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Prof

PAPERS

ON THE

Ancertainty of the Materia Medica,

READ BEFORE THE MEDICAL SOCIETY OF SAN FRANCISCO, 1854,

By CHAS. W. BRINK, M. D.

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A PAPER

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UNCERTAINTY OF THE MATERIA MEDICA,

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BY CHAS. W. BRINK, M. D.

MR. PRESIDENT—I am not ambitious of intruding upon the attention of the Society, nor would I now ask its indulgence for a few moments whilst I read some hastily written reflections upon the *Uncertainty of the Materia Medica*, were not the subject an interesting one; and further, that I think it the duty of members to contribute something, from time to time, for our mutual benefit.

Feeling, however, more willing to receive, than able to impart instruction, it is with great deference that I submit the following desultory thoughts.

It is, I believe, generally conceded that learning, pedantry, and scholastic egotism, are as often the direct objects of medical controversy, as the elucidation of principles, the improvement of practice, or the development of truth.

Physicians too often study abstractions, overlooking that which is practical—that which amuses the intellect, or wins eclat—neglecting that which is useful to the sick.

As an example of what I mean, we find, in medical literature, and in scientific societies, the most eminent physicians—even those who have the reputation of being “most practical men”—expounding theories, and elaborating abstractions, even to satiety and exhaustion; and at the bed-side of the sick, watching for opportunities to corroborate their own, or overthrow another’s theories, and entirely neglecting to study the more immediate and operative agents of the healing art, and their effects upon disease.

This ought not so to be. The substances that we give as medicines, which, in judicious hands, are powerful for good, are also capable of producing incalculable mischief.

The *Materia Medica* is the great engine of power in our profession. To its application, for the relief of human suffering, our science owes its birth; and were it not in constant operation, all other branches of what we call medicine (except as they were cultivated as matters of general learning), would cease to be of interest to the world, and be abandoned to the professed scholar.

No other department of our science can reach, to cure, or by maladministration, *cause* disease. The profession depends for existence upon it; for who would employ physicians, if they were without means to relieve disease?

The agents of the *Materia Medica* decide the fate of the sick, (unless, indeed, as has been said, "our patients recover, not because of—but *in spite* of our remedies,") and upon them the practitioner depends, when danger threatens.

Other departments of study—Anatomy, Physiology, Pathology, Chemistry, et cetera.—although of immense importance to the medical philosopher, and indispensable to the student, are less necessary to the *practitioner* of medicine. They are mere matters of dead learning, except when galvanized into life by the application of therapeutics; and whilst the theorist is weaving flimsy sophistries to explain their obscurities, disease is progressing, and fatal changes are produced in the complicated machinery of man, by the very means employed to repair and save it. Besides, most other branches of science are fixed upon secure foundations; their resources have been thoroughly explored, their details made plain, but this—the "*Artium Medendi*" is shrouded in "thick darkness:" a field, which, if properly cultivated, would yield abundant harvests, is left comparatively neglected and barren.

What have the labors of three thousand years resulted in, but the discovery of two or three specifics? For every disease, we have a hundred prescriptions, but few or no certain remedies. Instead of facts, our *Materia Medica* is filled with histories of drugs, salts and acids, and directions for their administration, founded often upon faulty analogies and groundless speculations.

In corroboration of this statement, I may be allowed to quote from a learned author, who says "there are very few remedies, the

effects of which are well known ; the greater number disappoint the expectations of the practitioner, because their true virtues are still concealed in Democritus' well." Indeed, Bøerhaave in the preface to his *Aphorisms*, professes that he knows of nothing which can be fitly termed a *remedy*. Dr. Cullen says, " The writers on the *Materia Medica* abound with numberless false conclusions. Such indeed is the state of this matter, that nobody can consult those writers with any success or safety, unless he is provided with a great deal of skepticism upon the subject." Let us take as farther illustration of this absence of certain knowledge, the opinions which have been published upon the character and effects of some of those remedies which have been longest and most extensively used, and we will find the imputation of uncertainty is not without foundation.

Among writers upon *mercury* a most puzzling contrariety of opinion exists. According to Thompson and Edwards it is an *excitant*. Cullen, Chapman and Eberly say it is a *sialogogue*. Conradi, Bertoli and others suppose it to be a *sedative* ; and while the Italian Physicians declare it as a *contra-stimulant*, Broussais and his disciples class it among *revulsives* : and *Opium*—the Hercules of the *Materia Medica*—which exercises so powerful an influence over the animal economy, and in its numerous compounds is the catholicon of Modern Medicine—has as many characters assigned it, as there have been authors who have made it their study.

Dr. Bird—speaking of the conflicting testimony of distinguished Pharmacologists in relation to *narcotine*—says : " According to Derosne it is a *simple narcotic*. According to Magendie it is a *stimulant narcotic*. According to Prof. O'Shaughnessy it is *neither stimulant nor narcotic*, but powerfully *sudorific* and *anti-periodic*, and according to Bally or Orfila *it has no properties at all*." The same author further says, " The first accounts of *Iodine* were equally contradictory : it was an *emetic*, a *cathartic*, a *diuretic*, a *sialogogue*, an *inebriating stimulant*, a *stomachic*, a *gastric corrosive*, and an *hemorrhagic*, it was in fact everything, and it was *nothing*, for some practitioners assert that they succeeded in administering immense doses of it without any effect appearing to follow."

It was in view of the great mass of contradictory assertions and foundationless speculations which obscure this subject, that the Philosophic Bichat exclaimed, " To what errors have not mankind been led in the employment and denomination of medicines. The

same identical remedies have been employed, under different names, according to the manner in which they were supposed to act." He adds, speaking of the *Materia Medica*, "It is a shapeless assemblage of inaccurate ideas, of observations often puerile, of deceptive remedies and formulas, as fantastically combined as they are tediously arranged."

Another writer remarks, "Our *Materia Medica* is nothing else than a careful collection of fallacious observations which medical men have made. There certainly are among them a few valuable results, founded on sound experience, but who will lose his time to search for those few grains of gold, in the huge mass of rubbish which Physicians have gathered up for thousands of years."

Broussais, speaking upon the same subject, says, "When I would seek a guide among authors esteemed the most illustrious, and to whom medicine confesses herself most indebted, I found nothing but confusion—all was mere conjecture."

Rostan declares, that "errors so abound in the most recent formularies, that truths are as thinly sown as gold upon the dunghill of Ennius."

But if it be objected that these are authors of a remote period, we have the testimony of Pereira—whose *Materia Medica* is the most comprehensive treatise upon the subject in our language. He says, "Pharmacologists are *too* imperfectly acquainted with Therapeutical agents," and that "classifications of medicines are in reality founded on the prevailing medical doctrines of the day, or on the peculiar notions of the writer."

I might go on, and cite authority after authority to prove, not only the uncertainty of that branch of medicine most essential to the successful *practice* of our profession, but to show that there is more palpable absurdity, more craft and delusion, more humiliating instances of human imposture and credulity to be found in this, than in any other subject of the physician's study; but is it necessary? Does not daily experience and observation bring before us abundant evidence of the fact?

However much men may differ upon other subjects, all, I believe, (at least those most pre-eminently distinguished for scientific attainments and brilliant exertions in the cause of medicine,) agree as to the imperfections of our *Materia Medica*.

Time, which destroys or improves all things else, seems to have

“varied his treatment,” and made this worse. From the remotest times, when barbarians believed in the efficacy of amulets and incantations to cure their diseases; from the earliest ages of civilization, when physic was regularly practiced by priests in the temples of Egypt and Greece, down to the enlightened period when the labors of modern investigators commenced, the most pernicious fallacies have been introduced into medicine; one age bequeathing to another its errors—and of them, principally, is composed our modern *Materia Medica*.

I repeat that the *Materia Medica* is paramount to other branches of medicine, because it is the only *active power* we possess, and that its study deserves precedence over them all in the mind of the physician, who ought ever to remember that his highest duties are discharged; and reputation is to be won, not by explaining the nature or course of disease, or the cause of death, but by curing the sick.

Yet who has so stated this? Do writers in journals, or professors in colleges, or physicians in practice, write, talk or act, as though this were true?

Indeed the *Materia Medica* is an almost prohibited topic. So entirely has it been neglected, and so thoroughly debauched by absurdities—and its active energies made agents of evil instead of good—that we shrink conscious stricken from the utterance even of its name, and tremble under apprehension of being brought to an account for its abandonment and abuse. Would that we could see blushes crimsoning the cheek of the profession, for we might then hope for reform, and that some degree of certainty would be at last attained, to inspire confidence in the power of our art, to fulfil the promises of hope it gives to a suffering world. Enthusiasts may pretend, and the credulous believe that our knowledge of drugs is perfect; but we know how constantly our attempts are baffled, how utterly powerless we often are, to relieve suffering and save life.

To know the history and names of drugs, and modes of preparation—to describe them botanically, and to give certain quantities of them in certain cases, is simple enough! But to understand their effect upon the living microcosm, when invaded by disease—to judge correctly of their combined results, and determine the advantage one possesses over another, and to distinguish its peculiar operations under an almost infinite variety of circumstances—all this requires knowledge which we do not at present possess.

Are not the numbers who fall victims to the uncertainty of our medicines—the instinctive timidity with which we give or take them, as well as the duty we owe to those who rely upon us for restoration to health and preservation of life—are not these enough to awaken physicians to a sense of its importance, and stimulate them to still greater exertions for the improvement of this branch of science ?

Certainty, in the operation of remedies, alone can give confidence. Yet, here all is uncertain. If skepticism exists in the community, or in the minds of physicians, about the utility of medicine—this uncertainty is the source from whence it springs.

How often do we hear men descant with most masterly research and glowing eloquence, upon the glories of medicine, and the triumphs it has achieved—but when asked, *what will cure a certain sick man*—grow dumb, look wise, and timidly suggest the propriety of *trying this*—or, despairingly hoping *that* may do good—or, suddenly recollecting that they have seen the *other thing* cure, in just exactly such cases !

Yet still we neglect to study our remedies, and go guessing and blundering on in doubt and darkness. Not only is this wrong, but it is positively criminal. I fear, however, that we will continue guilty until men, who now addict themselves to studies which have no more to do with the *practice* of the healing art than has the law of Moses, learn to devote their energies to this task ; until the pride of opinion, the success of theories, and pursuit of fame, are less cared for than the well-being of our fellow men ; until the perfection of *practical medicine* is preferred by its followers to mere intellectual display.

We have a thousand books about the essence of fever, the nature of contagion, the proximate cause of disease, dynamic forces, the vital principle, and other things, known to God alone—and which his infinite wisdom has placed beyond the reach of human ken—where we have one, or not *one*, about what will cure disease and prevent death, or upon the facility with which the mal-administration of drugs may destroy life, shake the confidence of the physician in his remedies, destroy the patient's trust in his physician, and thereby perpetuate the opinion which reproaches ours as the most uncertain of sciences.

To this may be attributed the slow march of improvement, and the rapid growth of skepticism, with which ancient and modern, refined and barbarous nations have opposed the progress of medicine.

Now, if it is true, as an eminent author says, "that modern physic is the art of amusing the patient, whilst nature cures the disease"—if our experience (and who's does not?) agrees with that of Dr. Radcliffe, who once said, "When I was young I possessed twenty remedies for every disease, but when I advanced in age, I found twenty diseases without a single remedy." If there is truth in the authorities which I have quoted upon this subject, and if the consciousness of their truth makes the frequent sarcasms on medicine stinging to our ears, then, indeed, is there need that we strive to remedy the deplorable condition of our *Materia Medica*.

In proportion as it has been neglected by our predecessors, it becomes our duty to be active in invoking professional enthusiasm to an attempt to redeem it from chaos.

Theory makes science plausible ; experiment makes it certain. Those who pursue the former guess at truths ; those who practice the latter discover and demonstrate them.

True science is the legitimate child of experience ; if, therefore, we wish to give that character to therapeutics, we must carefully and patiently pursue the toilsome path of experimentation. By this course alone can we hope to remove doubt and obscurity. We all know how much Galen, (than whom there never lived a more accurate observer of nature,) said respecting the necessity of correct experience, in order to know and properly estimate the power of medicine.

There is no inherent impossibility in the subject—no reason why so much difficulty should exist. Life and health are results of the operation of vital laws ; disease is a disturbance of the harmony of those laws. Human reason has discovered in the mineral, vegetable, and animal kingdoms, agents having power to restore that harmony when disturbed—and these agents, are our *Materia Medica*.

Is there less harmony in the relations of man to the objects around him, than in the succession of the seasons, the movements of the tides, or the mechanism of the heavens ?

No effort of man's, however, can confer upon any branch of science, the unattainable attribute of infallibility ; absolute certainty, therefore, is impossible—still it ought to be our aim to elevate it to the highest possible standard. The administration of medicine would then safe, and its highest objects attainable, in proportion to its certainty, and the *Materia Medica* be entitled to rank with the other highly cultivated departments of Medical Science.

A PAPER
ON THE
UNCERTAINTY OF OPIUM,

BY CHAS. W. BRINK, M. D.

MR. PRESIDENT—In accordance with the invitation which the Society kindly extended to me, to present a second paper upon a subject which I so imperfectly sketched when we last met, I have hastily thrown together a *few facts* upon the *uncertain operation of Opium*, gleaned from various authorities, and from them have drawn an inference or two that will, I think, prove our confidence in the certainty of this remedy to be without much foundation in truth.

That this paper is unworthy the subject it treats, I am well aware. It claims to be merely a fragmentary prelude to a discussion, prepared in haste, and presented in hope that it may be followed by others from abler pens.

For the desultory manner in which the subject is treated I have only to plead incapacity and want of time to do better; but as mine is merely the duty of a herald, to introduce the combatants, I may be excused further exordium or apology. Respecting the opinions, however, that I expressed in regard to our imperfect knowledge of the agents which composed the *Materia Medica*, and the doubts I entertained in the certainty of their operation—which you did me the favor to listen to at our last meeting—and those which I may now state upon the subject of *Opium*, I may be allowed to remark, that I do not arrogate to myself superior sagacity in detecting fallacies, nor plead guilty of greater skepticism than falls to the lot of those who carefully investigate the sources of error, and the speculative doctrines promulgated by writers upon medical agents; I merely claim to have pondered their testimony, and sought by experience (that only certain test of the value of testimony) in this as in other studies, to arrive at truth.

Than *Opium*, and the history of its effects in diseases, there is no subject connected with medical science, that has presented a wider field for observation, none where knowledge finds fewer well attested facts, and none, I think, which more clearly illustrates the caprice and willfulness of human opinion. Though some say it was unknown to Hippocrates, it may be clearly traced to Diagoras *who condemned its use*; and from the reign of Galen, through the darkest eras of medicine down to the time of Pereira, it has occupied the attention of all sects. In the pages of medical writers, of every age and nation, we trace its presence. Identified with the healing art, it is ever invoked to aid the endeavor of the scientific physician; and indeed, beyond the limits of the profession, its wide-spread potency to kill or cure is seen. Whenever the sick chamber is polluted by the unhallowed presence of quackery, *Opium* presents itself in pill, lozenge, syrup or pectoral.

To the study of this potent agent, have been devoted the most consummate skill, and maturest judgments of men, as eminent for natural qualifications, as for acquired endowments. Theirs have been life-long labors to determine the peculiar circumstances under which this and other remedial agents may be given with certainty—but *they have failed*: notwithstanding the light their labors have thrown into the labyrinths of this subject, it is still dark and doubtful.

The testimony of others, upon subjects in which we are without sufficient experience, is the foundation of our belief; if, therefore, that testimony is conflicting, our belief is shaken.

Upon this ground it can, I think, be shown—not that *Opium* is worthless—not that it is not indispensable in the treatment of disease—but, that, like *all* the artificial agencies we employ, it is *an uncertain remedy*. To this conclusion we are compelled, by the contradictory testimony of observers.

I am aware, however, that *mere contradiction* does not always prove uncertainty, in that opposite qualities, assigned by different authors to a drug, may bear so much resemblance, as to corroborate instead of contradict each other's statement: as in the character of men, the vices and virtues, praised and blamed by friends or enemies, often agree. Thus, the courage and firmness of one, correspond to the rashness and pride of the other. Collateral evidence is therefore necessary to justify doubt.

But it is not so with *Opium*—there is almost nothing about it agreed upon or certain, but its uncertainty. The sources of this uncertainty are so numerous and self-evident, that even if there were time, it were unnecessary to more than hint at some of them. The limited sphere of individual experience, from which we draw our knowledge—the fate, as it would seem to be, of writers, be they wise men or blockheads, to reason fallaciously upon the operation of medicines, and particularly upon *Opium*, which enters into almost every prescription that is written—the complicated nature of the subject of investigation, the ever varying phases of disease, the idiosyncratic insusceptibility, or morbid sensitiveness of some—besides the variable operation of this substance upon different races—producing upon the Negro, Javanese, and Malay, effects entirely different from those produced upon the European, Turk, or Persian—as well as the peculiar conditions of the nervous system, (as in Tetanus,) and habit, which diminishes its influence over the system; all these are circumstances which materially modify its action, and make it one of the most uncertain remedies with which we combat disease.

So impressed with this fact was an eloquent author, that he exclaimed (speaking of the use of this remedy in a certain disease) “It is a fearful thing to strike a blow in the dark.”

Without wearying you with my opinions, or the results of my own experience—which, were it much more extensive than it has been, would be but a drop in the ocean, compared with that of others—I will at once present the testimony of those writers and teachers, whose eminent talents, extensive opportunities, and enthusiastic devotion to science, have made them our oracles; unlike, however, those of Delphi or Thebes, the priests of the temple of Esculapius deal not in darkness and ambiguity, but their responses (upon this subject at least) are clear and unequivocal. From them, we shall find that, apart from dose, idiosyncrasy, habit, conditions of disease, and other acknowledged sources of uncertainty, the most anomalous effects often follow the administration of *opium*; and so indeed it must ever be, until we can produce at will the conditions upon which its action depends.

In defining *narcotics*, (at the head of which of course stands opium, and is the type of the class,) Dr. Paris says:—“They are substances which, in moderate doses, occasion a temporary increase

of the action of the nervous and vascular systems, but which is followed by a greater degree of depression of the vital powers than is commensurate with the degree of previous excitement, and which is generally followed by sleep."

To reconcile the primary stimulant effect of narcotics, with the secondary or depressant effect, an absurd hypothesis (reminding one of pagan mythology) was once advanced. The guardian care of a goddess, the "*vis medicatrix naturæ*" is invoked, whose protection, in the first instance, and inability to assist in the second, accounted for the stimulant and sedative powers of this remedy.

Now, all that is so positively asserted by Paris, and so plausibly accounted for by Cullen, is made extremely doubtful by Dr. Guy, who says, "as a *general rule*, small doses of opium are succeeded by excitement, both bodily and mental; large doses are generally followed by symptoms of narcotism. To both these rules there are however exceptions, small doses being sometimes followed by narcotism without any previous excitement, and large doses by excitement. If a stone only *generally* fell to the ground, or day only *generally* followed the rising sun, the grand laws of nature would be uncertain.

I need not recall the sweeping denunciation of "lies, lies, lies," that De Quincy pronounced against all that had been written upon the subject of Opium, by travellers in Turkey, or by Professors of Medicine; nor remind the admirers of this profound logician, and eminent scholar, of his positive denial, "that the elevation of spirits produced is necessarily followed by a proportionate depression." Indeed, he contradicts almost all of our dogmas upon the subject, and says that "even those who have written expressly on the *Materia Medica*, make it evident that their experimental knowledge of its action is none at all"—a remark not less true of many other remedies than of opium.

After citing a whole catalogue of authorities, no two of whom agree upon its mode of action, Pereira says—"These examples, selected out of many opinions, will be sufficient to prove how little is really known of the real action of opium, and I believe we shall save ourselves much time and useless speculation by at once confessing our ignorance on this point."

Driven to hypothesis for explanation, at last, the same author says, "There are but three kinds of changes compatible with life,

which medicines can effect in the vital actions of an organ, viz: an increase, a diminution or alteration of activity. A change in the intensity or energy merely of the vital actions of the nervous system would not give a satisfactory explanation of the effects of opium. We are obliged, therefore, to *assume* that opium changes the qualities of actions."

The dependence of this remedy for its operation upon certain conditions—themselves variable—proves it to be, more eminently than others, a *relative agent*; and the arbitrary classifications to which it has been subjected, and which too much controls its administration, is another reason of our frequent failures to obtain expected results. Whatever explanation, however, may be offered, the fact of its great want of uniform action stands, challenging controversy.

Of its influence upon the *nervous functions*, an able author says: "The mind is usually exhilarated, the ideas flow more quickly, a pleasurable condition of the whole system is experienced." Yet we know many who use it, never experience the pleasurable sensations described by De Quincy and others, nor when taken as an article of luxury is Opium always unfavorable to longevity.

We are told that its effects upon the *vascular system* are by *no means uniform*; that for some of its diseases Opium may be an appropriate remedy, while for others it may prove an injurious agent, and is hence "not to be relied upon."

As to its effect upon the Urinary system, the same writer says—"Authors do not agree as to its effect upon the kidneys—some asserting that it increases, others that it diminishes the quantity of urine secreted." In the very *phraseology* employed by its historians—as well as the extreme caution necessary to be observed in its administration, so constantly urged by authors, which pervades our literature, and is the parent of the expectant practice of many—and *also the incompatibles* with which it is often given—in all these may be read unmistakable evidences of the uncertain character of "the pernicious drug."

Dr. Watson's assertion that *ptyalism* has been produced by it—which is only equalled by a statement made by another—"that Epsom salts have been known to act like opium, and opium to have produced a purgative effect," are instances of its want of uniform operation, which might convince the most credulous sticklers for its

certainty. We have all heard of Dr. Gregory's unlucky anodyne—a dose of opium was given to a patient, who, supposing he had taken a cathartic pill, was most thoroughly purged by it.

The history of the Royal Academy of Sciences furnishes an anecdote, which proves this to be an agent *peculiarly* unworthy of confidence. “A woman, tired out by the protracted dropsy under which her husband labored, charitably administered to him a very large dose of opium, with the intention of despatching him, but the medicine immediately produced such a copious sweat, that it restored him to health.”

There is no effect of this article more universally agreed upon, than its power, when long used, to produce constipation; yet, Dr. Christian, says—“Constipation is by no means a general effect of the continued use of opium.”

Castle, of London, tells us to give it, to act upon the skin and *liver*; yet, another author assures us that the constipation which *always* follows the use of opium, “depends upon the diminished secretion of bile.”

Now if, as an eloquent writer on the principles of medicine, tell us, “Opium relieves obstinate constipation, as well as obstinate diarrhoea,”—and if, for its effect in the one or other case, it depends *not* upon any intrinsic virtue of its own, but upon “sufficient antiphlogistic treatment,” and if it will open the bowels, in lead colic and diabetes, surely its operation must be very variable.

There is no less difference among authorities, as to its effect, and the dose proper to be given, *per rectum*. In that mode, “larger doses must be given, than when given by the stomach,” is Pereira's opinion; whilst Miller says, “it is an error to suppose that when given by the rectum, a larger dose is necessary than when administered by the mouth—the dose should be the same, certainly *not* greater.”

Even about its local use—which one would suppose easily settled—there is a variety of opinion. One says, “respecting the external application of Opium, “authors seem not sufficiently agreed.” Some allege that when applied to the skin it allays pain and spasm, procures sleep, and produces all the salutary or dangerous effects which result from its internal use;” while others say, “thus applied it has little or no effect.” The same author, speaking of its anomalous operation when given in too small a dose, says, “it often produces

disturbed sleep and other disagreeable consequences, and in some cases it seems impossible to be made to agree in any dose or form."

As to the irreconcilable opinions which appear in medical works upon the use of this remedy in particular diseases, the evidence of its uncertainty is as conclusive, as the amount is overwhelming. As this evidence often regulates the decision of practitioners in its employment, I may be permitted to glance at some of the most important diseases in which the propriety of giving it is questioned.

About the year 1779, Opium acquired a great reputation as a specific in Syphilis, yet, notwithstanding the favorable reports published by different practitioners, many denied its efficacy, and the profession gradually lost confidence in it as an anti-venereal remedy.

Mr. Pearson, who made a long trial with it, says, "The result of my experiment was very unfavorable to the credit of this new remedy."

Mr. Grant has written a book in favor of its use, and maintains as earnestly, that Opium is *the* remedy for Syphilis, as Sir. Wm. Fordyce did that a cure could only be effected by sarsaparilla.

It is more probably of value as an antidote to the mercurialization so often produced in the attempt to cure Syphilis. Yet Thompson is of opinion that experience has demonstrated that "Opium cannot be relied upon, even for this purpose."

A celebrated authority tells us that in "some diseases of the cerebro-spinal system great benefit arises from Opium, whilst in others injury only can result—that in *all convulsive diseases* it is *notoriously variable*."

Speaking of cases of Tetanus, reported by Mr. Curling, in which it was used, the same author says, "the confidence of the profession in its efficacy is greatly diminished."

Watson says, speaking of certain conditions of Small-pox, "the proper remedies are opiates." Gregory tells us "in all exanthematous fevers let Opium be avoided."

In *Bronchitis* and *Pneumonia* it has been objected to as being, in such cases, the cause of danger and death.

Doctor Thompson says "much difference of opinion exists respecting the employment of opium in *hemorrhages*; and also, "that in no disease has this remedy been more frequently employed than in dysentery; but there is much difference of opinion as to the propriety of this practice."

Enough testimony of this kind, proving the uncertainty of the

remedy under consideration, might be cited to fill volumes; and, after examining a few more witnesses upon its employment in inflammatory and febrile affections, I will have done.

There are no diseases, in the treatment of which *opium* is more constantly given, than in the extensive class known as fevers, particularly in the *delirium and its symptoms*, which attend, and so seriously complicate the most grave varieties.

Here we would expect to find some certain indications for its exhibition, and agreement among authors, as to its utility; but instead of unanimity of opinion, we are met by testimony which challenges the most sagacious and penetrating judgment for an impartial decision.

“I have seen,” says Pereira, “*opium* fail to relieve the delirium of fever, even when given under apparently favorable circumstances.”

Even in cases which are marked by *sleeplessness*, (the symptom most imperatively demanding its use) the propriety of giving it is questionable. On this point, Dr. Latham says, “there are cases where the indications for the employment of *opium* are doubtful—wild delirium, long wakefulness, &c., &c., seem to call for a considerable dose.” Yet he objects to it, and although he has seen good sometimes result, says—“but I have also seen the same quantity produce *fatal coma*, from which the patient has never been roused.”

Upon its exhibition in inflammatory diseases, Dr. Holland, speaking of the extreme caution necessary to be observed in employing so uncertain an agent, says—“to stupify the sensibility to pain, or to suspend any particular disorder of function, &c., is often but to interpose a veil between our judgment and impending danger.” Thus, as an agent to allay pain, its operation is uncertain; and when it produces that effect, which it often fails to do, its utility is more than doubtful.

To narcotize a patient, is to disguise the symptoms, and without *them*, what guide has the physician to diagnosis and indications? It is too much like an attempt to subdue the storm, instead of striving to steer the ship safely until danger is past.

Dr. Chambers, of London, (whose 67 quarto Ms. Volumes of Observations on Disease entitle his opinions, upon a *practical* question, to great respect) did not approve of narcotization. In his opinion, pain depends upon inflammation, and to give *Opium* would

be to place a mask between the physician and the disease, behind which the latter might destroy the patient unperceived ; he preferred to deal with pathology openly, and not remove pain, as a palliative measure, but rather by quelling the inflammation which was its cause. "We are sure," says his biographer, "the plan of Dr. Chambers was the bold and right one ; it was acting towards disease, as Nelson did towards the enemy—to place himself fairly alongside, and abide the result."

Now, notwithstanding the difficulties which attend the employment of this drug, in diseases the most common and fatal to our race, we find it resorted to with as much recklessness as though it were not liable to make more dangerous the complications which are incidental or essential to them ; as though it never opposed, instead of aiding the conservative efforts of nature ; as if it were incapable of oppressing the vital powers, when they languish and fail ; as though it never extinguished, instead of reilluminating the flickering flame of life.

The only advantage that arises from the unlimited trust physicians have in this and other potent drugs, and from their reckless administration, is, that it keeps down the excess of population. Indeed, I believe if Mr. Malthus had been a physician, he would never have promulgated his doctrines. He should have read Medical College Statistics of the United States, and both his labor and his fears would have been spared.

Of my own experience, which has been limited, I do not care to speak. One case, however, which came under my notice in New York City, in 1847, that seemed to me remarkable, I will mention. A lady, residing in Grand street, suffered slightly from odontalgia, which disturbed her rest, and her physician administered a moderate dose of opium as a sedative. Almost immediately after taking it, she was seized with a sense of suffocation and anxiety, which she referred to the heart, dyspnoea, and in fact all the symptoms (even the pain and numbness in the arm) which characterize *Angina Pectoris* ; and it was indeed so called by her physician. She had, many years before, taken opium, and, as I learned, once subsequently, and on both occasions a similar effect followed.

As a farther illustration of this subject, the testimony of Dupuytren may be cited. Upon the use of opium, by the stomach, in traumatic or nervous delirium, as he styles a peculiar state, following and complicating injuries, a condition in which, if its character be

certain, as some suppose, it ought to act favorably, he says, "opiates of every kind, and of every form, have always appeared ineffectual in this disease, as they neither diminish its severity nor arrest its progress;" and he adds, as a physiological reason to explain this want of proper action, "that the stomach is destined to elaborate a digestive power, and contains juices which more or less change the substances with which they are in contact."

This imputation does not apply alone to *Opium*, but to other remedies of the same class. Billings tells us that "Hyoseyamus has been known often to disappoint the practitioner, by inducing delirium-tremens even, instead of sleep."

As a final illustration, which merits notice for its practical value, I give the opinion of *Maunsell*, on the use of this remedy in *rigidity* of the *os uteri*, and *inertness*, both of which conditions are so trying to the patience of the accoucher. "Opium," he says, "has been much recommended as a relaxant; but it is a medicine, the effect of which in parturition we cannot accurately measure; and it may totally suspend pains, in place of expediting labor, by its relaxing effects," and for *inertness*, he says, "Opium has been recommended in large doses, but when thus given, I have known it paralyze the uterus completely." Again, in puerperal convulsions, those who suppose this disease depends upon irritability of the nervous system, (in order to be consistent with their theory,) give opiates freely. Speaking of this, the author I have above quoted, says, "as a general theory or practice, this is decidedly wrong. Professor Gilman assures us that "the use of opium, in large or long continued doses, is very certain to destroy foetal life, and produce abortion." Yet we all know it has been given, again and again for that purpose, and failed—death being often produced by it, without destroying the ovum. We find, too, that full doses are recommended in threatened abortion.

With what remarkably discriminating intelligence practitioners must think Opium is endowed, to destroy the fetus, and produce abortion in one case, and prevent it in another—to limit its operation to the cervix-uteri, *now*, and *then* act upon the entire organ—and all to answer indications, which they imagine to exist, as rules of procedure—as though it were a well trained lackey, ever obedient, and willing and able to perform, with undeviating regularity, its prescribed duties.

Is it true that Opium—like the atmosphere, or light, can embrace all the world, and adapting itself to the most contrary states of animal beings—that it can produce diseases which it destroys, and cure conditions which it causes? Belief in the possibility of all this, may prove the purest faith, but it does not indicate the profoundest reason.

As to the means for correcting the uncertainty of which I have adduced so much testimony, and of the causes which produce it—it does not, of course, come within the design of this dissertation, to touch them. I believe, however, that one of the most prolific parents of doubt and error, is the almost unlimited trust practitioners have in the power of opium to cure disease. Resorting to it, (notwithstanding its acknowledged uncertainty,) with as much pertinacious invariability, as Abernethy did to his eternal Blue Pill and Senna Tea—they become so familiar with it, as to neglect to observe its results. Its too frequent exhibition also arises from that *mischievous activity*—(one of the greatest errors in practice,) growing out of professional willingness to humor popular prejudice, and *do something*, whether it is necessary or not.

As to the grounds I have for skepticism, none can deny that the authorities I have cited, upon the variableness of the operation of this potent proteus of the *Materia Medica*, are reliable, nor that the facts and illustrations I have offered, are appropriate and incontrovertible.

I have not quoted obscure authors, whose means of observation were few or limited, but eminent writers and teachers, whose intellects have illuminated some of the darkest paths of our science. And I ask whether their conflicting testimony does not justify doubt in its almost universal applicability to the cure of disease, and prove the impropriety of too much dependence upon medicine generally, and particularly upon *Opium*.

“In the early ages of medicine,” says Dr. Gregory, “when descriptions of disease were imperfect, when pathology was in its infancy, and statistics were unknown, Physicians arrogated to themselves a power of controlling, by drugs, the course of diseases, which we now know to be wholly unwarrantable.”

Notwithstanding the contradictory testimony we have about remedial agents, I am not without faith in their virtues—as Old Burton

has it, "for my part, I am well persuaded of physic, and can distinguish the use from the abuse."

Nor do I advocate that "hard-headed or unlimited skepticism," as Dougald Stewart calls it, which is as great a proof of imbecility as implicit confidence is. I believe *skepticism should guard the portal, not occupy the palace of the mind*. Indeed, in our profession, the Pyrrhoic Philosophy is to be preferred. We recollect the French apothegm, that "Doubt is the true torch of science." Descartes asserted that all philosophy begins in doubt :

" Who never doubted, never half believed ;
Where doubt, there truth is—'tis her shadow."

Did not the pioneer of Philosophy, in Greece, begin his discoveries of truth by doubt ? Was not Harvey skeptical about the existing theory, before he discovered the circulation of the blood ; and has not distrust in old doctrines, always been the precursor of new ?

It was said by Volney, that the proper state of mind for the study of history, was that in which we "hold the judgment in suspense," meaning, I presume, we should be in a state of doubt.

To no study will this remark apply with more propriety, than to the *Materia Medica*.

When thus prepared, attention is aroused, we industriously examine, and carefully weigh facts as they are presented, and do not allow them to glide unquestioned into the memory.

By pursuing this plan of investigation in medicine, we become *humbly* proof. Almost by intuition we are enabled at a glance to detect the improbable, and grasp at the true ; and we thus become rich in wisdom, won by stern conflict, from the fields of observation and the honored possessors of trophies which perish not by the charnal touch of time.

Truth can only be elicited by a careful analysis of *facts*. For facts we depend upon testimony. We have seen that, in whatever direction inquiry has wandered, it has been met and overwhelmed by contradictory statements and conflicting testimony ; and we know it is logical to entertain *suspicion* concerning any matter of supposed fact, *when the witnesses contradict each other*. Out of the conflicting mass of testimony that I have presented, from authorities equally eminent, and equally well armed with facts, to what conclusion are

we compelled but that; to prove which, I am contending, viz:—
the uncertainty of our Materia Medica?

If I have succeeded in this sketchy paper in showing that Opium is an uncertain remedy, I have accomplished all I have attempted.

That it must remain so, seems to me a self-evident proposition. The necessity for uncertainty is *intrinsic*, and depends upon an almost infinity of circumstances. The ever-varying conditions of the brain and nervous systems, upon which opium is supposed to exert its influence—conditions, under the control alike of the gentlest emotion, or most powerful passions, which a sight or a sound may change, and which are almost never alike in any two individuals, nor in the same individual, two hours at a time; the control of that system over all others; over the circulatory, secretory, digestive and excretory, and of their dependence upon it for the performance of their functions; the rapid, and what we call, but improperly, *spontaneous* translation of disease, from one system or organ to another; the amount of discrimination and judgment required to administer, so as to render this agent available in the cure of disease—and, finally, the inexperience of some observers, the rashness of others, and the difficulty all have to believe they have aggravated evils which they intended, and believed themselves able to cure, tending to invalidate their testimony upon its effects—all these, and numerous others, which cannot now be named, are sufficient reasons for want of uniform operation of the drug itself, and of our knowledge of its effects in disease: and I repeat, ever must it so remain, until we can create at will the necessary conditions—until we can change climate—alter habit—correct idiosyncrasy, and regulate the sensibilities of the nervous system—until we can increase or diminish the assimilative power of the stomach, prevent or promote nervous transmission, neutralize or decompose incompatible substances, and control, by mere varieties of dose, the complicated chemic-vital operations, which are constantly at work in the living organism. We may then hope, by combining mercury or antimony (agents equally uncertain in their operations) with Opium, to obtain one result, and by adding Ipecacuana another, and have some reliable ground for belief, that by varying the combinations according to imaginary indications, we can obtain totally different, new and modified results, and never cause an unfavorable

one. When we can do all this, and not till then, will Opium and other potent agents of the *Materia Medica* be entitled to the unlimited confidence which is now given to them by practitioners.

But to conclude this paper, already too lengthy, I repeat the conviction, that I before expressed, that the *Materia Medica* is not included among the great improvements in medicine which are the boast of our age; for, although chemistry has analyzed old and introduced new remedies—discovered incompatibles and revolutionized nomenclature, (and thereby introduced a new element of confusion into this branch of science), still, respecting the curative power of drugs, and their effects in disease, the same uncertainty that hung over the darkest eras of the past now envelope the subject, and leave us in doubt whether the nineteenth century is to be preferred to the ninth—whether all our boasted advances have not been made in a circle—and whether that symbol of the Egyptians, which points to an eternity of doubt, ought not to be made our own.

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