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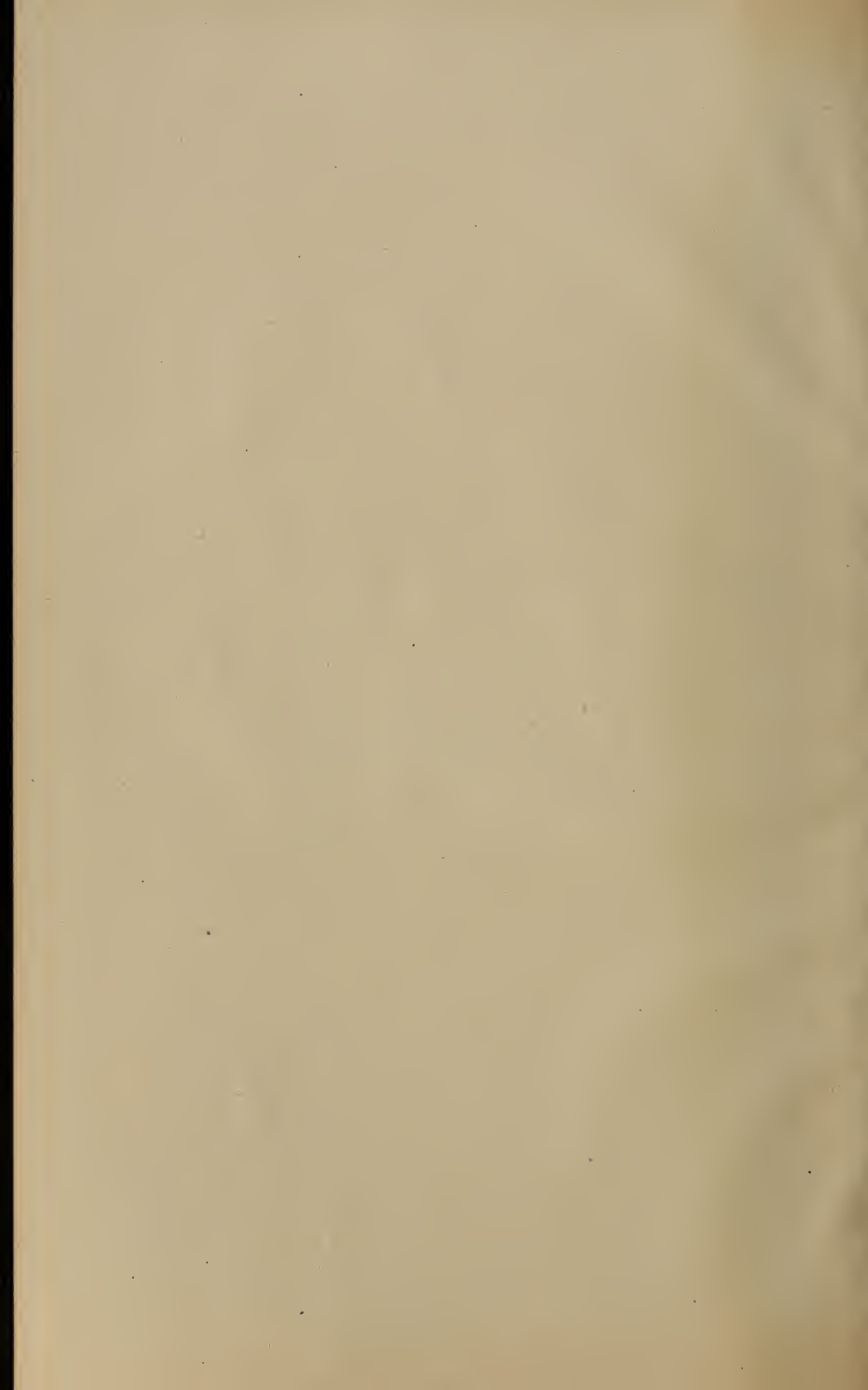
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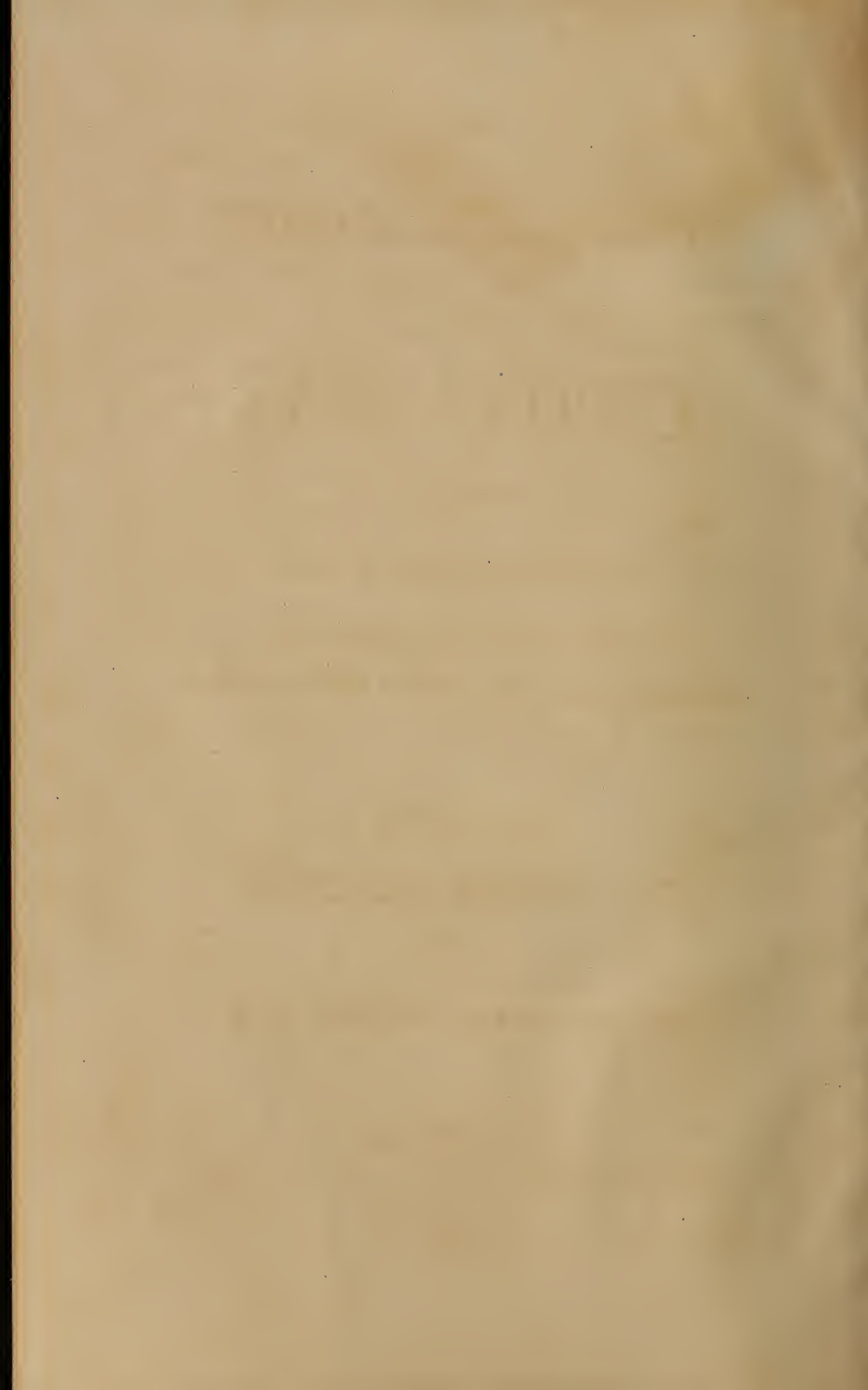
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UNITED STATES OF AMERICA.









THE  
PATHOLOGY AND TREATMENT  
OF  
CHOLERA:

WITH AN

**APPENDIX,**

CONTAINING HIS LATEST INSTRUCTIONS  
TO PLANTERS AND HEADS OF FAMILIES,  
(REMOTE FROM MEDICAL ADVICE)

IN REGARD TO ITS

PREVENTION AND CURE,

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BY SAM'L A. CARTWRIGHT, M. D.

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NEW ORLEANS:

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## PREFACE.

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The demand from physicians, medical students, planters and other persons, upon the Author for his views on Cholera, has been, and is yet, so great, that the present publication is forced upon him, it being impracticable to answer all the inquiries in any other way than through the press. It was intended for publication in the New Orleans Medical and Surgical Journal, but from some inadvertency was passed over in making up the July number. To wait for its appearance until September, would be too late, as the remedies, recommended by the author, are at the present time in very extensive use in the south and west; and hence many errors and fatal mistakes may be avoided by an immediate publication of the necessary directions and an exposition of the principles which should govern the treatment. An explanation of the *modus operandi* of the remedies advised, and the pathology of the complaint they are intended to cure, will not only lessen the evils to be apprehended from their empirical employment, but do some good in preventing the indiscriminate use of other medicinal agents likewise. The present paper is intended for medical men—not for sophomores or pretenders, but for intelligent and well read members of the profession. But as Cholera is a disease in which the most skilful physicians need help, in the initiatory treatment, until their personal attendance can be procured, just so much public information is given in the present paper, and particularly in the Appendix, as was thought necessary to guard against panic and to instruct the patient to give the required help; by taking the medicine first and sending for the doctor afterwards. In commu-

communicating enough of medical information to enable non-professional persons, in the absence of a physician, to begin the treatment in Cholera, the Author expects to incur the censure of those, whom the vanity of a little medical reading has led into the error of supposing that their skill can compensate for the time lost in procuring their advice. The present publication is due to the students of the Louisiana Medical College, who repeatedly requested the Author for his views on the subject : It is also due to upwards of six hundred medical students of the Schools in St. Louis, Louisville and Cincinnati, who expressed to him personally, in a recent visit to those cities, a desire to see his views *in extenso* on the pathology and treatment of the disease, and handed in their names and address : It is due to a great number of physicians, students and other persons, scattered throughout the Union, who, since the publication of Secretary Walker's letter, giving an account of the great success of the Author's treatment of the Cholera in 1833, have written to him for further information : But more than all it is due to the medical public, that a plan of treatment, which, in the hands of a number of other persons besides the Author's, has succeeded in curing about ninety-nine in a hundred, when put in practice prior to the failure of the pulse from the cholera action, should be made known and no longer criticised, *sub rosa*, by those who cannot read their diplomas, but go forth to the profession at large, while the disease is prevailing so extensively in different parts of the Union, to be tried on its merits, without waiting for it to disappear before the Author's method of treatment is vindicated from the charge of empiricism and its *rationale* explained.

NEW ORLEANS, July 9th, 1849.

# THE PATHOLOGY AND TREATMENT

OF

# CHOLERA.

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The Asiatic Cholera, like every thing else imperfectly known, has its inexplicable facts. Soon after its appearance in this city, last winter, the writer left Natchez and repaired hither to meet it on the out-posts, where he has been ever since, adding to his former experience in regard to its nature and treatment, both by conferring with his medical brethren, by observing and treating it in private practice, by examining the disease and the remedies used for it in the Charity Hospital, and by witnessing a great number of post mortem examinations of cholera subjects, made by the most skilful anatomists and pathologists of the city. A multiplicity of facts in regard to it has thus been ascertained; but much of what has been brought to light is inconsistent or irreconcilable, and must remain so until the mass of apparently inconsistent or clashing facts are better systematized and their harmony discovered. It is too common in Medicine, as in other sciences, for observers to doubt or deny all observations which may appear inconsistent with their own. When they cannot resist the force of evidence, in support of apparently inconsistent truths, they bring up one truth against another; a stumbling block is thus thrown in the path of knowledge, causing great numbers to fall into unprofitable cavelling or bitter disputations. Nothing can harmonize conflicting truths but an advancement in knowledge—disputations and angry controversies never can. The great mass of the votaries of science, in trying to reconcile contradictory truths by idle disputations or ingenious logic, stumble on the very borders of useful

knowledge, and never become profitable laborers in any unexplored field of science. As there are a great many irreconcilable facts—irreconcilable to our intelligence, in every science—charity, the highest virtue in morals, is the highest wisdom in Medicine. It is the key to unlock the door to practical knowledge. Without it, the inquirer after truth cannot enter, but wanders in a barren wilderness of controversy, where no good fruits mature. Our knowledge at first, is confined to isolated facts, each of which should stand on its own evidence, whether it can be reconciled with other facts or not. To harmonize or discover the relations between apparently contradictory things, is often unattainable, after the greatest minds have devoted a lifetime to the subject. Whereas, the evidence on which each alledged fact rests, is open to all, and requires but little time to ascertain whether it be a fact or not. It should not therefore be rejected because it clashes with any other known fact, as this would be tantamount to rejecting the experience of others, because it does not tally with our own, but should be received or rejected according to its own intrinsic evidence. Many important facts connected with the subject of Cholera have been uncharitably rejected, without a hearing or an examination of the evidence on which they are predicated, merely because they cannot be reconciled with other facts already known. Such a procedure closes the door to the inquirer after truth, by rejecting truth without examination, arrests the further progress in knowledge, and leads to unprofitable disputations. Every physician therefore, desirous of advancing the interests of his profession and profiting by the experience of his medical brethren, should practice sufficient charity towards them to give their experience a fair hearing and an impartial examination, whether it comports with his own experience or not. Charity is a virtue whose cultivation not only makes the heart better, but the head wiser. If more cultivated, there would be less discord in the profession, and its progress in knowledge would be greater, both in Cholera and other diseases. There is a harmony between virtue and true science; the latter is inanimate without the former, and is hindered from making progress; improvements being arrested at every step by bickerings

and contentions. The profession not only suffers from the uncharitableness of its members towards one another, but also from the uncharitableness of the public towards the profession. A great many remedies, apparently the most opposite in their properties, have been recommended as curative agents in Cholera. A large portion of the public, taking a narrow view of the subject, erroneously conclude that the whole science is a humbug or the most precarious and uncertain in the world, or the regular physicians would not pursue such opposite courses of treatment for the same disease. Their faith being shaken in the regular science by their incorrect reasoning, they are too apt to fly to quacks for relief, forgetting that if Medicine proper, be a humbug, quackery must be a greater; because the remedies it proposes for the cure of disease are more multifarious than those of the regular physicians. The great truth, that Nature has provided more ways than one, to arrive at the same end, the restoration of health, is not considered or understood by many of those, who, accustomed to see an end reached only in one way, unphilosophically conclude, that all those, who assert that the same end has and can be reached by other ways, are deceivers or the advocates of false doctrines. They cannot reconcile other methods of treatment with their own, and reject them without further examination, on the ground of irreconcilability with the truths taught by their own experience; the apparent contradictory experience of others being rejected without a hearing or an examination of the evidence on which it is founded. The error lies in limiting the science of Medicine to one remedy or particular class of remedies for the same disease. If proof be brought, that it is not so poor in its resources as to have but one remedy for a disease, they reject it altogether, sooner than give up the contracted view they took of it. They cannot see the truth because it stands in opposition to erring reason, and tells of cures by opposite means, which their contracted theory cannot explain. It is as unwise to lose faith in Medicine because it affords various and apparently opposite remedies for the treatment of Cholera, as it would be to reject it because it affords various, and to all appearances, directly opposite remedies for the cure of burns and

scalds. Those, who have only witnessed the good effects of cooling, soothing and emolient applications in burns, would be apt to deny the fact that the application of such a heating, exciting and inflammatory a substance as spirits of turpentine to surfaces, raw and inflamed by fire, could ever produce any good effect, or be entitled to the consideration of a curative agent. The admission of such a fact would be tantamount to an acknowledgment of ignorance, the very last thing for the ignorant to acknowledge. If it be humiliating to professional pride to admit that there are so many curative agents for burns and scalds, the Cholera and numerous other diseases, whose apparently contradictory characters, actions and properties cannot be scientifically explained, it should elevate, instead of lower, that noble science in public estimation, that has so many opposite and various resources for the relief and cure of the infirmities incident to humanity. Yet because the resources of the science of Medicine, for the cure of Cholera and many other diseases, cover a larger field than the eye of reason can scan, there are many who distrust it on account of this very perfection, and view the regular medical profession with suspicion, forego its advantages, and are brought to untimely graves with curable diseases, in the triumphant car of empiricism, gilded with their own gold.

They are the victims of a false philosophy, founded upon their own limited views of things, their own experience, or the pretended experience of a few designing men, in opposition to the enlarged experience of the civilized world. Every newspaper they open, inculcates this false philosophy in the shape of captivating quack advertisements. They have not charity enough for the regular medical science to examine the evidence on which it stands. They perceive that different doctors prescribe different remedies for the same complaint, and often call it by different names, and they reject the whole, because they cannot understand why this should be so. They do not consider which is the most likely to be right, the accumulated experience of ages, concentrated in the regular medical profession, or the ephemeral and limited experience of quacks and impostors? The quack publishes remedies for nearly all dis-

eases, professing to rest on his own experience or that of a few others; they enrich the quack by purchasing his remedies, and forego all the advantage the world's experience could afford them.

More quack medicine is consumed in the Mississippi Valley than all the medicine prescribed by physicians. Medical statistics prove that increased mortality and quackery go hand in hand together. Besides the individual quacks, each of whom sets up his experience in opposition to the experience of the world, there are of late years, many associations of persons calling themselves doctors, who set up the experience of the association in opposition to all that of all the world before them.

Of this class are those associations of individuals, who profess to cure all diseases by steam, by cold water, or by infinitesimal doses. They all unite in bringing prominently forward the apparent discrepancies and contrariety of remedies of the regular medical profession, as an argument in favor of their professed simpler and more certain method; alarming the public by telling of the failures of the regular physicians, but saying nothing about their more numerous cures. All of which has a tendency to confuse and unsettle the public mind on the subject of Medicine, particularly when the fears of the people, from the presence of the Cholera or other epidemic, get the better of their judgment. It is this distrust and want of confidence in Medicine as a science, that quackery of all kinds takes so much pains in disseminating by the press and every other available means among the people, at every visitation of Cholera or other epidemic malady, that opens a market for the sale of nostrums and pretended specifics; and if physicians refuse to publish methods of cure, they are denounced as being selfish, or having no knowledge to communicate, or no love for the people. The unhinging of public confidence in the medical profession in times of alarm from an epidemic, when its services are the most needed, is attended with much worse consequences than that of creating a harvest for quacks, as it deprives a large portion of the public entirely from the benefits to be derived from past experience, concentrated in the medical profession; or if they avail themselves of that experience, it is often too late, having lost much precious

time, in the first instance, in trying experiments with nostrums, coming recommended to their notice—not in the massive tomes of a science as old as civilization—but with no higher recommendation than that of newspaper puffs and advertisements, published at the instance and at the expense of the empirics themselves.

What is the main ground upholding quackery? It is no other, than because a science, as old as civilization, and which had arrived at great perfection long anterior to the Christian era, and cultivated and improved in every country where civilized man has dwelt, has more than one way of curing diseases.

The abundant resources of the medical science, instead of being arguments in its favor, are brought forward to prove its imperfections and to shake public confidence in it. Some of their principal remedies denounced as poisons in almost every newspaper, and even the Science itself distrusted of doing more harm than good, or of being something no better than antiquated nonsense, physicians work to great disadvantage during the prevalence of any wide spread epidemic. Their advice is either not followed, or followed with hesitation and reluctance. Often it is not asked for at all except in desperate cases. They get no credit for success, if they cure, and all the blame if the patient dies; and if two or more physicians effect cures by different or apparently opposite means, so far from getting credit for it, these very cures are adduced in proof that there is nothing really true or useful in the science, or that the cures were not effected by the means used, because the means were opposite or different in the same disease. There are not wanting many medical men, who are led gradually, by such false reasoning, to doubt the healing powers of the science they profess, and to disbelieve the evidence of their own senses, because they cannot explain or see the reason why opposite remedies should produce similar results. They sooner believe that they produce no effect at all or no good effect, rather than give up some cherished theory. Thus, those physicians, who have seen much good by the application of molasses or some other emollient and soothing application to burns, and having conceived a narrow theory, that every thing else, applied to such affections, except emol-



lient and soothing applications, would be useless or pernicious, sooner disbelieve in the good they have seen done, than in the curative virtues of spirits of turpentine, as such a belief would militate against a cherished, but short sighted theory. Again, those, who have witnessed the good effects of ice, bleeding, and the cold water treatment in cholera, and have become wedded to a theory, that it depends on an inflammation of the stomach, (making every thing inadmissible, but cooling and soothing things,) are not prepared to believe in the virtue of large doses of such a heating thing as *capsicum or red pepper*, as one of the best remedies in that disease. They will not believe in the facts of its curative virtues, because the facts are in opposition to their theories, or rather to their prejudices. All prejudices are nothing more than short sighted, narrow, contracted theories, built upon a few facts, without taking in the whole. The theory or prejudice, of medical men against the pepper family of plants, in acute diseases, is of modern origin, not two centuries old, and has been derived from the north of Europe—a cold region, where the diseases are inflammatory, and the heating spices injurious. On the other hand, the facts in favor of their medicinal virtues, are spread over an extent of country ten times as large, and extend through a period of 2000 years.

From Hippocrates to the time when the Edinburg school was founded, is upwards of 2000 years, yet the virtue of pepper during all that time, was admitted. It entered largely into the composition of all the celebrated compounds for the cure of plague, and conjestive diseases of southern latitudes. Even after the revival of learning, no less than twenty medical works were written, by as many different authors, on the virtues of a compound, which forms the basis of my prescription for cholera. That compound contained no less than three different kinds of pepper, the white, the black and the red. In 1571, Josephus, Valdanius of Brescia, wrote a work on its virtues in pestilential fevers.—De Onis, of Venice, in 1576; Stelliola, of Naples, in 1577; Eugubino, of Ferrara, in 1597; Fontaine, of Avignon, south of France, 1601; Gasparis, of Rome, 1640; and many others too

tedious to mention. The composition, besides the peppers, contained many antispasmodics, which might be well represented by gum champhor. For the purgative ingredient, the white agaric, a slow but sure cholagogue, calomel is an excellent substitute.

The white agaric and red pepper have been found to be the best remedies for a disease, very much like cholera, prevalent in the Alps, and supposed to be caused by swallowing leeches. The white agaric may be said to be the calomel of the Alps, as it is used on almost all occasions, as we use calomel or blue mass.

The composition above referred to, also contained some opium, and a number of plants, which have been lately analyzed in Paris, and erected into a natural family, under the generic name of *cinchoniacæ*, from the fact of their yielding a substance like quinine. Yet that celebrated composition, which formed one of the principal staple commodities of the great city in the Adriatic, was expunged from the Edinburg Dispensatory, less than a century ago, because it contained ingredients too heating for that high latitude; but worse than all, the Edinburg theorizers could not explain its action on the human system, and rejected it on that score. But they have not yet explained all the difficulties and mysteries hanging over a single blade of grass. Until they do so, we, of the South, should be cautious in sanctioning the rejection of medicinal agents, which the experience of twenty centuries, in a climate similar to ours, has proved to be valuable in the treatment of many diseases incident to southern latitudes.

I claim not to be an experimenter or innovator in Medicine, but only the reviver of a practice, having the highest medical authority to sustain it—the authority of twenty centuries—the practice of combining pungent aromatic stimulants with antispasmodics and purgatives. In setting forth this practice to the consideration of the profession, it is not my intention to call in question the practice of others differing from mine. There is more than one way of reaching the same end. Among the various plans of treating cholera, some may be good, others better, or best. But good, better and best, are only relative—what is best for one case may not be best for another. Much, therefore, must be left to the

judgment of the practitioner in adapting the most suitable plan to each case, as it occurs. No one plan can be best in all cases; because the constitution of the patient and the circumstances surrounding him, are not the same in all cases. With these remarks I pass on to give an *exposé* of the general plan of treatment in cholera, which my experience has proved to be the most successful, together with its *rationale*, and the pathology of the disease. In justice to others, who pursue a different method, I must state that I have not tried all the plans of treatment that have been proposed, nor the half of them; consequently I do not know whether my method is the best of all or not. It is only the best among those I have tried. I am satisfied with it however, believing that if it be not the best, it is a very good one; and all I ask is an impartial and unprejudiced hearing.

Like fire, the cholera is easy to subdue in the spark, but soon becomes uncontrollable and destructive, if let alone or improperly tampered with. No skill in physic can be depended upon to repair the damage caused by delay. Anything to smother and keep it in check, is better than nothing, until the personal attendance of a physician can be procured, even if the treatment be not the best the case admits of. The cholera, like a wild horse, should be put in strong harness from the first. Inefficient doses cannot be relied on. More deaths have occurred from trifling with the diarrhoea, by inefficient doses and quack nostrums, than from any other cause. I treat both the cholera, and what are improperly called its premonitory symptoms, in the same manner. By one or more efficient doses of medicine, given as soon as possible, viz: 20 grains capsicum or Cayenne pepper, 20 grains calomel, or hydrargyrus cum creta, 10 grains gum camphor, 15 gum Arabic and the same of calcined charcoal mixed together, and given at one dose. Two table spoons full of cold water, being the best vehicle. The end of a towel or napkin, wet in cold water, and inserted into the mouth, immediately after swallowing the medicine, will remove the burning, pungent, sensation in the mouth, and also prevent vomiting. Much water, drank after taking the medicine, is apt to cause vomiting, and is less effectual

in allaying the burning sensation, felt in the mouth and fauces, than the wet napkin. If the above composition be vomited, another should be given, or half doses, if only a part be, until at least one full dose is retained on the stomach. Then little sips of some aromatic teas, as chamomile, mint, cinnamon, &c., to determine to the surface. If the skin be cold, or the feet and hands, besides mustard externally hot salt in bags or hot bricks, or bottles filled with hot water, applied around the patient, will assist in starting a perspiration. As soon as the skin gets warm and moist, the drinks should be given more freely, and the hot applications removed entirely. Fresh, cool air to be admitted in the room from the commencement. As soon as the patient begins to sweat freely, warm drinks to be given freely, or cold drinks if the patient prefers them. It is not necessary then, that the drinks should be stimulating or pungent: warm water itself, will not vomit when a revulsion is made to the surface by the sudorific powder just mentioned, and a perspiration induced.

The hungry absorbents take up instantaneously any bland liquid and carry it into the circulation to replenish the loss of the serous or watery parts of the blood, occasioned by the disease. The watery fluids, taken into the stomach and carried into the circulation, will be a sufficient stimulant. It is unnecessary then, that the fluids, drank after the perspiration begins to flow, should be impregnated with aromatics or stimulants, as brandy, pepper, &c., except to give them an agreeable taste. Bland drinks—as gruel, chicken water, beef tea, &c., are better. The perspiration to be kept up from six to twelve hours. This sweating process does not exhaust, but strengthens, if the patient be freely supplied with diluent drinks.—The discharge from the external surface, makes the absorbents opening on the internal surface, greedy of all drinks taken into the prima via—and thus the blood vessels are refilled and the necessary fluidity to the blood restored.

Formerly I was in the habit of giving some purgative to work off the above mentioned medicine. Subsequent experience has proved it to be unnecessary, as the medicine works itself off the next

day; if retained longer than twenty-four hours, and the blood has regained its aqueous constituents, some simple purgative or enema might be necessary to prevent the calomel from salivating, by remaining too long in the system. I found it not often necessary to give opium, laudanum or morphine. The combination of pepper, calomel, camphor, charcoal and gum arabic, has the same power in arresting a rice-water vomiting, or purging, that calomel and opium have in arresting a bilious vomiting and purging.

For all thin large evacuations from the bowels of a light color, or destitute of bile, whether the disease be cholera, or congestive fever, or any other complaint, the above combination is the most effectual medicine that can be used. This I regard as an axiom in Medicine of great practical importance.

No consecutive fever follows the above treatment. If opium, in any form, be used, consecutive fever is very apt to occur. It is almost sure to do so if some medicine to restore the abdominal circulation through the liver, be not used. But I use opium or morphine, very freely in those cases, where the above mentioned combination cannot be retained on the stomach. Instead of repeating the powders, when the stomach is too irritable to retain them, the morphine or opium should be substituted for them—For instance, half a grain of sulphate of morphine, dissolved in two tea spoons full of camphor water, and given after every spell of vomiting, or every operation on the bowels, will be found an excellent remedy in such cases. If opium or morphine be given at all in cholera, it should be in decided doses, three or four-fold the ordinary dose. As much as a grain of morphine, or 4 or 5 grains of the best opium have been given at a dose without narcotizing the system. A little strong coffee should follow the use of opium—also, calomel or hydrargyrus cum creta, or blue mass, to act on the liver. Large opiates do not lock up the liver like smaller doses of that drug. It is very important not to purge too soon—a sufficient time should elapse for the watery parts of the blood to be restored before the bowels be operated on, otherwise there is danger of prostration.

The method I have adopted in treating cholera does not differ

materially from that which Sydenham found to be the most successful in the plague of London, in 1666. Nor does Sydenham's prescription for the plague differ much from that which the experience of the preceding 2000 years, proved to be the most efficacious in the cold, congestive diseases, (under the name of plague and epidemics,) that have, from time to time, afflicted mankind. The remedy, proved by experience to be the most successful in all such affections, consisted of a combination of aromatic, pungent stimulants, with antispasmodics and a slow purgative.

The peppers, both red and black, invariably entered into the composition of every one of them. The white agaric, a slow drastic cholagogue, performed the same office in the theriacas, alexipharmics, and the various compositions for treating poison and pestilence, that the calomel or chalk mercury does in the combination which experience has proved to be so successful in cholera.

The camphor in the cholera powders, does the same that the various balsams and antispasmodics of the old prescriptions for plague were intended to do. Such prescriptions were necessarily complex, because the irritating, drastic cholagogues then in use, required the addition of opium to correct their action, and therefore a number of other articles were thrown in to correct the effects of the opium; for instance, its tendency to check the renal secretion required the addition of diuretics to counteract that effect.

In cholera the kidneys cease to act from a deficiency of arterial blood. The venous system is *plus*, and the arterial system *minus*, as far as the systemic circulation is concerned. In the lungs, the reverse is the case. The arteries *plus* and the pulmonary veins *minus*; because, in the pulmonary circulation the veins circulate the *red*, and the arteries the *black* blood. I will not refer to the post-mortem examinations I have made in cholera on its former visitation, or to those made by physicians out of the city of New Orleans, because it is not worth while to go abroad for facts, when we have all the facts much clearer made out at home.— Instead of the physicians of New Orleans looking to those of

other cities and countries, to learn the pathology of the disease, it is time for them to say to their medical brethren elsewhere, "Follow us," and to assert the right of the Crescent City to take the same high rank in Medicine, she already has in commerce. She has all the elements to become as great in that as she is in this. Hence it is unnecessary to quote books to prove, from the post-mortem examinations made in other cities, what the scalpels of our own anatomists have demonstrated every day, for months in succession, and which so many physicians of this city either made or witnessed, to whom, I beg leave to refer as authority for the following facts, revealed by dissections in their presence: The great venous trunks were found turgid with a thick black blood, and the pulmonary arteries filled with the same grumous fluid. The pulmonary veins going to the left side of the heart, comparatively empty, as also that side of the heart and the whole arterial system every where, except the pulmonary arteries. In every cavity, a fluid like rice water, was discovered—in the kidneys, in the bladder, in the uterus, and even in the fallopian tubes. The spinal column and cranium contained a great excess of serum. The exhalent arteries of all the membranous surfaces had parted with the serous portion of the arterial blood contained in them, in the shape of a rice water exudation, bedewing the surface of the membranes to which they are distributed.

The fluid parts of the blood having escaped, the fibrine and red globules remaining, gave to the membranes that peculiar leaden or stone color, so conspicuous in the mucous coat of the intestines, and invariably present in all the numerous post-mortem examinations. But in the bowels, another source of rice water was detected, besides that derived from the capillary arteries.—The thoracic duct was found empty, the great trunk of all the absorbents, and the bowels contained a substance bearing the chemical characteristics of blood in every particular, except color. Where did this white blood come from? The empty thoracic duct is in proof that it had poured back its contents by a retrograde action into the alimentary canal, that the absorbents had actually vomited back the constituents of the blood into the prima via,

instead of carrying the same to the right side of the heart. It could not get to the heart, because the heart was full, and the vena cava and subsclavian in a state of utmost distention from the congestion of venous blood therein, which could not move through the lungs. Deprived of the stimulus of the chyle, the blood in the heart underwent decomposition, and the febrine separated from the mass in the shape of oyster-like polypous substances, which the scalpel revealed to the eye and touch. The knife revealed the fact that the circulation in the liver had been suspended from the same cause. The blood from that organ could not be poured into the cava and heart, already full; the right side of the heart could not empty itself, because the pulmonary arteries were full, and the pulmonary veins contained no red blood.

What they did contain was carbonaceous, like venous blood. The scalpel in the hands of such men as Stone, McCormick, Dowler, Wederstrandt, Smith and others, has shewn us all that post-mortem examinations can probably teach. Many of the New Orleans physicians have witnessed Dr. Dowler's experiments on the living subject afflicted with cholera—the same individual who has immortalized his name by the discovery of an unknown law of contractibility by which the power of muscular motion can be restored for a time to the dead subject. The thermometer on the tongue applied by the learned doctor indicated a diminution of animal heat, below the healthy standard, from fifteen to twenty degrees. This diminution of vital heat is evidently owing to the morbid cause of cholera, whatever it may be, enervating the brain and nerves, as poison does, diminishing the combustion in the lungs, causing a deficient arterialization of the blood, and a diminution of animal heat as a consequence. *It is the caloric given out by the combustion in the lungs, which impels the blood through the pulmonary veins to the left side of the heart.* True, there is not much difference in the sensible temperature of the black and red blood, yet the red blood contains much more caloric in a latent or insensible state—its capacity for caloric being increased by its diminished density and less specific gravity, when compared to black blood. Ether and oil have different capacities for heat.—



Ether, in a tube, is rapidly propelled forward before its sensible heat is much increased. The same happens to the red blood in the pulmonary veins. The caloric, it receives from the combustion in the lungs, propels it rapidly forward towards the left side of the heart in those valveless tubes, called the pulmonary veins, without its sensible temperature being much increased. The caloric, given out by the combustion in the lungs, passing into the insensible state, from the increased capacity of the red blood for heat, is the reason why the sensible temperature of the lungs is not more exalted, by the great quantity evolved in the metamorphosis of the thick, carbonaceous blood into a light fluid by the process of respiration. It is this latent heat that moves the arterial or red blood through the pulmonary veins to the left side of the heart. This important fact is not yet in our system of physiology. It is a newly developed truth, but can be easily demonstrated. When the heat diminishes as in cholera, the motive power of the *red* blood through the pulmonary veins is diminished also; at length the pulse ceases to be felt at the wrist, because the blood from the lungs has lost the motive power that impels it into the left side of the heart, and consequently accumulates in the pulmonary arteries, stagnating in the right side of the heart, and causing a congestion in the venous system. The absorbent vessels and all the hollow organs fall into a spasmodic or irregular action, as a natural effect of the loss of nervous power, the carbonaceous state of the blood, the deficiency of animal heat and the stimulus of destitution, caused by the venous plethora. The venous congestion is so great, that the exhalent arteries cannot pour their contents into the distended venous system, and all the albuminous and watery parts escape in the shape of rice water, by a kind of filtering, which the loss of tone greatly favors.

This being the pathological condition of the system, diffusible stimulants are indicated to arouse the failing nervous energy, dry heat, externally, is indicated to elicit a flow of blood to the surface, and to promote perspiration. Frictions are of use to assist the motion of the blood in the congested veins. The use of cold water, as in fainting, is a powerful adjuvant of internal stimulants. By throwing water in drops into the face, causes the patient to take fuller respirations and pro-

motes the circulation of the blood through the lungs. If Ether or Chloroform be added to the water, the effect is increased. A cool, fresh, circulating atmosphere, for the patient to breathe, is of the highest importance. Such an atmosphere feeds and fans the pulmonary combustion, by supplying a greater amount of oxygen in a given bulk of air, thereby promoting the transformation of the *black* into *red* blood, and the consequent development of more heat,—the propelling power of the blood from the lungs to the left side of the heart. If the vital power be not too much impaired, blood letting is indicated to remove the plethora of the venous system, and to accelerate its motions through the lungs. The asthmatic, anxious breathing in cholera, as in measles, is often relieved by the lancet, which by taking off a part of the excess, enables the balance to circulate more readily by diminishing the plethora in the system of vessels circulating black blood, and thereby removes the difficulty of promoting a healthy perspiration. That plethora diminished, the absorbing vessels are enabled to empty their contents into the veins. As soon as the circulation in the absorbents is restored, the rice water discharges cease entirely, which no astringents and opiates could check effectually. A revulsion to the cutaneous surface, in the shape of a gentle diaphoresis, is the most speedy and certain method of arresting the cholera action. If drinks be given, while the blood is flowing, the enervating effects of the loss of blood will be but little felt, if felt at all. Indeed blood letting to a moderate extent, the patient drinking freely of diluents while the blood is flowing, is in fact a powerful stimulus. But it is not a stimulant unless the absorbents are in a condition to take up a portion of the fluids drank. The loss of blood, however, by removing the venous plethora, gives activity to the absorbent vessels and makes them thirsty for fluids. Purgatives, to unlock the portal circle and to make the liver aid in restoring the equilibrium between the two systems of vessels circulating black and red blood, are important; but should be slow in their action, as all purgation is injurious until the lost serum of the blood is replenished, by exciting into activity the absorbent vessels of the alimentary canal through the

medium of a moist cutaneous surface. After the blood has been watered, so to speak, by the absorption of liquids taken into the stomach, through the instrumentality of the activity, which perspiration gives to the absorbent vessels, purgatives act kindly and do not prostrate. While the fluids are inspissated they cannot act on the liver. Spasms also prevent their acting kindly. All the hollow organs are apt to fall into a spasmodic condition, as well as the muscular system, in consequence of the inspissated condition of the blood and the nervous irritation. Even in a common colic there is great difficulty in bringing the liver into action before the spasms are relaxed. Besides the spasms, the venous plethora and torpor of the stomach, the natural course of the abdominal circulation is reversed. The constituents of the blood are running back into the alimentary canal, and the exhalent arteries are filtering out the remnant in the arterial and capillary system, by a kind of passive hemorrhage of its watery parts. To trust alone to calomel would be unsafe, because in the violent cases, if it acts at all, it cannot act in time. Combined with opium it promises more. Opium relaxes spasm, and increases the energy of the brain and nerves; so far so good; but it suspends all secretions, except those of the skin, and its use in cholera, if long continued, is apt to be followed by a secondary fever or cerebral excitement, often more dangerous than the disease. Quinine is liable to great objections. It is a new remedy and its use in cholera is experimental. It has been given in this city in doses as high as 30 grains, with 2 grains of opium. The success of the quinine practice has not made it popular with the faculty or the public. The sulphur and charcoal practice, about which so much has been said, is evidently a humbug—at least in the small doses advised, uncombined with other things. In scorbutic habits, and in persons who cannot use mercury in any form, without being salivated, or who, like the French, have inveterate prejudices against calomel, I have substituted a teaspoonful of sulphur for the mercurial part of my cholera powder—some ten or twenty grains of Turkey rhubarb have also been substituted for the mercurial medicine in the prescription, but owing to the difficulty of

procuring good rhubarb, the lac sulphuris or sulphate of potash is preferred. Camphor in large doses is equally as effectual in relieving spasm as opium, and has none of the objections appertaining to that article. Opium and its preparations, tannin and all astringents of that class, have more or less power in restraining the watery purging. The capsicum, however, is equally, if not more effectual in arresting the purging, not only by stimulating the nervous system generally, but by its direct, pungent, stimulating effects upon the mouths of the absorbent vessels, which are pouring back their contents into the alimentary canal, by a retrograde action. But the main virtue of the pepper lies in the fact, that in combination with the other articles of the prescription, it is one of the most certain, safe and powerful sudorifics of the *Materia Medica*. The revulsion to the cutaneous surface made by the sudorific powder, is much more effectual in arresting the purging, than any astringents or opiates possibly could be. The spasm being allayed by the camphor, the retrograde action of the absorbents, checked by the revulsion to the surface, and the nervous system aroused by the stimulating properties of the ingredients in the sudorific or non-purgative powder, the natural course of the greater or systemic circulation is restored, and nothing more is necessary than to give agreeably flavored diluents to support the sweat and to restore the lost serum in the blood, until the purgative medicine in the composition, has time to empty the distended gall bladder, and restore the natural course of the circulation through the liver. In a cold climate where the liver plays a very subordinate part in the animal economy, in comparison to what it has to perform in a southern one, the disease might be treated successfully without cholagogues. But in the south, where the lungs do so little and the liver so much, it is evidently unsafe to dispense with chalk mercury, calomel, rhubarb, sulphur, or some other slow purgative, to facilitate the circulation of the blood through the liver by exciting that organ into action, thereby removing visceral congestions, that might otherwise terminate in inflammation or a dangerous consecutive fever. A very common error is to over stimulate. Stimulants, of some kind or other, are all important in the commencement of the dis-

ease to arrest its downward progress. That indication being fulfilled, they are injurious or useless in the subsequent treatment. They are of use until perspiration occurs, and the rice water purging is arrested; afterwards teasans, gruel, chicken water, and such kinds of diluents, are the best stimulants. Chicken water alone will cure the disease, if there be sufficient activity in the absorbents to carry it out of the prima via into the circulation. Perspiration will impart to the absorbents the necessary activity. Then all that will be necessary to effect a cure will be to make the *ingesta* exceed the *excreta*. If the fluids gain by absorption more than is lost by the diarrhœa, the patients strength will increase instead of diminish. The error into which Prof. Cook led a portion of the medical profession in the south and west, of treating congestive diseases by large doses of calomel, as if patients were all liver, has caused many of the profession to run into the opposite extreme, and to treat cholera as if the patient had no liver at all. Extremes of all kinds are better avoided. Due consideration ought to be given to the influence of climate and surrounding circumstances. From not attaching sufficient importance to the change of treatment, which difference of climate makes necessary, many of our physicians are less successful than they would be.

The half starved, crowded population of Europe, particularly when huddled together in close damp apartments, loaded with the malaria of typhus fever, will not bear blood letting in any disease. But that is no reason why our full fed, free, and happy people should be deprived of the benefits to be derived from the lancet. This will be the case, if we imitate too closely the practice of the north of Europe, and fall into the error of treating our people, like the paupers of foreign hospitals, as if they had neither blood nor bile. Purgatives and the lancet have certainly been used to excess in many parts of our country, but the abuses of those powerful agents, ought not to lead us to forego the advantages to be derived from their judicious employment in the proper kind of cases.

A large portion of the public may be said to have rebelled

against the regular physicians, and enrolled themselves under the banner of quackery, because they see the medical faculty using such opposite modes of treatment, and also often condemning each other's practice. Dr. Rush, a host in himself in the open field against empiricism, was shorn of more than half his usefulness, and lost the greater part of his practice from the efforts, prompted by the jealousies of cotemporary practitioners, to detract from his merits and to throw his brilliant medical attainments in the shade. If professional men will not see their own interest, and will continue to work against one another, especially against those, who have deservedly gained some reputation in their profession, they cannot wonder that quackery should grow like an evil weed, when they themselves have cleared the field for it. Every stone, which jealousy or envy may prompt one physician to throw against another, is a stone thrown against the house that Hippocrates built. If physicians everywhere were to cease throwing stones, the interest of all and each, would be greatly promoted. While medical men operate against one another they injure themselves and play into the hands of quackery. When any one member of the profession brings his brother into disrepute with the public, and he the other, both are injured and only the quack is benefitted. If the public were to see more harmony in the profession, and each member of it following his own plan of treatment, no matter how different it might be from others, and all going smoothly on doing good and curing diseases, though walking in different paths of practice, the effect would be the same on the popular mind, as when the various religious denominations move harmoniously together, each working in its own way against moral evil. The physicians of the different schools extricating man from physical, and the clergy of the different persuasions from moral evil, each guiding him by his own lights through the labarynths of pain and error, all making progress out of evil into good, is a spectacle worthy of both professions. Stopping by the way to quarrel about the different shades of the respective lights that each is guided by, is unworthy of both and does much mischief to both, as it leads to the belief that they are all wrong and to the rejection of their aid

as guides. The difficulty of making the public understand why medical men should have different methods of treating the same disease, (as they, no more than the clergy, can agree on any one fixed system or formula,) has led a large portion of the faculty to be adverse to any public prescription, or advice in regard to the treatment of cholera, as calculated to do more harm than good. If each school of physicians were to publish its method, the several methods might appear so irreconcilable to one another, that not understanding why the same end can be reached by different means, the public would be led into the error of believing that there was no truth in any. If every person had a physician at his elbow, or if cholera was a disease to wait until one could be procured, there would be no necessity for any popular treatise on it. But when the people's fears are awakened, they will have advice of some kind or other. If physicians will not give their advice, they will take that of quacks, and are too apt to fall into the error of supposing that some interested motive may have influenced the former in withholding their council. From these and other considerations, there are not wanting many eminent names in the profession, favorable to putting the treatment, (or at least the initiatory treatment) of all rapidly fatal epidemics in the hands of the people; among the number, that of the illustrious Rush stands conspicuous. Some good, as well as evil, attaches either to giving or withholding advice. In 1833, I published my method of treating cholera. That publication, like the present, was forced upon me from the fact that it was physically impossible to answer all the calls for advice in regard to the disease, without availing myself of the assistance of the printing press. That it did much good, there are many most convincing proofs. That it has done some harm is very probable. A knife or a gun in the hands of those who do not know how to use it, may do hurt, but in times of pressing danger, when not a moiety of the people can command the services of a physician in time to protect them against an enemy, walking in darkness, and destroying its victims before assistance could be rendered, it seems to be all right and proper, that a weapon should be put into their hands to protect themselves as

they best could. If not told what to do, they would have fallen into the hands of quacks, and taken council from them, instead of the regular profession, as a large portion of the people every where, both in town and country, are now doing. Although mine, then, as now, may not be the best council that can be given, it is better than that. The publication made by me, in regard to the Cholera in 1833, had a good effect in putting down quackery, for the time being, in Natchez and its vicinity, and kept the practice in the hands of the regular physicians, for the very reason that the people chose to follow my professional advice rather than quack advice.

It had another good effect, it inspired confidence, and confidence made the disease more curable. It removed unnecessary alarm and panic, and during the cholera epidemic, the commercial and other interests of Natchez were not prostrated, as they would have been, if the field had been given up to quacks to excite by their publications unnecessary alarm, to sell nostrums.

Alarm and terror, in opening a market for quack medicines, prostrates all the great and vital interests of every town and city where it is created—the merchants suffer more from quackery than the physicians. The commercial and other great interests of New Orleans have suffered much more than there was any necessity for.

The hue and cry, that quackery raises about the cholera, causes unnecessary alarm, and the many errors under its management, swells the mortality and increases the alarm. Terror itself will often kill. The truth is the best policy, or as Washington expresses it, "Honesty is always the best policy, both in public and private affairs." Those, who try to hide the fact of the presence of cholera, do more harm to the interests of any city or place it may visit, than those who over-estimate its prevalence. When the people, at a distance, find that they have been deceived, and told that there is no disease of that character when there is, they are ready to fly to the opposite extreme and believe the most exaggerated and unfounded reports. They are also apt to get frightened, and to adopt a system of diet and drinks calculated to



produce it, if there was none in existence. I have often been called to cases produced by the very means adapted to prevent it—*too much stimulation and too little vegetable food*. Those persons, the best acquainted with it, see cause for prudence and watchfulness, but none for terror or alarm: believing that the science of Medicine has sufficient resources to protect them, if timely invoked. During the great excitement in December and January last, in this city, the risk from cholera, was considered so small, that nearly all the most intelligent portion of the community remained in town. Nearly all the wealthy classes, who had ample means to fly to the ends of the earth, remained unmoved, and fewer have died with cholera, and all other diseases put together, (if I am correctly informed,) than an equal number in other seasons reputed healthy. These are the facts on one hand; on the other, the ignorant, who became frightened, and changed their accustomed manner of living, running into extravagant intemperance to prevent the disease, and after it came, instead of calling in medical aid, lost much precious time in waiting to see whether it was cholera or not, or in trying experiments with quack nostrums, died in great numbers. The useless waste of life, thus brought about, by swelling the bills of mortality, caused the people abroad to over-estimate the danger. Whether any thing can be done to prevent the reënactment of a similar tragedy, in other towns and cities, destroying many valuable lives and prostrating all business, is a question worthy of the serious consideration of the profession. A question which I would answer, by saying, "*Give the people light.*" It is not expected that they can be taught to treat the cholera as well as regular physicians. But they could be taught enough of its symptoms and its insidious movements, to prevent them falling victims to the deceptive enemy, through a careless inactivity, trying senseless experiments with quack nostrums or trusting to inefficient, temporising means.— They could be taught to avoid making themselves more obnoxious to the cholera influence, and more liable to the disease in its worst form, by disturbing their digestive functions with alcoholic drinks, by a change of diet and habits, or by taking nostrums as preven-

tives. They could be taught that the best preventive is the regular play of all those functions, constituting what is called *health*; and that anything, which disturbs the system, whether by making the blood scorbutic, as an exclusive animal diet is apt to do; or robs it of its energies, as fear and the depressing passions, or breathing a contaminated atmosphere, or the unnatural excitement of artificial stimulation, increases the liability to an attack. They could be taught that fresh air is the natural food of the lungs—of vitality itself—and the purer the air the better the food; and thus see the necessity of cleanliness in their persons, their houses and the localities in which they reside. They could be taught, that remedies the most opposite, in the hands of the profession, who know how to use them, can often be made to produce the same effect; and thus see the folly of mistaking for sound reasoning the cavilling of empiricism, which condemns scientific physicians as impostors, because they often treat the same disease by medicines of opposite properties; unless indeed, they are prepared to condemn navigators of the ocean as impostors, for making agents, so opposite in their nature, as the cold, free winds over their heads, and the pent up, fiery steam beneath their feet, produce the same effect; lastly, but not least, they could be taught the necessity of keeping a few doses of cholera medicine in their houses, ready for use at a moment's warning, and how to use the same, until the services of a physician could be procured; and thus be able to deprive the disease of its terrors by guarding against panic and empiricism on the one hand, and a careless indifference on the other.

Unless the people have light, so stealthy and insidious is cholera, that they will most assuredly continue, as heretofore, to be the victims of a surprise by it; often falling into collapse or a dying state, before they are aware that the complaint is upon them.—Because physicians cannot cure the dying, the uninformed, panic-struck multitude, fly into the arms of every species of humbuggery and quackery, proclaiming that the doctors and their remedies have been tried and failed, whereas they themselves, have failed to give the proper remedies, or to call in medical aid in time to be of

any use, having let the complaint steal a march upon them from ignorance of its nature and character—mistaking the diarrhœa as nothing more, at most, than a premonitory symptom—not knowing that it is the veritable and dreaded Asiatic Cholera itself. With the proper light on the subject, so many valuable lives would not be trusted to a little paregoric, a few grains of sulphate and charcoal or some other inefficient remedy of doubtful utility in the mild cases, and wholly inadequate to the cure of severe ones; but the propriety would be apparent, of taking some medicine of sufficient potency to make sure work, by causing a revulsion to the surface.

The evil of being taken by surprise is not buried with the dead, as it too often causes the living to throw aside, as useless or pernicious, the only remedies which can be relied on, as curative, in the severe cases, from having seen them fail to cure the dying.

Unfortunately for the combination, to which I am most partial, that of the camphor, pepper, chalk mercury, &c., being regarded as a strong medicine, is seldom resorted to, except in the severer forms of the disease, and after the failure of other remedies.—Even in such cases, it has gained a popularity, equal if not superior, to any other combination in use in the Mississippi valley. But it is best adapted to the early stages of the disease, before the diarrhœa has robbed the blood of its serum. It then acts as a sudorific, with much greater facility and certainty, than when given in the more advanced stages of the complaint. The cure is rapid and effectual, free from relapses or secondary fever, and leaves the system in a better and healthier condition than previous to the attack—so far from being a harsh or dangerous remedy, only admissible in strong, robust patients, it is particularly adapted to weakly constitutions, as it cures by a revulsion of the fluids to the surface—a plan of cure, which gives strength to the system, instead of taking it away—provided the perspiration induced be supported by nourishing beverages—as chicken water, &c. But as example is sometimes better than precept, a lady at the St. Louis Hotel, probably one of the most delicate, weakly and nervous woman in New Orleans, and who had long labored under spinal irritation, was violently attacked with cholera in the

shape of cramps, and rice water evacuations. Her husband informed me that a single grain of mercurial medicine had always prostrated her. Seeing the necessity of an immediate arrest of the diarrhœa by a revulsion to the surface, I instantly gave her rather more than a full dose of my cholera powder, and in five minutes had a good perspiration established, which was supported by chicken water. It was three days before the medicine operated, and then only twice. In another case of a very delicate lady, who had been afflicted with a remittent bilious fever for nine days, the cholera came in place of the expected crisis—violent vomiting, and copious operations in quick succession—a full dose of the cholera powder was instantly given and effected a cure. Another lady of very frail, feeble frame, with copious rice water diarrhœa, took three powders before sweat was induced, and the diarrhœa arrested. So great was the *paresis* of the nervous system produced by the disease, that she scarcely tasted the powders, although each contained 20 grains of the strongest Cayenne pepper. In another case the powder caused perspiration, but owing to some local irritation in the bowels, the diarrhœa continued notwithstanding.—The patient had great determination of blood to the head, contracted pupils, and a state incompatible to the opiate or astringent treatment—Taking advantage of the activity, which the powder communicated to the absorbents, by inducing perspiration, I gave this patient, for several days, nothing but chicken water, beef tea, soda water, and such things. The strength daily increased, notwithstanding the diarrhœa, until perfect recovery. Other cases, in addition to the powder, had to be cupped over the stomach—some had to be bled from the arm, and a few had to be washed all over with cold water and to have cooling drinks, before perspiration was induced, and the disease cured. In some patients whose blood was scorbutic, I gave the powders and lemonade, vinegar and nitre to correct the scorbutive tendency—in others I omitted the mercury and substituted sulphur. In the great mass of cases, however, hot applications to the stomach and extremities had to be used, together with hot teas to assist the powder in causing sweat. Many cases were met with, where the powder could not

be retained on the stomach, and some in which it appeared to act as an emetic; throwing off a great quantity of a tough phlegm, which could be drawn out into long threads like spider web. In all these cases, the morphine and camphor, followed by coffee, had a happy effect, and produced no unpleasant action upon the head and nervous system—which may be attributed to the removal, by the powder, of the tough phlegm adhering to the stomach, that formed a kind of artificial coat, making it insensible to every thing in the shape of medicine, not of the most pungent, penetrating kind. In all the apoplectic cases of cholera, where the patient falls down insensible, I have invariably found the stomach, fauces and trachia thickly coated with a tough, stringy, croupy substance. In such cases, the cholera powder mixed in water, or salt and mustard, are the only things that the patient can be forced to swallow. The pungency, of these articles with the strangling sensation produced by them, disembarasses the throat, fauces and asophagus of their artificial coat of phlegm and facilitates deglutition. It also removes the stertorous breathing by relieving the trachia of the same substance, and restores the almost suspended respiratory function.

My general plan of treatment in cholera, may be summed up in a few words. It is the sweating plan, which past experience has found to be so successful in most of the malignant and congestive epidemics of former ages. The powder, I recommend, will generally start a sweat in ten minutes, if timely given; and in ten minutes actually begins the cure of the disease by making a revulsion to the surface. That revulsion to the surface has only to be supported by diluent drinks. No stimulants, astringents or opiates are necessary, if a healthy sweat can be brought about. They do harm if they interrupt the sweat, by heating the system too much. But until perspiration takes place, stimulants are all important. Bleeding or cupping, or the application of cold water, is as necessary in some cases to bring the system down to the sweating point, as hot applications, mustard plasters and frictions, are in the cold and torpid cases. In those instances, where the powder will not lie on the stomach, I give morphine in half grain

doses, dissolved in 2 or 3 teaspoonsful of camphor water, to arrest vomiting and purging—the subsequent treatment has to be varied according to the symptoms of each particular case. Whenever the cholera is very fatal, there is something wrong in the treatment, or in the locality of the place in which it occurs; or in the diet or drink of the inhabitants; or the cause of the malignancy lies in some vice of the constitution, as worms, scurvy, scrofula, &c. In most of the post mortem examinations of its subjects made in this city, an enlargement of the mesenteric glands, or some chronic visceral derangement, from former disease or intemperate habits, was discovered. On many of the plantations, where the complaint has been very fatal, the negroes were scorbutic or afflicted with worms—some were panic stricken. But the most prolific cause of malignancy can be directly traced to unwholesome provisions, as damaged pork, or bread made of weavel eaten corn, and the breathing of an atmosphere vitiated by some local nuisance. In the latter case, a removal out of the contaminated atmosphere, has always deprived the disease of its terrors. Apart from the circumstances enumerated, the cholera is not a fatal complaint, and can be cured with as much facility and certainty, if taken in time, as a common ague and fever.

## APPENDIX.

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*Containing the author's latest instructions to planters and heads of families, (remote from medical advice,) in regard to the prevention and cure of cholera.*

Wherever cholera has been very fatal on plantations among the negroes, or in private families, or in particular localities, its malignancy may be generally traced to some one or more of the following causes, viz: improper or inefficient treatment, or mismanagement, panic, unwholesome diet or drinks, an unhealthy state of the individuals themselves from worms, scurvy, intemperate habits, excessive fatigue and exposure, the depressing passions, or from some local contamination of the atmosphere. When from the latter cause, an immediate removal of the sick and well on the same day into the open field, to sheds erected after the removal has been made, has been tried in many hundred instances on plantations, with almost uniform success, in arresting its progress among negroes. The cholera poison, like a mad dog, follows some determined course along a road, a river, a hedge or a ditch, and has a propensity to rest in houses, whether inhabited or not. Hence in making a removal, old houses should be avoided and the middle of a field selected for the camp. A few hundred yards will be sufficient. The sick recover quicker and fresh attacks are prevented. The quarters should be thrown open and entirely abandoned for some three or four weeks. The depressing passions, and every thing which has a tendency to create panic, should be particularly guarded against. Amusements, mirthful plays, and recreations, music, funny stories, &c., should be pressed into service, and made to dispel the depressing influences of grief and despondency. The encouragements to be derived from hope should not be lost sight of. Great attention should be paid to the subject of food and drinks, to see that they are good and wholesome. Bread made out of weevil eaten corn, or that which has undergone a sweat from exposure to the weather, is a prolific cause of malignancy in disease. In travelling through Illinois the winter before last, I saw many cribs of corn entirely without covers, and for many months had remained exposed to the weather. The purchasers of such unsound grain cannot expect that the bread made from it

would deserve the appellation of the staff of life. I detected another cause of disease in the practice prevalent in Ohio, of killing hogs a long time before they are salted up, and then using more or less Liverpool or Kanhawa salt in making pork. It has been found cheaper or more convenient to kill hogs, and send them to the Cincinnati market on railroads, canals and steamboats, than to drive them as formerly. The pork, made out of meat which has remained so long without salt, as to have entered into the first stage of putrefaction, is a wide spread and fruitful cause of the malignant character of cholera among its consumers, whether in Cincinnati itself, among the negroes on the cotton and sugar plantations, the emigrants on the Rio Grande, or the distant plains of the west. The use of artificially made salt, which contains slack and bittern, causes the pork, prepared with it, to undergo a change in hot weather, rendering it a very unwholesome kind of diet. One year, the trade in solar salt being interrupted, the Irish pork was prepared with Liverpool or artificially made salt. The consequence was so much sickness in the East India fleet and army, supplied with this kind of pork, that it had to be thrown overboard. When cholera appears in any family, or on any plantation among the negroes, if any suspicion can rightfully be attached to the wholesomeness of the meat, bread or drinks, a change should be made of these articles for others more wholesome. The particular kind of food is of much less consequence than its entire soundness and freedom from any putrescent taint.—Fresh meat or pickled beef is much to be preferred to bad pork, and bread made by rasping green corn, to that made from old damaged corn. These are matters, which each planter can better judge of, than the physician in his hurried visits to the sick. The planter likewise, by observing his negroes, can tell better probably, than any one else, whether they have their usual healthy appearance, glossy skins, and cheerful, joyous countenances, indicating good health and spirits, contentment and satisfaction, or are dejected, dissatisfied, uncleanly in their persons and houses,—scorbutic teeth and gums, with skins of a husky, dirty, ashy appearance. In the latter case, medicine is unavailing without fresh vegetables, the more acescent the better; fresh meats, highly seasoned with spices; rice, pepper and mustard, with molasses, or metheglin. In addition to this, ablution with warm water and soap, followed by frictions over the whole body, of equal parts of bear's oil or sweet oil and lime juice, or the fresh juice of lemons, to which may be added, with much advantage, a drachm of quinine, and a drachm of oil of origanum to each half gallon of the oil and lime juice mixture. If this liniment be not only rubbed



on, but slapped in with the hands on the naked skin, the effect will be better in arousing into healthy activity the lymphatic circulation. The cholera is a disease more particularly of the lymphatics (or the vessels circulating white fluids,) which are more liable to obstructions in the black and yellow races, than in the white.—Indeed all the yellow races of Asia and the Sandwich Islands, from time immemorial have used oiling, frictions, slapping, kneading, shampooing, (called in French *massage*,) as preventives of epidemic maladies of almost every kind. The Russians use, for the same purpose, warm bathing, followed immediately by the cold, with gentle, yet agreeable flagellations over the whole body.

But what is to be done for the malignant cholera which kills in an hour or two, and has been so destructive on a great number of plantations—running its course to a fatal termination in defiance of all remedies, mine among the rest? This is a very important question. I have labored long and faithfully to answer it understandingly. Much time has been required to collect the necessary facts, to form principles of practice therefrom—to try the principles by the test of experience, and to ascertain the results. Although the cholera, when timely treated by the remedies I have advised, is according to my experience, almost invariably found to be a curable disease: yet I am bound to believe from the experience of others, that in some instances, neither my remedies, nor any others, no matter how early administered, will have any effect at all in arresting the downward progress of the complaint. On some plantations the negroes have died in an hour or two without warning or premonitory symptoms, as they are called, and without any vomiting or purging, except probably at the moment of dissolution. This malignant species of cholera, called by overseers, "*the thunder and lightning cholera*," to distinguish it from the less malignant grades, in resisting all manner of remedies, spreads panic and terror wherever it has appeared. It is more important to bring this species under the power of the healing art than any other, because the terror it inspires, and the panic it creates, have the effect of making the milder forms of the disease put on its own malignant livery. Dr. Williams, of Thibedaux, informed me that he saw a woman, with a very mild attack, fall into collapse from seeing a person on her right hand and another on her left, in the hospital, die suddenly with the malignant form of the disease. Whenever it occurs among negroes, like a wolf among sheep, it will continue to strike down its victims until it has thinned out the flock, unless something be done to arrest it. Whenever this form of cholera occurs, I recommend that every negro on the plantation, young and old, have a full dose of my cholera medicine, in proportion to their

ages, given to them in their respective houses, without waiting for them to get sick. They should take the medicine in their several houses and go to bed, and keep their beds for one day and night. A beef or mutton should be killed, and soup made for the whole of them. It should be well seasoned with pepper, and they should drink freely of it through the day, keeping up a gentle perspiration. They should keep within doors until the medicine, assisted next day by gruel with salt in it, acts once or twice on the bowels—which will be black and bilious. If it continues to act more, or if the operations get thin, frequent, and light colored, another dose should be given: or a dose of morphine, dissolved in camphor water, if there be excessive bilious operations. The plan of giving a good dose of medicine in advance, as a preventive, has been tried in so many instances, with complete success, that I do not hesitate to recommend it. The practice of crowding the sick together in a hospital, is very pernicious and has added greatly to the mortality of cholera on plantations. Each patient should remain in his own house, on his own bed, and one of the members of his own individual family, should be detailed to wait upon him, besides being under the general supervision of the regular nurses. As little exertion as possible on the part of the patient should be permitted. When attacked with the disease in the field, the patient should lie down and take the medicine on the spot, and should be carried home in a cart, or on a litter—though ever so able to walk, no unnecessary exertion should be permitted—not even rising to have an operation. Should the negroes be afflicted with worms, whether any malignant cholera has appeared or not, a better medicine could not be given to expel them, than the above mentioned cholera powder. In that case the calomel is better than the chalk mercury, and a little oil and turpentine, next day, to carry it off is advisable. The objection to the cholera powder, with calomel in it, is its liability to salivate—owing to the impurity of the article generally sold for calomel. This may be obviated by washing it in a large quantity of pure water, and drying in the shade. Calomel, as well as camphor, is known to possess vermifuge properties. But it is not so generally known that pepper is a better vermifuge than either, and has been used for that purpose long anterior to the Christian era. After Medicine as a science, began to be chiefly taught in the north of Europe, the pepper family of plants fell into disrepute with the medical profession, owing to their being too heating and exciting for the diseases of high latitudes. Hence the prejudices and ignorance of those medical men in regard to the peppers, who look only to the north of Europe for medical authority,

and are under a species of colonial vassalage to Great Britain and France; scarcely ever aspiring, even in Philadelphia, New York, or Boston, to any higher aims in Medicine, than that of republishing some English or French medical book. It is necessary to allude to the prejudices of physicians against the peppers, and the cause of it, in order that the objections, made by many of them to that class of remedies, may not have more weight than they deserve. Those medical writers and lecturers in the cities just mentioned, who have stigmatized my practice in cholera as empirical, supposing that I derived it from the steam doctors, are better acquainted with the writings of modern charlatans than with the standard medical authorities of all antiquity, and the experience of all southern nations, or they would have perceived that I had the highest authority, for the use of the pepper family of plants, in acute congestive diseases, of any known to the science of Medicine. It would be out of place to notice a theoretical prejudice against pepper, derived from an exclusive northern medical education, if it did not often lead to an omission of one of the most efficient articles in the treatment of the disease under consideration.

In the treatment of the milder forms of cholera, physicians often fail in effecting cures, owing to the fact that many negroes, through carelessness or the fears of taking medicine, will not report themselves as sick, until the diarrhœa has nearly drained their blood of all the serum it contains. The proper way to remedy this evil is to physic the whole of them, in advance, as recommended for the more malignant grades of the disease. This I consider a most important and valuable truth, calculated to save many lives.

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*AN ANSWER to the question: "What is the best course of treatment for a non-professional person to pursue, in a case of cholera, where medical advise is not at hand?"*

Give the patient instantly 20 grains Hydrargyrus cum creta, 20 grains best cayenne pepper, 10 grains gum camphor, 15 grains calcined charcoal, 15 grains gum Arabic, mixed together in two tablespoonsful of cold water, and put a wet towel in the mouth to take away the burning taste and to prevent vomiting. The patient should swallow the above dose quickly, and the whole of it without stopping to taste it. He should lie down and cover up and keep down. The doors and windows should be opened to give fresh air to fan and feed the combustion in the lungs, which burns slowly in cholera, i. e.; the change from black to red blood

does not go on as in health, and the temperature falls. A jacket or a flannel shirt wrung out of scalding water, and rolled into a ball as large as a child's head, until it will not drip, should be wrapped in a dry cloth and applied over the stomach and bowels, as hot as it can be borne. Bottles filled with hot water should be applied to the extremities. Five minutes having elapsed from the taking of the powder, a spoonful of hot sage, balm, mint or chamomile tea, to be given to the patient from time to time, with a tablespoonful of cold water, or a teaspoonful of pounded ice, alternated with the hot tea. Now look out for a perspiration. From 10 to 15 minutes after the powder is taken, perspiration is generally established. If so the patient is safe. Nothing more is needed but to give warm teas, or any warm fluid the patient likes best, in sufficient quantities to allay the thirst, and support the sweat. The sweat should be kept up 6 or 8 hours—then gruel to assist the Hydrargyrus cum creta to empty the gall bladder. Then the circulation will go on through the liver. The revulsion to the surface will cause the absorbents to suck up the fluids taken into the stomach, and the pouring back action will be arrested. This sucking up action, caused by the sweat, will restore the natural fluidity of the blood. When the sweat is established, stimulants are unnecessary or hurtful, as they may stop it. To put back the lost water in the blood, is the best mode of stimulating. I have thus described a case cured by one dose of medicine—a part of that dose might have been sufficient, it may be supposed. A smaller portion might have fallen in with the disease and operated on the bowels. A large dose is a non-purgative, because it is sudorific, revulses to the surface, starts a centrifugal action of the fluids, and arrests the centripetal action of the disease.—But if one dose does not sweat, give another, or half a dose; if that does not do, bleed from the arm, or cup freely over the epigastrium, and give warm stimulating drinks to force a sweat, and apply hot applications externally. Suppose the skin gets too hot under this high stimulation, outside and inside; wash the patient all over with cold water to bring the system down to the sweating point, if the pulse will not bear bleeding. Suppose the extremities are too cold to be compatible with healthy perspiration; warm them by hot applications and friction. Suppose the patient vomits the medicine; give a cup of chamomile tea, let him vomit that, and then repeat the medicine. Suppose he still vomits; then give two tea spoons full of the “drops for vomiting and purging,” and repeat after each stool or spell of vomiting, that is, about half a grain of morphine dissolved in camphor water. As soon as the stomach is settled, throw in some 20 grains of chalk mercury or

calomel. Give coffee if the morphine be used. The doses may be thought large, but if opiates be used at all in the complaint, the doses should be two, three or four fold. Small doses do more harm than good. I give nothing to work the medicine off before the next day or the day after. A purgative before the aqueous parts of the blood are restored is a dangerous thing. The medicine generally works itself off. Under this plan no secondary fever follows. But if stimulants be used after the patient begins to sweat, secondary fever is sure to occur. Stimulants, until the sweat begins, are all important—none are too strong. Fire itself is scarcely too strong. But when a sweat is established, all stimulants, internally and externally, should be suspended. The diluent drinks to thin the blood are the best of all stimulants. I often give mineral water, soda water, and even lemonade, for that purpose—any diluent or watery fluid that agrees best with the stomach. The patient cannot purge and sweat at the same time. The rice water in the bowels may run out after the perspiration is established, but more cannot be poured into the bowels while the perspiration goes on, indeed the perspiration generally causes the rice water in the bowels to be absorbed, carried into the circulation, and made aid in the cure. In Dr. H.'s case and some others, great assistance in the cure, was derived from the rice water in the bowels. As soon as the powder caused perspiration, the rice water was retained in the bowels, by compression, and soon absorbed, as proved by the abdominal distension disappearing, and the pulse rising—nothing afterwards ever being seen of the rice water, which at the time the compression was made, was running in a constant stream from him.

*FORMULÆ, to be handed to the apothecary, for the preparation of the principal medicines necessary in the treatment of cholera, being enough of three kinds for the cure of some eight or ten cases.*

LABEL.

Cholera powder, dose for an adult, 80 grains or 1 drachm and 1 scruple, in two table-spoonful of cold water.

40 grains for 7 years.

20 grains for 3½ years.

15 grains for 2 years.

8 grains for 1 year.

3 to 6 grains for less than a year.

LABEL.

Cholera powder for scorbutic persons, or those with bad teeth and easily salivated — Dose 2 drachms, or 120 grains for an adult, to be mixed in water.

LABEL.

Camphorated Morphine Drops, for vomiting or purging, to be used in those cases where the cholera powder will not remain on the stomach. Dose 2 teaspoonsful, after every spell of vomiting, or every operation.

R. Hydrargyri cum creta.

Best Cayenne pepper,           â â ʒfs

Pulv. gum camphor,           3ij

(which has not been exposed to the air.)

Pulv. gum Arab.

Calcined Charcoal,           â â ʒijj

(finely powdered, and which has not been exposed to the air,) M and rubbed well together and tightly stopped.

R. Lac Sulphuris                   ʒifs,

or 12 drachms.

Best Cayenne pepper,           ʒfs,

or 4 drachms.

Pulv. gum camphor,           3ij,

or 2 drachms.

Pulv. gum Arab.

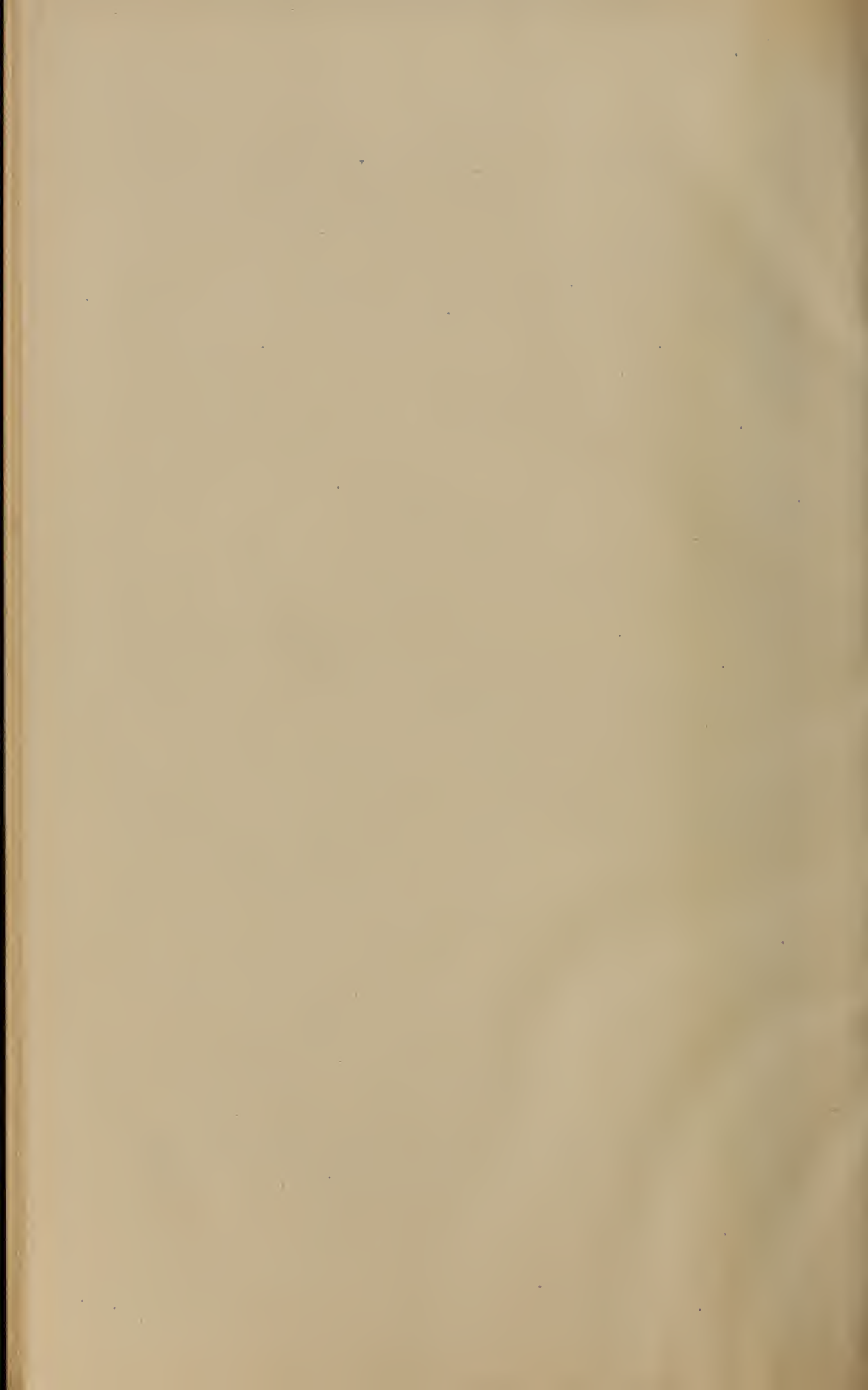
Pulv. calcined charcoal,       â â ʒijj

or 3 drachms, mixed and well rubbed together, and securely stopped in a vial.

R. Aqua camphor                   ʒvj

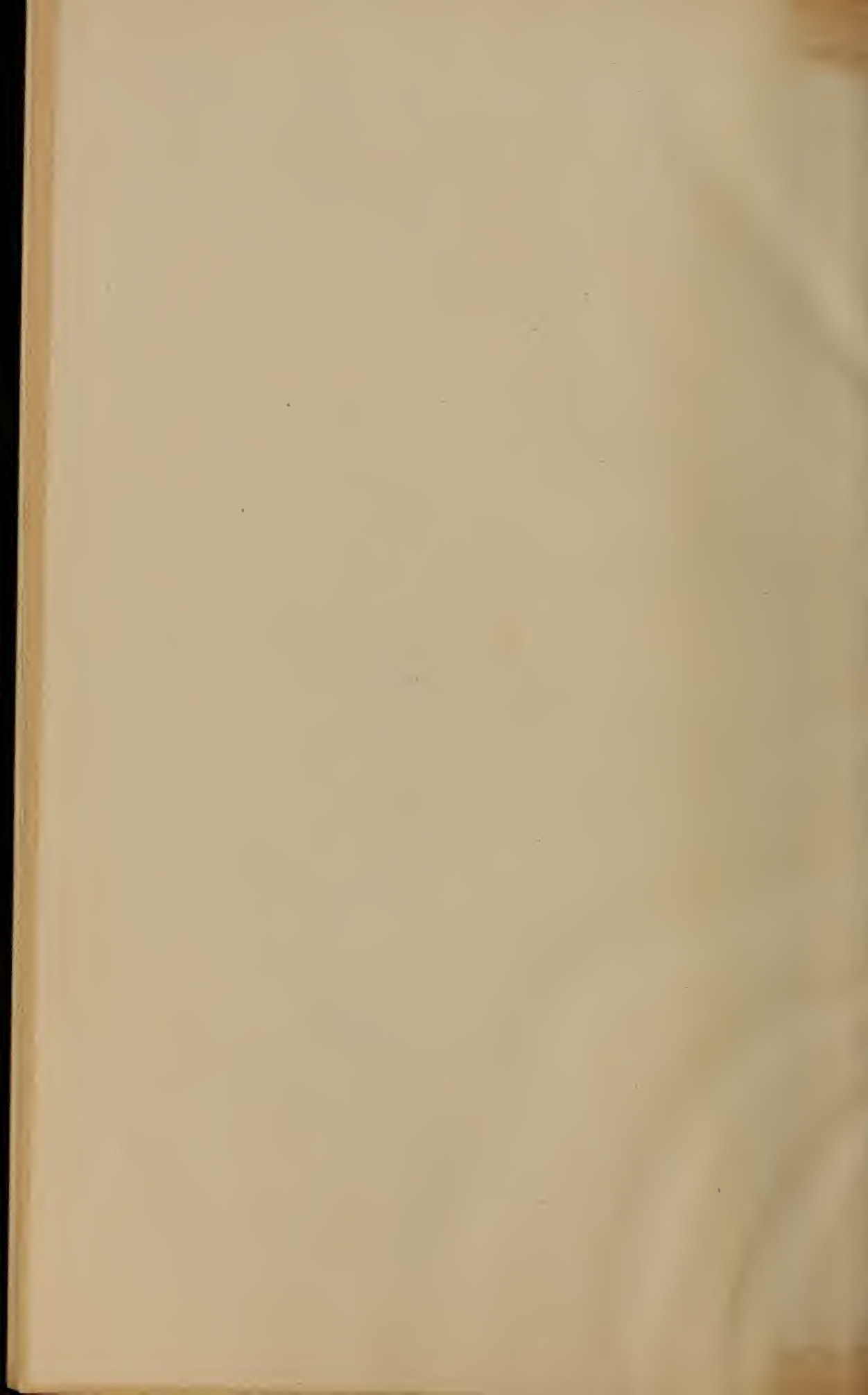
Sulphate morphine,           (M) grs. Xij













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