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CLASSIFICATION OF MEDICAL SCIENCE.

We continue our Classification of the Science of Medicine, with
PHARMACOLOGY.—That branch of Androphysics which treats of Medicines, including the modes of preparing them, their properties and their uses. The name is derived from the Greek *Pharmachon*, which may signify either a medicine or a poison.

A *Medicine* may be defined as any substance applied to the animal system, either externally or internally, to cure disease or restore health. The art of compounding medicines is termed *Pharmacy*; the person who prepares or compounds them, an *Apothecary*; the book which describes them, a *Dispensatory*; and the medicines themselves, as well as the study of them, are termed *Materia Medica*.

Pharmacology is divisible into four other heads, as follows: Therapeutics, *Materia Medica*, Pharmacy and Toxicology.

We may embrace under the head of *Therapeutics*, the classification of medicines in reference to the manner in which they act, or the effects which they produce on the human system. The classification here presented, is drawn chiefly from Dr. Dunglison's valuable treatise on Therapeutics. As to the action of medicines on the human system, they may be classed as either vital, chemical or mechanical agents. The *vital agents* are those which directly affect the functions of life; acting either as excitants, which increase, or sedatives, which diminish organic action. The *chemical agents* are those which produce an immediate chemical change, and the *mechanical agents* are thus termed for the reason that they are supposed to act mechanically in producing their peculiar effects. These may be still subdivided into other orders, according to their various effects on the system; but we have not room for such an extended view.

To *Materia Medica* belongs the description of all simple medicines, and their medical properties.

Pharmacy, or *Pharmaceutics*, is that division of Pharmacology which relates to the selection, preservation and preparation of medicines, constituting the art of the Apothecary.

Toxicology is the study of poisons; their effects and their antidotes. This department of medical science should be understood by every person, as poisons are frequently taken through mistake; and unless the antidote is immediately administered death would ensue.

The next department of Medical Science to which we call our reader's attention, is *THEREOLOGY*; under the head of which we include the study of diseases and the practice of medicine. The name is derived from the Greek, *Thereo*, I cure, or take care of, and therefore properly applies to the means of preventing disease, as well as its removal. It may, then, comprehend the subjects of *Hygienics*, or the means of preserving health; *Nosology*, or the classification of diseases; *Pathology*, or their anatomical and physiological effects; *Etiology*, or their causes; *Symptomatology*, or their symptoms; and *Clinics*, or the practice of medicine at the bed side, as the name implies. The term *prognostics* is applied to those symptoms which indicate the causes or probable event of diseases, and *diagnostics* to those symptoms which distinguish a disease from other similar diseases.

We may divide *Thereology*, the third department of Androphysics, into *Hygienics*: febrile, eruptive, nervous and secretive diseases.

Hygienics we have sufficiently defined as that division of *Thereology* which relates to the preservation of health. The principles upon which it depends, are diet, exercise, air, temperature, clothing, occupation, rest, habits and passions. The consideration of *diet*, or the quantity and quality of food, is so important that it has sometimes been regarded as a distinct study, under the name of *Dietetics*.

Febrile Diseases form the most numerous and important division in *Thereology*. They are classed as *Pyrexia*, or inflammatory diseases, by Cullen; as *Hæmatica*, or sanguineous diseases, by Good, and are generally characterized by chilliness at the commencement, followed by preternatural heat, and acceleration of the pulse, denoting an irritated state of the system.

Under the head of *Eruptive Diseases*, we may comprehend those disorders which, though usually accompanied by fever, are characterized by cutaneous eruptions, and hence termed *Exanthemata* in several systems of Nosology.

Under the head of *Nervous Diseases*, we may include those derangements, termed by Cullen *Neuroses*, in which the nervous system is more immediately affected, whether primarily or sympathetically. Nervous diseases may be divided into *Adynamie*, or diseases resulting from debility; *Erethismi*, or diseases resulting from irritation of the nerves, or increased sensibility; and *Spasmi*, or spasmodic affections.

Under the head of *Secretive Diseases*, we may include various derangements of the absorbent, secretive and assimilative functions, which affect different parts of the system. To this class belong most of the *Epischeses*, or suppressions, and the *Apoceneses*, or fluxes, so named by Dr. Cullen.

We may close this class of diseases with the *Chachexia*, of Dr. Cullen, which embraces all those diseases growing out of morbid humors, as Scrofula, Scorbutus, Elephantiasis, &c. This closes the department of Thereology.

Under the head of **CHIRURGERY**, we comprise all that branch of Androphysics which relates to manual operations for medical purposes, including Surgery, in all its branches. The name is derived from the Greek, *Cheir*, the hand, and *Erlon*, a work or operation; and the word Surgery may be traced to this root for its origin. It relates chiefly to the treatment of wounds, fractures, dislocations, sprains, tumors, ulcers, and such deformities as can be removed by mechanical means. This department of medical science necessarily presupposes a general knowledge of medicine, and a thorough knowledge of anatomy, to perform the operations correctly, and to administer the proper remedies in order to recover the patient from their effects. The practice of Surgery requires the utmost firmness, confidence, skill and dexterity, without which, the more critical operations, where life hangs upon the slightest turn of the knife, should not be attempted.

This branch of Androphysics may be treated of under the heads of Vulnar, Normal and Topical Surgery.

Vulnar Surgery comprises the treatment of external injuries, as wounds, fractures and dislocations, in all their various forms.

Normal Surgery properly treats of those operations which are necessary to promote recovery from ordinary diseases, or to remedy malformations, excepting diseases or malformations of the eye, the ear and the teeth, which properly belong to the following section. The word *Normal*, from the Latin, *Norma*, a rule, is used here in reference to the regular action of the organs, or the proper shape and state of the parts on which it is intended to act.

Topical Surgery embraces the treatment of the surgical diseases of the eye, the ear, and the teeth; which, from their difficulty, have been separated, in large cities, from general surgery, and assigned respectively to the Oculist, the Aurist, and the Dentist.

The diseases of the eye, requiring the attention of the *Oculist*, are numerous, and frequently very difficult to discover and manage.

To the *Aurist* belong the diseases of the ear, which are less numerous than those of the eye, but nevertheless frequently require critical surgical operations.

To the *Dentist* belongs that division of surgery which relates to operations on the teeth.

This concludes the various departments or branches of Medical Science, which are embraced under the head of *Androphysics*, a theoretical and practical knowledge of which is so essential to the medical practitioner. Our readers will at a glance perceive the necessity, as well as the beauty and harmony of these grand divisions in medical science. The various subdivisions seem but little less necessary, and equally beautiful and harmonious in their infinite progression. This may also serve to give our general readers some idea of the great amount of mental labor it must require to become profound in the infinitely varied principles of medical science.

Having carried our readers through our four propositions, which develop the true science of medicine, divesting it of its complex and mysterious character, rendering it beautifully simple and practical, safe and harmless in the hands of the people, its natural and rightful possessors, and to the *people* we humbly submit them. We might moralize on this matter, but we forbear. Should we be spared health and life, and the people give us a reasonable patronage, we will take this subject up in the third volume, and discuss the merits and demerits of each particular drug in use, and its various, or at least most common effects upon the human system; This would bring us into the true merits of abstract, practical *Materia Medica*.

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DR. MCNAIR: As your popular and scientific journal is the medium through which we receive intelligence of an important and philosophical character, I will take the liberty of communicating a few thoughts for the consideration of your numerous and intelligent readers; in doing of which my object is to prove that the great mass of mankind have lost

sight of sound reason. Man, at the present day, is to a great extent the creature of habit and education. The principles imbibed in early life give tone and character to the man at mature age. Owing to the different habits of men, and the rotten and imperfect system of education, founded as it is upon unphilosophical principles, we have the diversity of character, and the absurd and contradictory views of men. God, the creator of all things in heaven and earth, gave to man the capacity to receive knowledge, and faculties capable of investigating the works of his hands, and deriving therefrom the sublime truths of science and religion, and learning the relation that he sustains to the world, to his fellow beings, and to his God. Man, to be happy, and obey his God, must live in obedience to the physical, intellectual and moral laws of his nature. But, in consequence of having become corrupt, and having sought out many inventions, not satisfied with himself and the position which the God of nature assigned him in the world, has thereby brought upon himself the penalty annexed to the violation of the law of God. As man became estranged from truth, mercy and obedience, ignorance and cupidity began to brood over the moral and intellectual world, until the great mass of mankind were enshrouded in her dark mantle. Egyptian darkness blinded the eyes of the understanding, and reason, that noble faculty of the human soul, was dethroned. In this state of intellectual blindness and moral degradation, the baser passions of the human heart gained the ascendancy, and, lost to the genial influence of sound morals, man became a Devil incarnate. His chief pleasure consisted in gratifying the secular, ambitious and unjust desires of his depraved heart. Ignorance and cupidity were the motives of his mind, the baneful and desolating influence of which has destroyed kingdoms, dethroned monarchs, and abolished the most opulent and magnificent cities the world ever knew. Every nation under Heaven has been made to mourn and lament in consequence of the misery and death that has been brought into our world by this hydra-headed monster of the human heart. Long have the nations of the earth suffered under the galling yoke and tyrannical despotism of this—hell's most potent agent. But the day is dawning, and the light, the glorious light of human reason is penetrating the thick darkness; though feeble and glimmering its rays, the mist of error begins to disappear before the great luminary, which is advancing with an accelerated velocity, scattering as dust in the sunbeams the false philosophy of by-gone days, and revolutionizing the whole moral, intellectual and physical man, and unfolding

the beautiful and sublime truths of science and religion. We hail thee as Heaven's light, given to man, to illuminate his pathway through this dark and dreary world, to the bright elimes of bliss, where there is no dimming cloud to obscure our vision, and where hellish darkness can never intervene to obscure our sight. We will predict that the day is not far distant when human reason, enlightened by experience and observation, will be able to demolish all the fanciful and erroneous systems of philosophy, medicine and religion, and teach the true principles of society, of government, and of religion. Then, and not till then, will the base and hellish principles and acts of men meet their merited reward; the veil which long concealed from mortal eye the evil designs and secular motives of men will be taken away, and man can no longer, by hypocritical pretence of the love of virtue and justice, deceive his fellow beings, and thereby accomplish his wicked and hellish purposes. Long since has suffering humanity called aloud to be avenged and freed from the tyrannical despotism of ignorance and cupidity. The gigantic mind of man, after long imprisonment, by its innate power, and prompted by the love of truth, justice and patriotism, has arisen and thrown off the shackles of prejudice, and the bias of self-interest and early education, and with a holy enthusiasm proclaimed the true principles of government, society and religion, as being in harmony with each other, and in harmony with the whole material and immaterial universe. We will enquire, how long will ignorance and cupidity hold their despotic rule over the mind of man, and thereby deprive him of the pleasure of basking in the sunshine of truth and reason, man's counsellor in the intricate and arduous pursuit of knowledge. Will men, in an age like the present, replete with the most sublime and magnificent developments in the arts and sciences that the world has ever known, persist in unbelief and deny that the progress of mind is endless as duration. So great is the phenomena of the present age that the mind looks on with wonder and astonishment. Who will attempt to predict what a century to come will unfold to the scientific world, and will man not learn wisdom in reasoning upon the past, the present and the future, and thereby increase his fund of knowledge, that he may be able to act his part in life like a philosopher and a patriot, and not left to grope his way in the dark like a bigoted stoic, destitute of reason and common honesty. In every age of the world the great mass of mankind have been opposed to everything new; consequently, since the day that Noah built the ark, and had to encounter the mockery and scorn of the antedeluvian race, to



the present hour, obliquy and proscription have assailed every new and untried experiment of man. This spirit forms one of the most unseemly traits in the human character. It indicates a mind neither resting for success on the resources of its own power, nor relying on the superintending care of a just, a wise and holy Providence. Because we ourselves are not first in the discovery, or because it might militate against our interest, we would wish it buried. Yes! no matter how useful or how benevolent, we would wish it forever buried in the Cave of the Cyclopes.

Upon no subject have we a more clear and philosophical demonstration of the spirit of ignorance and cupidity than in the history of medicine. It is there we find men who should be patterns of every excellent and noble quality of the human soul, debased and sunken in the very depths of iniquity; they have become proverbial for their low and hellish conduct, thereby bringing disgrace upon the profession.

What is man, lost to the better feelings of the human soul? I would ask, what reason there is in condemning a thing that we know nothing about? And again, I would ask, what has been the conduct of a great portion of the would-be great men of the medical faculty? I need only make a few quotations from some of the most able and popular medical men, in order to give a bird's-eye view of the fair temple of medical science.

Dr. Brown, of Edinburg, after fifteen years of study and practice, "deplores the healing art as altogether uncertain and incomprehensible;" Dr. Gregory says that fever is present in eight-ninths of all the diseases of man, yet "all the vagaries of medical theory respecting it have proved unsatisfactory;" Dr. T. J. Todd says "medicine has never known the fertilizing influence of the inductive logic;" and Dr. Harrison says "reason and common sense are never brought to bear upon it;" Dr. Waterhouse, long a Professor in Harvard College, calls it "honied quackery;" Dr. Bigelow, now a Professor there, calls medicine an "ineffectual speculation;" Dr. Chapman, of the University of Pennsylvania, calls it "absurd, contradiction and falsehood"—"a Dedalian Labyrinth;" Dr. L. M. Whitting calls it "a perfect chaos, destitute of hardly one solitary well established fact;" Dr. J. Abercrombie calls it "the art of conjecture"—"the science of guessing"—"a striking in the dark," &c.

We could extend quotations, but think that enough have been given for the present. Next we will give the medicines in constant use by

the would-be great physicians of the present day a passing notice. In the present communication we will confine ourselves to that of mercury. That mercury, as a medicine, is one of the greatest curses that ever afflicted civilized society, there is not a doubt in our mind—the shadow of a doubt. The following is from Thos. Graham, of the University of Glasgow, and the Royal College of Surgeons, London—no quack slander this, no botanic nor mesmerizer's abuse of an invaluable medicine.

“There is a circumstance in the operation of mercury which ought to engage the serious and attentive consideration of the profession, as well as all who are in the habit of taking it themselves, or of giving it to their children. I mean the permanency of its deleterious effects. An improper or excessive use of the generality of medicines, is recovered from without (comparative) difficulty; but it is not so when the same error is committed with the mercurial oxides. They affect the human constitution in a peculiar manner, taking (so to speak) an iron grasp of all its systems, penetrating even to the bones, by which they not only change the healthy action of its vessels and general structure, but greatly impair and destroy its energies. I have seen the constitutions of such persons, (who were supposed to have the Liver Complaint,) irrecoverably ruined by active mercurial courses, but in no instance did I ever witness a cure effected by this treatment. It is painful to recollect that in disorganized livers, mercury, carried to the extent of salivation, is commonly regarded as the sheet anchor, the fit and only remedy; for I will venture to affirm that the far greater number of such cases grow materially worse, rather than better by such use of it, and that this aggravation consists not merely in an increase of the patient's weakness and morbid irritability, but that the existing disease in the liver becomes more extensive and inveterate.”

ABERNATHY.—“Persons who are salivated, have, as far as I have remarked, the functions of the liver and the digestive organs constantly disturbed by that process.”

BLACKALL, on the Scirrhus, or Tuberculated State of the Liver.—“I have seldom seen mercury make any (good) impression; but I have seen the mercurial habit superadded by continual salivation, and then the disorder become more complicated and more speedily fatal.”

HAMILTON.—“The ordinary mode of exhibiting mercury, for the cure of Chronic Hepatitis, not unfrequently hurries on the disease, or, by impairing the constitution, lays the foundation for paralytic affections, and it may be truly affirmed that it thus often shortens life.”



GRAHAM.—“There is not in the *Materia Medica*, another article which so immediately and permanently, and to so great a degree, debilitates the stomach and bowels, as calomel. Yet this is the medicine which is prescribed and sent for on every occasion. Its action on the nervous system is demonstrative of its being an article in its nature inimical to the human constitution, since what medicine besides, in frequent use, will excite feelings so horrible and indescribable, as calomel, and other preparations of mercury?”

N. CHAPMAN, Professor of *Materia Medica* in the University of Pennsylvania.—“If you could see what I almost daily see in my private practice—persons from the south, in the very last stage of miserable existence, emaciated to a skeleton, with both plates of the skull almost completely perforated in many places, the nose half gone, with rotten jaws and ulcerated throat, with breaths more pestiferous than the poisonous Bohon Uphas, with limbs racked with the pains of the inquisition, minds as imbecile as the puling babe—a grievous burthen to themselves, and a disgusting spectacle to the world—you would exclaim, as I have often done, ‘O! the lamentable ignorance which dictates the use (as medicine) of that noxious drug, calomel.’ It is a disgraceful reproach upon the profession of medicine—it is quackery—horrid, unwarrantable, murderous quackery. What merit do physicians flatter themselves they possess by being able to salivate a patient? Cannot the verriest fool in christendom give calomel and salivate? But I will ask another question: Who is there that can stop the career of calomel when once it has taken the reins into its own possession? He who resigns the fate of his patient to calomel is a vile enemy to the sick, and if he has a tolerable practice, will, in a single season, lay the foundation of a good business for life, for he will ever afterwards have enough to do to stop the mercurial breaches in the constitutions of his dilapidated patients. He has thrown himself in close contact with death, and will have to fight him at arm’s length, so long as one of his patients maintains a miserable existence.”

Dr. RUSH says: “Dissections daily convince us of our ignorance of the seats of disease, and cause us to blush at our prescriptions. What mischief have we done under the belief of false facts and false theories. We have assisted in multiplying diseases—we have done more, we have increased their mortality.”

I hope you will excuse this lengthy article. The next will not be quite so lengthy.

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We publish the following article from the *ANNALIST*, a Record of Practical Medicine, in the city of New York, and edited by William C. Roberts, M. D., to show the astonishing acknowledgements which are daily being made by the more enlightened, observing and conscientious of our Alopathic brethren, in respect to the ruinous and destructive effects of that *Sampson* of the drug shop, Calomel. From twenty to fifty infants die per week in this city, (St. Louis,) the cause of which has created a great deal of anxious enquiry. The light, however, of observation and experience, has not yet been able to penetrate the dense skulls of but very few of those whose duty it is to observe *the effects of their practice*, and trace out the cause which deals out *death* so relentlessly, especially among infants. Premature death is an artificial effect, produced by causes under the control of enlightened reason. The excuse, "the will of the Lord be done," will not appease the feelings of the *philosophic* parent, when his "*little ones*" fall thick and fast around him, mown down like grass before the scythe, and withered before the meridian sun has beamed upon their understanding. The observations of the people are, however, daily becoming more and more developed upon this vastly important matter, and the day is not far distant when those opaque heads will be rendered beautifully transparent by the keen demands of nature's wants.

We hope time, with her powerful wand, may work a *glorious* change in their practice, which will convert the deadly weapons of medical warfare into powerful agents in preserving and prolonging life—for reason has most assuredly failed.

We should be pleased to enter into the merits of this matter ourselves, but we shall be contented for the present for our readers to listen to the Alopathic. At a more convenient season we shall take this subject up and resolve it into problems and solve them mathematically.

## ON THE EFFECTS OF MERCURY ON THE YOUNG SUBJECT.

BY JOHN B. BECK, M. D.,

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In some previous papers,\* I endeavored to point out the peculiarities attending the operation of opium and emetics, on the infant subject, as distinguished from the effects of these agents on the adult. I now

\* New York Journal of Medicine and the Collateral Sciences. Vol. 2 p. 1, Vol. 7. p. 153.

propose to make some remarks on another article of even still greater importance, and that is *Mercury*. That Mercury is an agent of immense power either for good or evil, upon the human constitution, cannot be questioned. While in many cases it is the means of saving life, in not a few it unquestionably destroys it. If this be so, it becomes a question of the deepest practical interest, to determine whether its action is modified in any way by the age of the patient, and particularly so, when it is recollected that it is given by too many physicians, even more freely, and may I not add indiscriminately, to the young subject than to the adult.

*The first and most striking peculiarity attending the action of mercury, is that in young subjects, it does not produce salivation so readily as it does in adults.* Indeed under a certain age, it appears to be exceedingly difficult to excite salivation at all in them. On this point, besides our own experience, we have abundance of testimony. Dr. Clark says, "under various circumstances he has prescribed mercury, in very large quantities, and in a great number of cases; and he never produced salivation, except in three instances, in any child under three years of age."† Dr. Warren, of Boston, observes, "that he has never known an infant to be salivated, notwithstanding he has given in some cases, large quantities with this view."‡ Mr. Colles, of Dublin, says, "no man in the present day requires to be told that mercury never does produce ptyalism, or swelling and ulceration of the gums in infants."§ Drs. Evanson and Maunsell speak still more strongly. They say, "mercury does not seem capable of salivating an infant. We have never seen it do so, nor are we aware of any such case being on record." "We have never succeeded in salivating a child under three years of age."||

The same general fact seems to be applicable to the external use of mercury. Dr. Percival, of Manchester, remarks, that he "repeatedly observed that very large quantities of the Unguentum Cœruleum may be used in infancy and childhood, without affecting the gums, notwithstanding the predisposition to a flux of saliva, at a period of life incident to dentition."¶

† Commentaries on some of the more important Diseases of Children. By John Clark, M. D. p. 182.

‡ View of the Mercurial Practice in Febrile Diseases. By John Warren, M. D., p. 146.

§ Practical Observations on the Venereal Disease and on the use of Mercury. By Abraham Colles, M. D., p. 171. Amer. edition.

|| Treatise on the Management and Diseases of Children, p. 88.

¶ Essay, Medical and Philosophical. By Thomas Percival, M. D. vol. 2. p. 318.

That salivation does not take place so readily in the infant as in the adult, would seem then to be well established. That it never can or does take place, as might be inferred from some of the preceding quotations, is by no means, however, true; and the statement, if implicitly relied on, is calculated to be the cause of much mischief. That very young subjects do sometimes become salivated, is unquestionable. One case, and only one, however, has occurred in my experience, in which a child of two years of age was salivated, and that by a very moderate quantity of calomel, viz: five grains, given in three portions, at intervals, within the space of about twelve hours. In about two days after, the gums became inflamed, the tongue swelled, several ulcers appeared in the mouth, and the flow of saliva was free; after continuing about three days in the same state, it gradually yielded, and disappeared without any further inconvenience. In this case every thing seemed favorable to the development of mercurial action. The child had been laboring under whooping cough for several weeks, and was a good deal reduced. It vomited freely with every paroxysm of coughing, and this no doubt aided in bringing on salivation, in a constitution peculiarly sensitive and evidently scrofulous. Nor is this a solitary case. Dr. Clark, already quoted, admits that in three cases salivation was produced in children under three years of age. And similar cases have been observed by others. Dr. Blackall relates the case of a child, two years of age, who was salivated in consequence of taking two grains of calomel for several successive nights. The child was a poor scrofulous subject, and it sunk under the effects of the mercury.

This, then, is a remarkable peculiarity in the action of this agent upon the infant subject, and the observations of it have doubtless led to the belief, too prevalent among some physicians, that it may be given to them to almost any extent with perfect impunity; an error, which, if not in its immediate, yet certainly in its remote effects, has been the prolific source of more mischief, probably, than any of us are aware of.

*Although mercury so seldom salivates infants, yet, notwithstanding this, it cannot be doubted that it affects the system profoundly, and even more so proportionally than it does the adult.* That it should do so appears perfectly natural, when we reflect upon the mode of its operation on the human system. On this subject, I am aware that a great difference of opinion exists. By some, mercury is looked upon as a stimulant; while others view it as a sedative, a familiar acquaintance with its effects, however, will show, I think, that it may be the one or the other, according

to circumstances—according to the dose in which it is given—the length of time it is continued, and more especially, the condition of the system at the time of using it. A single large dose of calomel will cause nausea and relaxation, and sometimes unpleasant prostration, while if it be given in smaller doses and repeated frequently, it will occasion irritation of the intestines, and general disturbance of the vascular and nervous systems. In the former case acting as a profound sedative, and in the latter as a stimulant, or rather irritant. That calomel given in large doses operates as a sedative, seems to be proved, not merely by nausea and prostration which it frequently produces, but by other considerations. In dysentery, for example, in the adult, a dose of twenty grains of calomel will sometimes allay pain and irritation, with as much certainty as a dose of opium. For the purpose of testing the effects of calomel, some interesting experiments were made by Mr. Annesley, which would seem still further to show, that in large doses the action of this agent upon the mucous membrane of the stomach and intestines is that of a sedative. He took three healthy dogs, and gave to one, 3j. of calomel, to a second 3ij. to a third, 3iij. After this they were tied up in a room.

“The dog which took 3j. did not appear to feel any kind of sickness, till six or seven hours afterwards when he vomited a little. He was lively the whole time, and ate his food well; had been purged two or three times; dejections of a black grey color.

The dog which took 3ij. was likewise lively and ate his food well, vomited two or three times, and was purged more than the other; he passed tape worms and the dejections were black.

The dog which took 3iij. was heavy, and apparently uncomfortable the whole day, and did not vomit at all; he was purged and passed a very long tape worm; dejections also black.”

Twenty-four hours after they had taken the calomel, the dogs were all hung, and five minutes after they were dead, they were examined, and the vascularity of the stomach was found to be the inverse ratio of the calomel they had taken; i. e. in the dog which had taken 3iij., the vascularity was the least, and so on. For the purpose of comparing this with the condition of the stomach of a dog which had taken no calomel at all, an examination of another dog was made; and here the stomach was found to be *more vascular* than in any of the others. From these experiments, Mr. Annesley drew the conclusion, that “the natural and healthy state of the stomach and intestinal canal is that of high

vascularity, and that the operation of calomel in large doses, is directly the reverse of inflammatory."\*

The foregoing considerations would seem to show that calomel in full doses is a local sedative, and in its general effects, is debilitating to the system at large. Hence its great utility and value as a remedy in many inflammatory diseases.

When on the other hand, it is given in small and repeated doses, it acts not unfrequently as a local, as well as a general irritant, producing immoderate action of the bowels, and general irritation of the nervous and vascular systems. Now these, we know, are the effects observed continually in the adult, and it is but reasonable to suppose that all of them must, as a matter of course, be aggravated in the more delicate and sensitive system of the infant.

What shows incontestibly that the action of mercury is actually more energetic on the infant than the adult, is the fact, that when salivation does take place in the former, as it sometimes does, its effects are most disastrous. Sloughing of the gums and cheeks, general prostration and death, are by no means uncommon occurrences. On this subject, Dr Blackall justly remarks, "a general opinion prevails, that the constitutions of young subjects resist mercury. Its entrance into the system they certainly do resist, more than we could expect; but they are greatly overcome by salivations, and the possible occurrence of such accidents may well set us constantly on our guard."† Dr. Ryan, too, says, "Ptyalism of infants is often followed by sloughing of the gums and cheeks; and this I have known to occur after the use of it in Hydrocephalus."‡

Besides being more energetic in its action on the infant, mercury is also more uncertain. This must necessarily be the case, and for the same reasons that every other active agent is so. In the adult we know that mercury varies in its effects, according to the condition of the system, and the peculiarities of the patient's constitution. Thus some persons are salivated by the smallest quantity of this metal, while others resist the influence even of the largest quantities. In some, febrile action; in others, diarrhoea and exhaustion take place even from moderate doses. Hence it is, that every prudent physician, if unacquainted with the previous history of his patient, makes it a special subject of inquiry to ascertain whether he has ever taken mercury previously, and how it af-

\* Transactions of the Medical and Physical Society of Calcutta. vol. 1 p 211.

† Observations on the Nature and Cure of Dropsies, by John Blackall, M.D. p.126.

‡ Manual of Midwifery. By Michael Ryan, M. D., p. 477.



facts him. Now, in the young infant, of course, as we cannot so well have the benefit of this information, more uncertainty must necessarily attend its operation.

These, then, are the peculiarities attending the operation of mercury on young subjects, viz: that they are salivated with great difficulty, and that notwithstanding this, the effects of it are frequently more energetic and uncertain than they are in the adult. And it is upon these as the basis, that I propose to make a few remarks bearing upon the practical application of it in young subjects.

1. If salivation occurs so rarely in children under a certain age, then it is evident that it can never be made a criterion by which to judge of its influence on their systems. To attempt, therefore, to produce this effect, as we do in adults, is manifestly improper. In cases where it is desirable to get the system under the influence of the remedy, other modes must be resorted to for the purpose of judging to what extent the use of the article should be carried. Now this is by no means easy. Even in adults, where we have the benefit of salivation as a test, all practical physicians are aware how difficult it is frequently to decide when it is proper to stop the use of the remedy. How much more so must this difficulty be increased in the young infant, where we are left without this guide. The only modes of judging, of course, are the character of the evacuations from the bowels, and the general impression made upon the disease for which it is administered. Both these are evidently, however, uncertain. It is to be feared, therefore, that for the want of a more certain guide than we at present possess, the use of this remedy is, in many cases, unnecessarily protracted, to the great detriment of the little patient. From all this the conclusion is obvious, that in the use of this article in the young subject, much greater caution is necessary than in the adult.

2. The fact that mercury may prostrate and destroy a young child, even though it does not cause salivation, it is to be feared is not sufficiently appreciated, at least by some. We have known calomel given without weight or measure, to a young child, and the reason assigned to justify it was, that it could do no harm, because it would not salivate. Now it appears to me that no opinion can be more unfounded, and no practice more mischievous. Although a single dose of calomel, even though large, may be well borne by children of an ordinary strength of constitution, yet even this is not entirely safe in all cases; and when these doses are frequently repeated, particularly in delicate habits, the most serious consequences may result.

3. The use of mercury in young subjects as an alterative, should in all cases be conducted with great caution. There is no practice more common than that of continuing the use of this agent in small doses, for a considerable time, and certainly none which is more liable to abuse. Under the idea that the dose is so small, and from no salivation appearing, we are apt to infer that even if the medicine is not doing any good, it is certainly not doing any harm. Any improvement, too, which occurs during the use of the article, is sure to be attributed to the silent operation of it on the system. Now, although this is not unfrequently the case, yet it is not invariably so; and every observing physician must have been aware of cases in which, in this way, the article has been unnecessarily and injuriously continued. In bowel complaints, under the idea of altering the secretions, it has frequently, no doubt, helped to keep up the very intestinal irritation it was given to correct. In other cases it has developed the latent tendency to other diseases, such as Scrofula, Phthisis Pulmonalis, &c. In adults we know this to be very often the case. How much more likely is all this to happen to the young infant.

4. In the use of mercury in young children, great care should be exercised in ascertaining, as far as possible, their constitutional peculiarities. This, of course, is not in all cases easy to be done. A good deal, however, may be learned from an acquaintance with the tendencies of the parents. Wherever the parents show indications of scrofula; or where there is an hereditary predisposition to consumption, great caution ought to be exercised in the use of mercury in their offspring.

5. Mercury should be administered with great caution in cases where a child has been sick for a considerable length of time, and when the strength of the child has been very much reduced. In this state of constitutional depression, a single cathartic dose of calomel sometimes proves fatal. We think we have seen more than one case, in which a child has been irretrievably prostrated under these circumstances, under the false impression that calomel is an innocent purgative to a child.

6. The too common practice of giving calomel as an ordinary purge, on all occasions, is certainly unjustifiable. From the facility with which it may be given, it is unquestionably resorted to in a great number of cases where it is certainly unnecessary, and in a great number where it positively does harm. The misfortune is, that its use is not limited to an occasional dose, but it is too often given in every slight indisposition of the child. Now, in this way, there can be no question that the use of

4. Swallowing the food slowly, or in small quantities, and at short intervals, is very necessary.

5. A quantity not exceeding the real wants of the economy, is of prime importance to health.

6. Solid aliment, thoroughly masticated, is far more salutary than soups, broths, &c.

7. Fat meat, butter, oily substances of every kind, are difficult of digestion, offensive to the stomach, and tend to derange that organ, and induce disease.

8. Spices, pepper, stimulating and heating condiments of every kind, retard digestion and injure the stomach.

9. Coffee and tea debilitate the stomach and impair digestion.

10. Alcohol, whether in the form of distilled spirits, wine, beer, cider or any other intoxicating liquors, impairs digestion, debilitates the stomach, and if persevered in for a short time, always induces a morbid state of the organ.

11. Narcotics of every kind impair digestion, debilitate the stomach, and tend to disease.

12. Simple water is the only fluid called for by the system; artificial drinks are all more or less injurious; some more than others, but none can claim exemption from the general charge.

13. Gentle exercise after eating, promotes digestion more than indolent inactivity or rest. Violent exercise, with a full stomach, is injurious.

14. Sleep, soon after eating, retards digestion, and leads to debility and derangement of the stomach.

15. Anger, fear, grief, and other strong emotions, disturb digestion and impair the functional powers of the stomach, and deteriorate the secretions generally.

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## MESMERISM.

A Mr. Gayler is electrifying the people at Indianapolis with his lectures and exhibitions in animal magnetism. A correspondent of the State Journal says that four persons were put into the mesmeric state, and no difference was perceived between this and their natural condition. "Their feet were fastened to the floor at the command of Mr. Gayler, so firmly that with all their efforts they could not move, the sense of feel-