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1859





PRACTICAL REMARKS

ON

YELLOW FEVER,

HAVING SPECIAL REFERENCE

TO THE

TREATMENT:

BY

EDWARD JENNER COXE, M. D.,
NEW ORLEANS,

AUTHOR OF "DOMESTIC MEDICINE," "A PRACTICAL TREATISE ON MEDICAL INHALATION;"
AND VISITING PHYSICIAN TO THE N. O. CHARITY HOSPITAL.

"Prove all things; hold fast that which is good."—Thoss. 5, 21.

"NULLIUS ADDICTUS JURARE, IN VERBA MAGISTRI."

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Entered according to the act of Congress, in the Clerk's Office of the United States District Court, for the Eastern District of Louisiana, by EDWARD JENNER COXE, M. D.

TO MY FATHER,

D R. JOHN REDMAN COXE,

From whom, in conjunction with

Drs. PHYSICK, JAMES, CHAPMAN, GIBSON,
HORNER, AND HARE,

In the brightest era of the University of Pennsylvania, I am proud to say
the sound principles of Medicine, emanating from their illustrious
predecessors, were received, which have stood the test
of time at the bed-side, and will endure
'till time shall be no more;

TO

D R. RENE LA ROCHE,

The Magnus Apollo of authors on Yellow Fever, to whose unequalled work I
acknowledge myself greatly indebted;

And to the

ADMINISTRATORS OF THAT NOBLE INSTITUTION,
THE CHARITY HOSPITAL, OF NEW ORLEANS,

From whom the appointment as one of the Visiting Physicians was
received, thus enabling the study and treatment of Yellow
Fever and other diseases, to be pursued
on an enlarged scale,

THE FOLLOWING REMARKS ON THE TREATMENT OF YELLOW FEVER,

Are respectfully dedicated, by

EDWARD JENNER COXE, M. D.,

Camp street, New Orleans.

TO THE MEDICAL PROFESSION,

AND

TO THOSE WHO MAY BE UNACCLIMATED.

I had hoped to be able to publish my concluding remarks, on the treatment of yellow fever, in the ensuing number of the journal which contained the first and second parts.

Circumstances beyond my control, in reference, *it is presumed*, to the length of the article,—no reason having been assigned—induced the request to curtail it within the prescribed limit of fifteen pages. Knowing such curtailment to be impossible, and not altogether approving the manner adopted, I now regard it as a fortunate event, for in its present form, the inconvenience necessarily resulting from presenting the treatment in disjointed numbers, at long intervals, will be entirely obviated.

The grounds, on which I consider myself authorized to present these remarks on yellow fever, more especially, the treatment, the end, and aim of all remarks on any disease, have been, bed-side observations, during three consecutive years, of almost daily attendance on patients in the wards of the Charity Hospital,

those derived from private practice, and those resulting from my personal experience in 1839, from one of the most dangerous and protracted attacks of yellow fever ever recovered from.

A keen and painful remembrance of the torture I was forced to endure, for days, at the hands of an old, and valued friend, simply obeying the irrational orders of the physician, by faithfully carrying out the pernicious customs, at that day, no less perseveringly persisted in, than it is well known is now acquiesced in, if not approved of by the majority of physicians, and, invariably by the public.

When we seriously reflect on the sufferings of those laboring under a burning fever, the justly apprehended aggravation of the existing symptoms, or the appearance of those probably to be developed, by excessive covering, the exclusion of fresh air, and the entire disregard of the real feelings, and wants of the patient, can it be considered a matter of astonishment, that one, who has suffered, should raise his voice, and endeavor to mitigate, if not arrest the continuance of so much evil?

Entrusted with the lives of my fellow beings, would I act the part of a true disciple of Esculapius, by withholding the knowledge of a fact, sincerely believed to be fraught with evil?

Suppose the views expressed may not be acceded to, in all their details, are they not deserving of serious reflection—and if perchance, an error might be found to exist, could it not, in the proper place and manner, be pointed out, for the future benefit of the profession, and consequently for the welfare of all attacked by the yellow fever?

Presumptuous, possibly, may be considered the following remark, but having more than once made it to several of my confrères during the epidemic of 1858, I fear not here to repeat, that I did think the yellow fever ought to be more curable than was found to be the case.

Such an opinion was based on the various facts developed in my wards, by twice daily visits, of about three hour's duration, and also from those observed in other wards, in which I was no infrequent visitor.

I could not make myself believe that the mere fact of an individual dying from this fever was sufficient explanation in extenuation of the fact.

The writing, as well as the publication of the following remarks on yellow fever, was undertaken from a sense of duty conjoined with more than a faint hope, of doing good—the Christian banner of the profession of medicine.

Should the main object of my remarks, on the treatment of yellow fever, prove the means of decreasing the sufferings of those passing through an acclimation, save valuable lives, and thus, add to the permanent population of our city and State, ample will be my reward.

In the bonds of fraternity,

EDWARD JENNER COXE, M. D.

Practical Remarks on Yellow Fever.

WHEN viewed in all its bearings, can any one question the fact, that, to the city of New Orleans, as to her more rapid permanent prosperity, to the inhabitants, more especially those unprotected by acclimation, the subject of yellow fever, and the treatment best calculated to prove generally successful, are matters of vital interest? Notwithstanding the extensive research, and consequent voluminous works upon this subject, by the most able of the profession, in present and past days, may it not fairly be questioned, whether some important points, referring to the cause or causes, the origin, and mode of communication of the disease, are better understood at this day, than was the case with those who first grappled with such abstract, and most probably incomprehensible mysteries? An attentive perusal of the unapproachable work of Dr. La Roche, on Yellow Fever, will substantiate such an opinion, for who, after its careful study, will acknowledge, that upon any one of the many important points, therein so ably handled, he has been enabled to arrive at a positive conclusion? Will he not have to confess that an array of talent has

been expended upon both sides of the question, without a single positive conclusion having been agreed on? Upon many of the debatable points, an equal amount of interest may not be felt, but on the most important part of the subject, the treatment, in which all are equally interested, there is not to be found a greater unanimity of opinion, whether regard be had to the general course of treatment to be pursued, the individual remedies specified, or the proper time, and manner of using them.

Who, unacquainted with the last part of the subject, practically, would be able to decide upon the merit due to, or the confidence to be reposed in, any one of the means, so fully set forth? Who can decide, when Doctors disagree? would be the most natural exclamation. Should the idea suggested by Dr. Nott, of Mobile, and acquiesced in by others, be realized, that a visitation of this fever may possibly be inflicted on some of the northern cities, there can be little doubt that those upon whom the duty will devolve to combat the unwelcome visitor, may not find these remarks valueless.

Engaged in the drug business for sixteen years, to which, by continued ill health, I was forced, but few have elapsed, since I was enabled to resume the practice of my chosen profession. It was on the occasion of the philanthropic visit of my friend Dr. Fenner, to assist in alleviating the sad scenes at Norfolk, that in taking charge of his wards, I had an opportunity of seeing yellow fever upon an extended scale, although for several preceding years, I had attended some cases. With thanks to the administrators of the Charity Hospital I have since that time enjoyed the advantage of attending the sick in the wards under my charge, and

during the recent epidemic, I paid a morning and afternoon visit from the 20th of July, until within a few days, when the necessity no longer existed. During that period, there were brought into my wards, 32 and 33, one hundred and ninety-two cases of well-marked yellow fever, necessarily embracing every degree of violence; ninety-nine cases were in ward 33, and ninety-three in ward 32. In ward 33, sixty-two were cured, and thirty-seven died. In ward 32, fifty-five were cured, and thirty-eight died: 192 cases; 117 cured; 75 died.

From the number of deaths, I am entitled to abstract two who died within an hour of their entrance, after having thrown off a large quantity of black vomit, which, in one case, was forcibly ejected a distance of about seven feet from the bed.

Deduct about thirty, who died within fifty hours from the time of entering, when, from the first moment, the faintest hope of averting a fatal issue could not exist, my opinion is that while I have no reason to complain of the result, by comparison, in reality, I am far from being satisfied. Whether the results of such an opportunity of combatting the most insidious and treacherous disease, that it is possible to encounter, will effect an improvement, or greater certainty, as to a correct course of treatment, to be depended upon, in future times, should such occur, time alone can determine. I fulfill a duty; others must judge of the result, and the means employed.

There are several points of no little interest about this disease, frequently alluded to, upon the recurrence of an epidemic, which it may not be amiss to notice. Is yellow fever contagious? It appears to me, after a due consideration of the facts and observations deduced

therefrom, to be found most impartially collected in the able work of Dr. La Roche, as well as from what has actually occurred in this city, bearing upon that point, that it is not contagious. By this I mean, that one or more persons, with the disease on them in full force, at any stage, if removed to a healthy spot, without clothing, goods, or chattles, this disease cannot be communicated to any one with whom they may come in contact, however closely or faithfully nursed. Again. That this disease is capable of being communicated, or in some manner, transmitted to other points, from that infected must be admitted, nor can the many strange or remarkable facts, developed during our past severe epidemics, be in any respect understood or explained, without such admission.

In what manner, such duly recognized effects have been produced, has proved an enigma to the ablest minds, satisfactorily to account for. On that point, perfect ignorance is candidly admitted. To my mind, it is considered clearly proved that yellow fever is of local origin, although, upon that point, all are aware of the extreme difference of opinion, maintained by opposite parties, which it is reasonable to suppose, never can or will be reconciled. That the quarantine, for the purpose of preventing the ingress of yellow fever into our city, has signally failed, and the same it is well known has occurred at other points, is regarded fully proved. While admitting the propriety and necessity of having proper sanitary measures, legally established, as well for internal or common, as external and rare sources of disease, I cannot but believe, that, as long as contagionists, and anti-contagionists, so strenuously insist upon their respective views, or opinions, just so long

will a rational or common sense compromise be withheld from the community.

In reference to the possibility of establishing a course of treatment adapted to the ordinary run of cases of yellow fever, which might enlist the approbation of the profession, if such a marvel could occur, I venture the opinion, that if all, or the greater part of the physicians of New Orleans, who for the last thirty years have enjoyed such ample opportunities of treating the fever, had given true reports of their successful as well as unsuccessful cases, it being well known, that the latter are frequently even more instructive than the former, it can scarcely admit of a doubt, that the essentials of the treatment, would have become well established, and in all probability, the successful management of the disease more certain. Is this suggestion unworthy of serious consideration?

Appertaining to the treatment of yellow fever, there are two subjects, according to my views of the nature of the disease, not only of great importance, but most intimately connected with whatever general plan of proceeding may be considered best calculated to effect a cure. Allusion is made to the amount of covering, or number of blankets proper to be used, due regard being had to the present comfort and future safety of the patient. The other is, whether, and to what amount fresh air should be allowed in the sick room?

I know, and all must agree in opinion, that, in treating any other febrile disease, in which inflammation does not exist, or at least to any great degree, *the feelings of the patient are, and ought to be the only guide.* A departure from that universal rule, in those cases, would be a transgression of the laws of nature, which can

never be done with impunity, present or future. Upon what principle the very reverse should be acted on in yellow fever, in which the heat of the skin and the fever continue gradually but regularly to increase for a certain time, passes my comprehension and cannot be rationally accounted for.

The facts, proved by the innumerable experiments of our learned *confrère* Dr. B. Dowler, are conclusive on the subject of animal heat. *The only guide should be the feeling of comfort of every individual patient*, for in that respect, as in all others in connection with the human system, do not all differ? They are the sufferers, and in such a case, in my opinion, they ought to be permitted to make themselves *comfortable*.

If regarded medically, as to the absolute necessity of keeping up a profuse sweat, which is not necessary to effect a cure, for I know the advantages of, and act on the principle of maintaining a healthy condition of the skin, and resort to various means for such an object, yet I maintain that to cure this disease, profuse sweating is not indispensable; on the contrary, much more frequently than is thought to be the case, the unnatural habit of piling on blankets, not only does not effect what is desired, but may and does prevent it, although the sweat may wet all the clothing of the body, as of the bed. Tucked around the body, scarcely allowing the head to be free, how can *evaporation go on*, which would diminish the febrile heat, as well as that unusual feeling of hot skin, peculiar to the disease? Besides, if it is wished to eliminate the poison from the blood by the efforts to cause sweating, how can it escape from the body, seeing that it is covered with a load of blankets? The power of absorption by the skin, who

questions? and will not, and does not poisonous exhalation from the skin, which you will not let escape, become reabsorbed, and play a very important part in transferring upon the stomach and kidneys an increased poison, very likely to eventuate in black vomit, increased irritability of stomach, or suppression or retention of urine, and what then? Sufficient for the present about an irrational and destructive prejudice.

As regards the *admission of fresh air*, which cannot, under ordinary circumstances, be too much indulged in, or enjoyed, I would remark, that when the body is in a free perspiration no one, in his senses, would advise it to be exposed to a draught; for who has not felt the ill-effects from it in health? But, if the animal heat, or temperature of the body, in a state of fever is beyond the natural point, feeling hot and dry, no reasonable amount of fresh air will, or can then do harm. On the contrary, under those circumstances, in addition to fresh air, if a few buckets of cold water be thrown over the body, the patient going to bed, and covering himself with one blanket, a free perspiration will be almost certain to ensue. To protect from a draught is not objected to, but let there be an abundance of fresh air in the room, and around the bed; make your patient comfortable, and he is half way on the road to recovery.

If the observations made this season, if the coincidence of opinion with many of my *confrères*, with whom I have conversed, if the fact of several deaths (resulting, as I am firmly convinced, from blankets in excess), if, I repeat, I am correct in the above, and I am confident of being so, how could I conscientiously, or, who would wish me to suppress the above remarks about *clothing and fresh air*?

I consider it of great importance in confirmation of the above remarks, to state, that when I consider the size of my wards, the number of windows, the two doors well placed for a fine draught of air, most generally open, when I think of the moderate amount of clothing permitted during the first half of the epidemic, and the absolute order in both wards, after having become, from painful experience, convinced that *excessive covering would kill*, when other circumstances fully warranted the hope for success, that but one sheet and one thin blanket should be permitted upon any patient having the fever, *unless any one might complain of feeling cool or cold, when another might be put on*. Besides, I took care to tell every patient, that if he felt too warm, and wanted the blanket off, off it might go, and no one should interfere. In no one instance did the least injury result, which most important, and absolutely true fact, I wish to be particularly noticed.

Of the 117 cures out of 192 cases of yellow fever, the following number were discharged on the days specified, namely: 3 the 3d day; 7, 4th; 14, 5th; 8, 6th; 14, 7th; 12, 8th; 7, 9th; 10, 10th; 2, 11th; 7, 12th; 4, 13th; 6, 14th; 2, 15th; 2, 16th; 4, 17th; 3, 18th; 1, 19th; 2, 20th; 1, 24th; 1, 25th; 1, 27th; 1, 31st.

Of the 75 deaths, the following number died on the days specified: 15, 1st day; 10, 2d; 16, 3d; 8, 4th; 15, 5th; 2, 6th; 3, 7th; 2, 8th; 2, 10th; 1, 13th; 1, 21st.

Although it is my intention to confine myself principally to the consideration of the treatment of yellow fever, there are many points of great interest bearing directly, or indirectly, more or less on that important subject, and, thus early, I think it proper to state that, whether the opinions entertained and expressed, are

acquiesced in or not, those opinions, or, as I believe, those facts have been forced upon my mind, by bed-side observations, and serious reflection, resulting, in no small degree, from the great loss of life among those, of at least, ordinary health and strength of constitution, at an age, when, with reason, it might be supposed that the human system could more generally and successfully resist the morbid influence of the powerful, though unseen poison.

A firm believer in the controlling power of appropriate judicious medication, to successfully combat a disease universally acknowledged, and proved at the bed-side, to be under all circumstances most dangerous and treacherous in character, I sought first, to be able, from the recorded observations of others, to decide upon some general course of proceeding, which might have received the approbation of at least a portion, if not of a majority, of the members of the profession, who had enjoyed so many opportunities during the numerous epidemics, to decide upon that important point, and so confer a boon upon their successors. Where could such be found? The remarks of the late Professor J. Harrison, correct and replete with sound practical doctrine, as they are acknowledged to be, did not meet my wants. Expressing the opinion of an individual who yields to no one, in the high appreciation of his profession, I withhold not the remark, that the impossibility of finding a well digested course of treatment, for the ordinary run of cases, clearly laid down, redounds not greatly to the credit of the passed veteran M. D.'s of the by no means unfrequent epidemics. Feeling the want of such a digest, the great work of La Roche, as well as what has been recorded in our own medical journals,

were carefully perused, and there was found truly a mighty mass of conflicting opinions upon all practical points, rendering the arrival at a fixed decision, as to the best course to be adopted, to meet the various indications pointed out by the symptoms, utterly impossible. Can it be said with truth, that the above remarks do not apply to many of the M. D.'s of the present day, who learnedly and lengthily write about the inscrutable first cause of yellow fever, without scarcely touching the only part of real importance to the profession and the community, the most appropriate course of treatment to be pursued under ordinary circumstances.

The following remarks, by Dr. M. Morton Dowler, substantiating my views, I notice with pleasure :

“A three-fold purpose presents itself to the mind of every physician in this city, to write and publish all he knows, does, and believes, in relation to the disease, however discordant and opposite may be the deductions which may result, namely: First, he owes it to the medical profession at large, who are immediately and specially interested, and who naturally expect us of the city of New Orleans, to thoroughly investigate and probe the subject to the bottom. Again, circumstances such as these, the yellow fever, should be the grand and engrossing medical topic of the day ; and every physician amongst us should be considered as failing in duty, who fails to contribute to our recorded stock of knowledge, in relation to this disease.” Additional remarks of similar import, from the same source, could be given.

Mark what Dr. J. Harrison says: “Hence the causes of this disease, its pathology, and the methods of treating it, become of immense importance to the public,

and hence, too, a duty rests upon those who have seen much of the disease, to impart their experience."

Remarks of similar import, made by Dr. Merrill, in an article on the yellow fever, at the Bay of St. Louis, in 1820, are to be found in the number of the *New Orleans Medical and Surgical Journal* for July, 1851.

It is more than probable, I may not succeed in filling the assumed void, but, having enjoyed a fair opportunity of combatting the enemy, it will be my aim to perform the duty to the extent of my ability, and earnestly request the many, equally, if not more capable, to surpass these humble efforts in so good a cause.

With a firm belief, that, successfully, and with some certainty, to conduct a case of yellow fever through all its stages, very much is required, in addition to, and commenced simultaneously with the medicinal treatment strictly so called. I make no apology for offering additional remarks, as proof, that the opinions enunciated, have been, and are now entertained by others of note. To combat a deeply rooted, and in my opinion, a fatal prejudice, is, I am well aware, an arduous, and not very enviable undertaking; but, fortified, as I hope to prove I am, by high authority and the laws of nature, I fear not the result. The essence of the whole subject is embraced in a few words. Are the principles assumed, right or wrong? If right, who shall say, the result will not redound to the welfare of those who may be induced to cast their lot in this city, and as a general law require an acclimation?

With unfeigned satisfaction, I extract the following remarks, peculiarly appropriate to this portion of my subject, from an article on Refrigeration in Ardent Fevers, in the number of the *New Orleans Medical and*

Surgical Journal for September, 1856, by the indefatigable and learned Bennet Dowler, M. D. This article I did not see or read, until after having commenced these remarks, and I cannot but regard the coincidence of opinion, on such important points, as enhancing greatly their value.

“Refrigeration harmonizes with most theories of the treatment of fever, in all of which, whether primary or secondary, free caloric must act mechanically, chemically, morbidly, and fatally, as is well known from experiments upon animals, in which it proves fatal when augmented from 10° to 15° beyond the normal standard. The animal metamorphoses, decompositions, recompositions, and the many altogether new changes, which the organism must undergo from such an all-pervading and all-powerful agent, are great, paramount, and even in a physical point of view, comprehensible. Every tissue, every atom, every normal chemical combination, whether gaseous, liquid, or solid, must be presumed to undergo deleterious alterations from a great morbid heat. Normal physiology, and physics too, indicate the great principle of refrigeration beyond mistake, and an enlightened pathological physiology must accept it as fundamental in the therapeutics of maladies which are characterized by an unnaturally high temperature, as ardent fevers, etc. Many of the phenomena attendant upon these maladies, as they progress, when left wholly to nature, together with most of the remedies applied by art, combine to prove that the removal of morbid heat is a grand desideratum.” Alluding to Thompson, or his theory, Dr. D. says: “He also used steam, a purer and better article than the steam of the patient’s body, *inclosed in the bed clothes, so much relied on by some in*

New Orleans." "It is well known that a high humid heat is far more oppressive, unendurable, and irrespirable than a dry one of the same temperature. A man immersed in boiling water, and in water even at a temperature much below that, is instantly killed; though a dry air, heated two or three times hotter, has been frequently borne for many minutes without injury. Steam of a high temperature, like hot water, is injurious, fatal. *The hot steam of perspiration confined around the body by blankets is more pernicious than ordinary steam of the same temperature, inasmuch as it is loaded with a most deleterious gas, namely, carbonic acid—a cutaneous excretion—thrown off from millions of pores. That carbonic acid gas is eliminated from the skin, has been proved by direct experiment, by inclosing a limb in an air-tight vessel. It must be observed that this hot steam, or air, saturated with humidity, and deleterious gases confined around the body, prevents the aëration, or oxidation of the blood, which, to some extent, is carried on by this tissue, the cutaneous, as in some of the inferior animals. An impermeable varnish placed on the skin soon proves fatal to animals, as proved by many experiments. Air, garments, sheets, and blankets, saturated with humidity, and confined around the body, so far from increasing, diminish, and would wholly stop perspiration, or evaporation, just as in the case of an impermeable varnish were the saturation and confinement of the air complete. The illusory appearance of wet garments, as indicants of abundant perspiration, misleads the unscientific observer. These garments once wet, would be always wet, were the air wholly excluded. A free current renders perspiration invisible, though not the less real for that reason.*

Sensible perspiration thus becomes insensible, passing off, unseen, in vapor. Dry garments, and warm, dry, free air, may lessen apparent, not real perspiration. The fundamental idea, in the popular mind, that sweat and wet, perspiration and water, are synonymous terms, is a fallacy, which the medical profession should not countenance. The artificial application of heat may increase sensible perspiration; but the hot, forced sweat, thus excited, as it is sometimes in yellow fever," [almost invariably, E. J. C.,] "which, in the early stage, is one of the hottest diseases known, is generally mischievous, often resembling that malignant form of yellow fever, in which the patient, from the first hour of his disease, until his death, is bathed in a hot perspiration, the heat declining but little, even in *articulo mortis*. For, although the general tendency of perspiration be refrigeratory and curative in yellow fever, yet heating measures to excite it during the hot stage of the disease, augments the danger upon the whole. The forced sweating not neutralizing the new element of mischief, introduced and combined with the preëxisting preternatural temperature inherent in the malady itself. In these persistent hot cases of yellow fever, nature generally sets up the sweating and *evaporating* process, which is favored upon physical principles, by free ventilation in warm, dry, lively currents of air, unless the body be almost hermetically sealed in blankets, non-conductors of heat.

"Among the most efficacious of all remedies for the treatment of the early and middle stages of ardent fevers, are, *free aërial currents, and cold water*. The application of these remedies, of course, requires skill and discrimination, yet owing to their cheapness, simplicity, pleasantness, to prejudice or some other cause, they are

not only very often repudiated, but very opposite methods and agents are substituted in the treatment of febrile maladies. In New Orleans, the refrigeratory treatment is underrated, not a few patients being treated by other means, chiefly in yellow fever, as hot mustard baths, *warm drinks, blankets tucked around the body to exclude the air, closed windows, etc.* This practice, which, it appears, *originated with a portion of the medical faculty, has, during the late epidemics in New Orleans, taken a deep hold upon the minds of many, insomuch that the writer*" [Dr. B. Dowler] "*has, in his own practice, in some instances, been unable to carry into effect a better mode of treatment, even in the hot stage of yellow fever.* In fact, he has found patients willing to take any drug he might prescribe, who, nevertheless, refused to change their wet body linen and sheets, for a week, who wrapped themselves in blankets, who hurriedly put out their wrists, in order that their pulses might be felt, returning the same quickly under cover, lest the sweating should stop, who, *instigated and advised, by their deluded friends, allowed no windows to be opened, nor cold spongings to be applied to the skin, nor iced drinks to be taken.*

"Candor obliges me to say, that a fair proportion of patients thus refractory, as it respects purity of air, light covering, sponging, etc., recovered, nevertheless. Nature, instinct, and feeling, are not always wrong. Nothing but a hope, or belief, that heavy coverings of blankets, or of feathers, are necessary to the patient's cure, reconciles him to bear them during the hot stage of fever.

"In some instances, however, when the physician is prejudiced against ventilation, but not against cold beverages, the latter serve to lessen the increased heat

from excessive coverings, and the absence of free ventilation, by their refrigerant action in the centres, and by their secondary action in the form of both sensible and insensible perspiration, or transpiration from the surface. *Nature is great*, and seeks to compensate herself on many occasions in the sick room, *in despite of false theories and bad therapeutics.*

“The impure air, originating from dense masses of human beings, whether in palaces, jails, ships, or camps, is, when not removed by ventilation, known to be the antecedent, or cause of typhus fever, etc.; and how can it be dispensed with, or substituted by drugs, its opponents have not explained. *Exclude all air from a room, and its inmates must inevitably die*, with a rapidity proportioned to the area and the number of individuals, just as in the case of the men confined in the Black Hole of Calcutta.

“Experimenters find that both carbonic and nitrogen gases are parted from the system, through the skin, by the sudoriparous glands. And it is highly probable that the poisonous agents, the *materies morbi* of diseases are, for the most part, eliminated from the skin, in the form of sweats, gases, odors, eruptions, etc.

“Those who have no faith in the existence of perspiration, which they can neither see nor touch, should know that experimental physiologists have obtained data, by which they are able to estimate the actual weight of matter parted from the body in health by aëriform exhalations, etc., chiefly from the skin, at about five pounds daily, and this, too, without it may be, the appearance of liquid sweats, or wet garments. Among those attacked in the great epidemic of 1853, from personal experience, among patients under my care, or seen

in consultation, a considerable number had spontaneous, profuse, hot perspirations, through the whole course of the disease, which saturated their garments, beds, and bedding. In a few instances, my authority was wholly insufficient to cause these latter to be changed during the entire course of the disease.

“Neither could I induce the friends of the sick to permit the access of pure air from without. Deprived of ventilation, these patients respired foul air, and also, weltered in clothes, and skins loaded with viscous, oily, acid, saline matters, and cuticular exfoliations, originally parted from the body as effete or deleterious, but which, nevertheless, were carefully confined around their bodies, for fear the sweat should dry up. *Effete deleterious matter thus confined in a liquid or humid gaseous form upon the cutaneous surface, would probably, to some extent, undergo reabsorption.* In the first decennium of the present century, Prof. Mussey found, after immersing himself in a madder bath, that for the two following days he had plenty of madder in his urine. An infusion or cataplasm of tobacco applied to the skin, speedily produces severe nausea, prostration, fainting, vomiting, etc. All know that not a few articles of the *Materia Medica* act through the skin, upon the whole system, as belladonna, cantharides, etc. Hence the term, endermic medication. Medicines and poisons enter the economy by pulmonary inhalations; the deleterious exhalations discharged from the lungs of patients, in close, unventilated rooms, and in hospitals, reënter the system by this same route, which, upon every rational principle of analogy, not to say direct experiment, must be injurious to both the sick and the well. The inhalation of effete gasiform animal matter is a most un-

favorable but unavoidable circumstance incidental to crowded hospital practice.

“Sponging cleanses the skin, keeping the outlets of the sudoriparous ducts open, thereby favoring the escape of sensible perspiration, which facilitates the discharge of oily matter from the sebaceous glands, promotes the elimination of carbonic acid, and perhaps also, the deleterious principle which constitutes fever, *per se*, or its *causa vera*.”

Thus far we have a series of undeniable facts, recorded by the well known editor of the N. O. Med. and Surg. Journal, which cannot fail to receive the most serious consideration from every member of the profession. The following will be found equally conclusive upon the important subject under consideration :

In the number for March, 1856, of the N. O. Med. and Surg. Journal, in detailing the general plan of treatment adopted by Prof. Shanks, of Memphis, (Tenn.), during the epidemic of 1855, the following language occurs, which, from its appropriateness to the main object of this part of my subject, I consider well worthy of extracting. “*The encouragement, or production of perspiration, during the stage of heat and excitement, by hot diaphoretic drinks, wrapping up in blankets, and keeping the room heated and confined, was soon found to be most decidedly injurious. The morbid heat was thus retained, and the excitement, restlessness, pain and exhaustion, greatly increased, without any compensating benefit.* Some of the most favorable recoveries occurred, when the liver and kidneys acted well, without any greater action of the skin, than the insensible perspiration, and a gentle moisture.”

Be it remembered, that the mode of treatment which, upon trial, had to be condemned, as prejudicial, *had been*

imported from New Orleans, which might reasonably have been regarded as the *fons et origo*, of correct treatment, due regard being had to the many opportunities of treating the disease, the physicians of our city had enjoyed for so many years.

Under the head of Treatment, in the work of Dr. LA Roche on Yellow Fever, are found the following extracts:

“Cool Air.—There are few physicians, conversant with yellow fever, who have not had ample opportunities of appreciating the advantages of placing the patient under the influence of cool or fresh air. The good effects of it, during the epidemic of 1793, were, according to Dr. Rush, obvious in almost every case in which it was applied. *It was equally proper, whe'her the arterial system was depressed, or whether it discovered in the pulse a high degree of morbid excitement.*

“Dr. Griffiths furnished a remarkable instance of the influence of cool air upon the fever. Upon my visiting him, on the morning of the 8th of October, I found his pulse so full and tense as to indicate bleeding; but, after sitting a few minutes by his bedside, I perceived that the windows of his room had been shut in the night by his nurse, on account of the coldness of the night. I desired that they might be opened. In ten minutes afterwards, the doctor's pulse became so much slower and weaker, that I advised the postponement of the bleeding. The cool air was improper only in those cases where chilliness attended the disease. Dr. Cathrall says that the chambers of the sick should be spacious and airy, kept cool, and frequently sprinkled with vinegar. Great attention, adds Dr. C., should be paid to these circumstances, as they are of infinite importance to those who frequent the apartments of the sick,

and are highly *conducive to the cure of the disease*. Dr. E. H. Smith found the same benefit to accrue from this means in New York, during the epidemic of 1795. The advantages which resulted were," he says, "universal and wonderful." To this end, the sick were ordered to be placed *on a hard bed, with very little covering, in the middle of the room; and the doors and windows were, as much as possible, kept open day and night*. In all the stages and circumstances of this malady, of whatever form, says Dr. Dickson, *we must give the sick man fresh air*. If his apartment be *close and unventilated, he must needs die*. Similar observations, continues Dr. La R., have been made elsewhere, whether within, or beyond the tropics, and to enhance the effect, it is often found advantageous to sprinkle the room floor with water alone, or mixed with vinegar. The results are the more marked, when the air is not only cool, but also when it is pure, its renewal unimpeded, and its circulation free. *For this reason it is, that the mortality from the fever is greater where these advantages cannot be obtained*. Hence the practice, in the West Indies and elsewhere, of removing the patients from the hot and confined localities, to spots *where the air is cool and pure, and the ventilation as complete as possible; or, where such changes are not attainable, to place them, if possible, in an upper and well shaded room*.

"The necessity of these means has long been recognized. In these matters, as in most others, there is nothing new under the sun. Galen, some two thousand years ago, in treating of the synochus, directed the apartments of the sick to be kept cool, and well ventilated, and to have the floors sprinkled, and rendered fragrant by means of suitable flowers."

Dr. La R. cites his authorities for the above facts.

“ Now, if a comparison be justly drawn between the above unquestionable natural rules, *life-aiding* they may properly be termed, as being strictly in accordance with the laws of nature, reason, and common sense, and those customs, so long stereotyped in the city of New Orleans, excessive covering, close rooms, and doors, and even the crevices stuffed, no less properly termed, Death-assisting aids, is it to be wondered at that the difficulty of successfully treating yellow fever has been great, or that the mortality has been excessive, far beyond what would reasonably be expected, seeing that there always are, in every epidemic, very many cases of a mild type, which do, and will end favorably, without much medication, provided the laws of nature are observed, and the real necessities of the case in hand be looked at and closely watched, all, without so much ado about incessant nursing? and is it not a fact, that some do recover, in spite of all obstacles, even that most reprehensible of all, the abandonment of the case, as hopeless, by the medical attendant before death has occurred, as though the wonderful power of nature, in its proper acceptation, was not behind the curtain? Is not the assertion an almost demonstrated fact, that thousands, aye, tens of thousands, have been immolated upon the altar of erroneous opinions, and the practice deduced therefrom? I need not be told that I have drawn a fancy sketch, for I speak that which I do know, and have seen. All know, that in the main, the allegations are true, and, if necessary, the most abundant proof could be adduced, even from non-medical observers and thinkers, of the self-evident fallacy of excessive covering, and seclusion of fresh air, in the treatment of yellow fever.

Having sufficiently dwelt on the preceding vitally important subject, may I not hope, satisfactorily? I now direct attention to another, scarcely inferior, and intimately associated with any plan of treatment which may be decided on, as best calculated to lead a case of yellow fever, or the various symptoms therein presented, to a successful termination.

The subject alluded to, is the nursing of the patient, with suggestions as to the propriety, or safety of admitting friends, acquaintances, or visitors, to the chamber of the sick, during the progress of a case of this fever. Known, and recognized as a fact, beyond cavil, that, at the commencement, or forming stage of yellow fever, in the majority of cases, it is absolutely impossible for any one, however experienced he may be, to foretell what course it will pursue, whether it will pass quietly and slowly, without much suffering, to a speedy and happy issue, or whether, after having first appeared in a mild form, it may, unexpectedly, and suddenly, put on the most dangerous symptoms, possibly, setting at defiance the highest medical skill. Fortifying my assertions, or opinions, by the remarks of others, well known to the profession, the following is from the pen of Dr. M. M. Dowler, who says: "We have no means of rendering an unprotected person, insusceptible to the disease, nor can we subject him to any process that shall determine, and secure him in advance, a milder attack of the disease. Individuals awaiting an attack of yellow fever, surrounded by all the resources known to art, can have no assurance, as to whether their cases shall be so mild, as to yield to the therapeutics of nature, or so deadly, as to defy the power of medicine." As no one who has seen much of yellow fever, can ques-

tion the possibility of this uncertainty in a matter of great moment, how manifestly important becomes the subject of nursing? All, the faculty, as well as the public, are well aware, how essential good nursing has been, and is regarded in the City of New Orleans, and in this belief I most heartily coincide.

Adopting, as do many of the faculty, ably seconded by so-called nurses, the erroneous practice of excessive blanketing, and the exclusion of fresh air, ought it to be considered a matter of astonishment, that, with the body at an elevated, or febrile temperature, it is found impossible to keep the clothing constantly adjusted around the body, without the unceasing aid of the nurse, for nature will speak, by kicking off the covering? Now, if such interference is essential for the safety of the sick, which unequivocally I deny, what can result, but the constant annoyance of the patient, and generally, an increase of the existing fever? What but injury can result from such a course, scarcely to be believed, if not known to be a fact! From personal experience, I do know that this irrational and murderous course has been regarded, and acted on as the law, and even at this distant period, it is not without a shudder, that I revert to what I was forced to endure, when passing through a most violent attack of yellow fever in 1839, an attack rendered what it was, by what I shall ever regard as mal-practice.

In reference to nursing, the adage, that one may have too much of a good thing, all, at some time, must acknowledge the truth of. My ideas of a really good nurse are, that she strictly carries out all the directions left by the Physician, and nothing more. Whether this is always observed, and whether all self-styled nurses are

really such, let others judge, I have not found them so. For the fifteen beds in each of my wards, with from ten to twelve patients under treatment, I had but one, with at times, the assistance of a convalescent. I do not mean to say, that was sufficient, but I do say that my patients were well and properly nursed, by that individual doing his duty, and all that I required.

On the other hand, condemning any imprudence, by adopting the opposite rational, because natural course, which allows the real sufferer to think a little for himself, as to the quantity of clothing and fresh air adapted to his feeling of comfort, when scorched by the fever; and this ought to be regarded as the only true guide for such matters, for an individual in his senses; does it not follow, as a necessary consequence, that the nervous irritability, so constantly present in the febrile stage, often continued throughout the disease, will become tranquilized, other symptoms ameliorated, and who will venture the assertion, that the appearance of many dangerous symptoms would not thus be prevented? Is it not a legitimate assertion that in gaining such self-evident advantages, the necessity of the customary, unceasing watching on the part of the nurse will be greatly lessened, and the not unfrequent changes in the disease materially diminished? Acknowledging in all sincerity, my high appreciation of the real benefit resulting from the attendance of a good and faithful nurse, more easily talked of than found, during an epidemic, there is no question in my mind, that the majority of hired nurses, notwithstanding the five or ten dollars a day, more frequently consult their own ease and comfort, rather than the welfare of the sick under their charge. The self-sufficiency, or officiousness, of many hired nurses, as

well as of not a few falsely called friends, is manifested in many ways, almost always to the detriment of the patient. It is unnecessary to enter into particulars. The remark, however, of one of our most experienced physicians, who had attended about one hundred cases of fever, during the recent epidemic, will show that similar opinions are entertained by others, competent to judge, and express an opinion about the subject. Said he, "as regards the generality of self-styled nurses, in yellow fever, I would prefer an ordinary field hand, who made no pretensions, but who would keep awake, and strictly obey all the directions left for her guidance." Believing that the main object in alluding to subjects of such real importance, will be equally, if not better attained, by giving a few directions for the proper management of the sick room in yellow fever, rather than by complaining of what, in justice to all parties, I deem the results of thoughtlessness, I append the following:

The first direction is embraced in the remark, that, in the treatment of any serious disease, more especially, one, at times so violent in its approach; frequently, so rapid in its career, for weal or for woe, as yellow fever is known to be, there should be a strict observance of all directions given by the physician in attendance. The fact should be not only distinctly recognized, but constantly kept in mind, and acted on, that, as far as human means are concerned, the life of the patient is under the charge of the physician in attendance; with, and upon him, rests the responsibility, and he can only predicate his hope of success in the treatment of the case, on the faithfully carried out instructions which have been given.

2d. Who will question the fact, that the best of all

nurses, is the wife, the sister, or a real friend, assisted, it is true, by a nurse, thus combining feeling, with the labor necessarily attendant upon the treatment of the case.

3d. For reasons too obvious, to need explanation, there should be as little talking in the room as is consistent with the necessities of the case. Hence, the importance of there being in the sick room but one, or at most, two persons, for it has frequently been confessed by the sick, that, but for the too much whispering, many a doze would have been enjoyed, thus, unintentionally, no doubt, interfering with the real well-being of the sick friend. It should always be borne in mind, that a sweet sleep, if only for an hour, not unfrequently proves sufficient to turn the scale in favor of recovery.

4th. As a necessary consequence of the above, no friends or acquaintances, should desire, or be allowed to enter the sick room for any purpose whatever, for who knows not, even supposing no talking to be done, that more or less excitement is almost invariably the result. The mere standing at the bedside is exciting to many, and should be avoided.

5th. As far as practicable, whatever may be required to be prepared for the sick, the process should not be carried on in the sick room. If unavoidable, a screen is very useful in many ways.

It is possible that a few may offer objections to such, apparently rigid directions, but believing, from what I have seen and heard, that positive injury has resulted from their non-observance, I am sure all will admit the propriety of adopting the safe course. By such means it is not impossible that we may find the disease to be more under the control of human means, and as a

- natural consequence, the dread of an attack of yellow fever, become materially lessened.

Having upon the above important points said all that seemed called for, or was necessary, to convey my views clearly, not wishing to be misunderstood upon matters of no mean value, if the desire exists to make the fever more amenable to treatment, I pass on to the consideration of a few points, not devoid of interest.

What is yellow fever?

To give a satisfactory answer to this question, I will first state the definition given by Fordyce of the word "fever."

"Fever," says Dr. F., "without alluding to any particular form, is a disease that affects the whole system; it affects the head, the trunk of the body, the extremities; it affects the circulation, the absorption, and the nervous system; it affects the body, and likewise the mind. It is a disease, therefore, of the whole system, in every kind of sense. It does not, however, affect the various parts of the system, uniformly and equally; but, on the contrary, sometimes one part is affected more in proportion to the affection of another part."

If, to the above attributes of fever, all of which, the disease under consideration, possesses in a marked degree, we add the facts, that the stomach and kidneys are more prone to manifest the poisonous effects of the first cause, at a much earlier period; that the disease is more violent and dangerous, as to symptoms and effects, with a tendency to a fatal termination, more rapidly and certainly, than, as a general rule, is found to be the case in the ordinary course of any other fever, the question as to what is yellow fever, may be considered answered.

In reference to the particular type of the fever, during the past epidemic, it was regarded as a continued fever, of one paroxysm. In all respects, in my opinion, yellow fever is to be looked on as a disease, *sui generis*, differing in so many essential points from the bilious, the remittent, or the intermittent fevers, that I could regard it in no other light, although, from incidental circumstances, it might have, in a few cases, put on some of the characteristic features of those forms of fever. To my mind, it is impossible to find in any other fever, however severe the type, such an assemblage, or variety, of the most dangerous symptoms, at as early a stage, frequently, and most unexpectedly ending fatally, without the slightest hope of affording relief; the idea of affecting a cure would be a pure absurdity.

During the continuance of the epidemic, so frequently were the following facts observed, appearing to have a direct bearing on the mooted point, the part first affected in an attack of yellow fever, that, in my opinion, their importance deserves attention.

Many were brought into my wards, complaining solely of a feeling of great soreness of the whole body, or in some cases of certain parts only, the back and lower limbs; headache was present in the majority, though absent in some; there was no evidence of fever, as indicated by the pulse or skin, there was an absence of the injected and peculiar appearance of the eyes and face, so constantly present as to constitute it the pathognomonic sign of yellow fever, which, when absent, would cause great doubts as to the genuineness of the attack.

In the absence of almost all of the more usual symp-

toms of the first stage of yellow fever, while good reasons existed for its being such; in an embryo state, I uniformly was satisfied to prescribe one or two modified blue pills, followed in two or three hours by a moderate dose of castor oil, one or two tablespoonfuls, with, if required, in a few hours, an injection of salt water, to insure a free action of the bowels. This ordered, I would wait until the following morning, or evening visit. At the next visit, how manifest the change! how clearly marked and fully developed all of the characteristic features of the fever! The eyes presented their significant appearance, more closely resembling those of one just out of a drunken debauch, coupled with a slightly dirty yellowish tinge of the white. The headache was far more severe, and always present, the face more flushed, or red, the skin intensely hot and dry. Now there could be no mistake; and to what conclusion could I arrive, but that the nervous system was the part of the body first acted on by the invisible poison, which had so mysteriously and powerfully impressed the entire system? The nervous system, once impressed, who will affix a limit to the velocity with which subsequent impressions shall pass from that system to the blood, and upon it exert its most powerful influence? This secondary effect produced, what is there to protect any one of the vital organs from the destructive agent, now coursing rapidly throughout the whole system, selecting any weak organ, upon which to expend its poisonous influence? Who can prove the contrary?

Subsequent events, developed during the treatment, throughout the whole course of the fever, fully satisfied me of the necessity of closely watching the frequent and various manifestations of the nervous system, and

as far as possible, to endeavor to control them by such remedial measures as might have been indicated in each case.

“The nervous system,” says Dr. J. Harrison, “is particularly liable to derangement in yellow fever ; the most fatal of all the symptoms are those which indicate affections of the brain.”

Not irrelevant to the disease or the treatment, I consider it proper to state, that frequent opportunities were presented, during the epidemic, of noticing an affection of the whole system, which, not only in hospital but in private practice, has been of frequent occurrence at all times, and irrespective of other diseases, an affection not admitted into the catalogue of positive diseases, although well meriting specification as such. I allude to bilious derangement, which existed to a greater or lesser degree, in quite a large number of the cases of yellow fever, brought into my wards. As a complication, it plays a most important part ; but in no one instance were effects produced calculated to induce the belief that the important organ, the liver, was in any way or degree more than functionally deranged. As a purely functional derangement, it was regarded as performing a very important *rôle* in the grand assemblage of the symptoms of yellow fever, demanding for itself a particular treatment, because of indirectly exerting a most powerful and baneful influence upon the fever itself, and materially interfering with the administration of the remedies considered appropriate for the judicious management of the main disease, the yellow fever.

With the exception of the above derangement, I have seen no reason to believe the liver to be an organ seriously, if at all, impressed by the poison, or first cause,

which opinion is substantiated by the following remarks of Dr. J. Harrison: "As for the liver, the symptoms of the disease, throughout its whole course, as well as post mortem examinations, show that it is by no means particularly affected." And again: "I have never seen any lesion in this organ which could be attributed to the effects of the yellow fever."

Jaundice.—Of this peculiar yellowness of the skin, generally termed jaundice, which no doubt does in some cases result from bile, there is reason to believe that much more frequently it is to be considered the effect of a morbid condition of the blood, although practically I do not regard it of much importance. Jaundice in yellow fever is represented by most authors to be of frequent occurrence; in my wards but few instances occurred, which I attributed to the general course of treatment pursued. By far the most severe and general case of jaundice occurred in a man who had a relapse of the fever after having been fairly convalescent for about a week. He was walking about the ward, gaining strength by means of diet and tonics, the bowels were regular in all respects; yet, when least looked for, he had a relapse, which proved more severe and dangerous than the first attack, by no means mild in character.

Tongue.—In reference to the appearance of the tongue, so entirely different did it present itself, that no especial value was attached to it, as a sign of the disease. Most generally, it was heavily coated, of different thicknesses and color, at times red and dry, and occasionally quite natural in appearance. "In truth," says Dr. Harrison, "those who see much of yellow fever, soon learn to distrust the tongue in their diagnosis."

Restlessness, to a great degree, was noticed in the majority of cases, and it was observed as a prognostic fact of no mean import, that those who remained perfectly tranquil, uniformly passed through the disease with few if any draw-backs. In several cases of a most violent grade, this fact was specially noted.

Delirium was of rare occurrence, but when it did show itself, as a general rule, it was found a most dangerous, and generally, a fatal symptom.

Hiccup.—This truly distressing symptom, fortunately occurred in but four cases. It is to be looked on as a very dangerous attendant, generally of fatal augury, and always adding to the difficulty of the case.

Urine, suppression, or retention of.—But two instances of retention of urine were observed in the whole number of cases, and not one of suppression, at least in that stage of the disease when looked for, although in those cases of severity, which from the first offered no reasonable ground to hope for relief, it is presumable that suppression may have existed. In consideration of the few cases in which any obstruction was observed in the free and regular secretion and discharge of urine, I am forced to believe that such immunity was the result of the free use of iced drinks, the other remedies employed, and the small amount of covering allowed.

The Pulse.—In general, the fever being well established, the pulse has been found full, varying in hardness, and frequency to such an extent that to it alone, I confess, I did not attach as much importance, as I know it is most generally supposed to possess, but taken in connection with all of the other symptoms, it is entitled to a diligent attention. One fact in reference to the pulse was perceived, and in every case particularly watched.

It was, that however hard and full, it was with ease compressed by the fingers, showing that it did not resemble the full hard pulse of other fevers. It was an apparent, not a real force, which in most cases, after twenty-four hours' treatment was found less frequent, hard and full. There were but two cases of the fever in which I was induced subsequently to believe that the general and local loss of blood would possibly have averted the fatal issue, but in all others however apparent the necessity for the abstraction of blood, subsequent events in a short time fully convinced me that in the yellow fever of this season in my wards, the resort to that remedy as a means of cure, would have proved disastrous. That there may be some cases in which a local determination, especially to the brain, may be so severe that it would be unsafe to dispense with that powerful revulsive, I do not question, but even in those cases I should prefer, most frequently, the free abstraction of blood locally by cups. Close observance of the effects of the disease and the remedies proved the fact, that in a short time the system required all of its physical strength to enable it to pass safely to convalescence, and convinced me that more harm than good would necessarily result from the loss of blood, whether general or local, and according to the ideas entertained of the disease, I believe as a general rule, that great source of depression of the vital force, had better be dispensed with in the treatment of yellow fever, at all times, with the exception of those few cases, which it is admitted may and do occur.

Black Vomit.—This dangerous or more correctly, this almost invariably fatal symptom, was of frequent occurrence in my wards the past season. Often have I

left patients very ill, but without any one especial fatal sign, complaining of no pain in any part, the bowels regular, kidneys acting freely, skin natural, and only a sensation of fullness, or uneasiness at the lower part of the abdomen, not however very sensible to pressure, and indeed considered in a fair condition; at the following visit they would be found dead, having previously thrown up large quantities of black vomit. The quantity in some instances thrown off was very large, three or four basins full in the space of a few hours, and more than once, in cases that had not been in the ward twelve hours. One man who, to all appearance, was out of danger, at least, reclining on his elbow, remarked that he felt no pain—would like a little more diet, and thought he would be able to go out in a few days. In less than six hours he ejected an enormous amount of black vomit, and in a few hours was dead. Truly may this fever be called treacherous. When black vomit occurs at the latter end of the disease, however favorable all other symptoms may appear to be, I doubt if any will recover; but, when it appears at an earlier stage before the system has been excessively prostrated, and this does occasionally occur, I think there are good grounds to hope that by the use of appropriate means it may be arrested, the condition of the stomach upon which it depends—now to a certain extent local—may be overcome and recovery secured. Under all circumstances it is our duty not to abandon any case however apparently hopeless it may seem, until the most conclusive evidence exists, to prove that Nature herself can not interpose her power. Have not cases occurred even with black vomit, other fatal symptoms, and the confession of the physician, that he

could do no more, in which, by the unceasing exertions of the family and friends, a recovery has been finally gained, aided, it is true, by that ever to be recognized, though unseen power of Nature, the true friend of patient and physician at all times? That black vomit does occur in other diseases, of a very different character from yellow fever, and that blood from any hemorrhage passing into the stomach, and there commingling with the acid usually present, will produce real black vomit, are admitted facts; but when the season of the year, with all antecedent symptoms of this fever are taken into consideration, how can we fail to recognize in black vomit a pathognomonic sign of yellow fever? It is well known that the presence of black vomit is not essential to establish the fact of the existence of yellow fever, for in the majority of cases, whether resulting in a cure or death, not a trace is seen, and yet, at times, its presence is necessary in order to determine the true nature of the case of fever which may have existed. Upon the recurrence of the season of the year when yellow fever may be reasonably looked for, should the first cases be of a mild character, so similar in all respects are the symptoms observed to those occurring in any ordinary fever, more particularly if this is severe, that it is absolutely impossible to decide positively whether it is yellow fever or not. Is not that fact proved at each succeeding year? and if further proof be required it can be substantiated by the printed opinions of acknowledged judges.

I allude to this fact for the express purpose of exonerating from censure those who, at some distant place, may for the first time fail to correctly diagnose a case of yellow fever appearing in a mild form. As additional

proof of the possibility of error in that certainty of diagnosis in this fever, so much talked of, let me state that in 1839, in this city, I had an attack of fever, moderately severe in character, after recovering from which it was asserted that I had passed through the yellow fever, was congratulated upon the event, and felt sure of the opinions of some experienced physicians. In about five weeks from that time I was most suddenly seized by the simon pure fever, in its most violent and dangerous form, such as few recover from. For years I suffered from the effects of that true acclimation. Am I not correct in my skepticism as to the unerring diagnostic signs of yellow fever in its forming stage, at least in mild cases?

Facts developed during the epidemics of 1853 and '58, in reference to the important subjects of acclimation, the result of passing safely through a *bona fide* attack of the fever, as well as those connected with individuals who had presumed upon having obtained the same exemption by long residence, require those points to be alluded to. I will first give an extract from the valuable remarks of Dr. J. Harrison, on yellow fever, embodying, as they do, the opinions entertained at the period he wrote (1845) by the majority of the profession. A departure on the part of the disease, during the past epidemics, proves the disease in those years to have been of a more violent character than usual, and that in some respects those recognized facts have been in some measure weakened. Says Dr. Harrison: "The yellow fever attacks only strangers, those born in the city being perfectly exempt from the disease, though it is still a question whether they do not pass through it in infancy. The creoles of the State, residing out of

the city, and never subjected to the disease, are as liable to attacks of as grave a character as those born further north. Upon recovery the citizen is said to be acclimated, and enjoys an immunity from the disease; but this, though general, is not universal, for I have known several who have been attacked a second time. I have never known, however, such cases to terminate fatally. Some persons, also—and those not a very few—pass through the most violent epidemics without being attacked at all, and are then considered fully acclimated. This rule, however, does not apply to those who have remained in the city during what are termed mild epidemics; in other words, those who pass through such epidemics as occurred in 1833, 1837, 1839 and 1841, without an attack, are considered as safe as those who have recovered, otherwise not. Persons coming from cities where the disease prevails, and in this respect, similarly situated to New Orleans, also enjoy an immunity from the disease. The susceptibility to the disease seems to be renewed by long exposure to cold weather. Negroes certainly have the disease in a much milder form than the whites, and the mortality is far less among them. I cannot say that I have observed any difference as regards the sexes, either as to the malignity or the number of the cases. As a general rule, children have it milder than adults.”

During the epidemic of 1858, not a few children of various ages, born in the city, never out of it, had moderately severe attacks of the fever, distinctly marked, and requiring but gentle medication. In one of the cases under my charge, a boy, aged five years, black vomit occurred in about forty hours after the first symptoms, and continued for nearly thirty hours; but

he was finally saved, and is now in perfect health. The particulars to be given under the head of treatment. My impression as to what constitutes a perfect acclimation is, that not only should the attack occur during an epidemic year, but that even then the attack should be sufficiently severe in all respects. *A mild attack, with but slight fever, and the absence of the peculiar eye, may prove sufficient for acclimation; but such an attack, as well as one occurring in a non-epidemic season, should be cautiously and doubtfully recognized as certain, which, in my opinion, is clearly warranted by the experience of 1858.* In fact, I express a decided doubt of a really severe attack, with all of the symptoms well marked, ever having been followed, without regard to time, by a second attack.

There remains one subject in connection with the cause of yellow fever which it may not be profitless cursorily to notice: I allude to the matter of filthy streets and gutters, as an alleged cause of yellow fever in New Orleans.

Coinciding in opinion, in all respects, in the views of Drs. M. M. Dowler and J. S. McFarlane upon that point, I embrace the opportunity, in extracting the following remarks of Dr. M. Morton Dowler, to observe, that I am, and ever have been, a firm believer in the absolute impossibility of adducing a solitary reason in proof of the assertion that so serious an effect could result from such a cause. On the contrary, many localities could be cited, to prove that far more filthy streets and gutters than have been found in New Orleans have a perpetual abiding-place without, producing yellow fever. Such an admission, however, does not authorize the assertion, that because of their unbelief in that cause, they do not on other grounds condemn

such nuisances most strenuously. There can be no doubt, in the mind of any reflecting man, that perfectly clean streets and well watered gutters, combined with an overabundant supply of wholesome water for the free internal, and external use of every one of the population, whether of a large or small city, does and will always contribute, in a great degree, to the formation of a good constitution, and, as a necessary consequence, the blessing of health.

Let those health-preserving measures be properly carried out—let all of our streets be paved with granite blocks, and then finish by having a constant and full flow of water from the inexhaustible Mississippi, through the gutters, and who will assert that positive good will not result—perhaps to the prevention of yellow fever, and certainly to remove from the public mind, a groundless cause of complaint, as far as the fever is directly concerned?

After a due consideration of the above, let us direct attention to the more than possible evil effects resulting from the manner of construction of our numerous frame buildings—or shanties, as some are. The joists, the flooring, imbedded in a wet soil, not an atom of air by any possibility allowed to pass through or over such a mass of filth as is seen, whenever a floor becomes so rotten that it must be removed; add to this the number of individuals, of all ages and sexes, as well as the *remarkable cleanliness* in all respects there seen, and then say, with such an atmosphere as must there exist to be breathed, whether those various combinations of causes are not more reasonably to be considered probably efficient for the production, if not of yellow fever, certainly of impaired health, and a great susceptibility to con-

tract that disease, the true cause of which, it is well to confess, will most probably elude all investigation. Says Dr. M. M. Dowler: "That a concurrence of terrene filth, with certain meteorological conditions, should possess the power of infecting an individual with a given disease, and *never after have that power* over the same person, is at war with all that is known of filth and meteorology, under any possible conditions; that heat, moisture, animal and vegetable putrefaction and exhalation should assume any such condition as to be capable of poisoning but once, is a mere figment of the imagination; that cryptogamic plants, microscopic animalculæ, and non-ozonic air should generate this pestilence, is wholly unsupported by a solitary discovery, and will not bear a minute investigation."

PART SECOND.

In the preceding remarks, it has been my endeavor to prove, that, for the most frequent successful treatment of plain, but well marked cases of yellow fever, uncomplicated by recognized dangerous symptoms, or such as may be considered extraneous to the disease itself, the erroneous, and prejudicial custom of excessive blanketing, in the first and second stages, is calculated to produce positive injury, rather than the benefit hoped for by its advocates and upholders, at least, if my firm belief in that assertion, has been the result of facts, correctly observed, as I know, they have been faithfully reported. Differing *toto celo*, from those acting on principles, in my opinion, incorrect, I desire to be dis-

tinctly understood, on such an important point, as it unquestionably must by all be regarded. It is well known, that in a febrile condition of the system, there is most frequently, a sensation of a nervous chilliness, which renders an additional quantity of clothing more necessary for comfort, than is the case, when the body is in a state of perfect health. This, however, does not justify the resorting to such an extreme point, in the covering, as has been witnessed, and is known to be generally the case.

It is difficult to conceive the possibility of such a cause, truly positive in its character, being merely negative in its effects, while it accords with reason, and my experience, to assert, that it does prove positively injurious, and that in various ways.

Others must judge for themselves, as to the positive effect, that cannot fail to result from this baneful custom, and act accordingly, but let them remember, that the issue is no trifling matter, neither more nor less than the decreased chance for life, of a fellow being.

To my mind, the fallacy of this custom, bears the impress of an established fact, and, certainly, if the subject is viewed solely in reference to possible effects, no one can deny its importance, and consequent demands for serious investigation.

I now proceed to consider other points, having a positive, if somewhat indirect bearing on the important subject, the treatment of yellow fever.

Allusion is made to the different stages of this fever, after describing which, the symptoms appertaining to each stage will be noticed.

Recording facts, observed in my wards, in the Charity Hospital, as well as those occurring in private practice,

during the epidemic of 1858, the various conclusions upon all points, to which I may have been led, are not intended to be applied to facts, observed and recorded by others, touching former epidemics, whether in our own, or foreign lands. Entertaining the same views, which I had previously formed, and published in the Boston Medical and Surgical Journal, several years since, as well of the general nature of the disease, as of the treatment confided on, I aim at giving a faithful statement of such facts, be they acquiesced in, or dissented from. Notwithstanding the commingling of the various symptoms of the different stages of yellow fever, not unfrequently observed, according to my observations, three were so distinctly marked, that they could be viewed in no other light.

First Stage.—By this, is to be understood the inception of the disease, or the premonitory symptoms.

At times these may appear in so mild a form, as to be scarcely appreciated by the individual affected, while, in others, they may be so distinctly, and severely marked, as to preclude any doubt of the system being affected by the fever.

In point of duration, this stage may vary, from a few moments, to one, or more hours, rarely exceeding twenty-four.

Second Stage.—This is most clearly the febrile. This stage may at times, commence almost simultaneously with the symptoms of the first stage, or, which is far more frequently the fact, it follows at the expiration, of from one, to twelve, or twenty-four hours—this last interval, however, being rarely observed.

It is in this stage, the febrile, that towards the latter end, we may anticipate an aggravation of many, if not

of all existing symptoms, as well as the appearance of those still more dangerous, to-wit: increased irritability of stomach, retention or suppression of urine, possibly preceded, or followed by black vomit.

The third stage, is, that, following the greater or lesser subsidence of the fever, or its entire disappearance, the other symptoms assuming a more favorable appearance, and proving the precursor of convalescence, or, on the other hand, the symptoms present, may put on a more serious aspect, the stomach may become more irritable, the kidneys, or the brain, or both organs, may become affected, causing increased anxiety, and rendering the issue of the case extremely doubtful.

It is certain, that, in many cases of yellow fever, the various symptoms of the different stages, do appear in regular succession, but such is by no means the universal law, for the line of demarcation, has been noticed to vary materially, in not a few cases, while in others, the symptoms of the three stages would seem rapidly to run into each other.

In a practical, or curative point of view, the fact of the existence of three stages, cannot but be regarded as of the highest value, bearing, as most unquestionably, it does, on the universally recognized absolute necessity of commencing the treatment, at as early a period of the disease as practicable, after the appearance of the first symptoms, provided a reasonable certainty of effecting a cure is to be hoped for, or entertained.

The foolhardiness, so frequently observed, inducing many thoughtless individuals to neglect a proper warning, it is impossible, too severely to censure and condemn.

It is worthy of remark, that on this point, if, on no

other, touching the yellow fever, a perfect unanimity of opinion prevails with all of the profession.

Most appropriately, in my opinion, as applicable to this part of the subject, may the following extracts from the valuable work of Dr. R. La Roche, on yellow fever, be introduced here, and to be found in the remarks, preliminary to the treatment, vol. 2, p. 629. So truly practical, will these remarks appear to every reflecting mind, that I do not consider it necessary to offer an apology for so long a quotation, convinced, as I am, that my old friend will not object to the use of his pages, considering that the sole object is the hope of doing good, and adding directly to the value (whatever that may be) of the various remarks on the different points of the disease, which will be noticed.

“It is evident then,” says Dr. La Roche, “that experience teaches the necessity of modifying the treatment of the yellow fever, according to a variety of circumstances. But while the propriety of such modifications, is placed beyond doubt, experience teaches also, that notwithstanding all that has been written on the subject, and the ample opportunities for observation afforded by innumerable epidemics, our progress within the last three-quarters of a century, towards any thing like a satisfactory treatment of the disease in its various formidable shapes, has been far from gratifying. The fever, when severe, continues to produce its usual havoc; and on comparing the remedial plans in vogue now-a-days with those suggested by our fore-fathers, we do not find them to differ materially; or, if they do, to be attended with much better success. The disease being the product of a poisonous contamination, it might be expected that the object of the physician

would be the discovery of an agent calculated to neutralize the morbid operation of the causes, and to act in the capacity of an antidote—thus endeavoring to realize in relation to this fever the prediction long ago hazarded by Sydenham, and often since repeated, that the day would come, when a specific remedy would be found for every disease.

“That individuals, in and out of the profession, have entertained a hope to that effect, or have even fancied they had made the discovery, is true; but I presume it is unnecessary to remark, that such expectations have not as yet been, and are not likely to be realized, in our days at least; and that in encountering this formidable disease, we must content ourselves with endeavoring, not to neutralize the poison circulating in the system, but to correct the morbid effects it occasions on both solids and fluids. We must, while watching carefully the course of the disease, prevent undue mischief from being done, especially to organs essential to life. We must keep these organs in as healthy a condition as possible—restore, if possible, equilibrium in the play of the functions, reduce undue and dangerous excitement, general and local, and sustain the powers of life when these threaten to become impaired, or are already reduced beyond the point of safety. But we are forced to confess that beyond this, art is of little avail. The idea of *curing* the disease, or greatly abridging its course, is entitled to little confidence. To nature must be left the chief management of the case; time must be allowed for the elimination of the poison; and the physician must be impressed with the conviction, that, in cases where no marked organic mischief has been done, or is likely to occur, he must keep his hands off, as

much as possible, and restrict his agency to the employment only of such means as are strictly necessary to fulfill particular indications. He must not attempt to do what is more safely done by the recuperative powers of the system, and rest assured that in these, and indeed in all instances, more danger is to be apprehended from too great than too little interference on the part of the medical attendant.

“No one can doubt the propriety of basing our practical method, on broad pathological principles; but in fevers—and in the yellow fever, perhaps, more particularly—the process is beset with difficulties: for though the disease expends its force on particular and important organs, and tissues, and though the main object would appear to consist in restoring these to their pristine condition, or to place them beyond the reach of disorganization, yet, in doing so, we do not attack the other elements of the disease—we do not eradicate the immediate cause of mischief, which, if sought at all, will be found placed beyond a condition of parts, which, however frequently it may present itself, does not do so invariably, and is sometimes, the effect of inflammation, at other times of congestion, combined, or not, with nervous irritation. The great rapidity with which the dangerous symptoms make their appearance, the little time afforded, for preventing their onset, and the great importance existing, of effecting that object—besides the difficulty of their removal, when they do appear, render promptness imperative. At the same time a knowledge of the insidious and treacherous nature of the disease, the great difficulty of predicting, whether symptoms indicative generally of a mild attack, are not soon to be succeeded by those of an opposite kind, and

whether changes calculated to make us hope for a favorable issue are not to be followed—perhaps in a few hours—by others, portending approaching death, should make him constantly attentive to the nature, and succession, of every phenomenon.”

At the conclusion of highly valuable remarks, referring to the various antiphlogistic means of cure, venesection, etc., Dr. La Roche says: “These remarks apply exclusively to the first stage of yellow fever, for experience in every part of the world, visited by that disease, has demonstratively proved, that it is *only during that stage*, and, indeed, during *the early portion of it*, that depletories, sedatives, and evacuants, can be used with any chance of success. Experience has proved also, that, to be productive of most benefit, these means, the first particularly, *must, if resorted to at all*, be so without loss of time; success being proportioned to the earliness of their application; nor is this all, experience has moreover proved, that, though antiphlogistics, may evidently be called for in the treatment of the inflammatory form of the yellow fever, they are not, as a general rule, to be used with the same freedom, as in ordinary inflammations; that, except in cases where the reäction is inordinately high, where important organs are seriously inflamed, or congested, and where the patient is *vigorous, plethoric and young*, and the *recuperative powers* of the system are energetic, it is safer to avoid the use of agents calculated to debilitate suddenly, and considerably, and to trust to milder means; not only because a heroic course—too long in vogue among us, and elsewhere—has not been found to succeed any better than one of a different kind, in arresting the course of the disease, and to do more than afford tem-

porary relief; but because, whatever be the means employed, remission is generally obtained, after a paroxysm of two or three days, and the natural tendency of the case is then to pass to an adynamic, or collapsed condition. In a word, while endeavoring to relieve inflammation, or congestion, we should not lose sight of the imperative necessity of husbanding the strength of the patient, and of avoiding every thing calculated to depress the powers of life, and thereby foster the tendency in question."

SYMPTOMS OF YELLOW FEVER—GENERAL REMARKS.

Of the numerous symptoms, which may appear, during the continuance of a case of yellow fever, of ordinary grade, as a generally observed law, but few, of serious import, comparatively speaking, show themselves at the commencement of the disease.

But for this most valuable acknowledged fact, enabling judicious preparatory treatment to be instituted, adapted to meet the indications presented by the different symptoms, no less than the existing condition of important organs, how far greater would be the mortality from yellow fever, great as that is known to be, even under the most favorable circumstances.

SYMPTOMS OF THE FIRST STAGE—PREMONITORY.

These are frequently ushered in suddenly, the individual often in the enjoyment of apparent perfect health, by a feeling of malaise, a confusion of head, or slight headache, impaired appetite, a sensation of chilliness, alternated with flushes of heat, at times a real chill, or shake, soon followed by a fever, more or less severe. These may either pass by, shortly to reappear, or, as is more generally the case, they may continue, and progres-

sively increase in severity. Pain in the head, back and limbs, which may occasionally prove the first symptoms, are now certain to appear, at times proving very severe, and perhaps more generally complained of, than all other symptoms. At times we may have a general soreness of the whole body, occasionally found to exist as the first symptom, and not unfrequently, known to be present for a longer or shorter time, before others make their appearance. The eyes are, even at this early stage, injected, and unnaturally bright, or shining. The stomach, although at times thus early affected, does not in many cases evince much evidence of being implicated. The bowels are not commonly in any way affected. Unless the stomach and bowels had been previously deranged, knowing that the majority of those attacked by this fever, were at the time, in the enjoyment of full health, I can see no good reason why the stomach or bowels, should necessarily be seriously implicated, at the very commencement of the disease, and such in fact was the result of my experience, in the majority of cases seen at an early stage.

That the stomach is frequently, more or less affected, at the commencement of this fever, is well known to be the case, and has been seen, but was not observed so frequently, as is represented by most authors. For the very reason that such has not been so constantly noticed by myself, I infer that there must have existed some adequate cause, which I am induced to believe was the influence exerted by the preparatory and subsequent treatment employed in all cases, and to be fully noticed under the head of treatment.

All know what an important rôle the stomach plays, throughout the whole course of this fever, for which

reason, I considered it of primary importance to endeavor, at the earliest moment, to place it in such a condition as to enable it to pass safely through its approaching trial.

The symptoms of this, the first stage, whether few or many, may assume every shade of force, from the mildest to the most severe.

SECOND STAGE—SYMPTOMS OF.

Sooner or later, the fever appears, when all of the symptoms, at that time existing, as a general rule, become more intense, the pain in the head, in a marked degree. The injected eyes now present their true pathognomonic appearance. The skin of the body is very hot and dry, with that peculiar burning sensation, irrespective of the degree of fever, by all regarded as peculiar to this disease. The tongue, although more or less coated, generally becomes red at the edges, and dry. The stomach now becomes irritable, even when not so previously, and nausea, or vomiting, or both may be present, to a greater or lesser degree; thirst is almost invariably excessive, and the desire for cold water unceasing.

The pulse, most frequently is full, frequent, and hard; in some cases this hardness is a reality, while in the greater number, it was found to be only apparently so, being easily compressed by the fingers, with but moderate pressure. This fact, so generally observed, as to leave no doubt about it, appeared to justify the conclusion, that it was a deceptive guide, in reference to the propriety of abstracting blood from the general system, unless other symptoms demanding such were present, and well marked.

In reference to the employment of venesection in

yellow fever, while satisfied that there are cases in which it would be incorrect to refrain from its use, there can be no question of the fact, that sound judgment and reflection, are required, previously to adopting it, for fear of consequences not easily overcome. Indeed, it may be questioned, whether in all cases that may appear to require blood letting, it would not be equally advantageous and more prudent, to abstract it by means of cups, which unquestionably do not cause as great depression as when blood is taken from the arm.

I remark, in reference to this febrile stage, that the actual amount of fever, present, whether great or small, whether of usual duration, or more or less prolonged, has not appeared to me to exert a marked influence, either as regards the severity of other symptoms, or the danger of the case.

The fever, after all, is but one of the many symptoms of the fever, and by no means the most alarming, and yet, it is in this febrile stage, precisely in proportion to the character and violence of other symptoms, that we do augur more or less favorably, as to the issue of the case. In other words, if the brain, the stomach, the kidneys, present no alarming symptoms, we may patiently await the subsidence of the fever, by the use of appropriate means, without undue anxiety or alarm.

Satisfied of the correctness of the above remark, I mean not to insinuate that I am either less gratified than my confrères by witnessing a regular decrease of the fever, or that I do not employ all proper means to effect that object, and I am always much pleased to find a moderate perspiration present.

THIRD STAGE—SYMPTOMS OF.

The symptoms of this stage cannot be said to differ from those of the finale, of the second stage—excluding the fever—except in degree, because, it is of common occurrence, for the fever to disappear entirely, and the patient yet be very far removed from safety, or convalescence. On the contrary, all of the other symptoms may continue, as they had been, or, as frequently happens, they may increase in violence, with a corresponding increase of danger.

Hiccup may supervene, hemorrhage from the stomach, bowels, and other parts, may take place; nausea or vomiting, more or less frequent, or constant, not unfrequently attend; the urinary secretion may fail, cerebral symptoms may follow, while, the most unfavorable of all the symptoms, black vomit, may be looked for at any moment. There may not be one single symptom present, on which to hang a ray of hope, all may appear lost, but such may not prove to be the fact, in the case under treatment.

In as much as some few have been rescued from such a supposed hopeless condition, by ceaseless watching, and the persistent employment of appropriate remedial agents, not always medicine, it cannot but be considered the bounden duty of our profession, never to abandon a case, however adverse to hope may appear the actual condition of the case.

It is well known, that the most unlooked for recovery has occurred, and that, in more than one instance, where a fatal prognosis had been given, and acted on, thus setting at naught such an opinion, and wresting from the proper person, that credit, and real gratification, which always result from an unlooked for recovery.

Facts, proving the propriety of such remarks, could be adduced, was it considered necessary, or professional.

From the incessant anxiety felt, and expressed, in cases of this disease, where the fever may continue more or less, beyond the time usually required, the supposition would naturally arise, that, the fever, *per se*, constituted the real danger. Such is by no means the fact, for, it may be correctly remarked, that, the most desperate cases, those almost necessarily terminating fatally, are often, if not most frequently, those accompanied by little fever, and that of a typhoid, or congestive type.

Before commencing the treatment of yellow fever, there are a few preliminary remarks, bearing on that important point, to which it may not be amiss to direct attention. Various have been the methods proposed, and, almost innumerable, the remedies suggested, and employed, for the treatment of yellow fever—a disease, by common consent, acknowledged to be the most insidious, and treacherous, of any, which it may fall to the lot of our profession to encounter. Without referring to the great mortality of recorded epidemics, of past days, in our own and foreign lands, the records of the ravages committed by epidemics during the past quarter of a century, in our own city, sufficiently prove the intractability of the disease, or the inefficiency, or inapplicability, of the numerous methods of treatment, which have been suggested, and had recourse to.

Antecedent remarks, conclusively prove the high appreciation entertained of those more than auxiliary means, so fully alluded to, about which, I conscientiously believe, not one word too much has been said. No one can question for a moment the intimate connection which

the course alluded to bears to the treatment. I maintain the subject to be all important, and as the course condemned, has been for many years, most popular in our city, may I not hope, that what has been adduced, from unquestionable authority, "fortified," if I may be allowed the term, by my own experience, based on observation, will receive that attention which the public have a right to demand.

Look to the subject matter, and not to the manner, in which that may have been presented.

At the risk of repetition, the fact should not be overlooked, that cases of yellow fever are met with, presenting every degree of violence, those, where, from the first moment, the symptoms show such severity, and malignancy, that death must necessarily ere long result; those, more or less violent in grade, in which, a reasonable ground for successful treatment may be entertained, or those so mild in character, so regular in their course, as to require little else than watchfulness, care, and gentle medication, to enable us almost with certainty, to warrant the successful issue of the case. I say, *almost with certainty*, because, it should ever be remembered, that, however mild, the symptoms may appear, a disease exists, which, at any moment, may change for the worse, taxing all the resources of our art to arrest its progress.

In reference to the essence of yellow fever—if that term be applicable—to my mind, it is the same disease, at all times, and in all places, whether annual, or of occasional occurrence, modified, however, to a greater, or lesser degree, by a variety of causes, ever present, and acting, both as regards the true cause, or poison—"be

that what it may"—and the combined influence, resulting from difference of age, or sex, no less than the constitution, or temperament of those liable to be attacked. That different types of this fever, do manifest themselves, at different times, and places, is a well known fact, and that, for each particular type, it will be necessary to modify the treatment, in order to meet the indications presented by the existing symptoms, and the condition of the general system, is equally certain. However unsatisfactory may be the various reasons assigned, to account for such difference, observed in the type of yellow fever, the following extract—the source whence derived, not at hand—appears to explain the subject, in as satisfactory, and intelligible language, as possibly we have a right to look for:

“That the law of the same cause, acting on different subjects, must produce different effects, will explain the various grades in violence of yellow fever, hence, the mild, the congestive, the inflammatory, the cerebral, and the typhoid forms, which the attack may assume.”

To anticipate with reason, the successful treatment of a case of yellow fever, it may be laid down as an axiom, that, the sooner the treatment is commenced, after the appearance of the first symptoms, just to that degree may it be considered justifiable to anticipate a cure.

This opinion is based on the supposition, that the plan of treatment, shall, in no respect, interfere with the general laws of nature, for, among the many sound principles of the healing art, indelibly impressed on the mind, by my venerated teachers, all, except my Father and Dr. Gibson, having paid the debt of nature, I was taught to believe, that no physician has a right to ex-

pect success in the treatment of any disease, with any certainty, if, knowingly, her laws are transgressed.

What are these laws, in the case of yellow fever?

As I have endeavored to read them, their interpretation may be given as follows:

1st. The actual condition of the stomach is to be closely investigated. For reasons, too self-evident, to require explanation, no one can, or will question the important part performed by that organ, throughout the entire course of yellow fever.

How essential then, does it become, at the very starting point of the treatment, to be correctly informed, as to the actual condition of the stomach, whether perfectly healthy, or in any manner deranged, or out of order. The belief is entertained, that, at this point of the disease, it is quite within our power, to make an all important first impression, which cannot fail to exert a beneficial influence over the future course of the disease, possibly, to the prevention of many dangerous symptoms.

2d. The urinary organs, prone, sooner or later, to be seriously implicated, does it not follow, that, even from the beginning, efforts should be made, by mild and appropriate remedies, to maintain their regular functions?

3d. The skin, an acknowledged important emunctory, are there not abundant reasons, why all appropriate means should be instituted, to maintain a *moderate perspiration—allowing evaporation to go on—*without that undue anxiety for a profuse, and long continued sweat, which by some is considered indispensable to the cure of yellow fever?

The fact should ever be borne in mind, that profuse sweating is, not only, not absolutely required, for the

successful treatment of yellow fever, but that, it will not, *per se*, cure a case, be it mild, or severe, and yet, no one can, or will doubt the propriety of procuring, and keeping up a moderate action of the perspiratory organs.

For severe cases, profuse sweating, as commonly produced, by excess of blanketing, is positively injurious, to a certain extent, from being antagonistic to the kidneys, unquestionably of far greater importance, in every point of view.

For mild cases, profuse sweating, is actually uncalled for, but an erroneous custom, almost forcing the continuance of the main producing cause, why should we not look for reasonable effects, in symptoms peculiar to the stomach, and kidneys, and as an almost necessary consequence, the prevention of many cures.

4th. Should the head be violently affected, inflammatory, rather than nervous—the last by far the most frequent—there can be no question, of the necessity of directing our remedies in an especial manner, to such a dangerous condition.

In the present, and preceding remarks on yellow fever, in confining myself exclusively to the consideration of the treatment as carried out at the bedside, whatever remarks may have been derived from other sources, have been considered, directly, or indirectly, as having a positive bearing on that one point.

While recognizing my indebtedness to the different authorities, from whom, I have culled important extracts, now that I am approaching the details of the plan of treatment, as well as of the remedies employed by myself, and which, in my opinion were clearly indicated by the different symptoms actually existing, I

purpose pursuing a plan, to my mind, best calculated to effect the object proposed.

The importance of the subject will be a sufficient apology, for an apparent repetition, which will be observed, but cannot be avoided, for my object and aim is to be distinctly understood.

TREATMENT OF YELLOW FEVER.

In commencing the detailed notice, of the general course of treatment, as well as of the various medicines, which I have employed, it is considered desirable to present a few reasons for the oft repeated assertions, as to the necessity of commencing, whatever particular treatment may be considered applicable to each case, at the earliest moment practicable. They are,

1st. The universally recognized fact, of the intrinsic really dangerous character of the disease.

2d. The frequently observed short duration of the first stage, during which, the necessity of endeavoring to make a favorable impression, is self evident, and can not be too strenuously insisted on.

3d. The proneness of the stomach, to be seriously implicated at an early period, of the disease, no less than the very opposite conditions in which it may be found, clearly show the reasons why its existing state should be closely observed, for the purpose of placing that organ, in as natural a condition, as practicable, by means which must necessarily differ, thus gaining, one or more hours, often sufficient, to turn the scale for good.

4th. The reasonable hope and belief, of the power, to control, or overcome, many of the symptoms of the first stage, thereby possibly preventing the appearance

of one or more of the dangerous subsequent symptoms, reasonably to be apprehended.

5th. The absolute impossibility, of fore-telling with any degree of certainty, what particular type, the fever, soon to be developed, may assume.

The inference necessarily resulting from many of the preceding observations, is, that, the yellow fever may, and in reality does commence, in very different ways, some of the symptoms being of greater force than others, one organ more violently attacked, than another.

Notwithstanding the occurrence, of such oft observed facts, it must be considered, a truly fortunate circumstance, that in the majority of cases of yellow fever, the first symptoms do evince considerable uniformity in all essentials, sufficiently so, to enable a correct course of treatment to be instituted.

As a necessary consequence of the above remarks, the force and truth of which, will scarcely be called in question, it is impossible to believe in the propriety of commencing the treatment, of yellow fever, in an uniform manner, the symptoms actually existing, must be our guide, and not the mere name of the disease.

The peculiarities of this fever should never be lost sight of, indeed, it is these very peculiarities that constitute some of the strongest grounds for many of the assertions, or opinions, enunciated.

In order to present a detailed notice of the course of treatment, as well as of the remedies employed, to meet the different indications, presented by the symptoms of the fever, or an accidental condition of an important organ, I purpose describing under separate heads, cases of actual occurrence.

The First Case.—One of ordinary character, well

marked, in which, one or more, or all of the symptoms, already described are presented, as general uneasiness, pain of head, back, and limbs, impaired appetite, chilliness, alternated with flushes of heat, etc. See symptoms, 1st stage.

In such cases, I have ever been convinced of the propriety, and necessity, of procuring a thorough evacuation from the bowels, to accomplish which, from five, to ten grains of blue mass, are given at once, and in this disease, blue mass, is preferred to calomel, for the reason, that it is less apt to occasion nausea, which, if possible, is always to be avoided. This dose, one or two pills, if desirable to gain time, may be given in two tablesponfuls of castor oil, at once, or, preferably, give the pills first, and the oil in from one to two hours. When, from any cause, the oil cannot be given, or retained, persist not in repeating the dose, but substitute a seidlitz powder, which is to be repeated every hour, or two, until the bowels have been freely acted on.

As a general rule, after the above, in one or two hours, a large cold salt water injection will act beneficially, as well to insure a free action, as to produce its refrigerant effect.

The necessity for further purging can generally be determined, by the character of the discharge, and the appearance of the tongue. Unless clearly indicated, the bowels once, and as early as possible, thoroughly evacuated, there is seldom need for further purging at the time, quietude in bed is required. If considered proper, subsequently to move the bowels, a seidlitz powder, to be repeated according to circumstances, or, a large cold salt water injection, is to be given, and may be repeated more or less frequently, if required. I

am convinced of the real usefulness of injections, in this disease, and, for various reasons, I prefer those of cold salt water, as refrigerant and laxative remedies, in the febrile stage. So really important do I regard the thorough evacuation of the bowels at the earliest period of the fever, that it affords me great pleasure, to fortify such an opinion, by the following from Dr. La Roche, 2, 653. "By the late Dr. Monges, whose experience in this disease was most ample, and whose practical tact was unsurpassed, it is positively affirmed, that, during the whole course of his long practice, he seldom saw a patient die of this disease, whose bowels had been well evacuated, within the first twenty-four hours, after the attack."

A hot mustard foot bath, is among the remedies first employed, and the propriety of using it before, or after, the thorough evacuation of the bowels, may be mooted. If a choice can be had, the action on the bowels, is considered the one important remedy in the first stage, and should take precedence of all others, at least in a case, as is being described. These two remedies may be used simultaneously as far as my observation extends, with perfect safety, and advantage.

The greater, or lesser, uneasiness, or soreness, of the whole body, the degree of headache, and other symptoms, can alone enable this point to be decided on, at the bedside.

I regard a hot mustard foot bath, as a valuable auxiliary, in the first stage of this fever, not so much for its power of producing a profuse sweat, as for its diaphoretic and soothing effects on the whole system, which it is known to exert. Judiciously employed, the more or less frequent repetition, of the mustard foot bath,

may be advantageously resorted to in this fever. I have never seen it do harm, it generally proves comforting, and not unfrequently predisposes to sleep.

While the above are being gone through with, the fever may have appeared, or, possibly, it may have existed, more or less all the time; in either case the following remedy is to be commenced:

℞.....Nit. Potassæ, ℥ii.

Sp. Nit. Dulcis, ℥ii.

Tr. verat. virid. et tr. rad. aconiti ℥ $\frac{2}{3}$.

Liq. Ammon. acetat. ℥vi.

Dose.—One tablespoonful every hour, for three hours, and afterwards, two teaspoonfuls every hour. As a general rule, the dose of this medicine is as above, for adults, although as a matter of course, the quantity must depend on the circumstances of each case.

It was not often, I was obliged to deviate from the dose of two teaspoonfuls every hour, until the fever had disappeared.

From the commencement of the treatment, until the fever has been subdued, not a mouthful of any thing was allowed, for drink or nourishment, except ice water, and an iced solution of gum arabic, in flaxseed tea, or an infusion of elm bark, made more agreeable by the addition of a few slices of fresh lemon peel, with a little of the juice, substituting for those in the hospital, citric, or tartaric acid, as being in reality equally good, but less expensive.

I regard the above fact worthy of particular attention, entertaining the firm belief, that, much more than indirectly, it has a positive bearing on the successful treatment of this disease, particularly during the febrile stage, in which, for obvious reasons, it cannot fail to

produce good effects, as well through the kidneys, as the skin, in both ways, having the power of eliminating the poison, from the system, by no means an unreasonable supposition, even if the power of proving the fact is beyond our reach. I remark, that from the moment I became practically conversant with yellow fever, (the gist of the remark being equally applicable to all really acute diseases), it has been my firm belief, on which I have acted, and still do act, that in the first, and second stages of yellow fever, the above nourishment is all sufficient, for the actual wants of the system, as then existing in a morbid state.

On this point, the entire adequacy of a *very rich* solution of gum arabic, with or without the flaxseed tea, to support the system, through a few days of an ardent fever, as that under consideration, bedside experience forces me to speak of, in the most positive manner, notwithstanding the assertions of others to the contrary, or the innovations recently made by some eminent physicians, as regards the necessity of stimulation in acute diseases.

Properly, may here be introduced the fact, that, not once since commencing to treat yellow fever, have I directed the universal orange leaf tea, not that I believe it does harm, but that iced gum water effects more positive good, with me, an all sufficient reason.

If, perchance, a few cases required rather more nourishment—an unusual occurrence—one, or two tablespoonfuls of arrow root, or rice gruel were allowed.

For the febrile heat and pain of the head, while, as local applications, pounded ice, or ice water, vinegar and water, are very grateful, the best application, in my

opinion, is Raspail's eau sedative. This may be kept on the head, by means of linen soaked in it, or, what has a better effect, passing the wet cloth constantly over the head, face, and arms, thus more readily enabling evaporation to go on, thereby diminishing fever, and pain. Here it is, that the services of a friend, or a real nurse, are of unquestionable value.

For the pain of the head, the application of a mustard poultice, or, one of mustard and cayenne pepper, most frequently used, to the back of the neck, or, more effectual, being a little further removed from the seat of pain, between the shoulder blades, will be found very serviceable.

If circumstances arise, rendering further irritation necessary, similar poultices may be applied to the soles of the feet, the calves of the legs, or even to the abdomen.

As a cooling, refreshing drink, the half of a seidlitz powder, or, if you wish not to act on the bowels, a soda powder, given in ice water, may be occasionally given, and almost always proves grateful.

Where the case of yellow fever, as just described, pursues a regular course, where no unusual symptoms supervene, and the course of treatment, most certainly, is not calculated to produce any, the fever, a little sooner or later, will gradually subside, and, finally, disappear; debility, it is true, will remain, but convalescence has been fairly established, and such, in my opinion, would occur, much more frequently, if, instead of searching for a specific for this protean fever, which, it requires no prophet to predict, never can, or will be discovered, we more rigidly adhere to that plan of treating the disease, which is pointed out by the existing symptoms, at the

commencement, as well as throughout the entire course of the disease. The idea of treating the yellow fever, by its name, is a direct absurdity; it must be treated by, and for the symptoms, as they arise, or even before the dangerous ones have appeared, or, the mortality will never be greatly diminished by the power of medicine. "*Magna est veritas, et prevalebit.*"

Although convalescence may have been firmly established, the patient is by no means out of danger, because, any act of imprudence, no matter, how slight, or in what manner produced, may be, and has been frequently, most speedily followed by a relapse, or the return of every dangerous symptom, when, as is well known, it is no easy matter to overcome them, and prevent the most frequent result, death.

At the commencement of convalescence, very properly, there may be allowed, a moderately increased quantity of nourishment, which may consist of well prepared beef tea, or chicken soup, with rice, or barley, boiled in it. Oyster broth is also appropriate. Avoiding excess in quantity of allowable food, carefully eschewing the too early taking exercise, or, even getting out of bed, be patient, and in a day, or two, a small quantity of beef, chicken, mutton, a soft boiled fresh egg, with the addition of stale bread and milk, may be indulged in, but, moderately. Those recover most quickly, and with perfect certainty, who are willing to observe the orders of the physician, for rest assured, he is quite anxious to free himself of the responsibility.

To favor, or hasten, the gaining of strength, the use of a small quantity of malt liquor, wine, or even brandy, with water, at proper times, no less than in proper quantity, is confessed to be beneficial, but not always

necessary. Mild tonics, I consider preferable, and, an infusion of cherry bark, or a mixture of this, and peruvian bark, taken frequently during the day, will answer every purpose. A very good tonic, which may be used in conjunction with the above, is a mixture of quinine, in Huxham's tincture of bark, "half a drachm, to four ounces," taking from two, to four teaspoonfuls, in water, or the tonic infusion, three, or four times a day.

A large majority of my patients in the hospital, convalesced rapidly on the tonic drink, which is in constant use in my wards. As a member of the profession, I am opposed to ordering liquor of any kind, unless absolutely required, and I am positive, that at all times, a watery infusion of the good old fashioned tonics, is much more certain of adding strength to the system than the ordinary quality of malt, or spirituous liquors, so generally used. I think it proper at this point, to remark, that throughout the treatment of the above case, a fair representative of a large proportion of those met with, in every epidemic, not a word has been said of quinine, except as a tonic, during convalescence. Until the middle of the last epidemic, when, for especial reasons, and in a particular mode of exhibition, I did use it, with marked advantage, I had never before given one grain, at the commencement of the disease, because I saw, and heard, too much of, to say the least, its doubtful effects, because, it did not harmonize with my views of the disease, and because, on comparing notes, I found the non-perturbating course which was employed, to be quite as successful, as the so-called abortive, if not a little more so. It is not at all impossible, that an all-powerful, and truly valuable medicine

as quinine is known to be, may, if not properly timed, prove really injurious. Now, this I believe to be the true state of the case, for, since having used it, in twenty grain doses, I can truly say, that, not only did it produce the most immediate, surprising, and beneficial effects, but, in no one instance can I recall the least serious complaint of ears, eyes, or brain, and only in a very few cases was there more than a very trivial buzzing of the ears, which it was necessary to inquire about, or even that would not have been known.

The SECOND CASE to be presented, is one, in which the true incipient symptoms are mild, and scarcely to be recognized, although the stomach is the organ principally affected, requiring immediate attention, not so much on account of the symptoms of the fever itself, as from the incidental condition of the stomach, deranged by vitiated secretions, or excess of food, more generally a combination of both causes. There are present, a heavily furred tongue, more or less nausea, occasional vomiting; these are the prominent symptoms, not strictly appertaining to the fever, but purely accidental, and clearly demanding a course of treatment, different from, or proper in cases similar to that first related.

The treatment first required, I designate preparatory, being essentially different from that considered appropriate to a plain uncomplicated case of yellow fever. It is self-evident, that this condition must be quickly relieved, if we desire a reasonable hope for final success, with the fever, and the important question arises, in what way, can this be most quickly, safely, and *certainly effected*.

On this point, there is much diversity of opinion, and

practice. Having in such cases, no confidence, in the power of anti-emetics, anodynes, or external irritants, to overcome such a condition; believing, that cathartics, even if retained—of which there can be little hope—require too long a time to act efficiently, although aided by strong injections, to say nothing of the uncertainty of knowing, a priori, what amount of medicine, or number of doses, will be required, to gain the point, I confess, I cannot regard purgatives as likely to do much good, as the first remedy, in such cases; on the contrary, injury, by increasing irritation, and, most probably, producing inflammation. There remains but one other mode to accomplish the end, which is an emetic of ipecacuanha, in a tumbler full of water, to be followed by copious draughts of warm salt water. Experience in a great many cases, enables me to speak most positively about this subject, all the circumstances being exactly as stated.

So far from augmenting the irritation, “in not a single instance observed,” it almost immediately, arrests every one of the gastric symptoms, frequently removes the headache, and causes free perspiration; what other remedy will do as much, I know not, and doubt much its existence.

Of one fact, based on observation, I feel certain, and hesitate not to assert, that in a case of yellow fever, presenting the above symptoms, particularly, after a full meal, the most safe course of proceeding, with a view of deserving future success, will be the administration of an emetic of ipecacuanha, aided by copious draughts of warm salt water. It may be observed that copious draughts of warm salt water, will frequently produce the same good effects, without the

addition of the ipecacuanha, although its use is preferred. I will go a step farther, and say, that, in all cases, where the attack has commenced shortly after a full meal, even without nausea, or, vomiting, it would be the safest, and most judicious practice to clear the stomach of its contents. I make this remark, after due deliberation, and, after having given, in different diseases, and watched the effects of nearly two thousand emetics, without, in more than one instance having seen reason to regret their use. Not a week passes, that I do not see unanswerable reasons, to regret the non-use of emetics, which invariably hasten the cure. The emetic having effected all that is desired, or could be looked for, we are brought to the treatment of an ordinary case of yellow fever, and in order to avoid unnecessary repetition, the treatment laid down for the first case, will equally apply to the future of the case under consideration. In reference to the propriety of administering emetics, as a routine treatment, a few words may not be inappropriate. It is very evident, that I have no apprehension of evil resulting from an emetic, under ordinary circumstances, and for ordinary diseases. The yellow fever, I regard as an extraordinary disease, in many vital points, and, therefore, not amenable to the same laws.

When all of the peculiarities of this fever are duly considered, when the marked proneness to the easily aroused irritation of the stomach, and the great difficulty of controlling those symptoms, when aroused, are duly weighed, it does appear to my mind, that, except for an existing, plainly marked, and positive reason, to justify even a mild emetic, yellow fever, is not the disease for which an emetic can, or should be indiscrimi-

nately recommended; although in many cases, I may feel sure no immediate injury would result, the subsequent impression, I might not be so certain of; a little prudence is commendable.

I now present the THIRD CASE, one, in which, the stomach, from the commencement of the disease, is principally, and seriously affected, differing entirely from the second case, and demanding an appropriate special treatment. Suddenly, or with more, or less premonition, this case is ushered in, as follows:

There is more or less fever, rapidly increasing, the tongue, at times coated with a whitish covering, is generally red over all, or only on the sides, vomiting is frequently present, while irritability, with more or less nausea, are rarely absent; to such an extent does it at times exist, that, even a teaspoonful of the blandest liquid cannot be retained. The stomach is painful on pressure, an indication of more, or less inflammation, or at least irritation. The bowels, generally costive, are occasionally loose. Pain of the head, back, and limbs, or larger joints, is present in greater or lesser force. The eyes present their characteristic appearance, in a marked degree. The pulse is almost invariably very frequent, hard, and full, or it may be small, and chorded; the fever is more or less intense, the skin hot, dry and burning.

In such a case, the first effort to be made, is necessarily that, directed to calming this irritability, possibly, to be effected by the following means, altogether external.

A mustard and cayenne pepper foot bath, as hot, as can be comfortably borne.

A poultice of the same, to the abdomen, calves of the

legs, or soles of the feet, when removed from the bath. To the abdomen, instead of the poultice, or after its removal, ice coarsely pounded, with or without salt, and tied in a bladder, or, as a substitute, a large towel, wrung out of iced salt-water, will often prove successful. At times, a mustard and cayenne poultice, applied along the spine, will answer the purpose, or, a number of dry cups may be applied to the abdomen, or, to the spine. One or more injections of cold salt-water may be given from time to time, as circumstances may require.

Thus far I have spoken of external applications, for, I never could see the reasonableness of fruitlessly trying to force quietude of the stomach, thus circumstanced, by the administration of any medicine, however mild such may be.

When considered proper to try the experiment, for such it is, and that time will arrive, if anxiety will allow patience to predominate, the only internal remedy which I employ, is the following: \mathcal{R} —Cyanuret of potash, two grains; bi-carbonate of soda, twenty grains; solution of morphia, two drachms; distilled water, or orange flower water, one and a half ounce. The dose is from one half, to one teaspoonful, every half hour, hour, or two hours, according to circumstances.

If necessary this may be given in even smaller doses, as from ten to twenty drops.

The successful use of the above in yellow fever, and other diseases, hundreds of times, certainly authorizes my speaking of it with the utmost confidence. When desired, or when thought advisable to make the trial, a small piece of ice may be occasionally held in the mouth, to gradually dissolve, and trickle down the throat, or it may be swallowed whole. An iced solution

of gum arabic, may be tried from time to time, by the teaspoonful. Equal parts of lime water and fresh milk, or, one part of lime water, and two parts of milk, given in half teaspoonful, or teaspoonful doses, will frequently prove successful.

The irritability of the stomach having been overcome, by one or more of the above remedies, after waiting one or more hours, to allow time for rest, should it be considered advisable, to commence internal treatment, small portions of blue mass, "two grains," may be given and repeated, every one, two, or three hours, as may be deemed proper, for two or three times. If this cannot be borne, or it is feared to incur the risk, give small parts of a Seidlitz, or soda powder, in ice water, as frequently as may appear necessary. If neither the pills, nor the Seidlitz can be retained, let the stomach alone, and trust to injections, to act on the bowels, and support the system, if that should be necessary.

A spice plaster, composed of powdered cinnamon, cloves, allspice, ginger, and cayenne pepper, tied in a bag of thin material, soaked in boiling brandy, and laudanum poured on it, I have found successful, after the failure of other remedies.

As soon as possible, commence with the nitrate of potash, and acetate of ammonia mixture, in small doses, every hour or two, iced gum water in small quantity, being occasionally given.

Thick, and more or less large compresses, wrung out of cold salt-water, applied over the whole abdomen, well covered with dry towels, or a small sheet, often prove of great value, and should not be neglected in severe cases, while in those of a mild character, smaller compresses soaked in cold salt-water, frequently re-

newed, I have used with benefit, more especially for that feeling of heat in the stomach, and bowels, so often complained of.

The application of a few dry cups to the abdomen, followed by a blister, which may be applied to other parts of the body, should be resorted to, for they frequently do good, even when the case may appear desperate. Properly timed, blisters are of immense benefit, in this disease, frequently turning the scale in favor of recovery.

It is unnecessary to dwell on the subsequent treatment, proper for such cases, for the symptoms described, being overcome, the treatment advised for case one, will be equally applicable for those symptoms, which, in these cases we may have to combat.

The FOURTH CASE is one in which the brain receives the first, and most powerful impression, and necessarily, to the symptoms evinced by that important organ, must our attention be directed at the very earliest moment. The pain in the head, always great, is occasionally excessive, accompanied by a deeply seated sensation of heat. The eyes are dry, shining, much injected, with the sensation of being filled with hot sand.

The pulse is very hard, and frequent, though occasionally, small, chorded and oppressed. The skin of the whole body is unusually hot and dry. The tongue is red and dry, at times coated slightly with a thin whitish fur, which may be of different colors, and thickness, depending on the state of the stomach.

The stomach, although not invariably affected, is so, most generally, and nausea, or vomiting may exist. The desire for cold drinks is excessive. The urine, generally small in quantity, is always of a deep color, generally red, at times bilious, and muddy.

In such cases, if, with an unmistakable hard pulse, even should all other symptoms be mild by comparison, there can scarcely be a question of the propriety, and necessity, of abstracting blood from the arm, as well as from the temples, or, preferably, from the back of the neck, which, except for particular reasons, I consider the best place to apply cups. Should the loss of blood, in the first instance, not have proved sufficient to materially lessen the urgency of the symptoms, and it may be considered proper to take more, I prefer to have it done by means of cups, thereby endeavoring to prevent the excessive prostration of the vital force, which, sooner, or later, it is well known, may be apprehended, thus greatly augmenting the danger of the case in the future. Besides, is it not sound practice to wait an hour or even two, in order to see what effects may have been produced by other remedies which in the mean time may have been given?

The following, auxiliary to the above, are to be resorted to, if not simultaneously, at as early a period as practicable. A large injection of cold salt-water, or the more active senna tea, with salts, should be given at once, and repeated every hour, if deemed necessary, to produce one or more copious discharges from the bowels.

From ten to fifteen grains of blue mass, or calomel, are to be given; and, if not contra indicated, a dose of oil, a seidlitz powder, or a dose of Epsom salts should follow in one or two hours. Should the symptoms call for additional action on the bowels, or the first dose not have had a sufficient effect, a Seidlitz powder, with the addition of one or two drachms of Rochelle salts, may be given every hour or two.

If the symptoms continue severe, cutting the hair close, or shaving it off, should not be long delayed, in order to resort to cold applications to the head, the benefit resulting therefrom being often very great. The cold applications for the head—the hair shaved, or cut close—may be pounded ice, with or without salt, in a bladder, or gutta percha bag. If ice and salt mixed, be used, it is prudent, from time to time, to remove the bladder for a few moments, lest the intensity of the cold should prove injurious.

Care is required in using cold applications to the head by wet cloths, or otherwise, to avoid soaking the pillow, and bed clothes, an apparently trivial matter, but one of importance, for the comfort, and real welfare of the sick. For moderate cases, when ice may not be required, or cannot be procured, the eau sedative of Raspail is perhaps the best of all cooling applications, indeed my opinion is, that it possesses peculiar properties in most cases of headache, and is not equalled by any other application which I have used.

If we succeed in overcoming the first and dangerous symptoms, and the case pursues the ordinary course, the remedies and general plan of proceeding laid down for case one, will be found equally appropriate, for the conclusion of the case, resembling this one.

In whatever point of view, may be regarded the self imposed duty of endeavoring to prove—for the benefit of those whom it may concern—the correctness of the opinion expressed in a former part of these remarks, that yellow fever ought to be more generally cured, than is known to have been the fact, and, however imperfectly the task has been performed, having presented a full, if not satisfactory description of the general

course pursued, as well as the various remedies required for the different forms, and stages of the disease, the subject might be considered completed.

An additional reason for acting on that conclusion, is based on the assertion, that, for many years, the course of treatment laid down, had proved successful, in the majority of cases of yellow fever, under my charge.

The experience of preceding years, much increased during the epidemic of 1858, authorizes the assertion, and belief, that, in *private practice*, strict attention being paid to those auxiliaries, fully noticed, and so vitally important, to the medicinal treatment, few cases of yellow fever will occur, in which, a cure may not, with reason, be looked for, *provided*, at the onset of the disease, there do not appear, one, or more, of those extra dangerous symptoms, which, it is well known, always render the issue of the case very doubtful.

The principles, on which the treatment of all preceding, and subsequent cases of yellow fever was conducted, were found to be equally adapted to all of those brought into the hospital, but, for reasons applicable, to the usual recklessness of health, and the frequent, rather advanced stage of the disease, when patients were admitted, I was soon convinced, that with them, an equal degree of success, could scarcely be anticipated.

Satisfied with the general result of the treatment adopted in private, and hospital practice, I did not believe in the propriety, or necessity of changing the remedies, particularly, as, to a certain point, "about the subsidence of the fever," these cases had progressed most favorably, but, at that time, the treacherousness of the disease would generally display itself by the appearance of dangerous symptoms, followed by a frequent and unexpected death.

This unfavorable condition occurring almost simultaneously, in five cases, where little real danger had been apprehended, while strong hopes of recovery had been entertained, caused more than regret, and demonstrated the necessity of finding some remedy which might meet the difficulty.

Reposing no confidence in the specific influence of any remedy, to meet the different indications presented by the various symptoms of the different stages of yellow fever, the thought passed through my mind, that, if the muriated tincture of iron did possess any curative power in this disease, as had been asserted, such must depend on the small portion of chlorine, therein contained. Correct, or not, in my opinion, the use of chlorine being determined on, it was prepared from the following formula:

R Liq. Chlor. Sodæ, ℥iii.
 Aqua destillat, ℥iii.
 Chlor. Potassæ, ℥iii.
 Acid Muriat. gr. xx. ℥.

This was given in the dose of one teaspoonful, every one, or two hours; it was commenced as soon as the fever had materially abated, or had almost disappeared. The object in giving it was of a preventive character, rather than for any special symptoms.

For about three weeks, this remedy was continued in most of the cases; in not one, was any unpleasant effect produced, in a few, slight benefit appeared to result, but, as in the majority, it did not appear to exercise any marked influence, the use of chlorine was abandoned.

I next directed my attention to that truly valuable medicine, quinine, and, opposed, as I had always been,

to its use, *without any preparatory treatment, at the onset of the disease*, I did think, that, at a certain period, given in a certain manner, this all powerful medicine, for good, as for evil, might respond to my call.

The Use of Quinine.—Its use being decided on, it was given in the dose of 20 grains, as follows :

The patient, when brought in, after an emetic of ipecacuanha, “if demanded, for causes previously stated,” or, the blue pills, oil, or Seidlitz, a hot mustard foot bath, and an injection of salt-water, being given to produce their full effects, one tablespoonful of the nitrate of potash mixture, was given every hour, for three hours, and to the third dose, the following was added:

℞.....Pulv. Nit. Potassæ, grs. x.
 Pulv. Acaciæ, ʒii.
 Quinin. Sul. ʒi.
 Liq. Ammoniæ acetat, ʒi, ℥.

The subsequent treatment was that laid down for case one. After having repeated the above, in a sufficient number of cases, for some weeks, closely watching the effects, the conclusions were, that in every case, the immediate effects, continuing from twenty, to thirty hours, were in all respects, decidedly beneficial, without the usual complaints, of the head, the ears, or the eyes, and while a reasonable proportion was cured, not a few dying, disappointed me, when my opinion was, that I had not yet gained my point, in one respect, while in another, I had satisfied myself of the propriety, safety, and harmlessness of that medicine, in the manner administered, in that stage of the disease.

That conclusion was considered important for various reasons, and after a few days I decided to combine

quinine, with the discarded chlorine mixture. This was prepared from the following formula:

℞Liq. Chlor. Sodæ, ℥iii.
 Aquæ destillat, ℥iv.
 Chlor. Potassæ, ℥iii.
 Quinin. Sulph., ℥ii.
 Acid. Muriat, gtt. xxv, ℥.

Dose.—One teaspoonful every two hours.

Not many days were required to satisfy me of the positive beneficial effects that did result from the use of this remedy.

While the employment of the above, conjoined with the other means advised for that period of the disease, had the effect of diminishing, to a certain extent, the frequency of that condition, for which it had been given, I thought indications deduced from the nervous system, were presented, authorizing the use of opium in some form. Except for special indications, I had never considered it necessary, or proper, to employ opium, or any of its preparations, in the first stages of yellow fever, and, without further explanation, of the why and wherefore, the use of morphia was commenced, as per following formula:

℞Liq. Chlor. Sodæ, ℥iii.
 Aquæ destillat, ℥iii.
 Chlor. Potassæ, ℥iii.
 Quinin. Sulph., ℥i.
 Liquor Morphiæ, ℥ss.gr-i.
 Acid Muriat. gtt. xxx. ℥.

Dose.—One teaspoonful every one or two hours, commencing its use, most frequently, in about twelve hours, after the exhibition of the twenty grain dose of quinine, or the other preliminary treatment.

It will be observed that the dose of morphia was quite small. In commencing the use of any active remedy, I have ever considered the feeling one's way, to be safe and sure, and in this instance with the maxim of *nullius addictus jurare, in verba magistri*, it cannot be objected to.

As day by day, experience proved the effects of this combination, to be permanently beneficial, the unpleasant condition for which it had been sought after seldom appearing, while, during this time some changes had been made in the formula, about the beginning of November, the following was prepared, and continued in daily use, as long as there was a case of yellow fever in the wards:

℞.....Liq. Chlor. Sodæ, ℥iv.

Aqua, ℥iv. ½.

Chlor. Potassæ, ℥iv.

Quinin. Sul. ℥ii.

Liq. Morphicæ, ℥ii.

Acid. Muriat, ℥ss. ℥.

To sum up the effects, resulting from the step by step process, of finding out and using this preparation, in conjunction with the chlorate of potash, and bi-carbonate of soda recipe given below—let one fact be stated. It is, that of the eleven patients, last admitted into my wards, one, in a hopeless condition, died, while the remaining ten were discharged, cured.

Such an occurrence, or an approximation to it, had not been observed in the wards at any period of the epidemic, and claiming for such a fact, the consideration it really deserves, I will not deny, that to myself, the internal gratification was an ample reward for the time and labor expended.

I will not attempt to offer a rationale of the manner, by which the various combinations alluded to produced such effects, the *modus operandi* of most remedies, being shrouded in confessed obscurity.

Of the fact, I am certain, and should the yellow fever repeat its unwelcome visit, and I be continued as physician to the hospital, I need scarcely say that every effort will be made to prove by additional facts, the absolute value of the remedies specified.

The following is the remedy just alluded to. So truly valuable have both of these preparations been found in various diseases, subsequent to the yellow fever, that I present both formulæ, as in daily use in wards 32 and 33:

R.....Chlor. Potassæ, ℥i.
 B. Carb. Sodæ, ℥ii. ½.
 Mur. Sodæ, ℥vi.
 Aq. Camphoræ, ℥ii.
 Aq. Destillat, ℥viii. ℥.

R.....Liq. Chlor. Sodæ, ℥i.
 Aquæ Destillat, ℥viii.
 Chlor. Potassæ, ℥i.
 Quinin. Sulph. ℥ii.
 Liq. Morphicæ, ℥ii.
 Acid. Muriat, ℥ii.

The dose of both, is from one half, to one teaspoonful, three or four times a day, or every hour or two, alternately, according to the requirements of each case.

The total number of cases of yellow fever, in which the twenty grain dose of quinine was administered, was 47. Admitting, as I do, the entire freedom from the least unpleasant effect, and the positive benefit accruing, in hospital practice, not doubting its applica-

bility in the manner employed to most, if not all cases in private practice, I do not mean to say that it is required in these last, to effect a cure, inasmuch as in but one case was it given, and that ended fatally, from no other cause than excessive blanketing, which, in spite of positive orders, was persisted in. But for that folly I really believe the case would have been cured.

THE TINCTURE OF VERATRUM VIRIDE, having been employed, during the recent epidemic, it may not be amiss to offer a few remarks about it. Of the value of this medicine in inflammation of the lungs, and pleura, little doubt can be entertained, and, long before the appearance of the yellow fever of 1858, I had frequently employed the tincture in inflammatory diseases with advantage.

Having in those cases used it combined with nitrate of potash, tartar emetic, spirits of nitre, and spirits of mindererus, it is impossible to speak of its specific property, with that precision, and certainty, which could have been done, if used by itself.

The conjoint action, however, having produced effects, greater, and more rapidly, than when the mixture was given without the tincture, the increased power evinced, could scarcely be questioned.

Of one fact I can speak with confidence—it is, that since having used this combination, the necessity for the abstraction of blood in acute diseases, has been much lessened, to what had been previously supposed to be necessary.

Convinced of the antiphlogistic power of this combination, when the yellow fever appeared, it was natural for various reasons to suppose, that the tincture of veratrum viride, could be properly given to meet some of the indications presented by the symptoms of that dis-

ease, and, in the first case brought into my wards, that article was prescribed, conjoined with nitrate of potash, spirits of nitre and spirits of mindererus.

For several weeks, this combination was given in every case of fever brought in, with satisfactory results, as far as the fever was concerned.

About this time, reverting to the fact, that in the yellow fever, in 1853, '54 and '55, I had treated cases with the favorite nitrate of potash mixture, occasionally adding thereto the tincture of aconite root, it was decided to employ that, in place of the veratrum, in order to institute a comparison of the effects.

This preparation was used for several weeks with similar results, when it was thought advisable to unite these tinctures in the proportion of two parts of the veratrum, with three parts of the aconite, and using two thirds of a drachm, of the combined tinctures in the usual prescription, in which quantity it was given during the remainder of the epidemic to all of the fever cases.

I entertain no doubt of the real utility of this combination to produce the various effects, for which it had been given, to-wit: controlling, or subduing the fever, facilitating the action of the kidneys and skin, and, in that manner, eliminating the poison, or presumed cause of the fever, thus preventing the appearance of subsequent dangerous symptoms, in important organs.

Reverting to the fact, noticed in my remarks on yellow fever, published in the Boston Medical and Surgical Journal for January, 1856, that, precisely similar effects resulted from the use of the nitrate of potash mixture, the question presented itself, whether the real benefit that did result, was not mainly due to the known an-

tiphlogistic properties of the different articles contained in that mixture.

It was difficult to solve the question, although strong reasons for its correctness might be given, but, certain as I was, of the effects that had been produced, it was judged proper to make no further change the balance of this season, but rather to observe the results of that in use.

The supposition that the depressing influence, attributed to the *veratrum viride*, might possibly have contributed to the production of that peculiar condition, manifesting itself toward the latter end of the febrile stage—previously alluded to—was met by the fact, that in much larger doses, the tincture had been frequently used, without such effects having occurred, therefore, that supposition was not considered of much force.

There was, however, one conclusion formed, after having closely watched the fever in all its phases, in my opinion most important, practically, that, the more or less fever, its longer or shorter duration, did not appear to exert an uniform intelligible influence on the production of dangerous symptoms, proceeding from other organs, which would appear unexpectedly, irrespective of the degree of fever, and invariably, at the period of its subsidence, or total disappearance. I was forced to regard the fever as of minor importance, comparatively speaking, inasmuch, as it could, and can be sufficiently controlled, by a cooling treatment, and the more free and regular employment of external applications, which during the latter period of the epidemic, was regularly, and rigidly enforced, contributing in no

slight degree, to the beneficial effects resulting from the continuous use of those remedies, so fully noticed.

Approaching the finale of these remarks, it is considered advisable to present the different formulæ alluded to:

Eau sedative of Raspail.

℞.....Aqua Ammoniaë, ℥iv.

Sp. Camphor, ℥i.

Aquæ, Q. S. pro. ℥viii. ℥

One or two tablespoonfuls of the above, added to one pint of strong salt-water, will make the extemporaneous preparation, used in my wards. The head, face, arms and hands, are to have this applied, more or less frequently, by means of a soft small sponge. A compress of linen of proper size, wet with it, may be applied to the head, and occasionally renewed.

I would remark, in reference to the following external applications, that during the epidemic, great restlessness, and other symptoms attributed to an abnormal condition of the nervous system, added materially to the danger of the case, and, while trying the effects of chlorine, quinine, morphia, and other remedies fully noticed, I decided to bring to my aid certain applications, to be used regularly, at specified intervals, which, I am happy to say, were found of great benefit, contributing, in no small degree, to the comfort of the sick, diminishing the restlessness, and in my opinion assisting in enabling many more cures to reward our efforts.

As a matter of course, changes were made in the formulæ during the period of their employment.

The first used was the following:

R Ext. Belladonnæ, ℥ss.
 Glycerin, ℥ii ½.
 Sp. Vin Rect., ℥iii.
 Aq. Ammoniaë, ℥iv.
 Sp. Camphoræ, ℥iv.
 Ol. Olivæ, Q. S. pro., ℥viii. ʒ.

The next prescription for the same purpose, was:

R Glycerin, ℥ii.
 Sp. Vin. Rect., ℥iv.
 Aq. Ammoniaë, ℥iv.
 Spts. Camphor, ℥iv.
 Ol. Olivæ, Q. S. pro., ℥viii. ʒ.

The third was,

R Glycerin, ℥ii.
 Sp. Vin. Rect., ℥iii.
 Aq. Ammoniaë, ℥iv.
 Sp. Camphor, ℥iv.
 Tr. Belladonnæ, ℥i.
 Ol. Olivæ, Q. S. pro., ℥viii. ʒ.

The last was,

R Glycerin, ℥ii.
 Sp. Vin. Rect., ℥iii.
 Aq. Ammoniaë, ℥iv.
 Spts. Camphor, ℥iv.
 Ol. Olivæ, Q. S. pro, ℥viii. ʒ.

With a small fine sponge, the face, forehead, arms, and breast, were regularly, every one, or two hours anointed, and experience proved the last preparation tried, to be equal in its effects, to those which had preceded.

It is impossible for me to speak in too high terms of

praise of the great exertions made by both of my nurses to assist, by faithfully carrying out my various orders, during a long period of no little anxiety. It really appeared as though they felt almost as much pleasure, as I received myself, whenever the efforts to cure disease, and save life were crowned with success.

REPORT OF CASES OF YELLOW FEVER.

In presenting cases of actual occurrence, I have not selected such as might favor my views; the first five occurred within a few weeks of each other, in my neighborhood, and of these, the two first were of my own household.

CASE 1.—Frances, black cook, always in good health, formerly lived on a plantation some miles down the coast; in the city about eighteen months.

She felt unwell in the evening, had slight pain in the head, and limbs, and went to bed early, without informing me of the fact. In the middle of the night, she became very restless, suffered considerable pain in the head and limbs, and in the morning early I was apprized of her illness.

I found her with every symptom of a well marked case of yellow fever, of more than moderate grade, tongue coated, pulse frequent, hard, moderately full, skin hot and dry, eyes injected, great thirst, drank water freely during the night, stomach not affected.

Treatment.—Ten grains of blue mass, at once, a hot mustard and cayenne foot bath, to follow. In two hours, two tablespoonfuls of castor oil, and in two hours a Seidlitz powder, if the bowels are not freely moved.

In three hours, when I again saw her, the bowels not having been moved, a large injection of strong salt-water, was given, and directed to be repeated in two hours, if the bowels were not freely moved. Two teaspoonfuls of the following mixture were directed to be given every hour. Nitrate of potash, two drachms; tincture of veratrum viride, (Norwood's), one drachm; water of acetate of ammonia, five ounces; Raspail's eau sedative, to be applied to the head, face, arms, and hands occasionally, or as often as she wished.

Nothing but iced gum water to enter the mouth as food or drink, not too much at a time, but as frequently as desired.

It is unnecessary to repeat all that was done in regular order, suffice it to say, the preceding medicines acted as they usually do in such cases, that on the third day, the fever had greatly subsided, to shortly disappear, and that during that time, by the aid of several injections of *cold salt-water*, a Seidlitz and soda powder, several times a day, and the iced gum water, she continued to progress to perfect convalescence, and on the sixth day was sitting up. The urinary secretion was free during the whole time.

During all this time, the door was kept half open, for free ventilation, she protected from a draught, the perspiration, was moderate, the clothing, what was comfortable to her feelings.

With the exception of my daughter, and myself, who nursed her throughout her sickness, not a single individual was allowed to enter the room, until she was sitting up. She convalesced perfectly, on rice gruel, rice and milk, bread and milk, tea and toast, different broths, and a tonic of cherry bark, and snake root.

CASE 2.—Rose, light mulattress, house-maid, of delicate frame, and predisposed to bronchial affections. She had been in the city about eighteen months, having previously lived on a plantation, with Frances.

On the third day after Frances was taken sick, Rose felt unwell, although keeping about, and going to bed early, without complaining. A very small eater at all times, for a few days, even less food was taken; and let it be observed that not once, was she in Frances' room.

About midnight, she suffered a good deal of pain in the head, back, and limbs, at different times nausea existed, and once, vomiting occurred.

At 5, A. M., I was called, and on going to her room found every symptom of a severe, well marked attack of yellow fever. The tongue was red, the skin hot and dry, the pulse weak, small, and slightly tense.

The most unpleasant symptom was the constant nausea, and occasional slight vomiting. With a full knowledge of her weak constitution, I felt not a little uneasy, fearing her system would yield to the attack.

The treatment was carried out, in the order laid down. Hot mustard, and cayenne foot bath, mustard, and cayenne poultice, to the abdomen, small pieces of ice to dissolve slowly in the mouth, or swallowed in lump, as preferred; iced gum water, by the teaspoonful, occasionally, or to suck a rag soaked in ice water. An injection of cold salt water, to be given and repeated in two hours, if the bowels were not previously moved.

The following mixture, as soon as procured, to be given in half teaspoonful doses, every half hour, or hour, until irritability of the stomach was allayed.

R Cyanur. Potass., gr. ii.
 Bi-Carb. Sodæ, ʒi.
 Liq. Morphiæ, ʒii.
 Aq. Fl. Aurant, ʒ1½ ℥.

Eau sedative was applied to the head, face, arms and hands, at short intervals, the room was darkened, the door half open, with a screen interposed, and the covering what was agreeable, and in reality, consisted of a sheet, and one thin blanket. In the course of the morning, the feet were covered with a moderately stimulating poultice of hops, flaxseed meal, mustard, and cayenne, the bowels were freely moved, and at last the nausea subsided. This course was continued for a few hours, when I considered it proper to bring in small doses of the nitrate of potash mixture that Frances had taken, in the dose of one-third, or one-half of a teaspoonful every one, or two hours. With the exception of occasional small portions of a Seidlitz, and soda powder, several injections daily, the above comprized all the medicine given, for, able as I was to see her almost every hour, I gave nearly every dose, coaxing the stomach, which proved successful, as in a few days, she was out of danger, and really convalescent.

The law of allowing no one to enter the room was strictly enforced. Convalescence was shortly established, and without a drawback, she gained strength by using the same diet, and tonics described in the first case.

CASE 3 was a young man, æt. twenty-four years, of a weakly constitution. Under the erroneous impression of having been acclimated in 1854, he was out late at night, aiding the Howards. On the follow-

ing day, being wet in a shower, and feeling a soreness of the whole body, took a foot bath, and went to bed at an early hour, under the impression of having caught a severe cold. After a restless sleep of a few hours, feeling chilly, he soon found his skin hot and dry, with severe pain in the head, back, and limbs. At 5, A. M., I found him as follows: Headache, skin hot and dry, tongue furred, eyes injected, pulse frequent, rather weak, and tense.

The treatment in this case consisted of one modified blue pill, Seidlitz powders to act on the bowels, and two teaspoonfuls of the following mixture every hour; nit. potash, two drachms; spirits of nitre, two drachms; tincture of veratrum viride, half a drachm; water of acetate of ammonia, five ounces.

During the second day there was slight uneasiness of stomach, with vomiting of a small quantity of bile.

The following mixture was substituted for the preceding: nitrate of potash, one drachm; bi-carbonate of soda, twenty grains; orange flower water, an ounce and a half.

Dose, half a teaspoonful every one or two hours, depending on the condition of the stomach. By allowing small quantities of iced gum water, small pieces of ice, the fever gradually abated, and left entirely on the beginning of the fourth day. Small quantities of arrow root, chicken and barley broth, a small quantity, occasionally, of an infusion of cherry and Peruvian barks, were now allowed, and on the following day small quantities of English porter and water were added. At this period two teaspoonfuls of a mixture of twenty grains of quinine in two ounces of Huxham's

tincture, were ordered to be taken, three, or four times a day.

The prostration in this case was very great, as was to be looked for, but observing orders, he was able to sit up, or recline on a sofa, on the eighth day, and regularly advanced to his usual state of health. Except the nurse and myself, no one was allowed to enter the sick room, until all danger had passed.

CASE 4.—A black boy, *æt.* eight years. He was taken about an hour after a full meal, at which it was believed he had eaten freely of nuts. The symptoms were well marked, head very much complained of, skin hot and dry, eyes much injected, pulse full, hard and frequent. Complains a good deal of pain in the stomach, tongue furred. Uncertain of what and how much, he had eaten, I considered it safer, to free the stomach by a simple emetic of ipecacuanha, followed by copious draughts of warm salt water. This operated well, thoroughly emptying the stomach, and bringing up a good deal of bile. In an hour, five grains of blue mass were given, followed in two hours, by two tablespoonfuls of castor oil. In an hour the usual mixture of nit. potass, one drachm; spirits of nitre, two drachms; tr. verat. viride, twenty drops; water of acetate of ammonia four ounces, was given in the dose of two teaspoonfuls every hour for three hours, and afterwards, one teaspoonful every hour. Iced gum arabic, an occasional third of a Seidlitz powder, moderate covering, and fresh air, with the frequent use of eau sedative to the head and arms, brought the fever to a close without the occurrence of other symptoms and convalescence was fairly established on the fourth day. With the usual diet, chicken and barley broth, and the infusion of chamomile and cherry bark, he recovered perfectly.

Imprudence in sitting in a draught, he having been carried down stairs, contrary to direct orders, brought on a relapse, which was brought to a fortunate issue in three days by hourly doses of the nitrate of potash mixture, for a few hours, aided by iced gum drinks, and eau sedative, when convalescence was again firmly established, followed by perfect health.

CASE 5.—A boy aged ten years, who had a well marked, but moderate attack, without any disturbance of the stomach, all the usual symptoms present.

A blue pill, a moderate dose of oil, and the ordinary nitrate of potash mixture, iced gum water, fresh air and moderate clothing, gave perfect convalescence in five days.

CASE 6.—A boy five years old, born and always living in the city, went to bed in perfect health the 29th of October. When seen at 7, A. M., 30th, I learned from the mother, with whom he had slept, that about midnight he became very restless, soon followed by a fever. Finding him asleep, with few, if any signs of fever, and supposing all might have resulted from a cold, prudence dictated the propriety of giving two grains of blue mass, to be followed in an hour by a small tablespoonful of castor oil, when he awoke, promising to return after visiting the hospital.

At 11, A. M., found him awake, every characteristic symptom of yellow fever present. The pill and oil, had been given, bowels moved once, discharge natural. I changed his red flannel body and leggings to one of muslin, and had him put on a cot, at the foot of his mother's bed. Ordered nitrate of potash, twenty grains; spirits of nitre, half a drachm; tr. verat. vir., three drops; tr. aconite root, five drops; spirits of mindererus, one ounce and a half; orange flower water one ounce.

Dose, half a teaspoonful every hour, iced gum water for drink, and eau sedative to be applied to the head and arms occasionally. Until the morning of the first of November, all progressed satisfactorily, not an unpleasant symptom having manifested itself; he was nursed by an aunt who had seen much of the fever, and was all that could be desired. At that time there was more restlessness, slight nausea, and at 10, A. M., a small quantity of black vomit was ejected. Other symptoms unchanged, the bowels having been moved, the urine freely discharged, and the fever diminished. A blister 4 by 4, was ordered for the abdomen, and half a teaspoonful of the following, every hour: Cyanuret of potash, one grain; sulphate of morphia, one grain; bi-carb. of soda, ten grains; orange flower water, one ounce; poultices of flaxseed meal, mustard, and red pepper, to be applied to the feet. Black vomit in small quantities being thrown off occasionally, the following was ordered: Powdered nitrate of potash, ten grains; sugar of lead, fifteen grains; powdered white sugar, twenty grains; a small pinch to be given every hour, and a teaspoonful of weak wine whey, occasionally, small bits of ice to be chewed, or held in the mouth.

At 9, P. M., black vomit still continuing, though less frequent, and in smaller quantity, I deemed it advisable to call in my friend, Dr. Stille, more particularly, as the parents had lost a son by the fever some weeks previously. During the consultation, black vomit was again thrown off.

The following was ordered: chlorate of potash sixteen grains; orange flower water, one ounce; distilled water, one ounce.

Dose, one teaspoonful every hour.

One grain of morphia, made into an ointment with one ounce of cerate was in proper quantity applied to the blistered surface, but could not be kept on.

Remaining for several hours, I gave small portions of the different medicines, with such quantities of nourishment, as I thought necessary. The next morning, a little black vomit was thrown off, after which, it ceased. It is proper to mention that two drops of oil of turpentine were brought in, at intervals of several hours, for three times. By coaxing the stomach with small portions of chicken or beef tea, wine whey, very small portions of the different medicines being given at long intervals, and frequent bathing of the body with brandy, eau sedative and oil, our little patient finally convalesced. It was found necessary to give small portions of quinine and Huxham's tincture of bark to support his strength, as well as an occasional injection to keep the bowels regular. The prostration in this case was excessive, requiring many days to perfect the recovery.

The preceding cases, will have sufficiently shown, practically, the general course of treatment, considered proper to pursue in cases of yellow fever.

In the following, mainly instrumental, as they have been, in causing the publication of these remarks, I shall direct attention more particularly to certain facts, in justification of what may be considered ultra views of some of the subjects alluded to :

CASE 7.—This occurred in a man of robust constitution, who, on the 17th of September, in perfect health, after the day's work, ate a hearty supper of codfish, and went to bed, feeling perfectly well. After a sound sleep of three hours he was awoke by a severe chill, followed by a high fever. At 5, A. M., he took a

foot bath, and in an hour a dose of castor oil. In an hour, he vomited a good deal of undigested food, and greenish bile.

When first seen, at 12, M., in bed, covered with a sheet, three blankets, and a comfortable, the window and door closed, was it strange to find every characteristic symptom of yellow fever, well marked? Removing much of the clothing, nausea, and a desire to vomit existing, the conclusion was, that the only chance for future treatment, was an emetic, of ipecacuanha to be given as soon as procured. The bowels, after the emetic had ceased operating, to be freely moved by blue pills, a Seidlitz powder, an injection of salt-water, repeated, if necessary; then he was to commence the nitrate of potash mixture, with four drachms of sulphate of magnesia, in the dose of a tablespoonful every hour, until further orders. Iced gum water for drink, eau sedative to the head, and arms, frequently applied.

5, P. M.—The emetic had acted freely, ejecting a large amount of undigested food and bilious matter, to the great relief of the head, and causing free perspiration. The bowels had been moved, but it was considered proper to order another injection, and after its action, to give in a tablespoonful of the medicine, the twenty grain dose of quinine, as noticed. Continued two teaspoonfuls of the medicine every hour subsequently.

Half-past 9, P. M., bowels well moved and quinine given. No inconvenience resulting, all seems favorable, fever decreased, skin moist, had urinated, pulse less strong. Continued medicine and drinks, except when asleep. During the day, had trouble about clothing, and fresh air.

19th; half-past 5, A. M.—Had slept several hours, says

he feels comfortable, all symptoms favorable. Found more clothing had been put on by friends, and little air admitted.

Saw no reason to change treatment.

12, M.—Slight uneasiness of the stomach, no vomiting, ordered a mustard and cayenne poultice to the abdomen, an injection of salt-water, and a teaspoonful of the cyanuret of potash recipe, occasionally, as preventives.

The balance of the day, to 10, P. M., the only change noticed was an uneasiness in the bowels, and restlessness, which I was disposed to regard as the result of too much covering, wrapped closely round the body.

The stomach in the course of the night became irritable, and in few hours, black vomit appeared, and in spite of a blister to the abdomen, the use of small portions of sugar of lead, and nitrate of potash, turpentine, morphia, champagne, and injections of brandy, it, and other symptoms continued to grow worse, until death occurred on the fourth day.

Had my wishes been fairly carried out, as to clothing, and fresh air, I had reason to believe the issue would have been different, for, it was impossible to have desired more favorable results from the action of remedies than were exemplified in this case.

CASES 8 AND 9.—These were two sisters, in full health, attacked by the fever on the 20th, and 22d, of September. In all respects so identical was the nature of the attack, so uniformly in both, did the various symptoms make their appearance, even to copious and frequent discharges of black vomit and death, that in the painful narration of their cases, there is every reason why they should not be separated.

Both cases were plainly marked, uncomplicated cases of yellow fever, in which, but for attendant circumstances, no physician would have much erred in expecting with some certainty, a cure. However frequently the injurious amount of clothing was removed, as regularly would it be found on, at the next visit, inveigh as I might against such folly.

The treatment was of that character, almost invariably successful, for what I term mild cases at the onset; a blue pill, the nitrate of potash mixture, iced gum, eau sedative. The bowels were freely moved, the fever was controlled, and up to a given point, no one could apprehend immediate danger.

Reference to the preceding six cases, in which, doubts of success were justly entertained, the same treatment, medicinally, having proved successful, precludes the possibility of any portion of the evil being justly attributed to that. The true cause was, as I believe, the persistence of a custom, fraught with positive evil.

Never have I been so strongly convinced of the absolute necessity of quietness, and the presence of few visitors, in the yellow fever chamber, as in this. It can not be too strongly condemned.

Black vomit appeared, and continued, notwithstanding the faithful employment of all means, ever suggested.

Death occurred in both cases.

At this time, I should consider myself more than reprehensible, was such rash imprudence permitted to occur, then, I was disposed to think that even such a departure from the laws of nature could be successfully combatted. Before the attack, I did not know the melancholy fact, that both these ladies had firmly em-

braced the belief that, if the fever did attack them, they knew they would die. Such an unfavorable opinion; such an entire absence of hope, if known, should never be concealed from the medical attendant, for, with hope, and a firm trust in Providence, on the part of the patient, a physician can do much, without them, he must confess, his power of doing good is materially diminished, if not a nullity.

The three preceding cases, painful though they were, caused me to see most clearly, that the ultra system of clothing, conjoined with the exclusion of fresh air, is fully competent to destroy life in a case of yellow fever, regardless of medical aid. If my opinion, and belief, are wrong, let them be so proved.

If right, should I have withheld them?

I sincerely believe, that, in an epidemic of yellow fever, if a patient is placed in a close room, without fresh air, an excess of clothing put on, evaporation not allowed to go on, and hot drinks freely used, black vomit can, and will be produced in less than forty-eight hours. In making this assertion, I am well aware of the inherent danger of the disease, no matter how mild may be the first symptoms.

CASE 10.—The prominent interest of this case consists in the fact, that, when first seen, this lady, five months enceinte, was not only in bed, sweltering under several thick blankets, but having on a thick mantilla, buttoned around the throat. With a full consciousness of the risk incurred, but convinced that recovery could not be looked for, under such circumstances, I insisted on removing mantilla, and two blankets, or I could not incur the responsibility of attending the case.

The body was actually wet, as also the garments, when taken off.

Except a feeling of soreness, of the upper part of the body, not previously complained of, no further inconvenience ensued, the fever gradually subsided, and perfect convalescence followed in a reasonable time, by pursuing the same course of treatment, so frequently specified, and which, I feel authorized to recommend.

In concluding these remarks, I cannot resist the desire of narrating the main points of a case, that occurred in the epidemic of 1853.

My opinion was asked in reference to the propriety, or safety, of removing a female, at that time, in the febrile stage of yellow fever, under the following circumstances: Two ladies were sick in the same room, one was willing to undergo the usual routine of confined air, and excess of covering; the other felt convinced that she would die under it. After due deliberation, I said, wrap her well up, put her in a carriage, take her to your house; I believe that the safest course. This was done, she was nursed in the house of that lady, no inconvenience resulted from the movement. Result—perfect cure.

Result in the other case—death.

Many other cases could be introduced; substantial reasons dictate the propriety of bringing these remarks to a close, in the fervent hope that the cause of humanity will have been advanced.

COROLLARIES,

Deducible from facts developed, throughout the progress of the foregoing remarks, on the TREATMENT of Yellow Fever, assumed, if not proved to be true.

1.—The absolute necessity of fresh air, in the sick room.

2.—The covering to be adapted to the feelings of the patient.

3.—The room to be darkened.

4.—Tranquillity of mind and body.

5.—An early evacuation of the alimentary canal, unless contraindicated, by a previously existing disease.

6.—Cooling drinks, superior to warm ones.

7.—The non-necessity of, and decided injury from excessive sweating, caused by too much covering, tucked around the body.

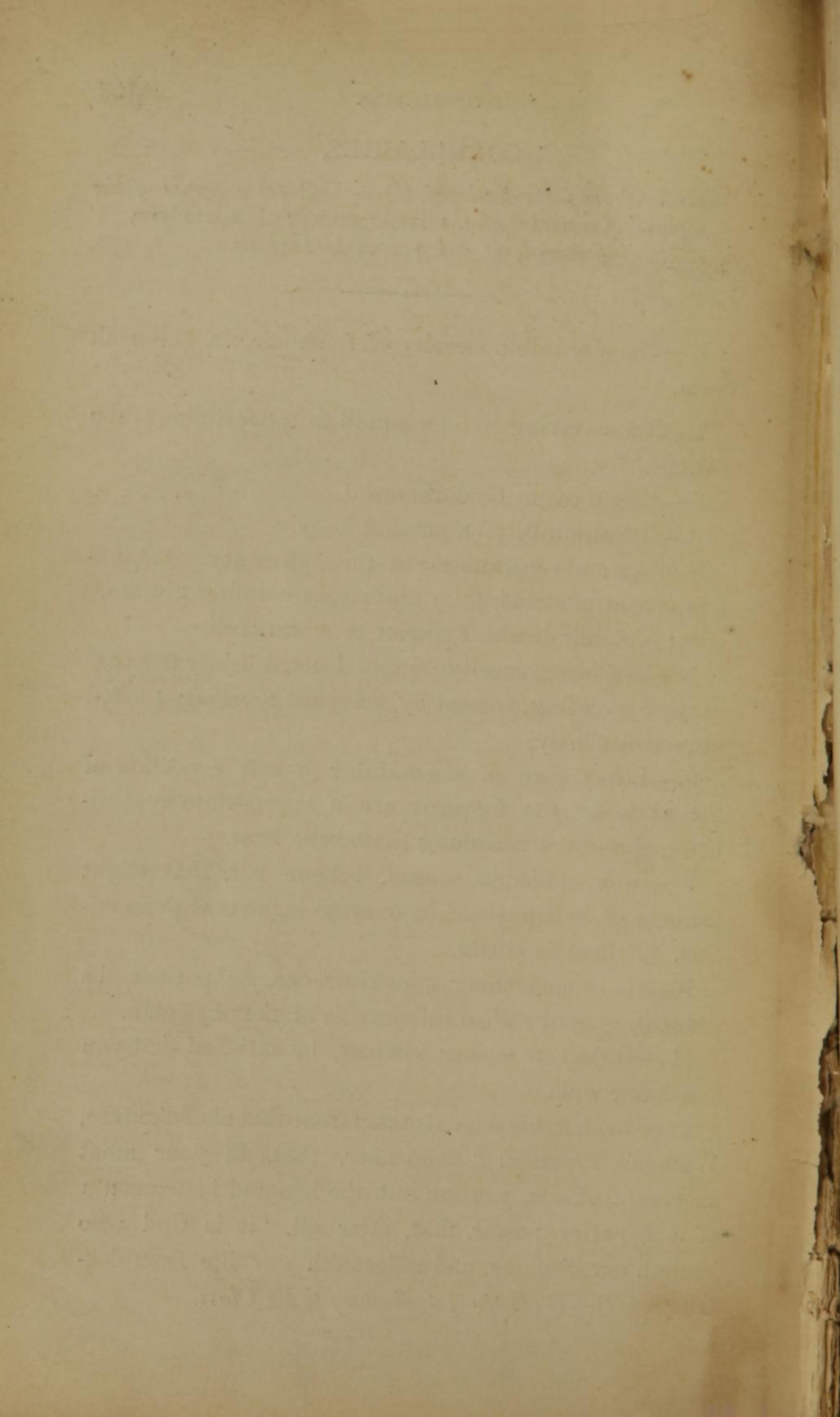
8.—Importance of maintaining a soft condition of the skin, by the frequent use of appropriate applications, thereby diminishing the febrile heat.

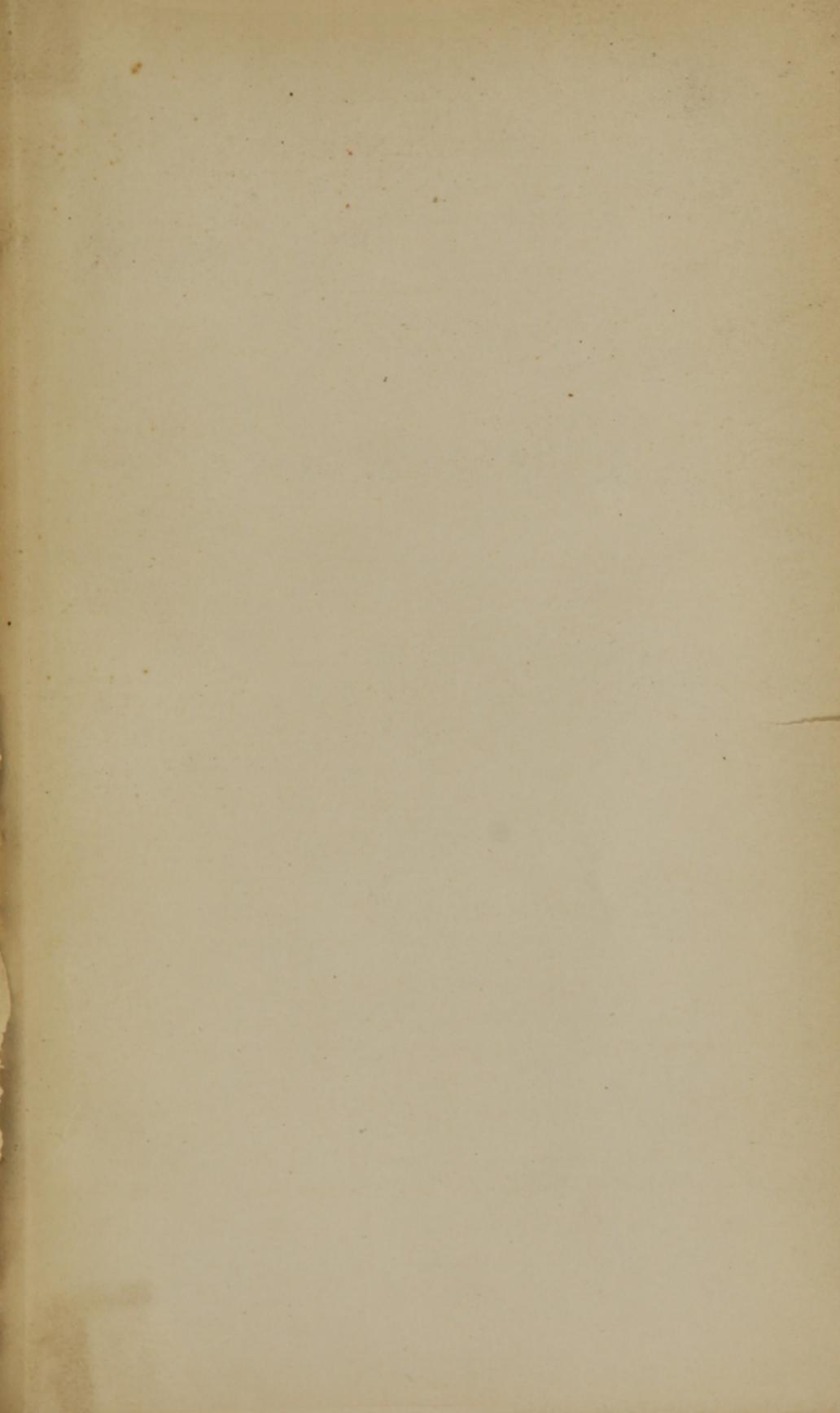
9.—In an epidemic season, believe not, that slight feelings of indisposition, convey no important premonition. *Principiis Obsta.*

10.—In commencing convalescence, be patient, be prudent, obey the wise injunctions of the physician.

11.—Object to seeing visitors, be satisfied that you are doing well.

12.—Last, not least, extracted from that chef-d'œuvre, *Watson's Practice*: "Remember, that, in your most successful efforts, you are but the honored instruments of a superior power, that, after all, 'it is God who healeth our diseases, and redeemeth our life from destruction.'"—*Watson's Introductory to his Class.*









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