An inaugural essay on the yellow fever, as it appeared in this city in 1795: submitted to the public examination of the faculty of physic, under the authority of the trustees of Columbia College, in the state of New-York, William Samuel Johnson, LL.D. president, for the degree of Doctor of Physic, on the 3d of May, 1797 / by Alexander Hosack, Jun. A.M. of New-York.

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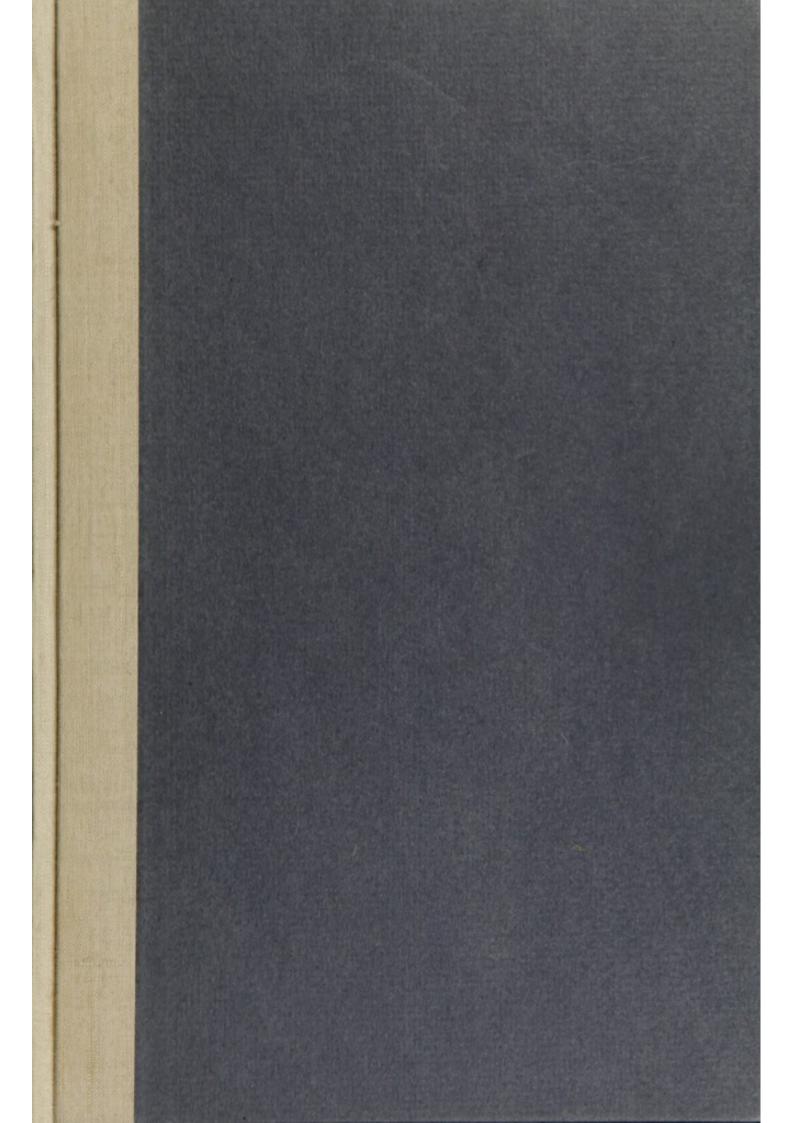
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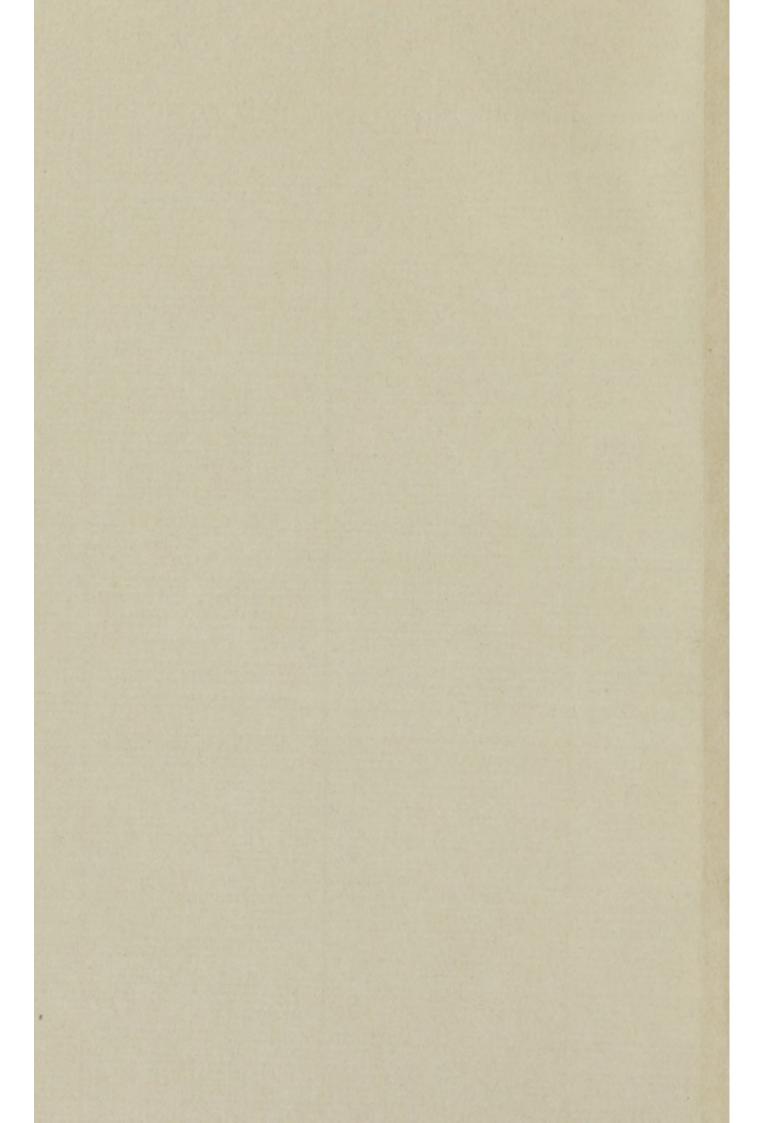
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INAUGURAL ESSAY

ON THE

YELLOW FEVER,

AS IT APPEARED IN THIS CITY IN

1795.

SUBMITTED TO THE PUBLIC EXAMINATION OF THE FACULTY OF PHYSIC, UNDER THE AUTHORITY OF THE TRUSTEES OF COLUMBIA COLLEGE, IN THE STATE OF NEW-YORK,

WILLIAM SAMUEL JOHNSON, LL.D. Prefident,

FOR THE DEGREE OF

DOCTOR OF PHYSIC,

On the 3d of May, 1797.

By ALEXANDER HOSACK, Jun. A. M. OF NEW-YORK.

NEW-YORK:

Printed by T. and J. SWORDS, Printers to the Faculty of Physic of Columbia College, No. 99 Pearl-street.

-1797.-

For Broupor Gregory with tentiments of great respect from his humber Terrens of pupil. Drosule

THE FOLLOWING PAGES ARE INSCRIBED TO

Doctor JOHN BARD,

AS A TESTIMONY OF SINCERE RESPECT FOR A

MEDICAL PRACTITIONER

WHO UNITES THE CHARACTER OF A

LEARNED PHYSICIAN

AND AN

ELEGANT SCHOLAR,

TO THAT OF AN

ACCOMPLISHED GENTLEMAN;

AND AS A TRIBUTE OF PERFECT ESTEEM, BY HIS VERY OBLIGED AND HUMBLE SERVANT,

THE AUTHOR.

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Dogor JOHN BARD.

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MEDICAL PRACTITIONER

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AND AS A PRIPER TO PERSON AND RESERVE AND RESERVENCE.

THE ABUHOR.

PREFACE.

BEFORE the reader peruses the following dissertation, I must be gleave to inform him, that this is the first attempt of a young man, inexperienced in writing, and is done only in compliance with the regulations of this College for conferring the degree of Doctor of Medicine.

I have purposely avoided any inquiry as to the origin of the disease, or the chemical composition of the matter or poison producing it; referring the reader for particulars upon these subjects to the more complete history of the disease, as published by Doctor Bayley, Mr. Webster, and others; and have confined myself to a plain detail of the symptoms, causes, and cure of the disease, as far as fell under

under my own observation, in my attendance at the New-York Hospital, and upon the private practice of Doctor Samuel Bard, and my brother Doctor David Hosack.

If a single fact, either new or useful, shall be communicated, I shall feel myself much gratified in having undertaken the task. AN.

INAUGURAL ESSAY

ON THE

YELLOW FEVER.

HISTORY.

THE yellow fever is known by a variety of names. By the French it has been denominated La maladie de Siam, from a country of that name in the East-Indies, where it is supposed to have had its origin, and from whence to have been conveyed to distant parts of the world. Sometimes they call it La sièvre matelotte, from its attacking seafaring people and foreigners more readily than the natives of the country in which it prevails. The Spaniards have

have given it the name of vomito préto, or the black vomit, which is one of its most malignant and characteristic symptoms. Some have called it the malignant fever others the putrid bilious, and bilious remitting fever, &c. This disease first appeared in this city about the year 1740; and, as I am informed by Doctor John BARD, who was at that time a practitioner, it manifested the same malignant symptoms which characterised the late mortal epidemic .-In some of the southern states it has been known to prevail at a much earlier period.* In 1791 it appeared again in New-York, and has been described in a differtation published by Doctor Addoms.

THE epidemic I am now about to defcribe, and which has univerfally received the name of yellow fever, first appeared about the middle of July, and continued until the weather became cold. The feafon,

fon, during its prevalence, was very hot and moist. It raged with most violence in those parts of the town adjacent to the eastern shore, where the air is less pure, and the ground lower than in any other part of the city; which, consequently, must, in some degree, serve as a reservoir for the silth of the upper parts of the city. It attacked persons of all ages, adults more frequently than children, and males than females—foreigners more than the natives, or such of our inhabitants as had lived in warm climates.* Frenchmen and blacks

* The same has been remarked in the West-Indies, and in the other parts of the United States, viz. that foreigners from northern climates were more susceptible of the disease than the natives. In support of this opinion, I beg leave to introduce the following extract of a letter from Doctor George Davidson to Doctor David Hosack, dated Fort-Royal, Martinique, September 23, 1796; in which he offers the following ingenious explanation of this fact: "I have already mentioned the experiments made upon the atmospheric air here, with a view to ascertain the composition of it. Those experiments have been frequently repeated, in the presence of the late Doctor Charles Webster, of Edinburgh, Doctor Saunderson, of London,

who had lately arrived from the West-Indies, were rarely the subjects of this disease, as they appeared to have been inured, and thence rendered insensible to the operation

and Doctor Chisholme, lately. The result has shewn a much greater proportion of oxygene than what I could have conceived—no less than 67 of oxygene gas. It may, perhaps, tend to explain some difficulties which we meet with in the phenomena attending upon yellow fever, viz. why Europeans, or those from cold climates, of tense, rigid fibres, and in the prime of life, are the subjects of its attack. I suppose, what you will admit, that Europeans or Americans, from cold climates, have a more tense and firmer texture of fibres than Creoles, or those who have long resided here-cold tending to brace the habit and invigorate the body, and whilst it does so, increasing the appetite and digestive powers. Besides this connection between the stomach and surface, we also observe a remarkable sympathy between the stomach and lungs: whatever tends to invigorate the stomach, remarkably increases the action of the lungs, as we may perceive from what follows after a full meal and a few glasses of generous wine. Inspiration and respiration are increased; a greater quantity of atmospheric air is taken into the lungs, and a greater quantity of oxygene fixed in the blood: hence the irritability; a glow of genial heat diffused, and the circulation becomes more rapid. But as the atmospheric air in Europe contains a less proportion of oxygene, the quantity of it fixed will be proportioned to the necessities and calls of the system. is, however, far different in those climates: before the appetite and digestive faculties are impaired, whilst the tone of its cause; but their exemption is, no doubt, more particularly to be ascribed to their temperate mode of life, and especially their freer use of vegetables; for it is certain, that those who most indulged in the use of animal food and spirituous drinks were most susceptible of the disease.

The fymptoms which marked the yellow fever in its first stage were, a general languor and heaviness—depression of the spirits, sometimes approaching to stupor—distinction to motion—a sense of cold, and shivering—acute pain in the head, especially above the eyes—pains in the back, and frequently extending down the extremities—the skin was hot, dry, and much slushed, not unlike the scarlet blush of an erisepelatous inflammation—the eyes were

and vigour of the system still continue, and also the corresponding action of the lungs, a much greater proportion of oxygene being contained in the atmospheric air, will be fixed, and the irritability of the system increased; or, in other words, the system surcharged with oxygene. Hence the predisposition to fever." fuffufed with water, and the veffels of the tunica adnata much diftended with blood: so constant were these last symptoms, that they may, in a certain degree, be considered as characteristic of the disease. The pulse was, for the most part, frequent, full, and hard-respiration was proportionably quickened, attended with much anxiety, stricture, foreness, and frequently intense heat about the precordia—the tongue was foul, the appetite depraved, with naufea, vomiting, and not unfrequently pain about the region of the stomach: these were among the first fymptoms of the disease. The bowels were constipated, unless the patient laboured under a diarrhoea at the commencement of the fever-the urine, in this stage of the disease, appeared, for the most part, as in the first stage of fevers in general, viz. high-coloured, and fmall in quantity; in the last stage, when the fever had continued for fome days with violence,

and

and the general mass of fluids became changed, this excretion manifested the same alterations, becoming fometimes turbid, and at others yellow, as if tinged with bile. -Such are the fymptoms which generally appeared at the commencement of the difeafe, constituting what I would call the inflammatory stage, but differing from any inflammatory disease, inasmuch as in the former there was no particular part of the body which appeared to be exclusively the feat of inflammation. Where the difease terminated favourably, there was, for the most part, an evident abatement of the above fymptoms in forty-eight hours; and in the course of five days the patients were generally freed from fever, but were left greatly debilitated by the violent operation of the poison producing the disease, and the evacuations which became necessary for the removal of the fever: even in those instances where blood-letting, the most debilitat-

ing of all evacuations, was not employed, the patient was fo reduced as to require all the resources, both of nature and of art, for his support. This stage of the disease was rather marked by fymptoms of debility, yet accompanied with great irritability, fo much fo, that the least imprudence in diet, clothing, bodily exertion, or indulgence in conversation and company, would frequently induce a return of fever. But where this abatement of the difease did not take place within the first three days, a very different and more malignant train of fymptoms appeared, partaking more of the fymptoms of the last stage of putrid fever, as described by HUXHAM and CULLEN.

In the last stage of the disease, the pulses sunk, became more frequent, irregular, and sometimes intermittent: the person would lay continually on the back, with the knees drawn up, and the body sinking toward the bottom or foot of the bed; the breathing became

became proportionably more difficult; and the crust which had formed on the tongue became of a black colour, which change also took place on the lips and teeth; the yellownefs became more general over the body, attended with cold clammy fweats; the vomiting now became more frequent and copious; in some instances patients have vomited inceffantly, and in aftonishing quantities; and what was brought up resembled the grounds of coffee: this, for the most part, was considered as a fatal symptom: there were, however, feveral instances of recovery after this had taken place to a confiderable degree.* It is worthy of remark,

^{*} The opinions, as to the nature and origin of the black matter vomited up, are very numerous and different. Some have supposed it to be part of the stomach; but we must entirely reject this idea, when we consider the enormous quantities which patients sometimes throw up. The most probable opinion is, that it is bile imperfectly formed. [See Saunders on the liver.] Here I beg leave to quote the words of Doctor Jackson, who, from dissection, has formed the same opinion: after opening the abdomen, &c. and noticing the appearance of the viscera, he says, "The liver

remark, that when the vomited liquor acquired this black colour, a diarrhoea sometimes followed, in which there was a discharge of a similar sort of black matter, but more resembling tar or molasses. The florid colour now left the eyes, and they became yellow and sunk. The functions of the brain and nervous system were also very much deranged: the patient was attacked with delirium, attended with subsultus tendinum, and sometimes a perfect stupor, with a convulsive kind of sighing. The speech began to faulter and tremble. The

and spleen were generally enlarged in size; the colour of the liver was often of a deeper yellow than that of any other of the abdominal viscera; while the texture of the spleen was frequently less firm than it is found to be in its natural state. The gall-bladder, for the most part, was moderately full, but the bile it contained was black and thick. The biliary ducts were likewise enlarged, and moderately filled with the same sort of bile which was found in the gall-bladder; while the very blood-vessels of the liver bore the marks of uncommon distension. In the cavity of the stomach, likewise, there was usually more or less of a dark coloured liquor, similar to what had been thrown up in the last stage of the disease."

patient appeared very uneafy, and shewed a disposition to leave the bed. Sometimes a deceitful tranquility appeared, and by fome was supposed to be a favourable symptom; but the patient, upon getting afleep, was much agitated. The stools and urine became black, very offensive, and discharged involuntarily: in some instances there was an entire suppression of urine: the extremities became cold, but the heat still continued about the stomach: blood was discharged from the mouth, nose, ears and eyes, and from those parts of the skin where blisters had been applied. Sometimes blood was effused in the cellular membrane, appearing in the form of mortification-petechiæ appeared about the neck and breast-vibices, or livid spots, came out upon the body, particularly upon the abdomen-the perspiration became very fætid—the eyes shone like glass-hiccough and muttering came on, and were followed by death.

C

Doctor

Doctor Rush, in his history of the yellow fever as it prevailed in Philadelphia, has taken notice of buboes and carbuncles as among its fymptoms. I do not know a fingle instance where these symptoms have occurred in this disease in New-York. In the West-Indies these symptoms are not uncommon, as would appear from the following extract of the before-mentioned letter, which I have introduced, as it serves to establish the similarity of the yellow fever to the plague.—"We have had a return of the yellow fever during the months of July, August and September, much more violent than I ever recollect feeing. The rainy feafon fet in very late, and the weather proved, during these three months, remarkably warm and fultry. The difease commenced early in July, and was not only contagious, but attended with pestilential symptoms. Buboes appeared in feveral patients, who, however, recovered; and I have feen feve-

ral instances of the anthrax and pestilential carbuncle. One patient evidently funk from a carbuncle on his elbow, the hæmorrhage from which could scarcely be suppresfed by pledgits dipt in diluted vitriolic acid; and two others also appeared upon the foot and ankle of the same patient. I am at present attending a medical gentleman who has above fifty carbuncles upon his body. The discharge has reduced him, but he is recovering. The appearance was first a red unequal eryfipelatous appearance upon the fkin; in the centre appeared an elevated fpot, which gradually changed to black, burst, and discharged a blackish bloody ichor, and left behind it a deep pit. Upon other parts a white pustule appeared, which, after bursting, discharged pus and bloody ferum, and pitted in the same manner. The back, loins, and upper part of the thighs were principally affected."

PREDISPOSING CAUSE.

PREDISPOSITION is that state of the body not of itself capable of producing the disease, but rendering the body more susceptible of the exciting cause. In order to produce yellow sever, it is necessary that the body should be in such a state as to receive the action of the exciting cause. This state appears to be a peculiar irritability in the system, by whatever means induced. Upon no other principle can we explain the reason why the contagion does not affect every person within its atmosphere, and why the attendants of the sick are not always attacked. The causes which produce predisposition in the body, for the most part, are,

1st. Fear, which possesses great power in debilitating the body, and hence rendering it more irritable. Upon this principle we may

may account for the good effects of the different preventives which many were in the habit of using; such as the wearing a small quantity of camphor, vinegar, &c. constantly about the body, inspiring them with a certain degree of courage. The use of tobacco was supposed to have a good effect in counteracting the disease, probably from its possessing more stimulus than the matter of contagion.

2d. Heat, especially exposure to the direct rays of the sun, was a common cause, as it assisted the stimulus of contagion in bringing on indirect debility. Fire also rendered the contagion more active. To prove this we notice, that a great majority of those that were infected were such as, from the nature of their occupations, were much exposed to the heat of the sun and sire.

3d. Fatigue, whether induced upon the mind or body, and from whatever fource.

4th. Grief. Persons who attended friends

or relatives in this disease were not unfrequently seized during their attendance.

5th. Excess in venery, and other evacuations, such as bleeding and purging, aided by fear, which caused some persons to adopt these means in order to prevent the operation of contagion.

6th. Cold; accordingly such as had been previously much heated, upon getting themselves wet, drinking largely of cold water, or exposing themselves to a stream of cool air, were readily attacked with the disease.

7th. Intemperance in eating or drinking: taking either too large or small quantity of improper food; or a scanty allowance of common diet.

EXCITING CAUSE.

DISEASE is brought on by the action of the exciting cause, after the body is rendered capable of receiving the contagion by the action of the predifposing cause. The yellow fever being a contagious disease, it must undoubtedly depend upon the action of a poison either generated or introduced into the body. This matter, or poison, is generally acknowledged to be exhaled from animal and vegetable fubstances in a state of putrefaction: but, as there is a great contrariety of opinion upon this subject, I shall purposely pass it over, referring the reader to the works of LAVOISIER and others .-There are also many different opinions as to the mode in which this contagion acts upon the body in producing the disease. Some have supposed that it enters the syftem

tem by the stomach—some that it enters by the lungs-and others, that the body receives it by the pores of the skin. All these opinions have their advocates; but by whichever passage it is communicated to the fystem, whether by the stomach, the lungs, or the pores of the skin, it is certain, that, in common with the matter of smallpox, measles, lues venerea, the venom of the rattle-fnake, &c. it produces a violent irritation throughout the whole fystem. Its first operation I consider to be upon the nervous system: hence the violent pains of the head, back, and extremities of the body -hence the fickness of stomach and vomiting—hence the fensation of cold and constriction upon the secreting and excreting veffels. Such an irritation upon the nervous fystem, with an interruption to the fecretions and excretions, are necessarily followed with a quickened circulation. The irritating matter of itself is sufficient

to produce this effect; but the suppression of perspiration, the confined state of the bowels, and especially the retention of bile of an uncommonly acrid quality, must also unquestionably have a share in adding to this irritation and increased action.

CURE.

HAVING stated the symptoms and causes of the disease, we are next to consider the indications of cure, which appear to be,

First, To prevent the further operation of the poison producing the disease.

Secondly, To procure a folution of the inflammatory stage of the fever.

Thirdly, To counteract the putrescent state of the body, as described in the second stage of the disease. And,

Laftly,

Lastly, To restore the tone of the system when the preceding indications are accomplished.

First, To prevent the further operation of the poison producing the disease. To this end it is necessary that the patient be removed from the atmosphere in which he took the disease, and placed in a situation where he may enjoy a pure, free air: all articles capable of conveying the contagion should be immediately removed from the body, such as clothing, &c. in place of which there should be clean dry clothing, bedding, &c.

Secondly, To procure a folution of the inflammatory stage of the fever. It is necessary to moderate the increased action of the system, and to remove, as far as possible, every other source of irritation. To evacuate immediately the poison from the body, when once introduced, is as impossible as to eradicate the matter of small-pox, measles,

or any other difease produced by specific contagion. In the treatment of yellow fever, as in that of the small-pox, if the analogy be a just one, the business of the physician appears to be, to moderate the action of the poison producing the difeafe, and, at the same time, to remove every circumstance which can aggravate its operation upon the body. With a view to diminish the increased action of the fystem, evacuations of different kinds were employed. Some practitioners had recourse to blood-letting, followed by purging and sweating; and others trusted entirely to the two latter. With respect to blood-letting, my observation has been, that the promiscuous use of the lancet was very injurious and unfuccessful. In the New-York hospital it was frequently employed, but in the majority of cases the disease terminated fatally; yet, in some few instances, where the constitution was uncommonly plethoric, and the determination

tion to the head more violent than usual, I have observed good effects follow the loss of a moderate quantity of blood. But, generally speaking, blood-letting was attended with pernicious consequences. The same has been consirmed by the observations of several of our most respectable practitioners. The more common and successful practice was,

the bowels. The purgative medicines which were employed were many and various. By fome, calomel and jalap were prescribed, and, in the beginning of the disease, with good effect. Others administered a mixture of rhubarb and magnesia with cinnamon or mint-water. This also answered well in many cases, where the stomach was irritable, and rejected the former medicines. But the medicine which was the most successful, and acquired the greatest reputation, was the Glauber's salts, given

in warm diluting drinks. The dose was generally from one to two ounces, diffolved in a pint of gruel made of Indian meal, and given in divided doses until it operated freely; the patient at the same time drinking freely of gruel or chicken water, to promote its operation. Salts, exhibited in this form, for the most part sat well on the stomach: they were expeditious in their operation, and, in many instances, possessed the additional advantage of relaxing the fkin and inducing perspiration, especially where the patient drank largely during their operation. But when the stomach was fo much irritated as immediately, to reject every thing taken into it, recourse was then had to glyfters, composed of vinegar and water, quickened by the addition of a finall quantity of molasses: these scarcely ever failed to produce the intended effect.

2. Having procured copious and free evacuations from the bowels, the next object

ject appeared to be to relax the furface of the body, and induce free perspiration. In fome instances this falutary discharge came on immediately after the bowels had been emptied, and was readily continued by taking plentifully of warm drinks; but, for the most part the febrile symptoms continued violent, the skin remained hot and dry, the pains still distressing, and it became necesfary to have recourse to more active means to induce sweating. For this purpose many fudorific medicines were employed. Some practitioners used emetics, and others small doses of James's powders, and the different preparations of antimony. Vomiting, in this disease, I have generally observed to be of dangerous tendency. It may, perhaps, not be amis, when the disease first discovers itself, and is attended with much fickness and vomiting, to empty the stomach freely, by means of an infusion of chamomile flowers: but the exhibition of emetics I confider

fider to be highly dangerous and improper. I believe I have feen some cases in which the death of the patients could be ascribed to no other cause than the incessant vomiting brought on by an emetic given in the commencement of the disease. But the most certain and successful means were, to wash the whole surface of the body with cold vinegar and water, and immediately after covering the patient with blanketsto administer such medicines as possess the effect of bringing on fweating: of these the spiritus mindereri and saline draughts of RIVERIUS fucceeded well, more especially if the warm drinks were continued, fuch as the infusion of snake-root, gruel, toast water, tamarind water, lemonade, &c. These were much aided by applying to the feet of the patient a warm brick, steeped in vinegar and covered in a flannel cloth wet with vinegar or spirits: the steam, thus emitted and diffused through the bed, had

a wonderful effect in foftening the skin and exciting fweat, especially where the cold washing had been previously employed .-Some practitioners have preferred the practice of plunging the patient feveral times in a cold bath, and violently dashing the body with cold water. But simply washing the patient with cloths dipped in cold vinegar and water, was found much preferable to immersion, both because it more effectually diminished the heat of the system, and was less fatiguing to the patient. Experiments have proved, that repeatedly wiping and washing with water, in the ordinary way in which the operation is performed, diminishes the heat seven or eight degrees more than fimple immersion, or dashing it over the body with pails.

THE practice of cold bathing in fevers of this type is not a new one, but was very commonly employed at Breslaw, in Silesia;

Silesia;* and of late years has been very successfully applied in the West-Indies,† as well as in different parts of Europe, where diseases of this type prevail.

PROFESSOR GREGORY, of Edinburgh, and Doctor CURRIE, an eminent physician at Liverpool, have also prescribed it with great advantage in the low typhus fevers of those cities. But its great success in the New-York hospital, as employed by Doctor SAMUEL BARD, and in the private practice of my brother, have fully convinced me of the propriety of its use. It is also proper to remark, that where the physician was not called to the patient in the first stage of the disease, and putrid fymptoms had appeared, and the patient had become much debilitated, the cold bath was injurious; and from the abuse of cold bathing, by employing it in the last stage of E

^{*} See DE HAEN'S Ratio Medendi.

[†] Doctor Jackson on the Diseases of Jamaica.

of the disease, it has fallen into disrepute with some practitioners. But as the abuse of a thing is no argument against its use, I repeat my observation, that in the first or inflammatory stage of the difease, it was one of the most useful remedies that was employed. When the cold bath had been thus made use of, and immediately after followed by the spiritus mindereri or faline mixture, with plentiful dilution, it rarely failed to produce fweating in the course of fifteen minutes; and when once induced, it was eafily continued by the repetition of the fudorific medicines and drinks, until a folution of the fever was obtained. In fome instances where the patient refused his drink and medicines, or, from the carelessness of the nurses, they had not been supplied as frequently as was proper, and the perspiration had been suppressed, it became necessary to repeat the cold bathing, which feldom failed to procure a return of the fweating. By the continuance of this discharge an abatement of all the symptoms took place: it appeared to operate as a specific in the disease; the pulse in a short time became moderate; the heat of the skin diminished; the pain in the head and back, before so distressing, was also relieved; the sickness of stomach and vomiting were removed; and, in the course of two or three days from the attack, the patient had little else to contend with but mere debility.

Thirdly, In those cases where the physician was not called in the early stage of the disease, where the bowels were not freely emptied, and perspiration had remained suppressed, with a continuance of the fever, a more distressing train of symptoms appeared, as described in the second stage of the disease, and required a different mode of practice: sew patients, however, recovered from this stage of the disease.

WHERE

WHERE the stomach was much disturbed with fickness and vomiting, which was one of the most dangerous symptoms, the faline draught was exhibited in the effervescing state; and, in some instances, yeast was employed with advantage, followed with nourishing antiseptic drinks, as milkpunch, lemonade, porter diluted with water, &c. Snake-root-tea, where it fat well upon the stomach, appeared to possess most advantages in this stage of the disease, inasmuch as it procured a free determination to the furface of the body, independent of its antiseptic properties; but where the stomach rejected every thing, recourse was had to blifters, applied immediately over the region of the stomach, and, in some instances, with the most happy effects. Spirituous fomentations, applied to the lower extremities, especially where they were followed with perspiration, in many instances gave relief to the stomach, and rendered it more retentive.

Where the bowels were in a costive state, purgative medicines were given to the patient; at the same time injections were employed, composed of vinegar and water, with the addition of molasses, and repeated every hour until they produced the desired effect.

WHEN the functions of the brain and nervous system were much disturbed, as indicated by delirium, fubfultus tendinum, restlessness, &c. finapisins, composed of rye-meal, vinegar, and mustard, applied to the foles of the feet, blifters to the ankles, to the infide of the thighs, and to the head, in some few instances procured relief .- In this stage of the disease some practitioners had recourse to bark, wine, and the tonic treatment in general; but the plan I have observed to be attended with most fuccess in addition to the medicines and treatment related above, was to support the patient's strength, by the mildest nourish-

nourishment, and such as was the least stimulating to the fystem, viz. soups, composed of a great proportion of vegetables, fago, milk-punch, with a fmall quantity of spirits or brandy, merely sufficient to render it grateful to the stomach. In addition to this mode of treatment, great attention was paid to the removal of every external fource of irritation, by frequent changes of linen and bedding, by frequently wiping the body with cloths dipped in fpirits or vinegar, removing every offenfive matter from the room, and by correcting the atmosphere around him, by the explosion of gun-powder, sprinkling vinegar over his bed, and through the room, and procuring a free circulation of fresh air.

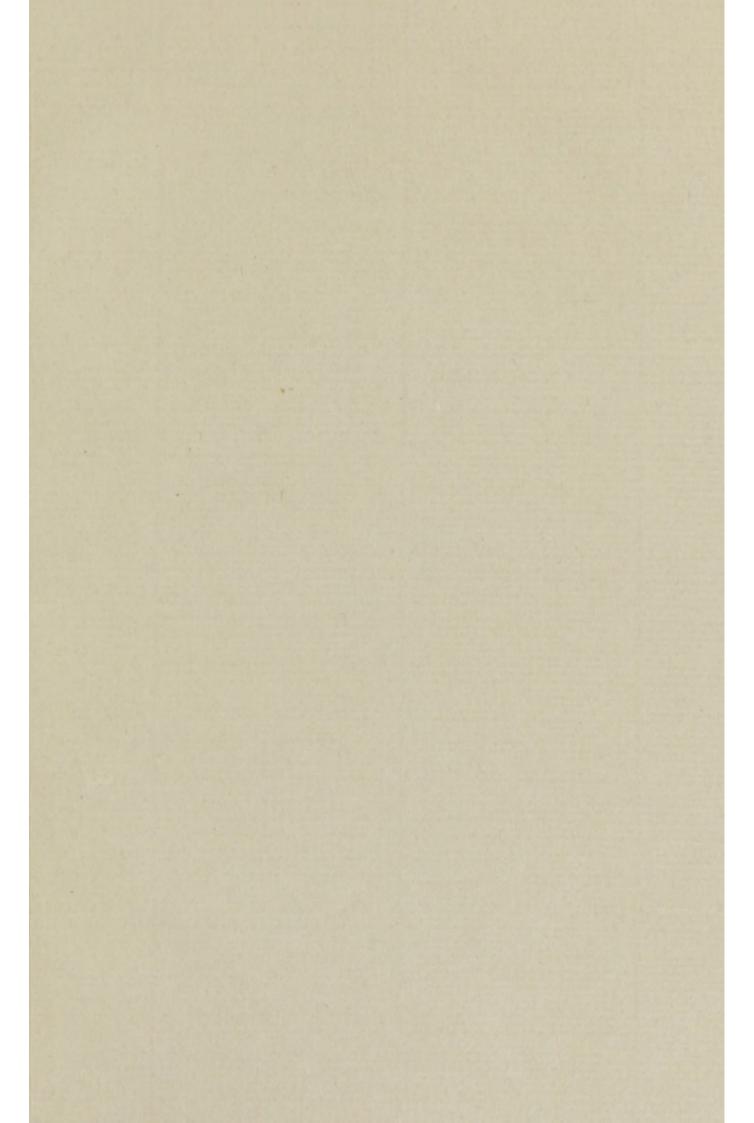
Fourthly, Having, by the means above enumerated, procured an entire folution of the fever, it remains to restore the strength of the system. In the stage of the disease alluded

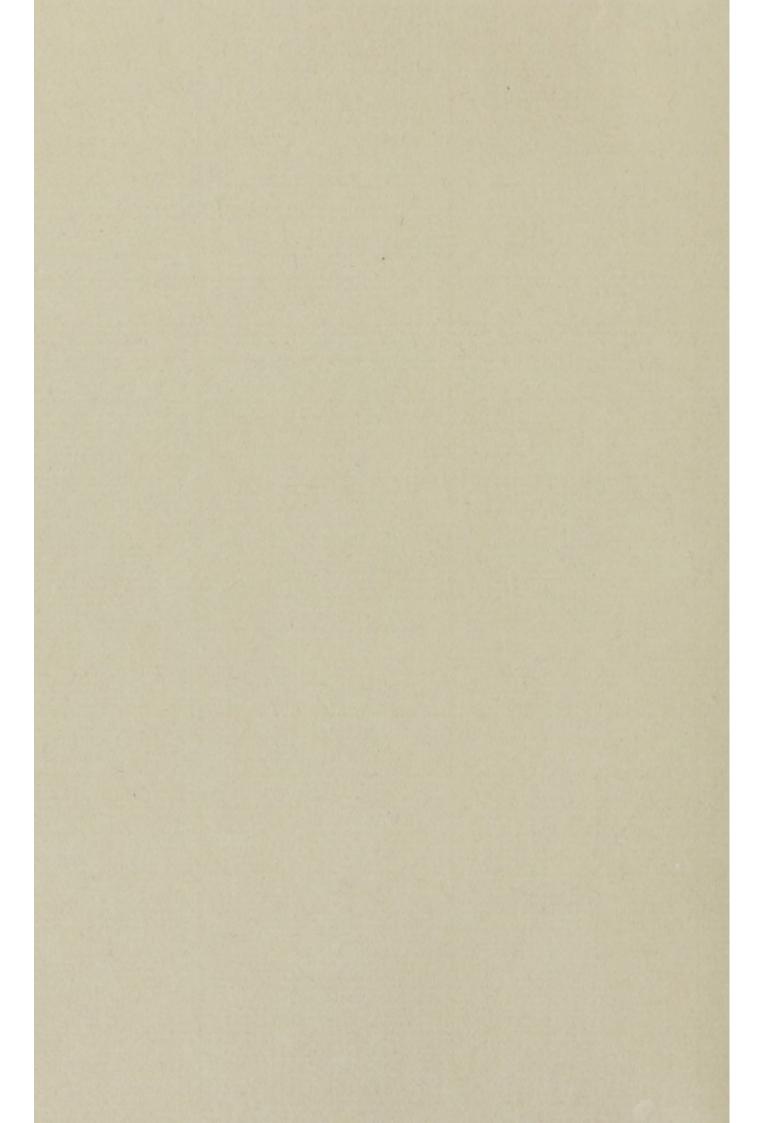
alluded to under the last indication, while a degree of fever remained, an active tonic or stimulating plan of treatment was found injurious; but, when a perfect folution of the disease was obtained, and the patient laboured under mere debility of body, this mode of treatment was not only admissible, but, in many instances, the patient's strength was so completely exhausted, that the most restorative medicines and diet became necessary. In this state of body recourse was had to the bark, serpentaria, the different bitters, mineral acids, and the ufual medicines prescribed with this intention, viz.wine, porter, milk-punch, &c. The diet employed with most advantage consisted chiefly of vegetables: fago, tapioca, indian and oat-meal gruel, rendered palatable by the addition of wine, were, for the most part, grateful to the patients-were fufficiently nourishing, and, being of a more antiseptic quality, were found less hazardous than the use of animal food. When animal food was employed, it was in the form of soups, with a large proportion of vegetables, or calves-feet jelly, with the addition of wine: in this form it became less exceptionable. But solid animal food was very commonly injurious, retarding the recovery of the patient, and in many instances producing a return of the disease; it was therefore very generally prohibited during the convalescent state of the patient.

THE drinks employed with most benefit, and which were found most grateful to the sick, were wine and water, milk-punch, porter, &c. Such was the disease, and such the mode of treatment, as far as has come within my knowledge.

THE END.

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Beek taken apart. Leaves deacidified with magnesium bicarbonate. Resewed en linen cords. New all-rag end paper signatures. Unbleached linen hinges. Rebound in quarter unbleached linen. Fabriane paper sides.

Carolyn Herton & Associates 430 West 22nd Street New York, New York 10011 February, 1977 Med. H15t. WZ 270 H8241 1797

