauces*.

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On the 9th day she could open her mouth. On inspection, the *fauces* still appeared much swelled, though less than formerly, the right side was covered with purulent matter, and the whole looked white. She had *subfultus tendinum*. Her pulse was very quick, but free and equal, she breathed with anxiety; but her eyes looked better; she had some appetite, and little thirst. Her urine was turbid and still fetid;—the gargle when injected brought away great quantities of viscid slime and purulent matter. These appearances continuing, and the author being alarmed lest the disease should terminate in gangrene and death, he resolved to prescribe the bark. Her drink was tamarind whey, acidulated with spirit of vitriol in such quantities as the *fauces* would bear.

On the 10th day, her pulse continued very frequent, and her respiration quick and sonorous; and she had a pain in the right side of the thorax. The following preparation of the bark was prescribed; and she consumed the whole quantity in the



space of 24 hours, till the 31st day of the disease\*.

On the 13th day, her pulse was strong, equal and moderately quick; her respiration good, but painful when she coughed. The appearance of the *fauces* was natural. On the 14th day the celerity of her pulse and respiration was inconstant. She had a slight pain in her breast; and her *fauces* suppurated externally. On the 18th day every thing appeared favourable. From the 18th day of the disease till the 37th, she had more or less complaints of lassitude; as also pains sometimes in her right and sometimes in her left arm, and sometimes of the breast. From the 16th day till the 40th, there was a perpetual disquamation of the cuticle, either in branny or mealy scales, or in large shreds. But perfect and constant health succeeded this violent disease †.

From these cases it appears, that, in the first stage of the Scarlet Fever, our author trusts

\* R. Cort. Peruvian. pulv. unc. iii. *Coque bichorio pura*  
*Aqua, libræ tres colatæ d. u. Ad hujus uncias iv. solius*  
*Syr. Rub. Idei unc. iii. adjice oportuit.*

† Ibidem. p. 49, &c.

trusts to bleeding, cooling purgatives, and the peruvian bark; and he adds, if a large and liberal use of this last remedy ought to be employed for a long time in any distemper, it should be in the Scarlet Fever.

In the dropical, or leucophlegmatic state of the disease, which is so frequently dangerous from the serum falling upon the different viscera, but more particularly on the lungs, he recommends diuretics, and purgatives of the antiphlogistic kind, intermixed with the bark.

PLENCIZ, an eminent physician at *Vienna*, published a treatise on the Scarlet Fever, in the year 1762. According to this author's account, the disease begins with lassitude, loss of strength succeeded by heat, shivering and fever. About the same time, particularly in the malignant species, the patient is attacked with intense pain in the head, delirium, inclination to sleep, nausea and vomiting. Deglutition becomes difficult. The patient complains of restlessness, anxiety, straitness about the *præcordia*, and respiration is small, quick, and laborious.

About

About the 2d and 3d day, and sometimes later, a red unequal eruption appears, at first in distinct spots, but afterwards running together, the whole body is covered with an uniform red colour. The eruption is first observable on the face, neck, *fauces*, and breast, and afterwards on the back, *abdomen*, and other parts. This efflorescence is at first of a red cinnabar colour; but about the end of the 3d, or beginning of the 4th day, it becomes paler, and by degrees the redness totally disappears. At the end of the disease, the skin falls off in long, broad, and thick scales, in proportion to the redness which had formerly prevailed.

All the parts about the *fauces* were particularly affected in this disease; the palate, tonsils, *uvula*, tongue, *larynx*, and *pharynx*, became red, and swelled so much, as not only to impede deglutition, but to endanger suffocation.

About the 6th or 7th day from the commencement of the eruption, in some instances, he observed numerous pustules on the hands and feet, resembling white mi-  
liary

liary eruptions; but, upon examination, they were perfectly different; and upon being cut, were found to consist of an elevation of the *epidermis*, and to contain nothing but air.

About the 14th or 15th day from the termination of the fever, and sometimes later, the patients frequently became peevish, weak, and languid. The face, hands, feet, belly, *scrotum*, and the whole body, became inflated with leucophlegmatic swellings. The urine was voided in small quantities, of a bloody appearance, resembling the washings of flesh. This state of the disease, we are told, chiefly succeeded the worst species of Scarlet Fever; but several instances occurred even after the mildest species. It arrived, in general, at a greater height in children than in adults; was more considerable in winter than in summer; and those patients who went soon into the open air, were more severely attacked than those who kept longer confined. More patients are represented to have died in this stage, than in the early period of the disease.

These

These are the usual symptoms of the disease, but a variety of others occur, which may be reckoned anomalous; such as hæmorrhages from the nose, bloody saliva, sneezing, swelling of the parotids and glands of the neck, and now and then abscesses in the *fauces*, ears, breasts and other parts of the body.

In the treatment of the milder species of the Scarlet Fever, the author informs us, that little more is necessary than a due attention to regimen. But in the malignant form, he recommends bleeding freely, especially in the feet, blisters to the neck, and lower extremities; emollient clysters, and the plentiful use of diluting drinks. After the inflammatory state of the disease is over, he advises the peruvian bark, as a principal remedy. But as it cannot be taken in sufficient quantities in powder, from the swelling of the *fauces*, he orders it in *extract*, and the decoction to be given in clysters.

For the cure of the dropfical swellings, he recommends infusions of juniper berries, and other diuretics; but in obstinate cases he

he trusts chiefly to the following pills\*: one or two of which, are given every two or three hours, according to the age or strength of the patient; and if they do not procure three or four stools every day, the dose is either ordered to be increased, or some other purgative, such as *diagridium*, or the *pil. cochiae*, is added. By this means a salivation will be prevented. But they must not be employed when the feverish symptoms run high †.

SAUVAGES describes a disease, under the title of *Scarlatina Anginosa* prevalent at *Montpelier*, in the year 1765, which, in my opinion, has a nearer affinity to our epidemic, than any species of Scarlet Fever, mentioned by any other author. “The disease prevailed amongst children, the whole body was intensely red, the voice hoarse, and it was attended with an ulcerated, and

\* R. Rhei Elect.

Sp. Sal. Coagulat. ana drach. ii.

Mercur. Dulc.

Aur. Fulminant.

Extract. Scillæ ana drach. fs.

F. Pilul. cum Rob. Juniper. pondere unius alteriusve grani.

† Vid. Plenciz Tract. de Scarlatina; or the Edinb. Med. Comment. Vol. V.

“and in some with a gangrenous fore  
“throat\*.”

“The cure we are told, depended upon  
“a vomit, which was indicated by nausea;  
“afterwards upon cathartics, and washing  
“the *fauces* with barley water, honey, and  
“a little of the marine acid. Afterwards,  
“when the fever remitted, the ulcers were  
“ordered to be dried with a *lixivium* of  
“quick lime and honey. Children, however,  
“except the *angina* was mild, and unless  
“they could be easily prevailed upon to  
“have the remedies applied, often died.”

Some other authors †, on the continent,  
have described the disease as raging in diffe-  
rent

\* Hac æstate Monspeliæ viget apud infantes scarlatina, in qua totus truncus intense rubet cum voce rauca, & angina ulcerosa, imò in quibusdam gangrænosa, qualis ante biennium sola sine scarlatina plures infantes abstulit. Curatur emetico quod nausæ indicant, dein catharticis, mox verò deterfione faucium ope mellis & decocti hordei cum pauillo acidi marini; dein, remissâ pyrexia, lixivio calcis vivæ cum melle ulcus exsiccat; verùm sæpius infans è medio tollitur, nisi angina simplex fuerit, & docilis æger remedia admittat. Morbus hic contagiosus apparet, ut & cynanche maligna ante biennium fuerat.

*Sauvages Nosologia Method. ed. 4to, clas. iii. G. viii. Sp. 6.*

† Storch, Navier, &c.

rent places with malignity: But since the days of Morton, we meet with only one instance on record of the *Scarlet Fever attended with a sore throat* being epidemic in this island\*. It appeared at Edinburgh†, in the year 1733, of which we have the following account.

“ In July, many complained of *anginae*,  
 “ coughs and hoarseness, and children  
 “ were attacked with the Scarlet Fever and  
 “ Sore-Throat, which became very epide-  
 “ mic in the two succeeding months, was  
 “ less frequent and milder in October ;  
 “ but

\* The *febris anginosa*, mentioned by Huxham, which raged at Plymouth in 1734, and appeared again in 1752, at the same time that the *Ulcerous Sore-Throat* was prevalent, seems to have a great analogy to the Scarlet Fever and sore throat. The disease was attended with pain, swelling, and ulcerations of the throat, *scarlet* or pustular eruptions ; and succeeded by great itching and disquamation of the cuticle. The pulse was commonly hard, quick, and small: the breathing hot and laborious, with great oppression on the præcordia ; and a delirium came soon on.—The author in another place, adds, “ though the malignant ulcerous squinsey seemed to be a disease *sui generis*,  
 “ yet it had certainly a very great resemblance of the *febris*  
 “ *anginosa*”—In a word, the high inflammatory small pox  
 “ differ as much, or more, from the malignant, as the  
 “ *febris anginosa* from the *pestilential ulcerous sore throat*.  
 “ *Vid. Huxham de Aère et morb. Epid. p. 92, 93, 94.*—And  
 “ his *Essay on Fevers*, 5th Ed. p. 271, 272, 296, 297.”

† Edinburgh Med. Eff. and Obs. Vol III. p. 26.



“ but continued all the winter and spring.  
“ The disease commonly began with a quick  
“ pulse, heat, thirst, head-ach, pain in the  
“ throat, and frequently with a swelling of  
“ the *amygdalæ*. Many had a vomiting and  
“ *diarrhœa* at the first attack. After a day  
“ or two, the face, or extremities, and some-  
“ times the whole body swelled, the skin  
“ being red, with a watery clearness shining  
“ through it. Frequently the swelling and  
“ redness proceeded gradually from one part  
“ to another. Such patients who had  
“ undergone the Scarlet Fever before, took,  
“ at this time, the fever and *angina* with-  
“ out the eruption; but all who laboured  
“ under the Scarlet Fever had also the *an-*  
“ *gina*.”

“ Many who were neglected in the begin-  
“ ning were suffocated by the *angine*. Few  
“ died who were timely and plentifully  
“ bled, which weakened the fever, relieved  
“ the throat; and was the only medicine  
“ that removed the vomiting and *diarrhœa*.  
“ After the pulse was brought down with  
“ the loss of blood, vesicatories were of use,  
“ and the cure was afterwards completed by  
“ laxative ptisans.”

The

The ANGINA MALIGNA seems to be nothing more than the Scarlet Fever, combined with Gangrenous Sore-Throat. The ingenious Dr Fothergill was amongst the first who suspected its putrid nature; and both he and Dr Huxham have described its symptoms with accuracy and precision. The following are the particular circumstances which accompany this distemper.

This disease shews itself most frequently in autumn, and the beginning of winter. It attacks persons of all constitutions when exposed to infection, but is more peculiar to children, and the weak and infirm. It comes on with giddiness, chillness and shivering, sickness, vomiting or purging, or both. The patient soon complains of acute pain in the head, of heat and soreness rather than pain in the throat, and stiffness of the neck. The face soon after appears red and swelled, the eyes inflamed and watery as in the measles, with restlessness, anxiety and faintness. Soon after the first attack, the internal *fauces* appear of a florid red, and the *uvula* and tonsils swelled. White ash-

R

coloured

coloured sloughs are soon seen upon these parts, which conceal ulcers. They are first discernible on the angle of the tonsils, or on the tonsils themselves, and they often cover the basis of the tongue in the manner of a thick furr. Instead of these sloughs when the disease is mild, a superficial ulcer appears on one or more of these parts, scarce to be distinguished from the sound, but by the inequality of the surface it occasions.

Generally on the second day of the disease, but sometimes later, the scarlet efflorescence appears on the face, neck, breast, and hands to the finger ends, with sensible tumefaction; and the fingers are frequently tinged, as if they were stained with the juice of raspberries. Besides the redness, a great number of small pimples, of a more intense colour, appears on the arms and other parts. As the skin acquires this colour, the sickness commonly goes off, the vomiting and purging cease of themselves, and rarely continue beyond the first day.

The parotid and maxillary glands swell much, and grow hard and painful to the touch, and if the disease be violent, the neck  
and

and throat are surrounded with a large œdematous tumor, sometimes extending to the breast, which threatens suffocation, and brings on rattling breathing, as if the patient were strangling.

Towards night, the heat and restlessness encrease, and a delirium frequently supervenes, but a sweat breaking out in the morning brings on a remission. During the whole course of the disease the pulse is generally very quick, but without strength or firmness. The patients complain of faintness, more than all the rest of their sufferings; and are frequently comatose.

The *uvula*, and tonsils are sometimes so much swelled as to leave a very narrow entrance into the gullet; and this entrance is frequently surrounded with sloughs, yet the patients swallow with little difficulty or pain.

When the disease is very malignant, the breath is exceedingly fetid; and the ulcers become of a livid colour. The internal membrane of the nostrils is red and inflamed, and discharges a thin acrid mat-

ter occasioning sneezing, and which excoriates the parts it lies upon. When this ichor is swallowed, it brings on purging, which excoriates the *anus* and neighbouring parts. These symptoms happen especially in children. The organs of respiration are often affected, and the inflammation is communicated to the *larynx* and *trachea*, bringing on sudden suffocation and death.

The disease has no stated crisis, nor any constant period that may be called its height. Some grow easier from the first attack, and in general the symptoms of recovery appear on the 3d, 4th, or 5th day. When the disease proves fatal, it generally happens between the 2d and 7th day.

When the patients recover, the symptoms proceed in the following manner. The redness of the skin, and the heat abate, the pulse becomes slower, the external swelling of the neck subsides, the sloughs cast off, the ulcerations fill up, and sleep and appetite return.

But on the contrary, if the efflorescence suddenly disappears, or becomes livid; if  
the

the ulcers of the *fauces* turn black; the eyes lose their lustre; and the swelling of the neck and face increase, together with involuntary liquid stools, the danger may be judged to be extreme\*.

In the *Angina Maligna*, which may be more properly termed the *Scarlet Fever attended with Gangrenous Sore-Throat*†, all evacuations which weaken the strength are pernicious, but more particularly bleeding and

R 3

purgings.

\* See Huxham on the *Ulcerous Sore-Throat*, and Fothergill on the *Putrid Sore-Throat*. 5 edit.

† The chief cause of the disagreement of authors, concerning the proper methods of treating this disease, has, I conceive, been owing to their describing every variety of Scarlet Fever attended with *Ulcers* in the Throat, under the general title of *Angina Maligna*. If there be not different species, or at least varieties of this disease, how shall we reconcile the contradictory practice of the following experienced Physicians! Dr Ruffel, in the *Angina Maligna* which he observed, advised bleeding, and a little manna to be given, if called in early; and committed the business afterwards to nature. The celebrated *Sauvages*, and Dr Grant, a Physician of eminence in London, recommend bleeding and gentle purgatives in the beginning. Dr Fordyce also recommends an antiphlogistic cooling regimen, keeping the belly open with manna and soluble tartar, supporting the strength with wine whey, and promoting sweats with diaphoretics. Dr Fothergill, on the contrary, condemns bleeding, and the use of laxatives; nay, he says that “upon procuring a few stools with manna, the redness of the skin has disappeared, and the flux to the throat

purging. A generous cordial regimen ought therefore to be directed from the beginning; and with regard to medicines, the chief dependence ought to be placed in the Peruvian bark, and the constant use of antiseptic gargles.

I have been the more prolix in giving this account of the *Scarlet Fever*, as it has been observed in different parts of Europe, and of the *Angina Maligna*, as I am of opinion they ought not to be considered as distinct affections, but only as different species of the same disease. From a near review it will appear, that the *crimson efflorescence* is a leading

throat has been surprizingly increased: If it happens that the discharge by stool continues, the swelling of the neck commonly grows larger, the *fauces* become flaccid, dry, and livid, and the patient in a few hours after this expires." From the beginning he advises a cordial regimen, and warm aromatic alexipharmac medicines to be given every four or six hours: such as the *Powder of Contrayerva*, *Cordial Confection*, and the like. In the preface to the last edition of his *Essay on the Putrid Sore-Throat*, he observes, indeed, that bleeding, in some sanguine and plethoric adults, may be sometimes allowable; but puts the greatest stress of the cure upon the bark conjoined with *pulv. contrayerva, conf. cardiac.* and the like.—See *Russel's Oeconomy of Nature*.—*Sauvages Nosolog. Method.*—*Grant's Observations on the Nature and Cure of Fevers.*—*Dr W. Fordyce's Essay on Fevers.*—*Dr Fothergill on the Putrid Sore-Throat.*

leading symptom, and that in both diseases there is a determination of the morbid matter to the throat.

But however far I might be led to this opinion by reasoning from analogy, I should not have risked it, had I not seen the *Scarlet Fever* twice epidemic; and in some patients, as mild as that described by *Sydenham*; and in others, attended with *Ulcerated Sore-Throat*; and in others, with every circumstance of the *Angina Maligna*.\*

I am indeed sensible that plausible objections may be made, and that it may re-

R 4 quire

\* In the beginning of August, 1774, the *Scarlet Fever* appeared at *Kelfo*, in the county of *Roxburgh*, and was very frequent in the neighbourhood till the beginning of December. The disease, in general, was mild, and seldom required aid from medicine. During the harvest months, I saw many children going about with a mealy desquamation of the cuticle, in whom the fever was so slight, as only to confine them for a few days; and they did not seem, at that period, to have had any affection of the throat. In several instances, however, it was attended with swelling and ulceration of the tonsils, and succeeded by a great desquamation of the cuticle; and two children, whom I attended in the beginning of the epidemic, died, with every symptom of the most malignant *Angina*. Some had suppurations from the ears, and abscesses of the lymphatic glands of the neck; and two had consequent dropical swellings.



quire the united efforts of the faculty, and the experience of ages to ascertain the truth of this opinion. It may be urged, that the *Angina Maligna* requires a very different treatment from several species of the *Scarlet Fever*. This circumstance, however, is not sufficient to constitute a generic difference; for the same thing happens in the varieties of the small pox, which by the united consent of Physicians arise from the same specific contagion. It may also be objected, that the *Scarlet Fever* only seizes patients once in their lives, whereas having the *Angina Maligna* once is no security against a second attack. This indeed seems to have much weight; but I very much doubt whether the *Angina Maligna* was ever attended with the scarlet efflorescence twice in the same patient; though it is probable, when the disease is epidemic, that the same patient may have the affection of the throat repeatedly.

But I am certain, without considering the subject in this extended view, the practice can never be properly guarded; and mistakes must constantly happen in treating diseases, in so many respects similar.

I cannot

I cannot conclude this section without cautioning the younger practitioner against the liberal use of the lancet in every species of Scarlet Fever, notwithstanding the injunctions of the *German Authors* to the contrary. It is well known they are very great friends to venesection in almost every acute distemper. Sydenham, in the mild *Scarlet Fever* he observed, refrained from bleeding, and Morton did not use it without the most urgent necessity, and even then very sparingly\*. Perhaps antimonials, properly employed, when there is inflammatory irritation in the beginning, will totally supercede the use of an evacuation, so debilitating to young subjects, who generally become the victims of this disease.

## S E C T. III.

THE CURE OF THE SCARLET FEVER  
ATTENDED WITH ULCERATED SORE-  
THROAT.

**A**LTHOUGH the distemper was not entirely new to me, when it appeared at *Newcastle*, yet from the combination of the  
in-

\* Morton de Feb. Scarlat. p. 85.

inflammatory and putrid symptoms, I confess that in several instances I was at a loss how to proceed; particularly in the beginning of the epidemic.

The great resemblance of the disease to the *angina maligna*, and the subjects being chiefly the young and delicate, prevented all thoughts of bleeding. Finding the following plan answer every intention of abating the inflammatory irritation which prevailed in the beginning, I never but once, even in adults, tried the effects of this evacuation. I can therefore say little about the propriety of it from experience; although I am apt to imagine, that in most instances it would have proved detrimental.

When called early, whilst the action of the vessels continued strong, after directing the patients legs and feet to be bathed in warm water, I prescribed *tartar emetic*, in such doses as to vomit, and afterwards directed it to be given so as to open the belly gently. By this means a great deal of bile was frequently voided; the fever abated and the throat became easier. When this course was begun soon after the attack,  
the

the disease was sometimes removed at once; and it was almost always rendered so mild as to yield to such preparations of the bark, as the patients could be prevailed upon to take.

In adults, when the throat was tumified, I sometimes began the cure with a saline purge, instead of the antimonial; but, even in such cases, I found from experience that the former method ought to be preferred.

But whatever signs of inflammation might appear in the beginning, the disease, when malignant, soon assumed a putrid form. When called in the advanced state, when it approached to the nature of the *angina maligna*, which was known from the appearance of the sloughs, the bloated countenance, the feeble pulse, and the swelling of the parotid and mixillary glands, together with the tumefaction of the neck, warned by the precepts of the experienced Dr Fothergill, I was deterred from giving emetic tartar; and put my chief confidence in the bark and cordials, as internal medicines. In such a state of the disease, this method was attended

tended with success, when applied in time. But in some instances, however, where it had a fair trial, owing to the combination of putrid and inflammatory symptoms, this powerful medicine was found ineffectual; and those invariably recovered best, whose cases would admit of antimonials in the beginning.

With regard to the preparations of the bark, the powder ought always to be preferred; but from the irritable state of the *fauces*, and from the difficulty of prevailing upon children to take it in this form, I generally prescribed it in infusion at first, afterwards adding to it the powder. The following is the *formula* I generally used, and which is both more pleasant, and more effectual than the decoction, as the medicine is possessed of all the aromatic principles of the bark:

R. Pulv. Cort. Peruv. unc. i.

Aq. Cinnamom. Sp. unc. fs. ad unc. i.

Bullient. unc. viii.

Infunde per 8 vel 12 horas et Cola.

This quantity was sometimes sweetened with the extract of liquorice, sometimes acidu-

acidulated with lemon juice, the vitriolic, or marine acid; and in one or other of these forms, it very seldom happened but the youngest patient could be prevailed upon to use it.

Through the whole course of the disease great attention was paid to the throat. During the stage of tumefaction, therefore, antiseptic gargles were injected into the *fauces* milk warm; and it was amazing what large quantities of viscid slime were by these means discharged, both by the nose and mouth. The common gargle was composed of sage tea, honey and vinegar; but when the ulcers spread, or the sloughs separated slowly; the marine acid was added; and the parts were sometimes touched with the following application by means of a pencil\*.

When the maxillary glands were much swelled, the *volatile liniment* was used externally; but in some instances I found greater advantage from the application of warm cataplasms, composed of oatmeal, oil and vinegar; these, however, were only ordered,

\* R. Mel. Rosac. unc. i.

Sp. Sal. Marin. gutt. xx. M.

dered, when I could depend on their being removed before they turned cold.

As no symptom was more favourable than a disposition to sweat, in the beginning while the skin continued dry and hot, or the head affected, the *pediluvium* was directed twice a day or oftener, and, in some instances, where the tumefaction of the throat was great, and the symptoms of putrescency did not run high, the *warm bath* was attended with more success than any other remedy.

In regard to blisters, meeting with an instance, where their application was succeeded by mortification, I did not often apply them to the throat. But in several cases where the inflammation of the *fauces* was great, they were attended with advantage when applied to the nape of the neck.

The diet consisted of sago and panado, to which a little wine was added; and the patient was indulged with oranges, and ripe fruit of all kinds; nor did I observe that they ever produced purging. The drinks in the beginning were barley water,  
or

or wine whey acidulated with lemon juice; and as cold water, and butter milk were frequently longed for by the sick, they were allowed such drinks in abundance. In the advanced stage of the disease when cordials were necessary, the wine whey was made strong, or port wine was allowed. Cordials, however, it must be observed, were, in general, very improper in the beginning. When wine became necessary, the poorest patients, admitted to the Dispensary, met with a sufficient supply, either from the humanity of their neighbours or recommenders.

The apartments of the sick were kept as clean as possible, and fresh air was admitted by the windows; and this, together with the sprinkling the room with vinegar, in my opinion, is the best method of correcting the noxious effluvia, which arise from the bodies of those who labour under putrid diseases.

In the dropical state of the disease, I followed nearly the method of cure directed by *De Haen*, consisting of purgatives and di-



diuretics, with the intermediate use of the bark. The purgative I found most advantage from, was calomel with squills variously combined. When this state of the disease was accompanied with fever, which was frequently the case, I gave first emetic tartar in nauseating doses, and afterwards the bark joined with *sal diureticus*, or the *acetum scilliticum*. When this state of the disease was attended with rattling breathing, and peripneumonic symptoms, besides these remedies, blisters were applied to the sides and betwixt the shoulders. These methods were always attended with success, unless the patient laboured under a dropy of the cellular substance of the lungs.

#### S E C T. IV.

#### C A S E S.

**I** SHALL now proceed to illustrate the nature of this epidemic, and the method of cure, by the relation of particular histories: and for the greater perspicuity, I shall begin with those cases in which the Scarlet Fever was attended with mild ulcerations of the throat. In the next place

I shall

I shall relate some cases in which it was attended with gangrenous ulcers of the throat, or where it resembled the *angina maligna* in every symptom; and lastly, I shall give some instances of the *dropical affection*, consequent on the disease.

I. CASES OF THE SCARLET FEVER ATTENDED WITH MILD ULCERATIONS OF THE THROAT.

C A S E I.

JANE SADLER, of *Pandon*, aged seven years, on the 6th of July 1778, was seized with head-ach, and sickness, succeeded by vomiting and purging. At night she became delirious, and on the following morning her body was covered with the scarlet efflorescence; she complained of her throat, and swallowed with difficulty. On the 9th she was admitted a patient of the Dispensary. When I visited her, I found her pulse strong, and beating 130 pulsations in a minute. Her whole body was covered with a dull crimson-coloured pustular rash. The submaxillary glands were enlarged. The

*velum pendulum palati*, tonsils, and *uvula* were red and tumefied, with some sloughs. Her tongue, near the basis, was covered with a white fur; her mouth was full of viscid slime; and her breathing was quick, laborious, and rattling; she was exceedingly hot and restless; she swallowed every thing with great difficulty and reluctance; and I was told she had been delirious in the night. Belly costive. The common gargle and volatile liniment were prescribed, and two table spoonfuls of the *julep. emetic* \* every two hours. Her feet and legs were also directed to be immersed in warm water.

*4th day of the disease.* She passed a very uneasy night; but her throat was rather easier. The medicines were continued.

*5th day.* She vomited several times with the julep; the tumefaction of her throat had subsided, but the maxillary glands were more swelled; being costive for three days, a laxative was ordered.

*6th*

\* For the *formule* of medicines referred to in this, and in the following cases, see the appendix.

6th day. She was still very feverish; but the sloughs were almost entirely removed; and she had three stools in the evening.

For the three following days the fever was moderate; but she had an exacerbation at night.

10th day. The cuticle began to peel off in large pieces; her legs and belly were a little swollen; she had no appetite, was costive, and still feverish at night. Ten grains of the *pulv. mercurial.* were given at bed-time, and two ounces of the infusion of fenna in the morning. Next day two table spoonfuls of the following preparation of the bark\*, were ordered every three hours.

12th day. She had four stools yesterday: the swelling of the belly and feet had subsided. The bark was continued.

S 2

14th

\* R. Infus. Cort. Peruv. unc. v.  
 Sal. Diuretic.  
 Sp. Nitri. Dulc. ana drach. ii.  
 Syr. Simp. unc. fs. M.

*14th day.* The skin peeled off in large pieces from her hands and feet. She was free from fever; her appetite began to return, but the maxillary glands were still tumefied.

*17th day.* The maxillary glands of the left side were very hard and painful; and she had a considerable degree of symptomatic fever. A poultice was ordered, and the medicine continued.

*20th day.* The glands seemed to advance slowly to suppuration; she was feeble; and exceedingly restless at night. Still some desquamation of the cuticle.

The abscess did not burst till the 28th day of the disease; and even then some of the lymphatic glands of the neck continued tumefied. She was ordered mercurial purges at proper intervals; and was discharged on the 20th of August, being the 45th day from the beginning of the disease. She was then free of all complaints, and had almost recovered her usual strength.

## C A S E II.

John Sadler, aged nine years, brother to the former patient, on the 20th of July was seized with sickness and fever, and soon complained of pain and soreness of his throat.

*3d day of the disease.* He was admitted to the Dispensary. I found him complaining of sickness. His pulse very quick; his skin dry and hot, and universally tinged with the scarlet rash; the *fauces* red and swollen, with some specks upon the tonsils. The volatile liniment and common gargle were ordered, and two grains of the *pulv. antimonial.* every hour till it produced the usual evacuations.

*4th day.* Vomited several times, and had one stool. This day the throat easier, skin moist, and fever moderate. The antimonial powders were ordered to be repeated every three hours.

*5th day.* The efflorescence was dull, the swelling of the *fauces* had subsided, and

the sloughs were removed. Being costive, a dose of rhubarb was prescribed.

*6th day.* Skin rough, and began to peel.

*7th day.* He complained of cough. On the 8th the cough became very distressing. He was hoarse, and complained of a stitch in his side; pulse very quick, but weak; belly costive. Ten grains of the *pulv. mercurial.* were prescribed at bed-time, and a spoonful of the following mixture \* when the cough was troublesome.

*10th day.* The cough almost gone; skin peeling off; no fever; but now complains of pain in his belly. The mercurial powder was repeated at bed-time, and an ounce and a half of the *infus. sennæ.* ordered to be taken in the morning.

From this time he daily recovered, and was restored to perfect health by the 5th of August, being the 15th day from the commencement of the disease.

CASE

\* R. Mist. Oleos. unc. v.  
Elixir. Paregoric. drach. ii. M.

## C A S E III.

Barbara Hall, in the *Castle-garth*, aged twenty-four, was admitted to the Dispensary on the 9th of July, being the 4th day after she was seized with the common symptoms of the Scarlet Fever. Her throat was much swelled and inflamed; an ash-coloured slough was observed on each tonsil; and she swallowed every thing with the utmost difficulty. Her pulse was very quick, feeble, and hard; her skin was universally covered with the efflorescence, and irregular blotches of a higher colour were observed upon her arms. The submaxillary glands were enlarged; her belly costive; she was very restless; and had been generally delirious at night. The *pediluvium* and common gargle were directed; a blister was prescribed to the nape of the neck, and two table spoonfuls of a solution of manna and soluble tartar every hour till it operated.

*5th day.* She was very delirious last night. At noon she swallowed very little better. Pulse 130; very dispirited; the blister dis-



charged much serum, but the purgative did not operate. A solution of the *sal. cathartic.* with *crem. tartar* was directed to be given by spoonfuls.

*6th day.* As soon as the purge operated she found relief. At noon the swelling of the throat was considerably less. One of the tonsils still appeared much enlarged; she however swallowed with ease. The efflorescence was very plentiful and florid. Four table spoonfuls of the following preparation of the bark \* were prescribed every two hours.

On the 7th day I did not visit her. On the 8th day her fever was moderate; but she said she had passed a restless night. She was very feeble, and a large slough was observed on the tumefied tonsil. The antiseptic gargle was prescribed, and four spoonfuls of the *decoct. peruvian.* with a few drops of the weak spirit of vitriol, were directed to be taken every two hours.

She continued these medicines with uncommon regularity till the 13th day, when  
I found

\* R. Decoct. Peruvian.

Julep. Salin. ana unc. vi. M.

I found her quite free from fever, though very feeble. Her skin was peeling off in large shreds; her throat was free from ulceration, but remained relaxed. One drachm of the bark was prescribed every three hours, and a gargle with *tinct. rosar.* and a little allum.

*19th day.* She was now able to go about the house, but continued very feeble, although she had taken the bark regularly.

*20th day.* One of the glands of the neck began to swell: the skin kept peeling off. The bark was continued.

*23d day.* The swelling of the neck was very large, but as it shewed no tendency to suppurate, it was directed to be rubbed with the volatile liniment; and a purging ptisan was prescribed.

*30th day.* The tumor totally disappeared. She now began to recover. The desquamation of the body was completed, but the cuticle still peeled off in large pieces from her hands and feet.

On the 6th of August, being the 36th day from the commencement of the disease, she returned thanks for her cure.

#### C A S E IV.

Jane Campbell, of the *Castle-garth*, aged eleven years, was admitted to the Dispensary on the 30th of July. She had only been ill for 24 hours. Her pulse beat 120 pulsations in a minute; her skin was hot and dry; the throat much tumefied and inflamed, with some specks upon the tonsils; and her whole body was covered with the scarlet rash. A spoonful of the *julep. emetic.* was prescribed every two hours: the *pediluvium*, volatile liniment, and a gargle were also directed.

*3d day.* She vomited and purged several times with the antimonial. The action of the vessels still continued strong, and the skin was red, with some tumefaction. The emetic julep was continued in smaller doses.

*5th day.* The strength of her pulse had abated, and I was told she had been delirious  
in

in the night. The swelling of the throat had subsided, but some sloughs were observed on the tonsils. Efflorescence dull. The infusion of the bark was ordered.

6th day. Little alteration. She continued the medicines.

7th day. The cuticle began to peel off; she was feeble, complained of cough, and had nocturnal exacerbations of fever.

8th day. The sloughs on the tonsils spread; and she had more fever. An antiseptic gargle was directed, and half a drachm of the bark was prescribed every three hours.

In three days the sloughs totally disappeared; but the nocturnal exacerbation of fever continued, although she took the bark regularly.

On the 11th day, being costive, a dose of the *pulv. eccoprotic.* was given.

On the 14th day, a large swelling was observed under each ear. The volatile liniment was directed; the bark was continued;

nued. In a few days the swellings disappeared. The cuticle kept peeling off in large scales till the 19th day of the disease; and on the 21st she was discharged perfectly cured.

A child in the same room had the fever and scarlet efflorescence, with swelling of the maxillary glands, but without any affection of the throat.

### CASE V.

Richard Gow, who lived in the *Castlegarth*, aged five years, was seized with the Scarlet Fever on the 15th of August, and on the 18th was admitted to the Dispensary. I was told he had been very delirious in the night, and that his whole body became red this morning. Upon examination, indeed, I observed his skin both red and tumefied. The tonsils and *velum pendulum palati* were swelled, and of a crimson colour, but no sloughs could be observed. His pulse beat 120, was hard and contracted, and the maxillary glands were enlarged. The *pediluvium*, the common gargle, and antimonial powders were prescribed.

5th day. He vomited several times yesterday; he, however, passed a very restless night, and was delirious. The efflorescence, this morning, was of a high colour, and clusters of red pimples, scattered here and there, were observed upon his skin. His pulse was feeble, and the tonsils were covered with foul sloughs. Alarmed at these appearances, the antimonials were laid aside, and the infusion of bark, mildly acidulated with spirit of vitriol, was ordered to be given in as large doses as the stomach would bear.

6th day. Little alteration: being costive, a clyster was directed, and eight grains of the *pulv. eccoproticus* at bed-time.

7th day. The cuticle began to peel off, but he was still feverish. The bark was continued.

8th day. The fever continued, but the sloughs on the tonsils had disappeared. Being still costive, an ounce and a half of the infusion of fenna was ordered to be taken in the morning.

*9th day.* He was free from fever, and in a gentle moisture. The bark was continued.

On the 12th day, his belly being much swollen, six grains of the mercurial powder were directed at bed-time, and the infusion of fenna was ordered to be taken on the following morning.

These medicines were repeated at proper intervals. The cuticle kept peeling off, in large thick scales, till the 18th day of the disease. On the 20th day, being free from every complaint, he was discharged.

### \* CASE VI.

Miss —, aged fourteen years, on the 27th of August was seized with sickness and chillness, succeeded by heat and pain in her throat. On the following morning the scarlet efflorescence appeared.

*3d day of the disease.* I was desired to attend her along with Mr Leighton. The rash  
was

\* The cases selected from private practice are, in this essay, distinguished from those which occurred at the Dispensary, by having an asterisk prefixed.

was universally diffused over her body; the tonsils and *velum pendulum palati* were tumefied, and covered with specks; and the maxillary glands on the right side much enlarged. Her pulse beat 130 strokes in a minute; her skin was dry, and very hot: she complained of violent pain in her throat when she attempted to swallow; her head ached, and she was giddy when she sat up in bed. Her feet and legs were ordered to be immersed in warm water, the volatile liniment, a gargle, and a decoction of tamarinds with tartar emetic, were prescribed.

*4th day.* She vomited several times with the antimonial, and slept some in the night. When I visited her in the morning, she was in a gentle moisture. The efflorescence was full and florid; she was costive, complained of faintness, and was not able to sit up. A clyster was directed, and two table spoonfuls of the following\* every two hours.

*5th day.* She was delirious last night. At noon more sloughs appeared on the tonsils.

\* R. Infus. Peruvian. unc. viii.  
Syr. e Succ. Limon. unc. i. M.



filis. Her pulse 104 pulsations in a minute. A mealy desquamation was observed on her face; but the efflorescence continued florid on the rest of her body.

*6th day.* The fever was moderate; the efflorescence brown, and rough upon her body, but high-coloured on her legs. She continued to take the prescribed quantity of the infusion of the bark daily.

*7th day.* She was very feverish last night, but had a remission in the morning, and at noon was in a gentle sweat. The ulcerations of the tonsils had almost healed. Half a drachm of the bark was ordered every two hours. And as oranges and other ripe fruit did not keep her belly open, a scruple of *pulv. eccoprotic.* was directed at bed-time.

*8th day.* She was free from fever, but complained of a tickling cough. The cuticle kept peeling off in thick scales. The bark was continued.

*9th day.* The cuticle separated in long shreds from her hands and legs. She continued the bark for some days longer, and was soon restored to perfect health.

## C A S E VII.

Robert Douglas, a child of nine months old, living in *Pandon*, was admitted to the Dispensary on the 9th of September. He had laboured under the Scarlet Fever for six days. His pulse was exceedingly quick and feeble; his throat was swelled prodigiously, and covered with white matter, and he swallowed with the utmost difficulty. His respiration was sonorous, and he had given over the breast. Thinking his case desperate, I prescribed no internal medicine, but ordered him to be supported with wine whey, which could only be got over in tea spoonfuls; and a large blister was applied on each side of the neck, under the ear.

*7th day.* The swelling of the throat had subsided, and he could swallow better; but his countenance was ghastly, and he was extremely weak. A spoonful of the infusion of bark was desired to be given every hour.

*8th day.* The maxillary glands were much enlarged; his countenance was pale

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and puffy; and thin matter issued from his ears.

On the 9th he was able to take the breast.

On the 11th purulent matter was discharged from both ears, and he had a purging, which, however, was soon removed by a few drops of the *tinct. thebaic.*

This child took four ounces of the infusion of the bark daily from the time it was first prescribed. He gradually recovered his strength, and was discharged on the 24th of September.

### \* C A S E VIII.

Master —, aged about six years, on the 14th of September complained of a pain and stiffness of his throat. On the following day he continued very feverish; and at night breathed with difficulty, and became delirious. A volatile camphorated liniment was prescribed by Mr Leighton, the family surgeon, and emetic tartar was given, but it produced no evacuation.

4th day. I was desired to visit him. I found his face flushed; his eyes watery, prominent and staring. A sharp ichor issued from his nostrils, which inflamed the parts it touched. His breathing was quick, laborious, and rattling, and he kept his mouth constantly open. The *fauces* were loaded with viscid slime, and he could not articulate. His skin was exceedingly hot and dry; his pulse was feeble, and beat 130 pulsations in a minute. The *uvula*, *velum pendulum palati* and tonsils were much tumefied, and of a crimson colour; but no sloughs or ulcerations could be observed. The maxillary glands were very much enlarged, and every effort to swallow threatened suffocation. In this alarming situation, he seemed too feeble to suffer any evacuation by bleeding; but as he was costive, a clyster was injected; he was ordered to be put into the *warm bath*, and to have a syringe-full of a tepid gargle injected into the *fauces* frequently; a blister was applied to the nape of the neck, and a warm poultice with oatmeal, oil, and vinegar, round the throat. In the evening I found him considerably

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easier;

easier; another clyster was ordered, as the former had produced no effect.

*5th day.* In the night he was alternately delirious and comatose; and the mode of his respiration was threatening; but it was observed to be always easier after the use of the gargle, which brought away much tenacious slime. At nine in the morning his skin was moist. The blister had discharged much serum. He was sensible, and could speak. His pulse was 112; he could swallow with freedom, but breathed with difficulty. The *fauces* were still considerably tumefied, and covered with viscid mucus. A dose of the *pulv. eccoprotic.* was prescribed, and the gargle was ordered to be used frequently.

He had two large stools at night, and breathed with ease. Currant jelly, oranges and ripe fruit of all kinds were allowed, and as his skin was hot, his feet and legs were ordered to be immersed in warm water.

*6th day.* In the beginning of the night, he was restless, and a little insensible; but slept for several hours in the morning, although

though his breathing was rattling, from the accumulation of mucus. In the morning he was in a gentle moisture; the swelling of the throat had subsided, but the maxillary glands remained tumid. The blister discharged well, and the poultice had occasioned several painful pimples where it had been applied. An emollient cataplasm was ordered in its stead, and two table spoonfuls of the infusion of bark were prescribed every two hours. He had three stools, and when I visited him in the evening he was in a sound sleep.

In two days more the swelling of the throat totally disappeared, and he was speedily restored to perfect health.

This patient had no rash, but a slight desquamation of the cuticle took place. His younger sister was taken ill as he recovered, but in her the disease was perfectly mild.

### C A S E IX.

Mary Thomson, in the *Castle-garth*, aged two years, after being exhausted with a *diarrhoea*, was seized with the Fever and

Sore-Throat. On the 2d day of the disease she was admitted to the Dispensary. I found her very feverish. She had a reaching to vomit; the tonsils and *velum pendulum palati* were tumefied and inflamed. The *diarrhoea* had disappeared for some days past. The *pediluvium* was directed, an antimonial emetic was prescribed, and a dose of rhubarb and magnesia to be taken in the morning.

3d day. The maxillary glands were enlarged, her pulse was very frequent, and sloughs were observed on the tonsils. Two table spoonfuls of the infusion of the bark, sweetened with the extract of liquorice, were prescribed every two hours, and the common gargle was ordered to be injected into the *fauces* frequently.

5th day. Her face was pale and puffy, the maxillary glands more swelled, and the tongue and cheeks covered with aphthous ulcers.

7th day. The tonsils were more ulcerated; she swallowed with great difficulty, and part of what she drank returned by the nose. Her belly was loose, and her stools black  
and

and fetid. As she did not refuse the bark, it was continued, and a blister was applied to the nape of the neck.

9th day. The *velum pendulum palati* and tonsils were very much swelled, and full of white sloughs. The maxillary glands were more enlarged; her breathing was quick and rattling; and her pulse strong, firm, and about 140 in a minute. Finding that her disease became daily more and more alarming, and that nothing could be expected from internal medicines, as her drinks were rejected by the nose, I directed her to be put into the *tepid bath*, and to continue in it as long as she seemed to bear it with advantage.

10th day. She remained in the bath for about a quarter of an hour, and after its use slept calmly for some hours. This morning an erysipelatous efflorescence, not very unlike the nettle rash, was observed upon her breast, thighs, and legs. The *fauces*, both internally and externally, were much swelled, and part of what she drank still returned by the nose.



On the 11th day of the disease the ulcers of the throat were of a dark-brown colour. On the 12th the swelling of the tonsils subsided, and the *uvula* was covered with an aphthous slough. On the 13th she swallowed with ease; purulent matter ran from the left ear, and the blister still discharged much ferous matter.

For five evenings the *tepid bath* was continued; and my little patient passed her time in it with much pleasure, and always got some refreshing sleep after its use.

On the 19th day no ulcerations could be observed in the throat, the maxillary glands, however, were still indurated, and when she drank, some of the liquid returned by the nose. The angles of her lips were ulcerated; and notwithstanding the use of the bark, she had exacerbations of fever at night.

The cuticle kept peeling off her arms, hands and feet till the 39th day of the disease, and the purulent discharge from her ear continued. Her health gradually returned,

turned, and she was dismissed on the 43d day from the commencement of her disease\*.

### C A S E X.

Margaret Blair, in the *High-Bridge*, aged twenty-four, was seized, on the 19th of November, with the usual symptoms of the Scarlet Fever. On the 20th she was admitted to the Dispensary. I found her pulse very quick and small, but hard; the *fauces* were much swelled, and of a crimson colour; and her neck and shoulders covered with the scarlet rash. She became worse at night, and was frequently delirious. Her belly from the beginning was costive. A dose of manna and soluble tartar was directed to be taken immediately. The frequent use of the *pediluvium* and tepid gargles was enjoined; and she was ordered to breathe frequently over the steams of warm water and vinegar.

3d

\* The subject of this case afforded the only instance, during the course of the epidemic, of a patient having the disease twice: for in the end of June she had the Scarlet Fever and Ulcerated Sore-Throat, and six months afterwards was seized in the manner above described. It must however be observed, that the efflorescence which appeared on the 10th day, after the second attack, had not the least appearance of the *scarlet* eruption.

3d day. She had two stools; and the gargle discharged much viscid slime. Her pulse was feeble, and beat 136 in a minute. The tonsils and maxillary glands were exceedingly swollen, and every effort to swallow was attended with violent pain. The rash was very full, and some red blotches were observed on her arms. Four table spoonfuls of the following \* were directed every two hours, and a warm poultice was ordered to be applied round the throat.

4th day. Her arms were red, tumefied to the finger ends, and painful when touched; pulse 120. Her throat was easier, and the swelling of the *fauces* less.

5th day. The tumefaction of the throat quite gone, but the maxillary glands continued swollen, and she complained of great pain whenever she attempted to swallow. As she vomited every dose of her medicine since last night, two table spoonfuls of the following † were ordered every two hours.

6th

\* R. Infus. Peruvian. unc. viii.

Sal. Absynth. drach. i.

Sp. Vitriol. ten. q. s. ad plenam saturat.

† R. Julep. Salin. unc. viii.

Sp. Nitr. Dulc. unc. fs. M.

*6th day.* The vomiting had disappeared; she was in a gentle sweat, and almost entirely free from fever.

On the 7th day a slight desquamation of the cuticle took place. From this time she daily recovered; and on the 30th of September, being the 12th day from the commencement of her disease, she returned thanks for her cure.

## C A S E XI.

Jane Henry, of *Pandon*, aged nineteen, frequently visited the patient whose case has been above related, and was seized with the same disease on the 25th day of November. The attack was sudden and violent, and was attended with faintness and vomiting. Having procured a letter for the Dispensary, I visited her on the morning of the 2d day. She had been very delirious in the night: her pulse was feeble, and beat 130 pulsations in a minute; her eyes dull and watery; and the scarlet efflorescence was universally diffused over her body. She complained of head-ach, and was sick in an erect posture.

Belly

Belly costive. The tonsils were much swelled, and covered with ash-coloured sloughs, but she swallowed with ease. The symptoms of debility prevailing so much, I did not venture to prescribe *emetic tartar*. A gargle was ordered, and imperial for common drink; and four spoonfuls of the following mixture \* were given every two hours.

*3d day.* Her face and neck were bloated and œdematous; her arms and hands swelled, and tinged with red streaks. She was at times delirious, and her belly continued costive. An emollient clyster was ordered in the evening, and the mixture was repeated, with double the quantity of the bark.

*4th day.* She had two stools after the clyster: in every other respect as yesterday. Her medicines were continued.

*5th day.* The swelling of the throat much subsided, but the ulcerations on the tonsils were

\* R. Infus. Peruvian, lib. i.  
Pulv. Cort. Peruv. unc. fs.  
Tinct. Cort. Peruv. unc. i. M.

were of a dark colour. She was hoarse, coughed frequently, and rattled in her breathing: the last symptom, however, was relieved by injecting the gargle, which occasioned a great secretion of viscid slime. As she vomited every dose of her medicine, three spoonfuls of the infusion of bark were prescribed every two hours, and she was ordered barley water with simple oxymel for her common drink.

*6th day.* The ulcerations in the throat looked better; her face, neck, and breast were œdematous; and her hands red, swollen, and painful when touched. Her eyes were exceedingly dull; she returned answers when spoke to, but was, in general, either delirious or comatose. The hoarseness and cough the same.

*7th day.* The sloughs separated from the tonsils since my last visit. The efflorescence looked dull, and her whole body was inflated: the hoarseness had increased, and her pulse was exceedingly quick. The same medicines were continued.

8th day. Her throat was almost well. Her pulse 130. Her breathing sonorous and rattling. Her face, eye-lids and whole body were prodigiously swollen and bloated, and she lay in a comatose state. A blister was ordered betwixt her shoulders: a spoonful of the squill julep was directed every two hours, and wine whey with simple *oxymel* for common drink.

9th day. The blister discharged much serum. She had several watery stools in the night; and in the morning breathed with more freedom. A few drops of *tinct. thebaic.* were added to the squill julep, to moderate the purging; and she was ordered to be supported with wine whey.

10th day. The watery stools still continued; and the blister discharged much serum: the dropical swelling had almost disappeared, and her respiration was free and easy.

11th day. Her eyes began to brighten. She was now perfectly sensible; but complained much of the cough, and was still hoarse.

hoarse. A spermaceti draught with 60 drops of the *elixir. paregoric.* was ordered every four hours; and she continued the barley water with simple *oxymel.* which she preferred to every other drink.

From this time she began to recover: the cough, however, continued troublesome in spite of every remedy till the 21st day of the disease; and the cuticle kept peeling off in large pieces till the 24th. On the 23d one of the lymphatic glands of the neck swelled to the size of a pigeon's egg, but it soon subsided. After this she had a moderate *diarrhoea*, for which some doses of rhubarb were prescribed. Having recovered her health, and being able to go about, she was discharged on the 29th of December; being the 54th day from the commencement of her disease.

## II. CASES OF THE SCARLET FEVER ATTENDED WITH GANGRENOUS ULCERS OF THE THROAT.

### C A S E I.

MARY INNES, aged fifteen years, who lived in the *Castle-garth*, was admitted to  
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the Dispensary on the 23d of June. I was informed that on the 19th she was seized with rigors, giddiness and vomiting, succeeded by heat, head-ach, stiffness of the neck, difficulty of swallowing, and purging; and that on the 2d day her whole body was red; and that she had been delirious every night.

On the 5th day of the disease I first visited her: her countenance was bloated, the maxillary glands swelled, and both tonsils were covered with foul deep ulcers. She still complained of nausea, vomited at intervals, had a putrid *diarrhoea*, and her pulse was quick and feeble. Mint tea with port wine was ordered for her drink. An antiseptic gargle was directed, and three table spoonfuls of the decoction of bark, warmed with spirit of lavender, to be taken every two hours.

*6th day.* The purging still continued. Other symptoms as yesterday. An anodyne draught was prescribed, and her former medicines were continued.

*7th day.* She rested well in the night. Purging gone; fever moderate; and the ulcerations began to fill up.

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The ulcers disappeared next day; and on the 29th of June she was so well, as to require no further attendance.

## C A S E II.

Master —, about five years old, was seized with vomiting; soon became hot and restless, and complained of his throat. The scarlet efflorescence appeared on the 2d day; and at night he had been commonly delirious.

On the 7th of August I was desired to visit him. His pulse beat 130 strokes in a minute. His skin was hot. His face, arms, thighs, hands and legs were covered with the scarlet efflorescence, which felt rough to the touch; and the whole skin was sensibly tumefied. The maxillary glands and parotids were much enlarged, and the tonsils were covered with sloughs. Mr Hawdon, the family surgeon, who attended him had prescribed a gargle; and a mixture of bark. But as he now vomited the medicine, and took it with great reluctance, the fol-

lowing infusion\* was prescribed; and wine whey with lemon juice, and *sp. nitri. dulc.* was ordered for common drink. A gargle, with *mel. rosac.* and *sp. sal. marin.* was also directed to be injected into the throat with a syringe; and a volatile camphorated liniment was applied externally. The windows were kept open in the day-time.

*August 8th.* He was a little delirious in the night. In the morning his skin was soft and moist, and several white miliary eruptions were observed on his breast. Being costive, oranges, and ripe fruit of all kinds were allowed. The infusion of bark was continued.

*9th and 10th days.* Little alteration could be observed.

*11th day.* A fresh crop of miliary eruptions appeared on his sides, breast and neck. He complained much of itching; and

\* R. Pulv. Cort. Peruvian. unc. i.

Aq. Cinnamom. Sp. drach. vi.

Bullient. unc. viii.

*Infunde per 6. horas et colaturæ adde*

Sp. Vitriol. ten. gutt. xx.

Syr. c Cort. Aurant. unc. i. M.

and the sloughs still continued on the tonsils. The windows were kept open, and he took fruit with pleasure, and had one stool daily.

*12th day.* He was delirious in the night. The sloughs began to separate, and a slight desquamation of the cuticle to take place. The maxillary glands were still tumefied.

The ulcerations of the tonsils continued till the 20th of August, notwithstanding the constant use of gargling, and a regular perseverance in the bark; and his recovery was protracted by painful swellings in the lymphatic glands of the neck, which at last came to suppuration. After taking a dose or two of physic, he was advised to go to the country, and, in a few weeks, he returned in perfect health.

### \* C A S E III.

Miss —, aged about two years, the sister of the former patient, on the evening of the 12th of August, became feverish,

vomited, and passed a restless night. On the morning of the 13th I visited her. The *fauces* were of a crimson colour; the tonsils swelled and ulcerated, and deglutition was painful and difficult. Her pulse was strong and firm, and beat 140. The *pediluvium* was directed, and a julep with emetic tartar prescribed. The medicine vomited twice; but at night I found her very little relieved.

3d day. The scarlet efflorescence appeared, but neither the fever, nor other symptoms were mitigated. Her pulse still continuing strong, the julep was ordered to be persisted in. She, however, took too small a quantity of it to produce any effect. Being costive, a clyster was directed to be given in the evening.

4th day. The parotids, and maxillary glands were much swelled; her face was puffy, and the ulcerations were deeper. The infusion of bark, prescribed for her brother, was tried; but she refused to take it.

5th day. The *uvula* and tonsils, were so much swelled as almost to close up the passage

sage

sage to the gullet. Belly costive. Pulse strong. A julep with tartar emetic was again prescribed; and this day I gave her three doses, which vomited her. At night she rather appeared easier.

6th day. Every thing that she attempted to swallow returning by the nose, a large blister was applied round the throat.

7th day. The *uvula* and tonsils were surrounded with sloughs. The parotids, the maxillary glands, and the whole neck were prodigiously swollen. Her hands were œdematous to the ends of the fingers, and tinged of a red colour. The blister discharged well, but afforded no relief.

From this time the disease daily increased in malignity. Thin acrid matter was discharged from her nose, which excoriated the lips; and on the 13th day of the disease a purging came on, which also excoriated the *anus* and neighbouring parts.

On the 15th day, her teeth, tongue, and whole internal *fauces* became black; and

her face was so much inflated that she could not open her eyes. The tumor of the neck was large, and the part where the blister had been applied became livid. From this time she lay comatose, insensible, rattled in her breathing, and could swallow little or nothing. She expired on the 17th day of the disease, and immediately after death the back and whole neck became livid.

The bark was given in this case, in infusion; in decoction, with cordial confection; and in other forms: but as there was no possibility of obliging her to take it in sufficient quantities, it was likewise injected in clysters. Antiseptic gargles were assiduously employed, and poultices with the bark applied externally; and she had every advantage of nursing and regimen.

#### C A S E IV.

Ann Donaldson, in the *Butcher-bank*, aged seven, on the 4th of August was seized with sickness, fever, and pain in the throat. On the following morning the scarlet efflorescence appeared, and on the 7th of August she

she was admitted to the Dispensary. The tonsils were much swelled, and covered with broad sloughs, but she swallowed with tolerable ease. Her eyes were dull, and heavy, and she was comatose. The efflorescence was scattered over all her body; her pulse was exceedingly quick and feeble; she was insensible at times, and had always been delirious at night. Belly costive. Oranges and other fruit were allowed; a gargle was ordered to be frequently injected; and two table spoonfuls of the infusion of the bark were prescribed every two hours, with wine whey, acidulated with lemon juice, for common drink.

*5th day of the disease.* She passed a very restless night, and was delirious; the sloughs increased; and the maxillary and parotid glands began to swell.

For the two following days she was either delirious or comatose, but never refused her medicine when offered. The maxillary glands being very much swelled, and the neck puffy, a warm cataplasm, with oatmeal, oil, and vinegar, was applied round



the throat, and ordered to be repeated before it became cold.

8th day. The external swelling had subsided; the sloughs on the tonsils were livid; her face œdematous; and she had a running from the nose, with slight sneezing. Her pulse was very quick and feeble. She had taken eight ounces of the infusion of bark daily, which was now ordered to be acidulated with the *sp. sal. marin.* She could not be prevailed upon to take the bark in substance.

On the two following days I could observe no material alteration. On the 11th day, the cuticle began to peel off in large scales; the sloughs however continued on the tonsils, and her feet were swelled. On the 12th, the sloughs separated, and her fever was moderate.

On the 15th day, the ulcerations in her throat had totally disappeared, but she was feeble, and had hot and restless nights. The swelling of her feet was removed, but the glands of her neck remained enlarged. She continued to take eight ounces of the infusion of the bark daily.

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The glandular swelling became of a large size, extending from the left ear to the clavicle, and her recovery was protracted by symptomatic fever. On the 34th day of the disease, the tumor being much inflamed, emollient cataplasms were ordered to be applied. From this time, however, it began to subside, and totally disappeared by the 42d day of the disease. She still continued the infusion of the bark, and gentle cathartics were prescribed at proper intervals.

The cuticle peeled off in large and thick pieces to the 34th day of the disease; and the desquamation was so complete, that the nails of her fingers cast off. On the 26th of October, being the 53d day from the commencement of her disease, I thought it unnecessary to continue my visits. She went daily out, and was restored in a little time to perfect health.

### \* C A S E V.

J—R—, aged seven years, on Thursday the 10th of September, was seized with  
nausea

nausea and fever. On the following morning his whole skin was intensely red. In the day-time he generally had some remissions, but at night was restless and delirious.

*5th day of the disease.* I visited him at night: his whole skin was covered with the scarlet efflorescence; the tonsils were much tumefied, and full of deep ash-coloured ulcers; the parotid and maxillary glands were much enlarged, and his neck was swollen. His eyes were dull and watery; he was exceedingly restless; his skin hot, the *fauces* covered with viscid slime; he rattled in his breathing, and his pulse was fluttering, and beat 130 pulsations in a minute. Mr Leighton had prescribed a decoction of bark in the morning, and a gargle, which were desired to be regularly continued. The *pediluvium* was also directed, and an anodyne draught at bed-time.

*6th day.* He passed a very restless night, but in the morning got some sleep. His skin was moist, but he was comatose; and the ulcers had spread to the *uvula*. Two table spoonfuls of the infusion of bark were  
ordered

ordered every two hours; and a gargle with the *sp. sal. marin.* and *mel. rosac.* was ordered to be injected frequently with a syringe.

*7th day.* He was very delirious in the night; his teeth were covered with black *fordes*, and his face swelled and bloated. His pulse was very frequent; he moaned and dozed alternately; and his respiration was rattling.

*8th day.* The swelling of the tonsils had subsided, but the ulcerations continued. His voice was hoarse, and he coughed much.

*9th day.* The cuticle began to peel off in large pieces; his fever was more moderate, but the cough and hoarseness increased. He had taken eight ounces of the infusion of bark daily. As he was costive, notwithstanding the use of fruit, an emollient clyster was directed in the evening.

*10th day.* The ulcers looked better, but he continued very hoarse and feverish.

11th day. The cough being incessant, and his voice exceedingly hoarse, the following emulsion \* was ordered.

12th day. The ulcerations began to heal, but the maxillary and parotid glands continued indurated.

From this time to the 22d day of the disease, the cuticle kept peeling off from almost every part of the body. He continued hectic for some time, but recovered by a milk diet and change of air.

## CASE VI.

James Johnston, in the *Long Stairs*, aged four years, on the 12th of September was seized with sickness and vomiting, pain in the throat, and next morning his skin was covered with the scarlet rash.

3d

- \* R. Ol. Amygdal. Dulc.  
 Mel. Optim. ana unc. i.  
 Mucilag. Gum Arab. drach. iii.  
*Bene subactis admisce*  
 Aq. Hordeat. unc. iv.  
 Cinnamom. Simp. unc. i. M.  
 Cap. Gochl. i. urgent. tussi.

3d day. He was admitted to the Dispensary. The *velum pendulum palati, uvula*, and tonsils were covered with sloughs; the parotid and maxillary glands were hard and tumefied; his mouth was full of viscid mucus; he rattled in his breathing, and swallowed with great difficulty. The efflorescence was pimply, and of a red colour, and attended with great itching. His pulse was exceedingly quick, but strong. I therefore ventured to prescribe an antimonial emetic, and after its operation directed the use of the bark. The volatile liniment was also prescribed, and a gargle to be injected milk-warm into the *fauces*.

4th day. He vomited once, and had three stools in the night. The maxillary glands were more swollen, the appearance of the internal *fauces* the same; but his breath was offensive. The infusion of the bark was continued in as large doses as his stomach would bear, and notwithstanding the swelling of his throat, he took it with great resolution.

5th

*5th day.* The throat more swelled. He was very insensible and refused his medicine last night; but he took it, and port-negus during the day, notwithstanding every effort to swallow was very painful, and forced the tears from his eyes.

*6th day.* The external swelling of the neck encreased, and he rattled much in his breathing. Pulse quick and feeble. The infusion of the bark was continued.

*7th day.* His eyes were watery, prominent, and staring; and some of his medicine and drinks returned by the nose. Pulse 120, and stronger than formerly; a blister was applied to the nape of the neck; and being costive, in spite of clysters, a laxative was ordered in the morning, which procured two stools. At night he appeared to be relieved. His feet were ordered to be bathed in warm water.

*8th day.* The parotids, and maxillary glands were so much swelled that he could not open his mouth. Pulse 140. Belly much inflated.

10th day. A bilious *diarrhoea* came on with great explosion of *flatus*, in the night, which seemed to relieve him. His pulse in the morning beat 130, and he breathed better. His face, however, was more bloated; his eyes blood-shot, and the tears ran off involuntarily. As the matter he purged was so acrid as to excoriate the *anus*; Chicken water was ordered to be injected, in the form of a clyster; and a few drops of *tinct. thebaic.* were added to the infusion of bark.

11th day. The *diarrhoea* was moderate.

12th day. The swelling had subsided so much that I could inspect his throat, which now appeared in a gangrenous state. The purging recurred in the evening, and he died on the morning following. Immediately after death, his whole body became livid; but in particular the neck and back.

In this case the cortex in strong infusion had the fairest trial; I even administered it myself twice, nay sometimes thrice a day; and



and the greatest attention was observed with regard to cleanliness, cool air, and regimen.

The sister of this patient who was received upon the Dispensary for dentition with fever, caught the disease from her brother; but in her the anginous symptoms were milder, and she recovered.

### CASE VII.

William Frazer, aged four years, from being frequently in the room with the above patients, caught the contagion. He was seized with rigors, sickness and vomiting. His eyes were watery as in the measles; and he complained of a pain in his throat. I visited him soon after the attack, and prescribed *emetic tartar* in such doses as vomited him briskly. Next morning his fever was moderate, and the bark was ordered both in powder and in infusion; and in the evening the scarlet efflorescence made its appearance. On the morning of the 3d his throat was still sore and inflamed; but there was no appearance of sloughs. On the 6th the eruption went off in a mealy desquamation;

mation; and the fever totally disappeared. His face being puffy, and his legs œdematous, a gentle purge was ordered to be repeated at proper intervals. The bark was continued on the intermediate days, and he was speedily restored to health.

### C A S E VIII.

Joseph Sheriff, in *Pandon*, aged fifteen, was seized, on the 29th of September, with vomiting, head-ach, pain in his throat, and in the night became delirious.

On the 5th day of the disease he was admitted to the Dispensary. His whole body was covered with the scarlet rash; his hands were swelled to the finger ends, and tinged of a high colour. The maxillary and parotid glands were hard, and much enlarged; the tonsils red, tumefied, and covered with foul sloughs; his breath was fetid; his mouth full of viscid mucus; and his respiration quick and sonorous. His pulse was feeble and beat 120. A gargle was ordered, wine whey allowed; and two table spoonfuls of the infusion of bark, with half a drachm

of the powder, were directed to be given every two hours.

*6th day.* Little alteration; he continued his medicines regularly.

*7th day.* The efflorescence was still of a high colour. He took, from the time I visited him, three drachms of the bark and eight ounces of the infusion daily.

*8th day.* The fever was moderate; the ulcers began to heal up; the efflorescence was brown, and he had a gentle moisture on the skin.

A plentiful desquamation of the cuticle took place; his appetite returned; and on the 14th day, from the commencement of the disease, being free from every complaint, he was dismissed.

### C A S E IX.

Christopher Waters, in the *Clofe*, aged six years, was seized, on the 27th of September, with shivering, head-ach, and vomit-  
ing

ing. He complained much of his throat, and the scarlet efflorescence appeared in the evening.

On the 3d day of the disease he was received upon the Dispensary. His pulse was feeble, fluttering, and beat 130 strokes in a minute. His face was bloated, and the parotid glands much swelled. The tonsils, and *uvula* were covered with livid sloughs, and his breath was intolerably fetid. For two days past, he had been in a comatose, and stupid state; but he was now exceedingly restless. Wine was ordered: the bark was prescribed, both in infusion and substance; and his mother was desired to oblige him to take it regularly; and also frequently to inject an antiseptic gargle.

*4th day.* He was very delirious in the night: his neck œdematous; his countenance bloated and shining; and respiration quick and rattling. Clysters of the bark were ordered.

*5th day.* The whole body, but particularly the face and neck were much tumefied;

fied; and the rash here and there was livid. The ulcerations of the tonsils became quite black, and he died at two o'clock in the afternoon.

On the 3d and 4th days, he took his medicines freely. The room was kept clean, and every direction I gave punctually followed. Nothing however appeared to have the least effect in retarding the malignity of the disease.

### C A S E X.

Jane Mills, in *Sandgate*, aged nineteen, was admitted to the Dispensary on the 8th of October, and on the 5th day of the disease. Her whole body was covered with the scarlet rash; her tonsils were swelled, and deeply ulcerated; and the parotid and maxillary glands much enlarged. Her pulse was very feeble, and beat 130 pulsations in a minute; her mouth was full of viscid slime, and in the night she had been delirious. An antiseptic gargle was ordered, and a mixture, containing an ounce of the bark, was directed to be taken in 24 hours.

*6th day.* She rested well in the night, but as the bark brought on a looseness, a few drops of laudanum were added to each dose.

*7th day.* The fever was moderate, and the ulcerations looked better.

*8th day.* Her throat was almost well. The efflorescence on the arms (which were tumefied) was of the colour of rasp-berries. Her skin felt rough, and she complained of intolerable itching. Belly regular. The bark was continued.

From this time she daily recovered; the desquamation of the cuticle continued till the 23d day of the disease, and was more complete than in any other patient I attended. The whole skin peeled off from the elbows to the finger ends, and from the knees to the toes, in large thick pieces. The cuticle of some of the fingers came off entire; and had it not been for her impatience in tearing it off, I should have been possessed of a complete cuticular glove. She recovered her usual health, and returned thanks for her cure on the 28th day of October.

## CASE XI.

Dorothy Smith, in a narrow lane by the *Quay*, aged twelve years, on the 25th of November was suddenly seized with vomiting and faintness, which were soon succeeded by delirium, and on the following morning the efflorescence appeared.

On the 5th day of the disease she was admitted to the Dispensary. Her pulse was feeble, and beat 140 strokes in a minute. Her face was swollen and bloated, and the maxillary and parotid glands tumefied. She had a profuse rash, was delirious, had *sub-sultus tendinum*, and snatched at every thing that was offered to her. The tonsils were covered with sloughs of a livid cast; and her breath was fetid. Being costive an emollient clyster was ordered. Her recommender generously supplied her with wine. An antiseptic gargle was directed to be injected into the *fauces* frequently; and two table spoonfuls of the following \* were prescribed every two hours.

6th

\* R. Infus. Peruvian. unc. vi.  
Pulv. Cort. Peruv. drach. iii.  
Tinct. Cort. Peruv. unc. i. M.

*6th day.* She took her medicine, and every thing with greediness; and was still delirious. The mixture was repeated.

*7th day.* The swelling of the tonsils had subsided, and the ulcerations looked cleaner. She was more sensible; the cuticle began to peel off; but her feet were œdematous. The mixture was repeated.

*8th day.* She was perfectly sensible, and in a gentle sweat.

In two days more the ulcerations disappeared; but having an increase of fever at night, the bark was continued regularly to the 15th day of the disease. The cuticle kept peeling off till the 20th day. On the 24th she was able to go abroad, and was soon restored to perfect health.

A brother of this patient, who laid in the same bed, had the Scarlet Fever and Sore-Throat six days before; but the disease was of a much milder nature; and he was able to go about by the 8th day from the attack.



Her sister, seven years of age, who was seized the day after, had a plentiful scarlet eruption; and some specks on the tonsils, which soon disappeared, and she recovered on the 7th day of the disease.

From these three cases it would appear, that some diversity in constitution renders the disease mild or malignant; for there can be no doubt that the source of contagion was the same in all these patients. Many other instances of this nature might be adduced.

## C A S E XII.

Hannah Robertson, in the *Long-stairs*, aged fourteen months, was admitted to the Dispensary on the 6th day of the disease. I was told she had been seized with vomiting, and that on the 3d day her whole skin was of a scarlet colour. The efflorescence was now very dull, and her trunk and thighs were variegated with purple spots. Her pulse was feeble, and beat 120 pulsations in a minute; she breathed with difficulty;

culty; but her throat appeared to be little affected. She had passed four green stools daily since the commencement of the disease, and was now very comatose. A vomit with *ippecacuanha* was prescribed, and a spoonful of the infusion of bark sweetened with extract of liquorice every hour.

7th day. The purple spots were more numerous; she could take little or no medicine. She was ordered to be supported with wine whey, and a drachm of the bark was directed to be given in a little mutton broth, in the form of clyster, every two hours, during the day.

On the 8th day she was easier, and could swallow some of the infusion. On the 9th the purple spots looked better; but her right eye was a little swollen, she coughed much, wheezed in her breathing, and was very feverish. An emetic was prescribed, which operated once. The infusion, and bark clysters were continued.

On the 10th day she breathed better, but her lips and edges of her tongue were full of  
aphthæ;

aphthæ; the following\* was ordered to be frequently applied by means of a pencil.

On the 13th, the cuticle began to peel off. On the 15th, the fever abated; the aphthæ were almost healed; but she was weak, hoarse, and coughed much. The infusion of bark was still continued. She was carried out into the open air, and in about a fortnight was restored to her usual health.

### III. CASES OF THE DROPSICAL SWELLINGS CONSEQUENT ON THE SCARLET FEVER.

#### C A S E I.

MARY MALCOLM, in the *Castle-garth*, aged three years, living in the same house with a child who died of the Scarlet Fever and Ulcerated Sore-Throat, was seized on the 22d of June with the usual symptoms of this distemper.

On the 2d day of the disease she was admitted to the Dispensary. The tonsils and *velum pendulum* were inflamed, and the maxillary glands enlarged. On the 3d day, the  
scarlet

\* R. Mel. Rosac. unc. i.  
Borac. scrup. i. M.

scarlet rash appeared; her fever increased, and sloughs were observed on the tonsils. On the 5th, the efflorescence turned brown, and her face was covered with mealy scales. On the 6th, some sloughs were observed on the *pharynx*. The fever continued with little abatement till the 14th day of the disease, and the maxillary glands remained enlarged. From the time I visited her, she was treated in the way already recommended.

17th day. The cuticle began to peel off the breast, sides, and thighs, in thick scales. One of the glands of the neck was much swelled, and seemed to advance slowly to suppuration. Poultices were applied, and, as she had a febrile exacerbation every night, the bark was continued.

Little alteration happened till the 23d day. The swelling of the neck had disappeared, but she had a tumor under the other ear, which shewed no tendency to suppurate. Six grains of the mercurial powder were directed at bed-time, and an ounce of the *infusum sennæ* next morning.

After

After this the swelling of the neck increased. She continued feeble, coughed much, and, notwithstanding the use of the bark, became daily more and more emaciated. On the 18th of July she was directed to the country, for the benefit of the air, and a milk diet.

On the 2d of August, being the 42d day from the commencement of the disease, she returned: the glandular swelling of the neck had almost disappeared; but I was told she had been swollen all over the body for ten days past. Her face, hands, legs, abdomen, and pudendum were now prodigiously inflated, and the integuments every where bore the impression of the fingers. Her urine was in small quantity, resembled the washings of flesh, and deposited a black sediment. The mercurial powder \* was prescribed at bedtime; and a purging mixture, † to be taken by spoonfuls in the morning, till it operated.

43d

\* R. Pulv. Mercurial. gran. vi.  
Antimonial. gran. ii. M.

† R. Infus. Sennæ unc. i. fs.  
Acet. Scillit. drach. i. M.

43d day. The medicines operated briskly; and in the evening the dropfical fwellings fubfided.

The powder and purge were repeated at proper intervals; and the infufion of the bark, with *fal. diuretic.* was given on the intermediate days.

By thefe means, affiduoufly purfued, ſhe voided her urine in great quantities; and by the 53d day of the difeafe every dropfical fymptom was removed, and ſhe ſoon recovered a confirmed ſtate of health.

## C A S E II.

Jane Haſtings, aged four years, living in the houſe with the former patient, was received upon the Diſpenſary on the 29th of June. I was informed that ſhe had been feized with the ſcarlet fever twelve days before, but in a flight manner. Her appetite, however did not return, and ſhe remained weak and languid.

12th day. For five days paſt ſhe had been confined to her bed; and had been ſick, vomited

mitted frequently, and made little urine. The parotid and maxillary glands were stiff, and swollen; her face was pale, and so much inflated that she could not open her eye-lids; and her whole body was leucophlegmatic. Her skin was hot, her pulse quick, and respiration frequent and laborious. A spoonful of the *julep. emetic.* with *sp. nitri dulc.* was prescribed every two hours.

13th day. She vomited much bile with the julep. It was ordered to be continued in smaller doses.

14th day. She swet much in the night; voided her urine in good quantities; and the swelling subsided. Belly bound. A gentle purge was prescribed.

15th day. She had a severe paroxysm last night, and was delirious for some time. Two table spoonfuls of the infusion of the bark, with *sp. nitri dulc.* were prescribed every two hours.

17th day. The dropsical swelling disappeared; but the feverish paroxysm returned at night, and she had a troublesome cough.

20th day. She sweated much, and the feverish paroxysm still returned notwithstanding the use of the bark. Her breast was full of white miliary eruptions, and her face puffy; but the cough was almost removed.

22d day. She had several watery stools for two days past, her fever was moderate, and the swelling of the face had disappeared.

24th day. The purging still continuing, a dose of rhubarb was prescribed.

On the 26th day she was again seized with a very troublesome cough, for which she was ordered the spermaceti mixture with *elixir. paregoric.* But being likely to become hectic, she was advised to the country. Having regained a tolerable state of health, she returned her letter at the Dispensary on the 25th of July.

Soon after this she became asthmatic, the cough returned, and she was troubled with strong palpitations of the heart. These symptoms encreasing, application was again made



made to the Dispensary. I visited her on the 12th of February 1779. Her respiration was quick and laborious; her pulse small and oppressed; her countenance pale and leucophlegmatic, and her ancles œdematous. She made little urine, and the palpitation of her heart was so strong that it moved her cloaths. These symptoms all increased at night, and were so threatening, that for some time past her death had been expected. Judging her complaints, in a great measure, to depend upon a dropfical state of the cellular substance of the lungs, a blister was applied betwixt the shoulders, and one of the following pills was prescribed every night and morning\*.

*February 16th.* She had four watery stools daily with the pills. The palpitation of the heart was not so strong; and she breathed with freedom. The blister was ordered to be kept open, and the pills were continued.

She

\* R. Sapon. Hispanic. drach. fs.  
 Pulv. Scillarum gran. x.  
 Calomel. p. gran. iv.  
 Syr. Simp. q. s. f. Pil. x.

She persevered in the use of the pills regularly till the 2d of March, when she had almost recovered her usual state of health, only her countenance remained pale. The pills were repeated without the *calomel*; and she took two table spoonfuls of the decoction of the bark, thrice a day till the 20th of March: being then restored to perfect health, she was dismissed.

### C A S E III.

Robert Horsley, in *Vine-lane*, aged eight years, was admitted to the Dispensary on the 3d of July. I was informed that, about three weeks before, he had laboured under the Scarlet Fever, which only confined him for a few days. He however recovered slowly, and at the end of a fortnight became dropfical.

*21st day of the disease.* His pulse was frequent, his countenance pale, and leucophlegmatic. His whole body, but more particularly his legs, thighs, abdomen and scrotum were dropfical. He was very

Y

breath-

breathless, and made little urine. Two ounces of the *infusum sennæ*, with one drachm of squill vinegar, were ordered to be taken in the morning.

22d day. The medicine vomited once, and operated three times by stool. The swellings however were nothing diminished, and he continued very feeble, feverish, and breathed quick. A spoonful of the following julep\* was ordered to be taken every three hours.

24th day. He made much urine since he began the julep; the dropical swellings had subsided in every part, except in the scrotum. The purge was ordered to be repeated; and the diuretic julep was continued on the intermediate days.

By the regular use of these medicines, his respiration became free, and the dropical swellings were totally reduced in five days. On the 29th day of the disease, he had a hæmorrhage from the nose; and being feeble

\* R. Aq. Menthæ Vulg. Simp. unc. iv.  
Sal. Diuretic. drach. i.  
Acet. Scillit. drach. iii. M.

feeble and feverish, the decoction of bark with the *sal. diuretic.* was ordered instead of the squill julep.

On the 33d day of the disease, as the anasarcaous swellings had recurred, the purges were ordered at proper intervals. On the 39th day, every symptom unless weakness was removed; the bark and gentle exercise were enjoined. He gradually recovered his health and strength; and on the 13th of August was dismissed, being the 63d day from the commencement of the scarlet eruption.

### C A S E III.

Ann Walter, in the *Castle-garth*, aged eight years, was admitted to the Dispensary on the 24th of August. She had laboured under the Scarlet Fever and Sore-Throat three weeks before. After the cessation of the fever, she continued languid, and about the 14th day from the commencement of her disease, her face began to swell, and afterwards her whole body. When I visited her, she was universally anasarcaous, and the abdomen ascitical.

Her respiration was quick. She was exceedingly feverish; made little urine; vomited almost every thing she drank, and was costive. A mercurial bolus\* was directed at bed-time; and a spoonful of an antiemetic julep † to be taken frequently.

*23d day of the disease.* The vomiting abated, and she had three stools from the bolus.

*24th day.* The vomiting recurred with violence; her face was more œdematous, and the maxillary glands enlarged. Mint tea, with spirit of nitre, was ordered for common drink, and the julep was repeated.

*25th day.* The vomiting disappeared; but the dropfical swellings continued. The mercurial bolus was repeated.

*26th day.* The vomiting recurred, but in a slight degree. She had three stools; the  
cuticle

\* R. Calomel. p. gran. iii.  
Conferv. Rosar. q. s. f. Bol.

† R. Julep. Salin. unc. iv.  
Sp. Nitri Dulc. drach. ii.  
Tinct. Thebaic. gutt. xii. M.

cuticle kept peeling off in thick scales; and the swelling of the belly had abated.

27th day. Little alteration; the mercurial was ordered to be given at bed-time, and the *infusum sennæ* in the morning.

28th day. The vomiting recurred with so much violence, that the purging infusion was not given. She was very feverish and feeble. A spoonful of the decoction of the bark, with a saline draught, was prescribed every two hours.

29th day. She refused to take the medicine; the vomiting continued; the dropical swelling increased; she had more fever, and breathed with the utmost difficulty. A blister was directed betwixt the shoulders; a plaster with *theriac* and *camphor* was applied to the pit of the stomach; and the saline julep, formerly prescribed, was repeated.

30th day. The vomiting had abated; the blister discharged much serum; her respiration was better; but her pulse was 128, and the whole body continued anasarcaous.

32d day. She was seized with a most violent *orthopnæa*, and troublesome short cough. The dropfical swellings increased; she made little or no urine; and she was frequently delirious. Being costive, a clyster was injected; and a spoonful of the saline julep, with *acetum scilliticum*, was directed to be given as often as she could be prevailed upon to take it.

34th day. The fever, difficulty of breathing, and cough continued: she made more urine; the blister discharged much serum; but the dropfical swellings seemed to increase. As the parts where the blister had been applied had a bad aspect, the bark, joined with *sp. nitri dulc.* and cordials, was prescribed. — For the three following days her respiration was easier; the blister continued to discharge much serum, and she took her medicine better than could have been expected.

On the 39th, the vomiting recurred; her respiration became rattling; and many purple spots appeared on her body, which was  
uni-

universally œdematous and bloated. On the following morning she was relieved from her sufferings; and immediately after death, the whole back, neck, and thighs, turned of a deep violet colour.

After the above detail of the symptoms of putrefaction, which took place in her habit in general, it is almost unnecessary to mention, that the sore, occasioned by the blister, became gangrenous the day before death, notwithstanding the humane attention of Mr Anderson, Surgeon to the Dispensary, who gave her every assistance that his art could afford.

#### C A S E IV.

Thomas Wood, aged four years, who lived in a lane by the *Quay*, was admitted to the Dispensary on the 24th of August. He had laboured under the Scarlet Fever and Sore-Throat for eight days. The tonsils were still inflamed and ulcerated, and the whole neck was œdematous. His pulse was feeble, and very frequent; his eye-lids were swelled; and the cuticle kept peeling off in



thick scales. His belly was moderately loose from the beginning. Two table spoonfuls of the decoction of bark were prescribed every three hours.

9th day. His face, arms, hands, and the cellular substance over all his body much tumefied. He coughed frequently; rattled in his breathing; made no urine; and was costive. The infusion of fenna, with *acet. scillit.* was ordered to be given in spoonfuls till it operated.

10th day. The ulcerations on the tonsils were almost gone. The dropsical swelling had abated; but he was feeble, leucophlegmatic, and still made very little urine. Two table spoonfuls of the following were ordered every three hours\*.

On the 13th, the fever was removed, but he was more anasarcaous; the purging infusion was therefore ordered at such distances as his strength could bear; and the preparation

\* R. Infus. Peruvian. unc. vi.

Acet. Scillit.

Extract. Glycyrrhizæ ana drach. ii. M.

ration of the bark was continued on the intermediate days.

On the 14th of September, being the 28th day from the commencement of his disease, he was dismissed perfectly cured.

### C A S E V.

Adam Ewart, in the *Castle-garth*, aged five years, was admitted on the 15th of August, being the 3d day of his disease. His throat was inflamed, and he swallowed with difficulty; but no sloughs could be observed. His skin was hot and dry, and his pulse very quick. The *pediluvium* was directed, and a spoonful of the emetic julep prescribed every three hours.

*4th day.* Some specks were observed upon the tonsils; but as the action of the vessels was strong, the julep was continued.

*5th day.* The throat was almost well; but as he was still feverish, the *cortex* was prescribed in powder; and in infusion.

8th day. The fever continued, and his face, legs, and arms were anafarcous. The following purgative\* was ordered, at separate doses, in the morning.

On the 11th day, the anafarcous swellings still continuing, the purge was repeated, which vomited him several times. His strength seemed to be upon the decline, notwithstanding the use of the bark; and the swellings rather increased, and he made little urine. A table spoonful of the *julep. scillitic.* with *sal. diuretic.* was prescribed every two hours.

From this time, he voided his urine in large quantities; the swellings gradually diminished; and by the 23d day, he was restored to health.

## C A S E VI.

Sarah Wilson, in *Sandgate*, aged eight years, was admitted to the Dispensary on the 30th of September. She had been seized

\* R. Infus. Sennæ unc. i.  
Tartar. Emet. gran. fs. M.

seized with the *Scarlet Fever* and *Sore-Throat* three weeks before. After the efflorescence disappeared, she continued peevish, and weak; discharged thin matter from her ears, and at last became leucophlegmatic. When I saw her she was also deaf, and had swellings under each ear, which I was told, had diminished in size since the discharge took place. She was feeble; became feverish at nights, and the runnings from her ears were purulent. A purge was directed, and the bark to be taken, in substance, on the intermediate days.

On the 8th of October the dropfical symptoms were removed; and on the following day the swellings under the ears were scarce perceptible; but she was still deaf, and the purulent discharge continued; milk and water was ordered to be frequently injected into the auditory passages, and the *cortex* continued.

On the 26th of October, one of the auditory bones of the right ear came away; and on the morning her mother brought it to the Dispensary, where it was examined  
in

in the presence of Mr Anderson, surgeon, and Mr Stuart, apothecary to the institution.

On the 9th of November, the purulent discharge from the ears had almost ceased; and I was pleased to find that she had not entirely lost her hearing.

On the 16th of November, much purulent matter being still discharged from the right ear, an injection with *aq. calcis* and *tinct. myrrhæ* was prescribed; and the cortex was continued thrice a day.

Her health being restored, and having no complaints unless the discharge from the ear, I thought it unnecessary to continue my visits; she was therefore dismissed.

I called upon my little patient in the end of February following: the right ear still discharged purulent matter; but she heard pretty distinctly, and returned proper answers, even when placed at a distance, and when the left ear was filled with cotton. Other patients however were not so fortunate; for at present two children in this town

town remain quite deaf, from similar affections, the consequence of the *Scarlet Fever*.

From this case, it may be concluded, that the *membrana tympani* is not absolutely essential to hearing; and that sound may be communicated externally to the auditory nerve, when this membrane is destroyed.

## S E C T. V.

AN ACCOUNT OF THE SUCCESS OF THE PRACTICE WHICH HAS BEEN RECOMMENDED IN THE SCARLET FEVER, &c.

HAVING illustrated the method of cure which has been proposed, by the narration of particular histories, I shall now proceed to give a faithful account of the event of the disease of each patient whom I attended, labouring under the Scarlet Fever and Ulcerated Sore-Throat.

Of *thirty-six*\* patients whom I attended in private practice, *thirty-two* were restored  
to

\* I attended, in autumn 1779, six patients, in private practice, labouring under the Scarlet Fever and Sore-Throat, whose cases terminated successfully; but they are not included in the above number.

to health, and *four* died: And of *ninety-five* who came under my care at the Dispensary, *eighty-one* returned thanks for their cure; *one* was discharged for irregularity; and in *thirteen* the disease terminated fatally.

It has been remarked, that the assistance of a physician was seldom asked, unless the disease assumed a dangerous appearance; and from the cases which have been related, it will appear, that a great proportion of those recovered, who were in this situation.

But many applied when the disease had been neglected, the strength exhausted, and when few resources could be found from medicine. Some, however, who could be brought to follow directions, recovered contrary to expectation; but in most instances of this kind, the patients were incapable of taking medicine, and it was my lot to be the unfortunate spectator of irremediable distress. It will not be improper to give a short account of such cases, as they will tend further to explain the malignant nature of the epidemic, and afford the medical reader an opportunity of judging of the merits

merits of the plan of treatment which has been recommended.

\* I. A girl, aged nine years, caught the contagion from her brother, whose case has been related, No. V. p. 297. She was seized with shivering, pain in the throat, succeeded by sickness, vomiting, and delirium. On the following morning her pulse beat 130 pulsations in a minute; the tonsils were inflamed and covered with sloughs; the maxillary glands were enlarged, and she was insensible. A vomit was prescribed, a gargle was ordered to be injected frequently, and immediate recourse was had to the bark; but she could never be prevailed upon to take the last medicine, in any form, in sufficient doses. On the 4th day, she was comatose, and had a diarrhoea. On the 5th day, her eyes lost their lustre; the ulceration of the throat had a bad aspect; the purging disappeared, but her respiration was very frequent and rattling, and she was alternately comatose and delirious. On the 6th day, her neck was œdematous; her countenance bloated; the maxillary glands very much swollen; her pulse small,  
and



and feeble; and her breath fetid. Her voice was hoarse, and thin acrid matter was discharged from her nose. On the 7th day, her countenance looked greasy; the glands were more swollen, and respiration very threatening. Next day, her mouth and throat became black; her eyes were swollen; her hands and feet remarkably tinged, and her body was interspersed with livid streaks. She died on the evening of the 9th, and soon after death the corpse became livid.

\* II. A young man, aged about sixteen, was seized in the morning with giddiness, head-ach, vomiting and pain of his throat, and instantly became delirious. At night his whole skin was covered with the scarlet rash. On the morning of the 2d day his apothecary prescribed a laxative. He passed his stools and urine involuntarily through the day, and lay in a comatose state. At night his respiration became rattling; his relations were alarmed, and I was sent for. He lay speechless; and his pulse was so obscure, that it could not be reckoned. His face was clammy and bloated, and his extremities cold. The rash was  
livid,

livid, he breathed as if he had been strangling, and could not swallow. Some warm wine was injected into his throat with a syringe, part of which he got over with much gulping. He was supported in this manner during the night, and died on the morning following.

\* III. A boy about four years old, was seized in the morning with sickness, vomiting and *diarrhoea*, and complained of soreness in his throat. In the evening his skin was covered with the scarlet efflorescence. On the morning of the 4th day I first visited him with Mr Leighton. The purging still continued, and was very offensive. The parotids, the maxillary glands, and the whole neck were much swollen. The tonsils were covered with foul ash-coloured sloughs, and almost touched each other, however he swallowed with tolerable ease. He had also a running of sharp matter from the nose which excoriated the upper lip. His voice became hoarse, and every symptom increased in malignity, notwithstanding the use of the bark, which was exhibited liberally; and which he took

Z

with

with great perseverance. He died on the morning of the 9th day.

IV. John Leech, in the *Castle-garth*, aged two years, was admitted to the Dispensary on the 10th of June, being the 6th day of the disease. He laboured under symptoms of dentition, and two of the *molars* began to protrude. He was covered with the scarlet rash, the tonsils were much swelled, and a little ulcerated. After the exhibition of an emetic, a gargle and the infusion of bark were ordered. On the 10th day, the affection of the throat was almost removed; but the maxillary glands swelled more, and though the fever was moderate, he did not seem to recover. On the 13th day his tongue and *fauces* became black, the angles of the lips ulcerated, his countenance was pale and puffed up, and purulent bloody matter issued from the throat, when his tongue was pressed. His respiration became rattling, he coughed much, and died on the 15th day of the disease.

V. Elizabeth Watson, in the *Castle-garth*, aged seven years, was admitted to the Dispensary

penfary on the 25th of September, being the 3d day of the difeafe. She had a plentiful rash, vomited much bile, the tonfils were deeply ulcerated, and fhe was delirious. After the operation of an emetic, the bark was prefcribed, but fhe could not be prevailed upon to take it in any form. On the 6th day, the ulcerations became livid; the rash was interfperfed with purple ftreaks, and fhe expired in the evening.

VI. Jane Robfon, in *Sanelgate*, aged fifteen months, was admitted to the Difpensary on the 3d of October, being the 9th day of the difeafe. Her throat was much ulcerated, and part of what fhe drank returned by the nofe. She was very feverifh, much exhausted, hoarfe, wheezed in her breathing, and coughed almoft inceffantly. She had a large fwelling below the right ear, and purged frequently. On the 13th day, purulent matter was difcharged from the right ear, and the fwelling fubfided. The catarrhal fympfoms increafed; fhe refufed every kind of aliment, and died on the 19th day of the difeafe.

VII. Mary Williamfon, in *Sandgate*, aged eight years, was admitted to the Dispensary on the 5th of October, being the 6th day of the disease. The efflorescence was still full; her hands were red and tumefied, and her countenance bloated. The parotid and maxillary glands were swollen, and her whole neck was œdematous. Her throat was much tumefied, and of a livid colour. Her pulse was feeble, and sunk; she was delirious, and troubled with great inquietude; her stools were intolerably offensive, and she voided them without giving notice. She refused both wine and medicine, and died on the following morning.

VIII. Alexander Dryburgh, in *Sandgate*, aged two years, was admitted to the Dispensary on the 24th of October, and on the 7th day of the disease. The *velum pendulum* and tonsils were much swelled, and some ulcerations were observed on the *uvula*. His face was œdematous, the maxillary glands hard, and much enlarged, and his pulse was very quick and feeble. No rash. On the 9th day, the whole throat was covered

vered with apthous ulcers. His face was so much swelled, that he could not open his eyes; his pulse was scarcely perceptible, and he died in the evening. Next morning his back and extremities were livid.

IX. Jane Taws, in *Sandgate*, aged two years, was admitted to the Dispensary on the 24th of November, being the 14th day of the disease. In the beginning she had a plentiful rash, which continued for four days. She was now reduced to a mere skeleton. The *velum pendulum palati* was perforated by ulcers in two places; she was hoarse, coughed incessantly, rattled in her breathing, and died on the morning of the 16th day.

X. Thomas Gilchrist, in *Gallowgate*, aged three years, was admitted to the Dispensary on the 27th of February, 1779, being the 8th day of the disease. He had a purging from the beginning. The maxillary glands were much swelled, and the *uvula* and the angles of his lips ulcerated. His face was pale and puffy, and thin acrid matter was discharged from his eyes, ears and nose. He was

hoarse; every attempt to swallow brought on coughing, and part of what he drank returned by the nose. On the 9th, his eye-lids were much swollen and livid, and the *tunica albuginea* blood-shot. Circular purple spots, of the size of a shilling, were observed upon his elbows, and his skin was covered with livid streaks. His breathing was laborious and rattling, and he died in the evening. Next morning, when I examined his body, his arms, to the finger ends, were tinged of a purple colour, which disappeared on pressure; and the corpse was very livid about the neck and on the back.

XI. John Hewit, in the *Castle-garth*, aged three years, was admitted to the Dispensary on the 8th of August, being the 14th day of the disease. He was exceedingly feeble; his face and legs were anasarcaous, and he was very feverish and delirious in the night. To these symptoms were added sickness and vomiting. On the 19th day, he fell into convulsions; his breathing became laborious and rattling, and he expired in the afternoon.

XII. Peggy Foster, aged two years, three weeks after the commencement of the Scarlet Fever, became anasarcaous. But as she was able to go abroad, these complaints were not much regarded by her parents. She was admitted to the Dispensary on the 21st of August. For two days before I visited her, she had been confined to her bed, and was exceedingly feverish and asthmatic. She now laboured under the most violent *orthopnoea*, her whole body was leucophlegmatic, and she made little or no urine. A blister was applied betwixt the shoulders, and a diuretic mixture with squills was prescribed. The difficulty of breathing however increased, and she died eleven hours after her admission to the Dispensary.

XIII. Thomas Slater, in the *Castle-garth*, aged two years, was admitted on the 22d of September, being the 10th day of the disease. He was very feverish and exceedingly debilitated. His face and legs were swelled, the maxillary glands enlarged, he breathed with great difficulty, and coughed much. These complaints were relieved by



a vomit, and an expectorating mixture, with diuretics. On the 17th day the difficulty of breathing returned, he refused every medicine, his face became exceedingly œdematous, and he died on the 19th.

The four remaining cases which terminated unfortunately, have already been related in the former section, under No. III. p. 291; VI. p. 300; IX. p. 306; and III. p. 323.

## C O N C L U S I O N .

**H**AVING given a full account of the Scarlet Fever and Sore-Throat, both as it came under my observation, and as it has been described by some of the most approved authors; having illustrated the method of cure which was found most successful, by a great variety of cases, and having related the event of the disease, in each patient, I shall conclude with the following inferences.

- I. The Scarlet Fever is a contagious disease, and almost always attended with a  
Sore-

Sore-Throat, which is sometimes erysipelalous, sometime ulcerated, and sometimes of a putrid and gangrenous nature. On the 1st, 2d, 3d, or 4th day, a red eruption appears upon the skin, and after continuing for three, four or more days, goes off in branny or thick broad scales; and after the cessation of fever, the disease frequently terminates in dropfy\*.

II. The Scarlet Fever may appear at any time of the year; but most commonly begins in the summer or autumn, and generally continues throughout the winter.

III. Altho' great diversity obtains in the Scarlet Fever, yet the most important distinctions

\* The character given of the Scarlet Fever, in our nosological systems, conveys no idea of the disease, except the mild species observed by Sydenham. But De Haen, has defined it very properly in the following words.  
 " Est febris acuta, exanthematica, rubras, eademque laticas, maculas proferens, organa deglutitionis non raro impetens, Epidermidis in desquammationem abeuns, & infamis præcipue periodo sua altera, unius, alterius, tertiae, & ultra septimanæ, qua tumore corporis vario, anxietate, debilitate, hominem non raro in longe majus discrimen, quam in periodo priore, conjicit. Infantilis morbus appellatur, quemadmodum Variolæ: ut vero hæ, sic & ille, haud infrequenter adoritur adultos." Rat. Medend. Continuat. p. 60.

tions in practice are to ascertain, 1. When the disease is of an inflammatory nature; and 2. When it is attended with a disposition in the throat, in particular, and in the system in general to putrefaction.

IV. In the treatment of the mild species of Scarlet Fever, as described by Sydenham, little more is necessary than a proper attention to regimen.

V. In the Scarlet Fever attended with erysipelatous inflammation of the throat, without floughs or ulcerations, antimonials given in such doses, as to prove gently emetic, an antiphlogistic regimen, and detergent gargles, are the chief remedies to be depended on\*.

VI. In the Scarlet Fever attended with a mild Ulcerated Sore-Throat, in the beginning, and while the action of the blood vessels is strong, the same remedies as above are indispensably requisite; and as soon as the action of the vessels is abated, the chief dependance ought to be placed in the bark.

VII.

\* The Scarlet Fever of *Plenciz* seems to be of this kind. See Sect. II. p.

VII. When the Scarlet Fever is attended with gangrenous ulcers in the throat, and a disposition to putrefaction in the system, the bark ought to be prescribed in large doses, and an antiseptic cordial regimen pursued from the beginning.

VIII. Though the above general rules, (IV. V. VI. VII.) with respect to the method of cure, are the result of experience, yet, in a disease, which assumes such a variety of symptoms, and appearances, the proper method of treating particular cases must depend upon the sagacity and judgment of the physician; and a careful attention to the nature of the epidemic.

## P O S T S C R I P T.

SINCE the preceding pages were prepared for the press, I have with much pleasure perused *An Account of the Scarlet Fever and Sore-Throat* by Dr Withering, and a chapter on the same subject by Dr Cullen, in his *First Lines of the Practice of Physic*.

A short comparison of the Scarlet Fever, as observed by these authors, with our epidemic, may not be improper; as it will shew the great variety which obtained in this disease, in different situations of this island, and nearly at the same period of time.

The Scarlet Fever first appeared at *Birmingham* about the middle of May, 1778; and prevailed to the end of November following. From the description with which we are favoured\*, it seems to have had a greater analogy to the Scarlet Fever of *Plenciz* † than to our epidemic. The skin was smooth, without pimples or pustles, and was so intensely red on the 3d day, that the face, body, and limbs of the patient resembled a boiled *lobster* in colour, and were evidently swollen. The eyes also partook more or less of the general redness. The *velum pendulum palati*, the *uvula*, the tonsils and gullet were red and tumefied. No real *ulcerations* were observed on these parts; but sometimes collections  
of

\* See Dr Withering's Account of the Scarlet Fever and Sore-Throat, &c.

† See p. 233.

of thick mucus were perceivable, especially on the back of the *œsophagus*, greatly resembling the sloughs in the Putrid Sore-Throat; but these were easily washed away by any common gargle. During the whole course of the fever, the pulse was quick, small, and uncommonly feeble; the urine in small quantity, but scarcely differing in appearance from that of a person in health. The submaxillary glands were enlarged, and rather painful when pressed with the fingers. —And after the cessation of fever, abscesses were not uncommon, on one or both sides of the neck, under the ears.

In October, when the air became colder, the scarlet colour was less frequent. Many patients had no appearance of it at all; whilst others, especially adults, had a few minute red pimples, crowned with white pellucid heads\*; but these appeared only in  
parts

\* During the prevalence of the Scarlet Fever and Ulcerated Sore-Throat at Newcastle in 1778, no such symptom as the above was observed. But in the winter of the following year, I attended a patient in the neighbourhood, who received the infection from his children; and in whom the scarlet eruption was of a very high colour, and the pimples crowned with white heads. As his case varied very  
much

parts where the skin is most tender. The affection of the throat, in some patients, seemed to extend down the gullet to the stomach;

much from those which have been related in the 3d section, I shall introduce it in this place.

Mr J. aged thirty-five, after being indisposed for some days, on the evening of the 4th of December, 1779, was seized with lassitude and chillness, succeeded by violent head-ach, pain in his throat, intense thirst, and a burning heat all over his body. He went to bed, drank plentifully of warm diluents, and fell into a profuse sweat, which relieved the head-ach and fore-throat. In the morning he observed an eruption on his arms and breast, and through the day had 15 loose stools. At bed-time he took an opiate, by the advice of Mr Leighton, which checked the purging: in the night the febrile complaints ran high; his skin was intensely hot, and itched much; and his ideas were confused.

On the morning of the 3d, he had a remission, as usual; but through the day had an uncommon weariness, and was chilly, notwithstanding he complained of a burning heat in his skin. In the evening he took an emetic; but had a restless night from the intolerable heat and itching over all his body.

On the 7th of December, being the 4th day of his disease, I visited him with Mr Leighton. He was lying in bed with his cloaths on, and his pulse beat 112, pretty firm; he sighed much, and complained of oppression about the breast. When he got up, and attempted to walk, he became instantly sick and faint, and his pulse very feeble. His face and arms appeared puffed; the rash was universal over his body, and upon his arms and breast ran into blotches, which consisted of red pimples; but here and there it was of a dull colour. His skin was very hot; his tongue clean and moist; his throat of a natural appearance,

stomach; in others it spread itself down the windpipe to the lungs, occasioning cough and peripneumonic symptoms; and  
in

ance, and not the least swollen: he was thirsty, very anxious, and dreaded the return of the night. Two table spoonfuls of the following were ordered every three hours: R. Julep. Salin. unc. viii. Tart. Emet. gr. i. Conf. Cardiac. drach. i. M. In the beginning of the night, the heat and itching of the skin were more intolerable than ever, and his ideas very much confused. The julep purged him very severely, which he said removed the itching, and towards the morning he fell into a refreshing sleep.

On the 5th day, I was informed that the efflorescence over all his body was of a full scarlet colour; and that he had continued a spoonful of the julep, which now did not purge him: an opiate was ordered at bed-time; but he had no sleep; the heat, itching, and pricking pains of the skin were very distressing; his ideas were more confused, and at times he spoke incoherently.

On the 6th day I visited him. The efflorescence was now very plentiful; in some places of a full scarlet colour; in others of a dull crimson hue; in some parts pustular, and in others smooth. The skin of his whole body was evidently swollen, particularly his arms, thighs, and legs, which were very painful when pressed with the fingers. The scarlet pimples on every part of his body, except the face, were crowned with white heads, which contained a *milky fluid*. His pulse beat 120, his tongue was clean, the colour of his eyes, the nostrils, and *fauces* natural. He had made little urine from the beginning of his complaints, and continued feeble and much dispirited. Two ounces of the decoction of the bark, with *sal. diuret.* and *sp. nitri dulc.* were prescribed every two hours.

These medicines he continued regularly till the 16th day of the disease, which promoted a flow of urine, and improved his appetite.

On



in others its progress along the *Eustachian* tube was indicated by sharp pains in the ear.

These were the most usual symptoms which attended this epidemic; but for a more particular description, I must refer the reader to the work itself, which contains much useful information.

The distemper frequently assumed a more fatal form: In children, the delirium commenced a few hours after the seizure; the scarlet colour appeared on the 1st or 2d day, and they died early on the 3d. In adults, the  
rapidity

On the 7th day, the efflorescence became brown, and scaled off on the superior parts of his body. A desire for food returned; he slept well at nights, but a hoarseness came on every afternoon till the 12th day of the disease, which disappeared in the morning.

After this he was able to go abroad; the desquamation over his body was not completed till about the 6th day of January, 1780: And I was informed by a letter, dated on the 11th of the same month, that he was in perfect health, and that the cuticle was still peeling off from his feet.

Four of his children, who were recovering when I visited him, in the beginning had great inflammation of the tonsils, and much swelling of the maxillary glands. His brother had the disease, attended with as high a coloured efflorescence, and many red pimples with white heads: in him the disease was equally violent, but without a Sore-Throat; and he also recovered.

rapidity of the fever and delirium was such, that they died on the 4th or 5th day, especially if a purging supervened. Some survived to the 8th or to the 11th: in all these cases the throat was but little affected, and the eyes had an uncommon equable, shining redness, resembling that which is remarked in the eye of a ferret.

The disease was frequently succeeded by dropfical swellings, of the *anasarcous* kind; sometimes by an *ascites*. In some the dropfy affected the brain, producing coma-vigil, delirium, and blindness. In others it fell upon the lungs, and produced every symptom of the true hydrops pectoris.

The ingenious author considered the disease to be of an inflammatory nature. He however found bleeding to be of no service, and purgatives pernicious. Sweating was attended with no advantage, and the bark and cordials did harm. He therefore placed his chief confidence in repeated vomits of *ipecacuanha* combined with *tartar emetic*, and in diuretics, especially the *Seneka* root, and diluted solutions of the fixed alkaline salts.

Dr Cullen, in the 2d volume of the *First Lines of the Practice of Physic*\*, just published, informs us, that in the course of 40 years, he has seen the Scarlet Fever five or six times prevailing as an epidemic in Scotland, and attended with an Ulcerous Sore-Throat, in almost all the patients affected. “That even in some instances, the ulcers of the throat were of a putrid gangrenous kind, and at the same time the disease, in all its symptoms, resembled very exactly the Cynanche Maligna.” The Doctor however is persuaded that they are contagions specifically different; and he has formed this opinion from the following considerations.

“There is a scarlet fever entirely free from any affection of the throat, which sometimes prevails as an epidemic; and, therefore, that there is a specific contagion producing a scarlet eruption without any determination to the throat.

“Even the Scarlatina, which, from its matter being generally determined to the throat,

\* Chap. vi. p. 89.

“ throat, may be properly termed Anginosa,  
 “ has, in many cases of the same epidemic,  
 “ been without any affection of the throat;  
 “ and, therefore, the contagion may be sup-  
 “ posed to be more especially determined to  
 “ produce the eruption only.

“ Though in all the epidemics which I  
 “ could alledge were those of the Scarlatina  
 “ Anginosa, there have been some cases  
 “ which, in the nature of the ulcers, and  
 “ in other circumstances, exactly resembled  
 “ the cases of the Cynanche Maligna; yet,  
 “ I have as constantly observed, that these  
 “ cases have not been above one or two in  
 “ a hundred, while the rest have all of them  
 “ been with ulcers of a benign kind, and  
 “ with circumstances hereafter to be de-  
 “ scribed, somewhat different from those  
 “ of the Cynanche Maligna.

“ On the other hand, as I have two or  
 “ three times seen the Cynanche Maligna  
 “ epidemically prevailing, so, among the  
 “ persons affected, I have seen instances of  
 “ cases as mild as the cases of the Scarlatina  
 “ Anginosa commonly are; but here the

“ proportion was reversed; and these mild  
 “ cases were not one fifth of the whole,  
 “ while the rest were of the putrid and ma-  
 “ lignant kind.

“ It applies to the same purpose to ob-  
 “ serve, that, of the Cynanche Maligna,  
 “ most of the instances prove fatal, and, of  
 “ the Scarlatina Anginosa, a very few of  
 “ the cases prove so.”

The opinions of so eminent a physician, I am sensible deserve the greatest respect; but the arguments brought in support of them, however ingenious, are, in this instance, far from being conclusive; they have therefore produced no alteration in the sentiments which I delivered, towards the end of the second section of this essay: for by a parity of reasoning, the distinct small-pox might be proved to be a contagion, specifically different from the confluent; or the putrid measles \* from those which partake of an inflammatory nature.

But

\* See Dr Watson's paper on the measles. Lond. Med. Obs. vol. iv. art. xi.

But the Scarlet Fever and Sore-Throat which Dr Cullen has so often observed epidemic in Scotland, seems to have been, in general, of a very benign nature, and probably in this respect differed very little from the Scarlet Fever which was prevalent in Roxburghshire\*.

The disease began with chillness, and seldom with any degree of anxiety or vomiting. Early in the distemper some uneasiness was felt in the throat, and deglutition became difficult. On looking into the *fauces*, a redness and swelling appeared, approaching to the state of these symptoms in the *Angina Tonsillaris*; but in the Scarlet Fever, there was always more or less sloughs. On the 3d or 4th day, the scarlet eruption appeared on the skin, in the same form as in the *Angina Maligna*, and, after four days, ended in a mealy desquamation. At this time the fever commonly subsided, and some degree of sweat came on. The sloughs continued for some days, but falling off, discovered the swelling abated, and an ulcer formed on

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\* See note, sect. ii. p. 247.

one or both tonsils; and soon after the fever had subsided, these ulcers healed up entirely.

When the eruption disappeared, it frequently happened, that, a few days after, the whole body was affected with an anasarcaous swelling, which we are told soon subsided, and seldom required any medicine.

During the time that the Scarlet Fever and Sore-Throat was epidemic, especially on its first setting in, we are informed that there were always a few cases, in which the disease approached very nearly to the nature of the *angina maligna*, and it was only in such circumstances that it was attended with any danger.

With respect to the cure of the distemper, when the symptoms are nearly the same with those of the *angina maligna*, Dr Cullen recommends the same treatment, which he directed in the later disease.

In the ordinary state of the Scarlet Fever and Sore-Throat, which the Doctor observed,  
an

an antiphlogistic regimen was commonly all that was necessary, avoiding on the one hand the application of cold air, and on the other any increase of external heat. But when the fever was considerable, with much swelling of the tonsils, he recommends bleeding, especially in adults. He however puts the greatest dependance in emetics in nauseating doses, in keeping the belly open, and the frequent use of detergent gargles.

\* \* \* \*

SINCE the preceding sheets were printed, I have perused Doctor Cotton's letter to Doctor Mead *on a particular kind of Scarlet Fever* prevalent at *St Alban's* near *London*, in the year 1748, which I procured with great difficulty. This will be a sufficient apology for what I have advanced at page 239; and for this author's accurate account not being inserted in its proper place.

The disease made its appearance about the latter end of September; at first chil-



dren were only seized; but it afterwards attacked adults. In general the first symptoms were sickness, vomiting and purging. A Sore-Throat either attended these discharges, or immediately followed. The tonsils, parotids, and maxillary glands hastily swelled to a considerable degree: and upon looking into the mouth, there were frequently seen, especially after the disease was a little advanced, *ulcuscula* scattered up and down the *fauces*, which were pretty broad upon and about the tonsils, superficial, and covered with a whitish slough. The eyes appeared watery, and the countenance, particularly the eye-lids were puffed up, as in the measles. In many the arms, hands, and neck were puffed up and likewise swelled. In some also a cough accompanied the preceding symptoms.

The scarlet efflorescence, in some appeared immediately on the attack of the disease; not always gradually as in other eruptive diseases; but in some it was sudden, universal, and of an intense red. In some there intervened one or more days between the first sickening and the scarlet efflo-

efflorescence; and in some it was partial and gradual in its advances. The legs and thighs were spotted up and down with spots of various dimensions, some as large, or larger than a six-pence, while the trunk of the body was covered with such an infinite number of them, and so closely set together that no interstices appearing, the body was in some persons as red almost as if it had been dipped in *blood*. In others the scarlet efflorescence was trifling as to the degree of colour; and so very slightly was the skin tinged, that the disease was known more from the collateral symptoms, than from the efflorescence.

The scarlet efflorescence not only differed as to degree in different persons, but even in the same patient; appearing on the face, neck and breast, even with the superficies of the skin (*erysipelas*-like) at least so far as the eye could discover; while in other parts, the eruptions were prominent, and the cuticle felt rough with all the asperity of *fish-skin*, that spectacle-cases are made off.

The

The pulse in general was very quick and small; the thirst intense; and the greater part of those who laboured under the disease, had a sensation of burning heat upon the skin. But even with all this heat, and increased celerity of the blood's motion, the tongue was commonly moist, and but slightly furred. Some underwent extreme anxiety; some were delirious for four or more days together. Others were comatose, and when awaked to drink, immediately relapsed again. Several on the contrary were sleepless whole days and nights successively without any delirium. Almost all complained of sudden loss of strength, and great dejection of spirits.

The cuticle peeled off as in other Scarlet Fevers; and many for a long time complained, that their bodies were as sore within, as without. Such a sensibility indeed they suffered, as rendered them quite unhappy.

When the disease was very violent, it terminated, in some measure, on the 4th or  
5th

5th day; that is, at that period it had arrived to its height and was on the decline. In few or none did the fever leave the patient so totally, but it recurred, once, twice, or more the evenings following; and grew so mild at each return, as to be little more than barely noticed: at which time too, all the glandulous swellings commonly vanished. In some, although the fever evidently remitted of its severity on the 4th, or 5th day, its returns were of more hours duration and higher in degree; and a large share of inquietude continued, even to the 8th or 9th day. In one person the delirium continued after the fever was off, the skin cool, the pulse slow and regular, and the efflorescence dying away. In another, when the fever was past the height, the parotids began to swell for the first time, and continued to enlarge for three days successively; when suddenly they subsided, in a night's time, one half of their increased magnitude. In two persons after the cessation of fever, the tumor of the parotids continued; and, a fortnight or three weeks afterwards, suppurated largely.

In

In some the dejection of spirits, which had accompanied the disease through all its stages, still continued, when the distemper was over; and the patients dreaded the approach of the evening with an unusual kind of horror; and the shadows which were consequent upon the lighting of candles, affected their minds with extravagant terrors and perturbations.

This judicious author being one of the first physicians in England, who made and published observations on the *Scarlet Fever* attended with *Ulcerated Sore-Throat*\*, I have introduced the above account with particular pleasure, as it contains some variety in the symptoms of the disease; and because his sentiments perfectly coincide with mine, concerning the impropriety of altering the name of this distemper, as

\* The *Ulcerous Sore-Throat*, frequent in London in 1747 and 1748, and so well described by Doctor Fothergill, seems to have been essentially the same epidemic. Doctor Cotton's letter to Doctor Mead is dated the 12th of February 1749; as he takes no notice of Doctor Fothergill's Treatise, and mentions his own subject as being *novel*, we may conclude that his own observations were completed, before the publication of the former.

as will appear from the following quotation, with which I shall conclude.

“ From this diversity of symptoms, I  
“ have found some practitioners inclined to  
“ think, that this disease could not with  
“ propriety be called a Scarlet Fever. But  
“ I imagine, that such disputes are about  
“ words only. For although there is a con-  
“ siderable difference between the present  
“ Scarlet Fever, and that milder one, which  
“ *Sydenham* describes; yet if an increased  
“ number of symptoms, and a more ex-  
“ asperated degree thereof, would authorise  
“ a physician to alter the name of the dis-  
“ ease, I fear, that confusion would be the  
“ consequence of such a liberty. For the  
“ same reasons, the small pox might suffer  
“ a change in its name; because there is not  
“ so great, or a greater difference between  
“ a former, and the present Scarlet Fever,  
“ than there is between small pox and small  
“ pox; more especially if the comparison  
“ be made between the mildest degree of  
“ the *distinct*, and the most violent degree  
“ of the *confluent* sort.”

as will appear from the following quai-  
non, with which I shall conclude.

"From this diversity of symptoms, I  
 "have found some practitioners inclined to  
 "think, that this disease could not with  
 "propriety be called a Scarlet Fever. But  
 "I imagine, that such objections are about  
 "words only. For although there is a con-  
 "siderable difference between the present  
 "Scarlet Fever, and that which one, which  
 "Sydenham describes; yet it is included  
 "under of symptoms, and a more ex-  
 "tended degree thereof, would authorize  
 "a physician to alter the name of the dis-  
 "ease. I fear, that conclusion would be the  
 "consequence of such a liberty. For the  
 "same reason, the small pox might suffer  
 "a change in its name; because there is not  
 "so great, or a greater difference between  
 "a former, and the present Scarlet Fever,  
 "than there is between small pox and small  
 "pox; and more especially if the comparison  
 "be made between the small pox, and the  
 "the disease, and the most violent degree  
 "of the scarlet fever."

TABLES OF THE DISEASES OF THE  
TERRITORY ADJACENT TO THE  
GREAT DISCOVERY RIVER  
AND THE MOUNTAIN STATES  
DURING THE YEAR 1846

IN ACCORDANCE WITH THE  
ACT OF CONGRESS PASSED  
MARCH 3, 1845, CHAP. 24,  
SECTION 2, AND THE  
ACT OF CONGRESS PASSED  
MARCH 3, 1845, CHAP. 24,  
SECTION 3.

A N

A P P E N D I X.



AN

A P P E N D I X

TABLES OF THE DISEASES OF THE PATIENTS ADMITTED TO THE NEWCASTLE DISPENSARY, WITH REMARKS ON THE METHOD OF IMPROVING MEDICAL RETURNS.

**N**EXT to the relief of the distressed, the grand object of every institution for the reception of the sick ought to be the improvement of medical knowledge. It is, however, to be regretted, that little attention has been, hitherto, employed to effectuate so desirable an end. Even the ANNUAL REPORTS of Hospitals, Infirmaries, and Dispensaries, which, if properly executed, would convey important information to the faculty, are at present so defective, that they answer no useful purpose. The diseases, which might be extracted from the registers of these charities with little additional trouble, are not mentioned; and the mode of the discharge of the patients, is, in general, so exceedingly vague, that it is impossible to judge of the success of the practice.

Several eminent philosophers and physicians have pointed out the great advantages which would result to medicine, from the general establishment of accurate bills of mortality. These, indeed, answer many important purposes, both political and medical; and the public has been much indebted to Drs Price, Percival, Haygarth, and others\*, for improvements in these registers, which it is to be hoped will be adopted, and, in time, carried into execution in every town and parish in the kingdom.

But, in a medical view, I cannot help being of opinion, that accurate and satisfactory RETURNS OF THE SICK admitted to the benefits of the various establishments in the kingdom, but more especially to Dispensaries, would be productive of greater advantages. If properly executed, in a tabular method, they would, at one view, shew the rise and declension of epidemics; the comparative degrees of mortality occasioned by different diseases; the difference

\* See Price on Reversionary Payments, 3d Edit. p. 210, 211, 279. Percival's Essays, Vol. II. Philos. Transactions, London. Med. Obs. and Inquiries, Vol. III.

of seasons with respect to healthfulness; the stages of life at which mankind are most subject to particular distempers; and other circumstances of equal importance. And if, after a few years, these returns were collected into a volume by the physicians of each respective charity, together with a short account of the state of the weather, and of the most remarkable epidemics, and the general method of cure which was adopted, nothing would have a greater tendency to advance the science of medicine.

The improvements which I would propose in the *Returns of the Sick*, which may be published along with the annual Reports of the respective charities, will be better understood by the subsequent tables, than by verbal description; but before I introduce them, it will be necessary to premise the following particulars.

1. The diseases, in the following tables, are divided into four general classes, according to Dr Cullen's Nosology: but in the arrangement of the genera, I have chiefly followed the method which was adopted by the late celebrated Dr Gregory in his Lec-

tures, in order, as much as possible, to bring under each class those distempers, which have the greatest affinity to each other.

2. Dentition and Worms, in young subjects, produce diseases extremely different: such as, irregular fever; vomiting; diarrhoea; convulsions, and other spasmodic complaints. How proper soever, in a system of Nosology, it may be to refer these diseases to their genera, yet, as they so frequently change into each other, and are so often complicated in the same patient, to have inserted them in any other manner, than in general terms, would have occasioned many alterations in the register of the Dispensary.

3. The practice of the Dispensary being principally limited to Fevers and other distempers which require immediate assistance, and to those which are excluded from the benefits of the Infirmary, by its regulations, the tables do not shew the exact comparative proportion of diseases in general. For example, Intermittent Fevers, Consumptions, Rheumatism, &c. amongst the class of febrile diseases, are admitted to the Infirmary,  
either

either as out or in-patients, and therefore are not received at the Dispensary, when the situation of the patients will allow them to make application to the Infirmary. The Small-pox too, though it constantly rages with fatality in the town, bears a small proportion, because the lower class of people never apply for assistance in this disease, unless their children are apparently in the utmost danger. Many of the genera of *nervous diseases*, *cachexies*, and *local diseases*, are particularly the proper objects of the Infirmary practice; and therefore the distempers belonging to these classes, which are admitted to the Dispensary, bear a much smaller proportion to Fevers, than would otherwise be the case.

4. The patients, admitted to the benefits of the Dispensary, are visited at their own houses, and, in order to prevent any interference with the Infirmary, none are received who are able to attend as out-patients. This will account for the mode of the discharge of the patients being more accurately ascertained, especially with respect to deaths, than in any other charity, which has an establishment for out as well as in-patients.

## TABLE I.

A GENERAL RETURN of the Patients admitted to the Newcastle Dispensary, under the Author's care, from its commencement, October 1st, 1777, to October 1st, 1779.

DISEASES.	Admitted	Cured	Relieved	Went to the Infirmary	Irregular	Incurable	Dead
<i>Cl. I. Febrile Diseases.</i>							
Intermittent Fevers	11	8		2	1		
Continued Fevers	203	196			1		6
Small-pox	30	23			1		6
Measles	27	25					2
Scarlet Fever and Ulcerated Sore-Throat	95	81			1		13
Erysipelas	7	7					
External Inflammations	10	10					
Quinfey	8	8					
Catarrh	3	2	1				
Hoopingcough	3	2					1
Pleurisy & Peripneumony	43	38					5
Phthisis Pulmonalis; & Hætic Fever	27	12	13	1	1		
Inflammation of the Liver	4	4					
Nephritis; and Gravel	9	6	3				
Rheumatism	45	40	2	2	1		
Dentition with Fever	10	9					1
Hæmoptoe; vomiting, & Purging of Blood	6	5					1
Uterine Hæmorrhage	6	6					
Cholera Morbus	5	5					
Dyfentery	34	28	2		2		2
Carried over	586	515	21	5	8		37

T A B L E I. continued.

DISEASES.	Admitted	Cured	Relieved	Went to the Infirmary	Irregular	Incurable	Dead
Brought over	586	515	21	5	8		37
<i>Cl. II. Nervous Diseases.</i>							
Apoplexy	1						1
Palsy	4	1	1	1	1		
Stomach-Complaints	16	10	4	1	1		
Convulsions	6	4	1				1
Epilepsy	3	2	1				
A singular Spasmodic Disease	1						1
Asthma	28	16	9	1	1		1
Colic	24	23					1
Hysterics	14	8	5		1		
Melancholy	1	1					
Periodic Head-ach	3	1	2				
<i>Cl. III. Cachexies.</i>							
Anasarca; and Ascites	14	11	1		1		1
Hydrops Pectoris	1						1
Hydrocephalus internus	4	1					3
Scrophula	5	4	1				
Herpes	2	2					
Lues Venerea	7	6			1		
Jaundice	4	2	1				1
Worms	8	8					
<i>Cl. IV. Local Diseases.</i>							
Incontinence of Urine	2	1			1		
Suppression of the Menfes	3	2			1		
Scirrhus of the Gullet —of the Liver	2	1	1				
Cancer of the Eye—the Uterus—and Bladder	3			1		1	1
Opacity of the Eyes	1		1				
Total	743	619	49	9	16	2	48



## TABLE II.

The DISEASES of the Patients admitted each Month to the Dispensary, under the Author's care, from Oct. 1st, 1777, to Oct. 1st, 1779.

DISEASES.	October	November	December	January	February	March	April	May	June	July	August	September	Total
<i>Cl. I. Febrile Diseases.</i>													
Intermittent Fevers	1	3	1		1	3						2	11
Continued Fevers	24	23	27	32	15	11	5	8	5	8	11	34	203
Small-pox		3	3	5	6	2			2	3	3	3	30
Measles				1		12	8	2	3			1	27
Scarlet Fever and Ulcerated Sore-Throat	26	6	11	1	1	4	1		11	5	12	17	95
Erysipelas	1	1	2					1			2		7
External Inflammation				1		3	1	2	2	1	1		11
Quinsy			2	2			2	1		1			8
Catarrh		1		1	1								3
Hoopingcough			2	1									3
Pleurisy & Peripneumon.	3	4	2	5	3	5	6	7		2	2	4	43
Phthisis Pulmonalis; and Hæctic Fever	3	2		4	2	2	2	3	2	1	3	3	27
Inflammation of the Liver		1			2						1		4
Nephritis; and Gravel				2	2	1	2		1		1		9
Rheumatism		7	5	6	5	3	3	1	3	8	1	3	45
Dentition with Fever	1	1				1	2		1		1	3	10
Hæmoptoe; vomiting, & Purging of Blood	1		1						1			3	6
Uterine Hæmorrhage							2	1	1			1	5
Cholera Morbus							1				4		5
Dysentery		6	2	1	6	3	4	1	2	1	3	5	34
Carried over	60	58	58	62	44	50	39	27	34	30	45	79	586

T A B L E II. continued.

DISEASES.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Total
Brought over	60	58	58	62	44	50	39	27	33	30	45	79	585
<i>Cl. II. Nervous Diseases.</i>													
Apoplexy											1		1
Palsy					1		2	1					4
Stomach-Complaints			2		2	2	3	3	1	1		2	16
Convulsions		1				1					3	1	6
Epilepsy				1	1		1						3
A singular Spasmodic Disease									1				1
Asthma	1	2	3	8	2	1	4	3	1		2	1	28
Colic	1	4	4	1	1	2	3		3		2	3	24
Hysterics	2		2	1	1		1		2	1	2	2	14
Melancholy							1						1
Periodic Head-ach						1	1	1					3
<i>Cl. III. Cachexies.</i>													
Anasarca: and Ascites	3	1		1	1	2		1	1	1		3	14
Hydrops Pectoris												1	1
Hydrocephalus Internus					1	2	1						4
Scrophula		1					2	1				1	5
Herpes								1	1				2
Lues Venerea	1		2			2					1	1	7
Jaundice					1	1		1		1			4
Worms		1	1	1		1	1	1	1	1			8
<i>Cl. IV. Local Diseases.</i>													
Incontinence of Urine				1		1							2
Suppression of the Menfes		2					1		1				4
Scirrhus of the Gullet } —of the Liver }									1		1		2
Cancer of the Eye—the Uterus—and Bladder							1		1	1			3
Opacity of the Eyes									1				1
Total	68	70	72	76	55	66	61	40	48	36	57	94	743

TABLE III. The NUMBER of MALES and FEMALES labouring under each Disease, in the several Divisions of Life.

DISEASES.	Un- der 1	I to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	Total
Cl. I. <i>Febrile Diseases.</i>															
Intermittent Fevers						1	1	1	1	1	4			7	11
	{									2	1				4
Continued Fevers	1	4	7	8	6	28	7	4	7	12	5	3	2		203
	{	7	1	3	3	20	9	10	20	12	15	7	2		100
Small-pox	4	3	1		1	2									30
	{	3	6	3		2	1		1						19
Measles	1	3	4	1		6			1						27
	{	1	2	1		2	2								11
Scarlet Fever and Ulcerated Sore-Throat	4	5	6	5	5	9	6	1	2		1				95
	{	9	3	6	1	13	7	3	8						52
Erysipelas						1				1		1	2		7
	{							1		1					6
External Inflammations				1		1			1	1	1	1			10
	{				2		1								7
Quinfey					1				2		2				8
	{				1					1	1				3
Catarrh									1	1	1	1			3

	1	2	3	4	5	10	15	20	30	40	50	60	70	80	Mal.	Fe.	Tot.
Hooping-cough	1			1	1										3		3
	Males																
						2		2	6	7	6	4	8	1	34		43
	{ Females																
Pleurisy & Peripneumony								2	1	2	3	3	1	1	9		27
	Males																
						1	1	1	2	1	3	1	1		9		27
	{ Females																
Phthisis Pulmonalis; & Hectic Fever								1	2	2	5					18	
	Males																
								1	2	2	5						
	{ Female																
Inflammation of the Liver								1			2				3	1	4
	Males																
									2	1	1	1	2	1	4		9
	{ Females																
Nephritis; and Gravel																	
	Males																
								1	2	6	2	9	1	1	23		45
	{ Females																
Rheumatism								3	5	5	2	2	3	2		22	
	Males																
	5	3	1												9		10
	{ Female																
Dentition with Fever																	
	Males																
									1		1		1		3		6
	{ Females																
Hæmoptoe; vomiting, and Purgings of Blood									1	1	2					3	
	Males																
													1	1			6
	{ Female																
Uterine Hæmorrhage									1	3		1	1				
	Males																
									1	1	1	2			3		5
	{ Females																
Cholera Morbus																	
	Males																
	3				1	3	2	1	1	2	3	3	4	2	19		34
	{ Females																
Dysentery								3	1	1	5	2	2			15	
	Males																
	23	40	32	29	22	91	40	28	78	64	63	41	30	5	293	293	586
	Carried over																



Cl. III. <i>Chachexies.</i>		1	2	3	4	5	10	15	20	30	40	50	60	70	80	M.	P.	T.	10.
Anasarca; and Ascites	{ Males Females			1						1	1	2	4	2		9		5	14
Hydrops Pectoris	Female					1												1	1
Hydrocephalus internus	{ Males Females	1		1			1									2		2	4
Scrophula	{ Males Female						3			1						4		1	5
Herpes	Females	1										1						2	2
Lues Venerea	{ Males Females			1					1	2		2				2		5	7
Jaundice	{ Male Females												1			1		3	4
Worms	{ Males Females			1	1		1									4		4	8
Cl. IV. <i>Local Diseases.</i>																			
Incontinence of Urine	Males												1	1		2			2
Suppression of the Menfes									3									3	3
Scirrhus of the Gullet--of the Liver. Females	Females											1	1					2	2
Cancer of the Eye--the Uterus --and Bladder	{ Females Male									1			2					3	3
Opacity of the Eyes	Male										1					1		1	1
Total		26	46	37	30	24	10	44	35	97	91	87	68	43	14	355	388	743	743

## TABLE IV.

Containing a particular Account of the Diseases, Sex, &c. of those who died under the Author's care.

Months	DISEASES.	No	Sex	Age	Day of Disease admitted	Day of Disease Died
	<i>Febrile Diseases.</i>					
Nov.	Continued Fever	1	Wife	55	3	17
Nov.	Continued Fever	1	Batchelor	35	5	17
May	Continued Fever	1	Husband	53	6	12
Sept.	Continued Fever	1	Widow	55	5	8
Jan.	Continued Fever	1	Wife	22	10	11
March	Continued Fever	1	Girl	9	6	18
Feb.	Small-pox	1	Boy	9	14	30
Feb.	Small-pox	1	Girl	4	9	16
August	Small-pox	1	Boy	3	15	18
Sept.	Small-pox	1	Boy	1	2	7
Dec.	Small-pox	1	Boy	2½	4	7
Dec.	Small-pox	1	Boy	2	14	14
March	Measles	1	Girl	2	10	11
June	Measles	1	Boy	3	9	13
Sept.	Scarlet Fever & } Ulcerated } Sore-Throat }	1	Boy	4	3	13
Oct.	Scarlet Fever, &c.	1	Boy	6	3	5
Sept.	Scarlet Fever, &c.	1	Girl	7	3	6
Oct.	Scarlet Fever, &c.	1	Girl	8	6	7
Oct.	Scarlet Fever, &c.	1	Boy	2	7	9
Nov.	Scarlet Fever, &c.	1	Girl	2	14	16
March	Scarlet Fever, &c.	1	Boy	3	8	9
Oct.	Scarlet Fever, &c.	1	Girl	15m.	9	19
June	Scarlet Fever, &c.	1	Boy	2 y.	5	15
Sept.	Scarlet Fever, &c.	1	Boy	2	10	19
Sept.	Scarlet Fever, &c.	1	Girl	8	22	39
August	Scarlet Fever, &c.	1	Boy	2½	14	19
August	Scarlet Fever, &c.	1	Girl	2	22	22
July	Pleurisy	1	Husband	64	4	6
August	Pleurisy	1	Husband	45	6	10
Oct.	Pleurisy	1	Husband	50	8	17
March	Pleurisy	1	Husband	60	14	18
Nov.	Pleurisy	1	Wife	32	8	11
Jan.	Hooping-cough	1	Boy	3½	14	18
Oct.	Dysentery	1	Wife	63	10	44
Sept.	Dysentery	1	Husband	48	12	18
	Carried over	35				

Months	DISEASES.	No.	Sex	Age	Day of Disease admitted	Day of Disease Died
	Brought over <i>Febrile Diseases.</i>	35				
Oct.	Vomiting and Purging of Blood	1	Husband	60	14	18
June	Teething with Fever and Diarrhoea					
	<i>Nervous Diseases</i>					
Oct.	Asthma	1	Widower	70		
Sept.	Apoplexy	1	Husband	59		
Oct.	Convulsions	1	Boy	6m.	4	10
Nov.	Colic f. Rupture	1	Wife	40	3	8
July	Spasmodic Dis- ease	1	Wife	26	21	30
	<i>Cachexies.</i>					
June	Afcites	1	Maiden	48		
Oct.	Hydrops Pectoris	1	Maiden	13		
April	Hydrocephalus internus	1	Girl	9		
March	Hydrocephalus internus					
Feb.	Hydrocephalus internus	1	Boy	2½		
	<i>Local Disease.</i>					
May	Cancer of the Bladder	1	Maiden	58		
	Total	48				

DEATHS in each SEASON.

October, November, December	17
January, February, March	10
April, May, June	7
July, August, September	14
	—
	48

Of whom were,	Males under ten years	17
	Females under ten years	11
	Batchelors	1
	Husbands	8
	Widowers	1
	Maidens	3
	Wives	6
	Widows	1
	—	—
	Total	48



In every large and populous town, diseases frequently prevail in one district, when others are, in a great measure, exempted from sickness. In order therefore to give a more extensive view, I have added the following table, containing the deaths of the patients who died under the care of all the Physicians of the Dispensary; and also an account of the BURIALS in the different seasons, as registered in the four parish churches of Newcastle\*.

TABLE V.

DEATHS at the Dispensary in each season from 1777 to 1779.			BURIALS, as registered in the parish churches from 1777 to 1779.		
October	10	} 30	October	61	} 231
November	9		November	87	
December	11		December	83	
January	10	} 33	January	86	} 230
February	11		February	63	
March	12		March	81	
April	13	} 30	April	84	} 264
May	8		May	97	
June	9		June	83	
July	8	} 31	July	75	} 250
August	11		August	67	
September	12		September	108	
Total 124			Total 975		

This

\* The borough of Gateshead being out of the limits of the Newcastle Dispensary, and no register being kept at the Ballast Hills, where 300 are supposed to be buried annually, the burials at those places are not included in the table.

This table, I am sensible, does not comprehend a sufficient term of years, to deduce any certain conclusions, with regard to the seasons most productive of sickness: But it would have been an uninteresting and fruitless task, to have examined the registers of *Burials* for a longer period, as they neither specify the ages or diseases of those who die.

In a large and populous town like NEWCASTLE, it is astonishing, that so material a defect in the registers should have been so long overlooked: But as a plan for establishing more accurate and comprehensive *Bills of Mortality*, has been submitted to the consideration of some persons of influence, it is to be hoped, that it will be carried into execution.

When the former parts of the work were sent to the press, it was my intention to have added a third, containing select histories of some of the diseases mentioned in the tables: but as I have already exceeded my intended limits, they must be referred to some other opportunity.

F O R M U L Æ  
 M E D I C A M E N T O R U M.

DECOCTUM PERUVIANUM.

**R.** Pulveris corticis Peruviani uncias duas,  
 Aquæ libras duas,  
 Gummi Arabici drachmas tres.

COQUE aquam cum cortice Peruviano,  
 leni igne, ad libram; deinde adjice gummi,  
 et decoctum turbidum cola.

GARGARISMA COMMUNE.

**R.** Infusi Salviæ uncias sex,  
 Aceti unciam,  
 Mellis drachmas sex. MISCE.

INFUSUM PERUVIANUM.

**R.** Pulveris corticis Peruviani unciam,  
 Specierum aromaticarum drachmam di-  
 midiam,  
 Aquæ bullientis uncias duodecim.

MACERA,

MACERA, leni calore, per sex horas,  
et cola\*.

### JULEPUM ACIDUM.

R. Aquæ puræ uncias octo,  
Spiritus Vitrioli dulcis fefquidrachmam  
tenuis guttas xxx. MISCE.

### JULEPUM EMETICUM.

R. Aquæ ferventis uncias octo,  
Tartari emetici grana quatuor. MISCE.

### JULEPUM SALINUM †.

R. Salis abfinthii drachmas duas,  
Aquæ tepidæ libram.

D d 2

DES-

\* In order to render the medicine stronger, in the succeeding preparations, the water is boiled with the residuum of the former infusion, and strained, before it be added to the fresh bark. This is the usual formula of the Dispensary; but in private practice, it is prepared as directed p. 252.

† The saline julep is much more effectual, especially against nausea and vomiting, when given in an effervescent state. At the Dispensary, therefore, I usually prescribe an alkaline mixture, with the above proportion of the salt; and order the patient to take four table spoonfuls, with a tea spoonful of Spiritus Vitrioli Tenuis (see the formula) during the ebullition.

DESPUMA; deinde paulatim instilla  
Spiritus Vitrioli fortis q. s. ad saturationem,  
et adde

Aquæ Menthæ piperitidis,  
Sacchari albi, utriusque unciam. MISCE.

### JULEPUM SCILLITICUM.

R. Aquæ puræ,  
Menthæ piperitidis, utriusque un-  
cias duas,  
Syrupi scillitici unciam. MISCE.

### MISTURA OLEOSA.

R. Olei Olivarum fescunciam,  
Aquæ fluvialis uncias octo,  
Syrupi Simplicis unciam dimidiam,  
Lixivii Tartari guttas triginta.  
AGITENTUR in phiala donec albescant.

### MISTURA PERUVIANA.

R. Pulveris corticis Peruviani unciam,  
Aquæ Menthæ piperitidis uncias duas,  
Aquæ puræ uncias sex.  
MISCE; et adde pro re nata  
Extracti Glycyrrhizæ drachmas duas.

MISTURA

## MISTURA SPERMATIS CETI.

R. Spermatis Ceti drachmas duas,  
 Mucilaginis Gummi Arabici unciam,  
 Aquæ puræ uncias Octo,  
 Sacchari albi drachmam.

TERANTUR sperma ceti et saccharum  
 cum mucilagine; hisque bene subactis paul-  
 atim affundatur Aqua.

## PULVIS ANTIMONIALIS.

R. Magnesiæ albæ drachmas undecim,  
 Tartari emetici drachmam,  
 TERANTUR simul in Pulverem tenuem.

## PULVIS DOVERI.

R. Tartari Vitriolati uncias quatuor cum  
 semisse  
 Pulveris Ipecacuanhæ,  
 Opii, utriusque semunciam.

MISCEANTUR et terantur simul accu-  
 rate, donec fiat pulvis subtillissimus.

## PULVIS ECCOPROTICUS.

R. Salis polychresti,  
 Pulveris Rhei, utriusque uncias qua-  
 tuor. MISCE. SPI-

## SPIRITUS VITRIOLI TENUIS.

R. Spiritus Vitrioli Fortis pondere uncias  
 duas,  
 Aquæ pondere uncias quatuordecim.  
 MISCE.

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## T H E E N D.

E R R A T A.

Page. Line.

- 9 26 for *exardascentia* read *exardefcentia*.  
 15 16 for *be* read *been*.  
 117 26 for *Sp. Vit. Tin.* read *Sp. Vit. Ten.*  
 251 6 for *tumified* read *tumesied*.  
*Ib.* 19 for *mixillary* read *maxillary*.  
 254 for *Curr*, in the title, read *Cure*.

In various places, for *furr* read *fur*.

In the table, page 376, opposite to *External Inflammation*, for 2 in June read 1; for 11 read 10; and correct the total, in the corresponding columns, at the bottom of the page.



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