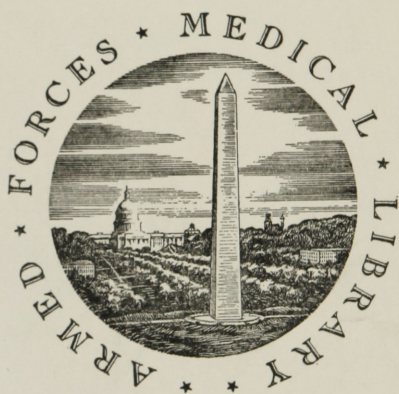




UNITED STATES OF AMERICA



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WASHINGTON, D.C.









Comstock (Jos.)

REMARKS  
ON  
FEBRILE DISEASES,  
WITH  
A DEFINITION OF  
FEVER;

IN A DISCOURSE READ BEFORE THE

MEDICAL SOCIETY

OF

RHODE-ISLAND,

AT

THEIR THIRD ANNIVERSARY,

SEPTEMBER, A. D. 1814.

—\*—  
BY JOSEPH COMSTOCK,

ONE OF THE CENSORS OF SAID SOCIETY.  
—\*—

PROVIDENCE:

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1814.



PROVIDENCE, September 6, 1814.

SIR,

THE Medical Society of Rhode-Island present you their thanks, for the ingenious and appropriate Discourse this day read before them—and request a copy for the press.

JOHN M. EDDY,  
JOHN W. RICHMOND, } Committee.

Doctor Joseph Comstock.

Doctors EDDY and RICHMOND—  
GENTLEMEN,

IN furnishing you with a copy of my discourse for the press, agreeably to your request, in behalf of the Society, I am not unaware of its many imperfections. In my strictures upon the treatment of the fever which has prevailed of late years in New-England and elsewhere, I know that I have touched upon a contested point. Suffice it to say, that I have seen and experienced for myself.

I entreat that it may not be considered that I would have either *spirituous* or *vinous* liquors used as preventatives of this or any other epidemick. I would wish to place these articles with *opium* and *mercury*, wholly in the hands of the physician. They are useful remedies in some diseases, when used with judgment, but I fear uniformly pernicious to health as articles of daily consumption.

Accept for yourselves and for the Society, the assurances of my highest respect,

JOSEPH COMSTOCK.



## A TREATISE

ON

## FEBRILE DISEASES.

GENTLEMEN,

**I**T is with much diffidence that I rise to address you, after the splendid display of talents which have marked each preceding annual meeting of our young society.

The disappointment experienced by the society, in the ill health of Dr. WILLIAM C. BOWEN, will I fear be but illy compensated by my production; especially, as the time, since receiving notice of that event, has been very short.

The profession of physick is one, in the practice of which, collateral obstacles arise, unmatched by that of any other:—It is one in which certainty is not always to be obtained, but like many other sciences, much is left to probability and conjecture: hence if the physician be furnished with the “lady’s hand, the eagle’s eye and the lion’s heart,” he must have one gratification of still greater importance; I mean a sound discriminating judgment.

Even the wise will judge of him and his doings, and yet not judge wisely, because unacquainted with the intricacies peculiar to his art.

Fools will advance opinions the most palpably absurd, and yet the absurdity will not be manifest to the world, because the whole subject is obscure.

“Each shallow pate who cannot read your name  
Will read your practice, and be proud to blame.”

If the case be clear in his own view, and if he prescribes “like an angel,” still his art is one in which “ladies interpose and



slaves debate.”—hence his plans may be interrupted, partially executed, or frustrated entirely.

Hence, it is, that physicians only are competent to appreciate the difficulties, the perplexities, the heart-rending scenes incident to the profession;—and hence a motive; a strong unceasing motive, for sympathy, friendship and affection between its members.

For how important their duties are, the two short words *life* and *health* will express; and “even life is not to live, but to be well.”

In attempting to offer something worthy of your attention, my subject, after some few preliminary remarks, will be that of febrile diseases, more particularly as they have appeared in New-England, with an attempt to define *fever*.

I. A reliance upon European authors for a knowledge of the varying epidemics of the air we breathe and soil we tread:—the spontaneous and peculiar production of our own climate, and which those who undertake to instruct us about, have not been nearer to than a distance of three thousand miles; is I believe pretty generally deemed as unwise, as it is manifestly unsafe.

Publicity, then, of such observations as have been derived from actual and diligent experience, becomes the duty—the imperious duty of physicians in the *new world*.

But it must be kept in mind that the records of medicine furnish but too many instances of “false experience,” as well as false reasoning; and, therefore, due diligence ought to be used, lest the labours of any should prove worse than useless. It has been pertinently observed, that the new light of which some men boast, not unfrequently proves a new edition of old darkness.

Observations upon the phenomena of diseases, and the effect of remedies, must be strict; must be accurate; must be pursued with a diligent, patient and unremitted attention, in order to be useful. The province of the physician lies here, which he must not quit: he must not at his peril be found sleeping at his post; he must not simply see his patient, he must, also, see the *disease* which afflicts him; he must not only prescribe a remedy, he must notice its effects.

Our country presents a most unbounded field for medical research; new modifications of diseases arise, new remedies, our fields, floods and mines, present a variety, unparalleled in other countries.

Much, very much has been done, is doing and it is hoped will continue to be done, on the score of improvement in our beloved republic. What scientific son of New-England does not feel a thrill of delight, at the recollection of what has been accomplished in his own section of the union; and that NEW-YORK and PHILADELPHIA are cities in a government to which he belongs?

In order to improve the medical art here, let every physician note down every thing singular which happens in his practice.

Let no physician plead the smallness of his opportunities, and the scarcity of occurrences worth recording; it is hardly possible to conceive of a journal kept by a practitioner of the medical profession, entirely void of interest. Some of the most singular and unusual phenomena have appeared in corners of the world, where we should least have expected any thing worthy of notice.

Let a single interesting fact be recorded by every physician, and how important, how delectable would be the aggregate!

Few men have lived, I suspect, who ought to have written a book, and few men have lived who ought not to have written a sentence.

Those who undertake the important task of instructing others, should not be satisfied with producing conviction in those only who are their pupils, countrymen and contemporaries; over whom they may be supposed to have some influence independent of the impressions made by their peculiar doctrines; they ought in fact to advance such things as will bear the test of experience in countries remote, and ages to come.

The works of some of the most popular writers during their lives, have fallen into total neglect after their decease. Their writings resembled the well told stories of an every day companion; they pleased, they amused, they had the applause of their readers, and their authors tasted of praise and commendation whilst they lived; but they treated of their subjects, *not* according to correct and scientific principles, but according to popular and received notions; they were in fact beautiful, rather than true, or perhaps they had failed of pleasing so much; for people choose amusement rather than instruction, and lively fictions are apt to please even the sober part of mankind more than dull realities.

But truths are eternal, and future generations will come in for a share in the labours of the author who delivers them; and with posterity, a part, at least, of his reward must rest; for truisms being seldom sought for, the author of them will be seldom applauded.

Physicians should, like Pompey the Great, choose the glory which is to last forever to that of a single day; by the contrary choice, immense injury has been done to the science of healing, as well as to all other branches of science. Candidates for ephemeral fame, by deductions from incorrect experiments, by false reasoning and premature inferences, have been the Goths and Vandals of the sciences.

Still it must be considered that the seal of imperfection is stamped on all things human:—that the leaven, which leaveneth the things of this world is not the leaven of perfection, but that every thing sublunary has its portion of alloy; hence remedies are *not* to be discarded because slight inconveniencies are attached to their exhibition, as some would teach us; the nature of things does not permit it to be otherwise.



II. Those causes which produce epidemick diseases appear to produce changes in the bodies and minds of those apparently in health; religious awakenings, increased number of marriages, a tendency in the barren to become fruitful, and of the fruitful to become prolifick, and sometimes aggravated and multiplied crimes, may be mentioned under this head.

It is curious that ancient prejudices and popular opinion have made the signs and omens of war, famine and pestilence all the same; such as earthquakes, comets, meteors, &c.

Now we would by no means allow these phenomena to be unconnected with the events that are to follow, and thus consider them merely as signals of such calamities, as is commonly done.

But if these agents have power sufficient to alter the atmosphere and render it pestilential to some, a slighter effect, or different modification of the same causes, may possibly so change the state of others, as to produce the effects described: And it is pretty well ascertained, that an alteration in the weather and seasons succeed, very frequently, such events, which sometimes shorten or ruin the fruits of the earth and cause famine; and thus would the ancient opinion appear not to be entirely void of foundation.

A new and curious source of medical improvement is thus opened, having for its object the sanity of those apparently in health, and the ascertainment whether those entrusted with the reins of government partake of the inflammatory, or irritable nature of the prevailing disease; so as to render it to be feared, that they will, without due cause, or consideration, involve their country in war or other calamities.

As a further means of improving the practical part of medical science, attending to periodical publications would seem to stand prominent; they are to medical men, what newspapers are to politicians, and prices current to the merchants.

If a violent disease attacks the inhabitants of one district of country, or a town, or village, the intelligence ought immediately to be circulated; and it will often be found that diseases for a great distance around partake of its nature. For, epidemick diseases are like an invading army, the soldiers of which may be known by the livery worn at head-quarters, even if they be sent on a distant expedition.

III. Diseases which are epidemick in one part of a country, will sometimes be sporadick in other parts, and sometimes appear to be analysed; that is, in fevers attended with eruptions, yellowness, shooting pains, headach, vomiting, abscesses and paralytick affections; each of these symptoms will appear singly, unconnected with fever, or its remaining symptoms; yet are these analysed affections so far connected with the distant epidemick, that in order for them to be successfully treated, reference must be had to the primary disease.



## OF FEVERS.

FEBRILE diseases, always important to be well understood, assume a higher degree of interest in this, than almost any other country, where within the last twenty years we have been visited with two epidemics of a most extraordinary kind, and directly the opposite of each other. I mean *yellow fever* and *spotted fever* with its kindred diseases; *typhus fever*, *pneumonia-typhoides*; and by some called *cold plague* and *malignant pleurisy*.

The cause of fevers is commonly obscure, but *yellow fever*, so far as we can investigate, appears to depend upon a combination of agents, any one of them singly, not being usually sufficient for its production.

These are putrefaction of vegetable, or animal substances, high heat, and high, or, irregular living. Hence, since the cool summers which we have had for several years past (indeed ever since the year 1805) we hear nothing of yellow fever.

The causes which we have supposed to produce it, being such as the inhabitants of commercial towns and mariners are most exposed to the influence of, this disease has been mostly confined to them.

It is curious, that although there has been a great deal written upon this disease, yet that there is hardly any one point on which the writers do not disagree. The nearest point of agreement appears to be, that, if a salivation can be produced by mercury, that the sick pretty uniformly recover: In confirmation of which, the medical periodical publications of the United States are appealed to.

Directly the reverse of yellow fever, is spotted fever and its associate diseases; which invade the inland part of the country, and as it seems do not visit sea-ports, nor even country towns on the sea-coast, with that malignity and mortality which have marked their progress in the interior.

That a disease should assail the habitations of a scattered country population which extinguishes life in a few hours; nay, which at its first onset appears to strike its victim with death, is a most surprising fact.

The annals of New-England furnish nothing in former times as its parallel, and nothing approaching it, except some cases of malignant sore throat, of which spotted fever may be possibly a disguised form; or the former may have been only a milder grade of the latter.

The CAUSES of its appearance, are not sufficiently obvious for us to speak with certainty about: we can say, however, that the seasons have differed very much from those in which yellow fever was prevalent: The summers instead of being as hot as

those of equatorial countries have been very cool; we have had early frosts, severe storms of wind, rain and snow in winter, with more intense cold; and sudden changes of temperature at all times of the year.

Perhaps, likewise, that an inflammatory disposition in the atmosphere of several years continuance, is always succeeded by an opposite quality of nearly equal duration.

Further, it seems probable that a very hot summer renders all the fruits of the earth more stimulant, and thus aids the stimulus of heat and putrefaction in producing yellow fever.

And on the contrary, that the vegetables and bread-stuffs which grow in cool summers, even if they are not injured by frosts, are less stimulant and nourishing than those of warm summers; and thus in the succeeding winter and spring, in combination with the debilitating effects of cold damp weather, and sudden transitions; aid in the production of that extreme debility, which lays the foundation of spotted fever.

*Yellow and spotted fevers*, which differ so materially in the seasons of the year in which they are most mortal;—in their diathesis, and in many other particulars, agree in one melancholy point—the sudden extinction of human life.

Spotted fever, however, is a hydra in the list of diseases, and like Proteus assumes a variety of shapes; there being scarcely a disease, or symptom of disease upon record to which it has not borne some analogy.

It has been, therefore, correctly called an *ataxick fever*,\* which is a name much more appropriate than that by which it is commonly denominated.

In some instances all the four classes of disease, seem combined to form this one: there being *fever*, *nervous affections* of the most violent and frightful kind;—a *cachectick habit*, shewing itself by scorbutick spots, or dropsical swellings; and finally some *local* affection, such as caries, ulcer or tumour.

It is not surprising, therefore, that it has been mistaken for various other diseases, and that some have died, and others recovered, under the care of physicians, who knew not their complaints.

Of an instance, in which a female patient was supposed, by her young physician, to have died with hysteria, I was informed by Dr. NORTH of Connecticut. Dr. STRONG, also, in his account of that disease at Hartford, says that, “several young ladies were supposed by their friends to have nothing more than a common turn of hysteria, until they were found to be sinking into death.\*

But, although there is fever in some cases, yet there are others,

\* By Drs. WELSH, JACKSON and WARREN, Committee of the Massachusetts Medical Society—vide Report.

\* See his inaugural dissertation, page 11.



in which there is no fever according to the common acceptation of that term, that is, there is no *heat*.

On the contrary, the surface of the body is colder, during the whole progress of the disease than it is in health; and what is very singular, the face will sometimes be cool, when at the same time the cheeks are very red.

This, and many other circumstances, not only in this disease, but in some others, serve to establish the truth of an opinion advanced by Dr. *Fothergill*, in his account of the putrid sore throat; viz. that redness and swelling are not always caused by inflammation, but that they may be owing to distention.

This is a pathological distinction, as I conceive, of the utmost importance; for it happens that, although the appearances are so nearly alike, yet that the nature of the cases are directly opposite.

Inflammation, being accompanied with a tense fibre and rich blood, and distention on the contrary with a weak relaxed state of the solids, yielding to the action of the heart, and a want of due density in the blood!

And it happens that the appearances detected by dissection, lead to no clearer distinction between the two cases than those exhibited externally: congestion of the blood vessels, being common to both inflammation and distention, has led some whose skill and knowledge in anatomy is not to be doubted, into an error in this respect.

Hence, it seems that experience *must* establish the treatment of epidemick diseases, and that the most certain signs will sometimes fail of indicating the true state of the system. There is for instance, a pulse *full* and *throbbing*, which seems to require the lancet, and yet the loss of a small quantity of blood is succeeded by alarming debility: And there is a pulse, *weak* and *low*, which rises and becomes stronger by that evacuation.

There are circumstances which arise in the living human body when labouring under fevers, which no principle in any of the arts can be brought to explain, and which indeed seem to contradict the plainest of all laws—those of gravitation.

A violent throbbing and fullness of the carotid arteries, when the pulse at the wrist remains void of excitement, flat and feeble, is an instance, which the celebrated *Huxham* notices in his chapter on putrid malignant petechial fevers; and which has been frequently noticed in spotted fever.

Here, contrary to the laws of gravitation, a greater quantity of blood takes the course of the ascending branches of the aorta, than of the descending.

We see that even the science of anatomy, which is the science of demonstration, fails to render it clear, which morbid appearance in the dead body was the cause of the disease; and which



was its consequence:—And to discover to us with certainty, which was the cause of death, and which the effect of the dying state, or the spontaneous changes immediately following dissolution.

It has even failed to discover the source of blood when copiously evacuated from the intestines by stool; and when the whole intestinal tract was laid open to the gullet for that purpose. Of which a recent case is published by Dr. *James Jackson*, of Boston,\* and which I can readily believe, even if the author was less highly respectable, from having seen a case somewhat similar in 1803.

From all this what inference are we to draw? Certainly this important one, that the living human body is the source from which the physician *must* derive his conclusions:—That he must not trust to comparative anatomy, to dissections, to chemical decompositions, nor to galvanism; so far as to apply principles to the nature and cure of diseases derived from these sources, not sanctioned by experience.

Let it not be supposed for a moment, however, that it is meant to insinuate any thing against the great importance of these sciences; it is merely meant to assert that clinical experience (of his own or others) must be the physician's guide; the living human body his province.

To account for all the symptoms and peculiarities of the spotted fever would be perhaps quite impossible, in the present state of medical science. On this point, however, I will make one remark, which is, that when spots do *not* appear, the probability seems to be, that the matter which forms them is arrested by or falls on some of the important viscera, and, therefore, the disease is equally violent as when they *do* appear.

The analogy which is evident between this eccentric disease, and the retrocession of the measles and other eruptive diseases, is in confirmation of this hypothesis.

As to the question which has been agitated, whether the spotted fever is a new disease or not, I have to remark, that the fever described by *Sydenham* under the title of a NEW FEVER, and which by his account began in February 1685, after two very severe winters; and which he tells us “spread itself all over *England*, both last year and this, and had been much more epidemick in other places than in London:” which was also attended with “*Petechiæ*” or eruptions—with pain in the limbs and throat, and finally resembled pneumonick diseases insomuch that he tells us that he first mistook it for a “bastard peripneumony.”—In all these particulars of the seasons preceding, of the time of year in which it first appeared; and of the symptoms after it *did* appear,

\* See *New-England Journal*, vol. 3. page 157.

there is such a similarity, that I think we are not authorized to pronounce the *ataxick* fever of New-England, a new disease.

Relative to its appearance in this country, being for the first time at Medfield, in Massachusetts, in the year 1806, as is commonly supposed, I have to observe; that there was published in the *Connecticut Gazette*, of May 20th, 1799, printed at *New-London*, an account of a petechial fever which had been prevalent in *Westerly* and *Stonington*, the winter and spring of that year, which whoever reads cannot fail, I think, to consider the same disease which has since been denominated *spotted fever*.

The pernicious effects of blood-letting, and the marked utility of stimulants are in that account particularly noticed, as is the weather of that winter, which was uncommonly severe.\*

**PNEUMONIA TYPHOIDES**, or typhus fever complicated with some degree of inflammation of the contents of the thorax, is no new combination; and is noticed here as being one of the kindred branches of spotted fever.

In the newspaper account referred to above, the symptoms of this complaint are particularly noticed as resembling *pleurisy* and *peripneumony*, and yet not bearing the loss of blood: it is indeed stated that in those cases wherein patients had been treated by repeated blood-letting, that they had died without exception.

It is clearly my opinion that distention, or congestion gives rise to symptoms so nearly resembling those dependant upon inflammation, as to be frequently mistaken for the latter.

But upon the supposition of the existence of either erysipelatous or phlegmonick inflammation, (as is the conclusion of a committee of high standing in a neighbouring state,) I beg leave to introduce the opinion of Dr. THOMAS, the celebrated author of the *Modern Practice of Physick*.

He says, (page 39 of the New-York edition) that "In temperate and cold latitudes, and in the winter season of the year, it is by no means an uncommon occurrence to meet with typhus, complicated with more or less of topical inflammation of the thoracick viscera. In such cases I have known (says he) venesection to have been employed; but even in these, it has appeared to me to be detrimental, and in two instances which lately fell under my observation, seemed indeed to have destroyed the patients."

What higher authority can be adduced, either in Europe or America, in favour of the conclusions of a majority of our own physicians, sanctioned by abundant experience, that, although spotted fever and its kindred diseases, put on symptoms slightly inflammatory, yet that they will not bear blood-letting!

\* This account, which is quoted in the 3d vol. of the 3d Hexade of the *Medical Repository*, pages 395-299, is probably the first notice of the spotted fever upon record in America.



That some have lived and recovered who have been treated in this way, is no certain proof that it is the mode of treatment best adapted; or, on the contrary, that it will not prove inevitably destructive in most other cases, which experience has sadly taught, even when that evacuation was small.\*

To be sure some diseases vary with the seasons and are not of the same nature at all times; but the one of which we are speaking, as also cynanche maligna, consumption, asthma, and perhaps some others, appear to be like evergreen trees, which retain their colour in the cold of winter, as well as in the heat of summer.

It would seem to be worth a moment's attention to account for the contradictory and perplexing reports of success, in the same disease, from different quarters, under modes of treatment directly opposite.

If for instance we suppose a disease to be nine degrees distant from death, a preposterous mode of treating it, which brings the patient a few degrees nearer, as within one or two degrees of a fatal termination; yet not quite so near as to overcome the salutary tendency of nature to a successful issue;—and allowing the patient to recover with much difficulty: the great credit of a mode of treatment which brought him six or seven degrees nearer the cold embrace of the king of terrors, than the disease would have done if not subjected to this mode, is immediately established! And this I think is a true solution of the problem: and from it this inference may be drawn, viz. “that although some cases of the same disease will not prove fatal by an absurd mode of management; yet that other cases, instead of surviving the six or seven degrees of bad treatment as we have supposed, will prove fatal by one single misstep; or even if the most decisive remedies, of the most appropriate kinds, are not used at the first onset.

Spotted fever, we have supposed not to be a new disease, yet it has appeared in many instances so dissimilar to other fevers, particularly in attacking without chills, and running its course without heat or quickened pulse, that in order for it to be embraced with fevers, the class of diseases called *Pyrexia*, would seem to require a new definition.

For both increase of heat and a quickened pulse make a part of the definitions of the most celebrated authors who have given the world a definition of fever. If we examine the writings of *Sauvages*, *Linnaeus*, *Boerhaave*, *Vogel*, *Sagar*, *Hoffman*, *Huxham*, *Willis*, and *Cullen*, we shall find that they all agree in this point.

\* Dr. Woodward, in his Remarks on Spotted Fever, says, “I likewise saw several who were brought into a low comatose state by a small bleeding, which cases entirely baffled the power of medicine and proved fatal.” *Med. Repos. Hexade 3. vol. I. page 44.*

Dr. Strong, speaking of blood letting, says “some carried it so far that several patients died under the operation.” See his *Inaugural Dissertation*, page 28.



*Sydenham*, *Darwin* and *Rush*, do not enter into a formal definition of fever; although Dr. *Darwin* gives us to understand, at the beginning of his *Sympathetick Theory of Fever*, that it may consist in a diminution of motion, as well as in its increase.

But, although we may discover fever by the pulse being rendered slower, as well as quicker; yet there are cases in which the pulse is not altered at all, but continues its healthy number of pulsations in a minute.

*Sydenham* appears to have noticed this kind of pulse; as in the chapter in which he treats of his *new fever*, he tells us that the "pulse was not much unlike that of a healthy person." Dr. *North*, also, recognises it in his treatise on the spotted fever of Connecticut.

It seems then that the compass of the physician, like that of the mariner, is not without its variations; and that the arterial system does not always point out the existence of fever.

Would it not lengthen this part of my subject *too* much, I could advance cases from my own practice, wherein there were the usual symptoms of fever about the tongue, in the excretions, in loss of appetite, with stupor and slight delirium; but in which there was no quickening of the pulse.

*Sennertus* appears to have been aware of such a state of fever: and Dr. *Thomas* says that "The poison which produces the plague, is often most fatal when it is accompanied with the least degree of fever."

Fever then is not altogether a disease in the arterial system, and the attempt to define it by making it "An extensive morbid affection in the blood vessels, or else in their contents;" as has lately been done by a writer of very handsome talents,\* will certainly not apply to all fevers; because there are very many cases of fever, in which the affections of both the blood vessels, and of their contents, are extremely limited.

It was long ago observed by *Helmont*, that the archer, who directs his arrows to the head, has his seat in the alimentary canal; and, although this remark has with great propriety been usually applied to mental diseases, yet it may have an extensive application to febrile complaints.

Stupor, coma, low delirium, insensibility to external stimuli, insomuch that a patient of my own had his leg burnt to a blister by sitting too near a fire in the first cold fit of his fever; all receive relief from the evacuation of a pitch-like matter from the lower bowels.

Here then are cases wherein the lack of vigour in the lacteals, or a defect in the peristaltick motion, leaves a part of the indigested, or fœcal materials adhering to the alimentary canal, and

\* See New-England Journal, vol I. page 240.

acting as extraneous substances; and by sympathy between that canal and the brain, giving rise to the more alarming symptoms of fever, and yet not in all cases throwing the arterial system into convulsions.

There are probably other cases in which a sphacelated spot on some of the viscera, or as dissections have shewn, a sphacelation of a whole viscus, owing to the death, or defect of one or more branches of the arterial, venous or lymphatick systems, have constituted primarily the whole febrile affection; and thus was the disease local in the beginning.

Agreeably to a remark in a celebrated modern work on surgery, that "There are cases which justify the conclusion, that a small part of the body may be affected with sudden death, just in the same manner as the whole machine.\*

A disease of this kind appears to have been epidemick in France, in the reign of Hugh Capet, and of which it is recorded that it lasted two ages. In an ancient history of France, I find of it the following short account, which I will take the liberty to introduce here, for its singularity, and the analogy it bears to the subject under consideration.

It is stated that "It seized people on a sudden, burnt the entrails or some other part of the body, which fell off piecemeal, and happy were those that escaped with the loss of a leg or arm." It is added that "This calamity in *Aquitain*, *Perigord*, and *Limosin*, Anno 994, swept away above 40,000 persons in a few days time."

Again, there are other febrile diseases wherein we evidently perceive an over action of the other circulating systems, when the arterial system is free, or only drawn into action sympathetically; which makes it clear that these small vessels have a principal share in the production of *some* fevers.

SUDOR ANGLICANUS, or the English sweating sickness, appears to have been an instance of this, which destroyed great numbers of people in the reign of Henry VII. in 1485.

Here a favourable symptom of most fevers constituted the chief disease;—The excitement of the capillary vessels—the fever; and the consequent evacuation—the debility and danger.

In answer to the question which has been agitated, *What is common to spotted fever as well as all others?* I should say diurnal exacerbations and remissions.

Fever may be known by a diminution of the healthy temperature, and an increase of that diminution, even if the heat is not higher, nor the pulse quicker than in health. It may, also, sometimes be known, by the secreted and excreted materials, differing from those of health and other diseases.

\* See Cooper's Surgical Dictionary, by Dorsey, Art. Mortification.



That the absorbent system should have a principal share in the production of some fevers, cannot be thought strange when we consider the extreme activity of these little vessels; which not only absorb fluid matters, but tumours; not only flesh, but bone; and not only common bone, but teeth; as every dentist has proof of, who extracts the teeth of children, the roots of which are often almost wholly absorbed.

Pain in the back and joints, lameness, immobility and extreme distress upon the least motion, we may suppose to arise from the dryness of the articulations, owing to excessive absorption of the synovial humours. The disease once prevalent in *England*, called *break-bone fever*, is hence accounted for, as are some symptoms of spotted, yellow and other fevers.

Too great an absorption from the tongue, occasions a dry, scaly, cracked, or shrunk appearance of that organ; and from these states of it may fever be known, if not otherwise.

That the appearances of the tongue which I have mentioned, are owing to increased absorption, and not always to increased heat, as is commonly supposed, I had proof in the case of a febrile patient in the winter of 1814, whose skin was cooler for twenty days than the healthy temperature; and yet whose tongue was dry.

If too much action takes place in the lacteal vessels, or intestinal absorbents, a febrile state of the first passages arises; hence constipation, colick, and yellow skin; the latter from the absorption and transmission of bile into the blood.

The patent orifices of the lacteal vessels, which in a state of health absorb the chyle, and reject the more acrimonious humours, lose their discriminating power in inebriates; and perhaps in some diseases; and take up the bile, which injures or destroys the texture of the blood: hence jaundice and dropsy.

Opposed to absorption is exhalation, or serous effusion, which by its excess may give rise to various diseases.

In illustration of which we may mention one state of fever, not before fully noticed. It is that wherein one branch of the arterial system is excited, producing local inflammation: Or that in which too much blood takes the course of one arterial branch, filling it to extravasation, while the other branches are proportionally deprived of their share. Analagous to inundation in one part of the world, and drought at the same period in another part.

Of this congestion in the viscera, sometimes even to extravasation, dissections of the bodies of those who have died with spotted fever afford several instances.\*

\* Drs. BARTLETT and WILLSON, of New-Hampshire, have given a plate of such extravasation in the brain. *Med. Repository*, Hexade 3, Vol 3. page 41. Dr. STEWART, of Albany, a case of *engorgement*, exhibited on dissection, in the same volume, page 23.

I will now with much diffidence offer a *definition of fever*, hoping it may be found to apply to fevers of all kinds.

In this definition, the term *circulating systems*, is meant to include the *sanguineous, lacteal, absorbent, lymphatick, secretory and capillary*.

We would then define FEVER to be a partial, or general deviation from a state of health in one, or more of the *circulating systems*; and which is commonly discernable by the pulse, being rendered quicker, or slower in its number of beats in a given time; or quicker in its individual beat, and in all cases by diurnal exacerbations and remissions. It is also, in some cases discernable by the appearances of the tongue, or some one of the excretions, which differ from those of other diseases, and from health.

1. To the *excretions*, when fever cannot be otherwise discovered, particular attention should be paid. The first symptom of malignity is sometimes discoverable in the black or bottle-green appearance of the alvine excretions, or from a portion of dark matter brought up by puking or expectoration.

2. The insensible perspiration is sometimes rendered *sensible* to the smell, and by its peculiar scent denotes the presence of fever.

3. The symptoms of fever will be more obviously explained by referring its seat to the fine vessels, than by always expecting to find it denoted by the large arteries. The arteries are to the absorbent system what large rivers are to their sources. We must refer to the latter in order to know the properties of the former.

4. In the hectic fever, attending pulmonary consumption, there is sometimes no trait of the disease in the pulse during the intermission of the fever, except by the quickness of the individual stroke, or beat; the number of pulsations in a minute not being increased.

I will now, gentlemen, conclude my discourse with a few short remarks upon the treatment of fevers, as they have appeared within the last seven years; and a sketch of a few cases.

I have before hinted my *partiality* to the stimulant plan, in the treatment of spotted fever and its kindred diseases. This partiality, as I conceive, is founded upon the most unexceptionable basis, that of having experienced its success in an extensive country practice.

But I must now observe that there is a most astonishing variety of different complexions in those diseases, which require many variations in their treatment.

Perhaps all the rational modes of curing fevers detailed by judicious authors, may in some of these varieties have a place, if I except repeated blood-letting, which I believe has never yet found its advocates, although a sparing use of the lancet has been recommended.



But, generally speaking, my experience has been decidedly in favour of the stimulant plan; and it must be noticed that even those who recommend blood letting, would have us make an early, or simultaneous use of stimulants.

The report of the committee of the Massachusetts Medical Society in 1810, which evinces much talents and knowledge, may be mentioned as giving a sanction to this compound practice.

The words, in one part of it are, that "In such a case it is not inconsistent to open the jugular vein, while we exhibit even the most powerful cordials."\*

And I perfectly agree with that committee, that if blood letting is thus powerfully counteracted by stimulants, that it cannot possibly do so much harm; and if strongly indicated by symptoms of congestion in the head, that it may possibly do some good.

If, however, we administer the cordials without opening the vein, we shall act more in conformity to the advice of those physicians who have seen the disease at a distance from the sea coast, in which parts its greatest malignity has been displayed. But, although cordials as I suppose are generally needed, yet the quantity required varies entirely in different cases.

Perhaps no better rule for the management of fevers can be given, than to KEEP THE SYSTEM AS NEAR THE STANDARD OF HEALTH AS POSSIBLE.

The indiscriminate use of stimulants, or of evacuants, will thus be avoided. When the "vital spark" seems almost extinct—when the surface is cold, and the "extremities very cold"—the pulse scarcely discernable, if discernable at all, surely wine and alcohol cannot be objected to, in sufficient quantities to bring back the heat of life.

The directions where the debility was extreme, and the attendants could be relied on as having sufficient judgment, were sometimes to this effect, viz. "To not mind the quantity of wine given, but to get down as much as possible, till warmth was restored to the surface and extremities, and a disposition to faintness overcome; and in case wine did not produce these effects, to exhibit brandy occasionally until they were brought about, and then to diminish the quantity."

Acting conformably to this rule, a most judicious mother exhibited two whole quarts of wine, and two quarts of brandy lacking half a pint, to her daughter, aged 12 years, all in the same forty-eight hours; the wine being mixed with a decoction of cinchona and cinnamon.

I more readily left discretionary the quantity to be administered in this case, because it was the tenth which happened in the same family, and I had ample knowledge of the discretion of the mother.

I ought to observe, that she as well as all the rest of the family

\* See the Report, page 187.

recovered; and that this girl never shewed the least signs of intoxication, nor was she heated beyond the healthy temperature; but that she appeared to owe her life to this inordinate quantity of stimuli, and its continuance, in doses a little diminished, for several successive days.

This case is by no means mentioned, however, as one forming any rule to be imitated generally; it being one out of upwards of five hundred, in which the largest quantity of stimulants were given in so short a time—a case of the most extreme debility, following a protracted state of typhus fever, and profuse nasal hæmorrhage.

In intestinal hæmorrhages, which were not unfrequent during the year 1810, I found nothing equal to the *acetas plumbi*, which if combined with a small quantity of opium, and a cathartick given at no great distance (a day or two after the cessation of the hæmorrhage) I have always found perfectly safe.

That this medicine saved some who would inevitably have bled to death without it, I have not the least doubt.

After I became acquainted with this epidemick, I found it necessary to guard against the sinking stage of the fever, by a timely use of wine and tonicks; debility sometimes coming on suddenly when least expected.

Puking occurred in two of my patients, of a matter exactly resembling blue die. These patients were females; both had severe fits of illness, with extreme debility. One of them was so stupid and senseless that cordials could not be administered by the mouth, and death seemed inevitable without them.

The administration of a gill of strong spirits every two hours by injection, resuscitated the dormant powers of life; after nine gills had been thus given in a diluted form. A free use of *mercurials*, as in most other cases, being used in small doses, they both recovered.

A woman aged 59 years was seized whilst changing her clothes, after meeting, January 6th, 1811, with sudden faintness, which so increased that the next morning she fainted several times, whilst lying on her bed. She had hysterick symptoms, and was quite deranged: itched extremely, and scratched herself with such violence as to abrade the cuticle. I was called to her about this period, found her pulse low and surface cool, and put her upon stimulants. At night, she puked a dark claret-coloured matter, interspersed with a filamentous substance resembling potatoe skins, to the quantity of upwards a pint; and during the night and next day she puked more of the same strange-looking materials.

I was informed upon inquiry, that she had not eat any thing to cause these appearances. Nothing further worthy of notice happened in this case, except her rapid recovery; for in three days after the first attack she was free from sickness and pain, and had an appetite for food, although very weak.



Black vomit, blue vomit, and that of a claret colour, are probably secreted from the extremities of the arteries, or from those glands which in health secrete the gastrick juice; by a diseased action of these small vessels, is such a vast difference made in the matters which they secrete.

But I do not know that the process is more inexplicable on the whole, than the secretion of bitter yellow bile from insipid red blood.

As to the filamentous appearances in the matter puked up in the last case, we can no more account for them, than for the formation of balls of hair in the stomach, or hairs in the abscesses\* and in the urinary bladder,† of which medical histories give us examples.

The powers of the secretory organs are perhaps greater than any physiologist has ever yet dreamed of. If it should turn out that both animal heat and cold were secreted, it would not be surprising.

The singular coldness of the nose of a dog, which is noticed by professor Blumenbach,‡ appears to depend upon the secretion of a cold mucus by that organ. And perhaps the theory of animal heat is as easily explained upon the supposition of its being secreted from the air, by the lungs, as upon any other hypothesis.

But the field of conjecture I am aware is boundless, and I will not further enter it at this time; nor suffer "the attractions of a yet unstained" page to tempt me longer to extend my observations.

\* See Medical Repository, Hex. 3, vol. 2, page 216.

† Ib. Hex. 2, vol. 4, page 348.

‡ See his Elements of Physiology.

It is a great pleasure to me to hear of your success in your studies, and to see that you are making progress in the study of the Greek language. I am sure that you will continue to make great progress, and that you will be able to read the original authors with ease and understanding.

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Doctor David

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Newport









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