

AN  
INAUGURAL DISSERTATION  
ON

*Scabimel In Diseases Of Children*

SUBMITTED TO THE  
President, Board of Trustees, and Medical Faculty  
OF THE

UNIVERSITY OF NASHVILLE,

FOR THE DEGREE OF  
DOCTOR OF MEDICINE.

BY

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OF

*Arbor Vitae, Alabama*

1859

MEDICAL JOURNAL OFFICE,  
NASHVILLE.

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As a great river has many fountains  
and confluent streams, so has the  
subject of which we are called to treat.

<sup>my</sup> We have all been exploring these  
sources, but have all gone some parts  
of the way in too much haste and  
with embarrassments often enveloped  
in darkness, sometimes with  
minds prepossessed by opinions and  
impeded by tradition or prejudice.

Let us then revive our observation; that  
our future voyages on these delight-  
ful streams of knowledge may be  
made with greater safety, pleasure  
and profit.

The Medical Profession has many strong  
alliances to religion; one is that it may  
be enlivened and strengthened by the  
conflict of opinions, all verging to one  
final and happy consummation.

The task for me is difficult, for on the uses and abuses of calomel in diseases of children, a writer would not soon come to his end, so manifold are the controversies on this subject, and so extensive is the employment of this powerful agent. In the first place, he would have to consider the various supposed modes of its operation; secondly, the indications and intentions in giving it; thirdly, under what circumstances it may do harm; fourthly, the modes of giving it in particular diseases; fifthly, the means of counteracting its excessive operation.

How small a part of these various points can be attended to on the present occasion, must be seen by you all.

In diseases of children, it may be fairly said, that it is principally given as

a purge, therefore the various modes of giving it may be considered under the head of particular diseases; but calomel stands pre-eminent as the great alterative, by which term is meant a medicine, that somehow, relieves the organism of some embarrassment, and fits it again for the just operation of aliment and stimuli. To this mysterious working of this noble medicine, our attention is particularly called.

Certain it is, that mercury promotes all the secretions, particularly that of bile, that it hastens the absorption of many morbid deposits, that it arrests the deadly progress of inflammation, that it is said to disintegrate the fibrine of the blood, so far as to prevent the forming of new, and deleterious membranes. These are all the prominent

desiderata, but whether they can be attained with safety in the diseases of children by the continued use of calomel is a very serious consideration, not to be neglected in the treatment of each case on hand. For it is well known to all of us, that mercury has sometimes an unexpected and fatal tendency, to the mapilla of children. I do not here allude to the canerum oris nor yet to the gangrenous erosion of the cheek; these two distinct diseases are never directly caused by this mineral; but that mercury does attack the gums and alveoli of children, causing, gangrene, caries, and stonking, was known half a century ago, though perhaps not sufficiently regarded at the present time.

Dr Rush used to caution us against attempting to salivate children under

six years of age; and, in writing of its producing gangrene in the jaws of children, he says:— Seven instances of death from that cause, in children between three and eight years old, with circumstances of uncommon distress, have occurred in Philadelphia, since the year 1795." We see then the caution of this great man and heroic practitioner, who has been most unjustly denounced as rash and dauntless, in the use of mercury. But to show how timid he was in comparison with some inferior spirits, I will quote a few lines from Professor Beck on Infant Therapeutics, "Under various circumstances Dr Clarke has prescribed mercury in many large quantities, and a great number of cases, and he never produced salivation, except in three instances, in any child

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under three years of age. Dr Warren of Boston, has never known an infant to be salivated, notwithstanding he has given in some cases large quantities, with this view. Drs Evanson and Mannsell say, "we have never succeeded in salivating a child under three years of age." Dr Percival repeatedly observed, that very large quantities of *ring cor-ruitem* may be used in infancy and childhood without affecting the gums."

We then see that incautious and unjustifiable attempts to salivate children are often made; and we see, too, that never were Doctors more fortunate than those supposing they have told us the whole truth. Dr Beck says again: "What shows incontestibly that the action of mercury is more energetic on the infant than on the adult, is the

fact, that when salivation does take place in the infant, as it sometimes does, its effects are more 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 effect upon the system they 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 on our guard.

Dr Ryan, too says, "that 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." I was not wrong then in calling those Doctors fortunate,



using this word in the hope that if any of those children had suffered gangrene they would have told us so.

The recollection of such cases must forever deter us from giving calomel to children, for many successive days, as a deobstruent and alterative; hence we suffer great loss in the treatment of many diseases, as pneumonia, obstructions of the liver and spleen, encephalous inflammation, dysentery, and fevers with cerebral oppression.

In treating an adult, we detect in good time the mercurial breath, but in children, the gums are swollen and the teeth are loosened, before we have reason to suspect the latent and now irresistible evil; moreover, the adult jaws can bear more inflammation than those of children, and the patients themselves are more tractable.

Notwithstanding my timidity, and the

causes, thereof, which I have freely expressed above, Calomel is a favorite medicine with me. But whoever gives calomel to children every-day, ought to be convinced that he has imperative reasons therefor, he ought to examine the breath and gums two or three times every day, and he should warn the nurse of what he is doing, likewise he must consider the various states of the system that favor or oppose the operation of mercury on the maxillae.

If we should harbor the thought, that the action of medicines, is the same in disease as in health, we would often be deceived, and particularly in respect to calomel; a few grains of this medicine will usually affect the mouth in health, whereas in fevers attended with hot and dry skin, we may give full and repeated doses without any such result.

It is <sup>true</sup> ~~true~~ that when the system is occupied by any considerable fever, the mercury is not very apt to bring the jaws under its influence, but this preventive fever is often soon reduced, and the body is now open to the accumulated doses of calomel, for the production of its active influence. This would be very apt to happen in pneumonia, the inflammation having been brought low by the appropriate, bleeding, starving, and antimony.

It is in a state of debility with continued fever, that gangraenosis is most likely to happen and to be most intractable. This predisposing state is found in dysentery, Typhus and remittent fevers, all which may preclude for some days the salutary operation of bark,

quinine, and animal food.

Much has been written on the appropriate doses of Calomel, and wonderful, indeed, is the discrepancy of the Doctors on this subject. The advocates of minute doses argue, that they are as great as the system can profitably digest.

In the mode of Dr Cope, they would give one-eighth of a grain to an adult, when others would give from one to ten grains. This equality of small to large doses, it must be observed, has no verging towards the Homoeopathic folly, but it never has been proved, hence it affords a laudable subject for discussion.

It is certain, however, that many cases, and some idiosyncrasies, abhor large doses of this medicine, and are yet benefited by such small ones as forty years ago would have been held in contempt.

But Physicians since the time of Dr. Rush, have so thoroughly learned to think, each one for himself, that every one possessed of a philosophic spirit, will fancy, that he sometimes sees indications for small doses, sometimes for large doses, and in his attention to this subject he will often find cause for self gratulation.

The patient is recovered by nature or by art, and the Physician cannot be blamed, if he attribute the cure to his own perspicacity. This is a part of our subject that claims the particular attention of every practitioner.

The doses of medicines to purge, to spuke, or to arrest an intermittent fever, are pretty well ascertained, but the most profitable doses of mercurial alteratives, are not easily settled to general satisfaction,

We are greatly indebted on this subject to Physicians of the British Army.

If any one condemn their practice, he must get acknowledge, that they have given him much on which he is bound to reflect and experiment.

If the European constitution, when melted down by the burning Sun and the scalding vapors of the Torrid Zone, can get bear scruple doses of calomel, repeated from two to four times in twenty-four hours, and be plainly benefited thereby, we ought to think at least twice before we speak once against their extraordinary practice.

Let us bear in mind, that these are men who deserve well of the whole profession, they have done all they could and are not "unprofitable servants," that while many Physicians who have spent

long lives in great Cities - even some Landed Professors have done nothing for the science, these roving men beset continually by every impediment to study, have furnished us with important facts and principles, have left works that must transmit their names to the love and to the gratitude of distant posterity.

With respect to large doses of calomel, Dr. Cartwright has some peculiar thoughts, which I am led to mention, because they are buried in the pages of an obsolete periodical - the Medical Recorder, vol VIII. He supposes that these doses are safe and supremely beneficial, because they act at once upon all the secretions of the body, disposing it to resume the functions of health; whereas small doses often repeated, act

merely on the liver. He gave twenty grain doses in dysentery, frequently repeated, and found these, as did the Physicians of the British army, not only salutary, but absolutely antiemetic and anodyne.

He contends that even syphilis is corrected by these, more certainly and quickly than by the small, frequent doses. He says, "experience teaches us, that this decisive method of introducing it, so far from producing mercurial irritation or fever, on which the evils of a mercurial course depend, produces a directly opposite state of the system, by establishing a gentle yet general and permanent secretory action throughout the body".

Dr Thomas Bond called calomel more than a hundred years ago, "the great revolutionary medicine."

Now if a revolution can be avrought as Dr Cartwright contends, by a few



Large doses, every one must find himself under a moral obligation to investigate this subject. They are safer with respect to the maxillae of children than the small and frequent doses, as they appear to work themselves off by all the secretions at once, and thus do all that is expected of mercury. Amidst the perils and panics of giving calomel, it would be a great relief to find some means of counteracting its possible and much dreaded superaction. Iodine was strongly recommended in Keufelands Journal, 25 years ago, for the sudden exorbitant salivation; whether it has been farther proven, I have not heard. But in No. 21 of the Med. Chir. Review, is a most interesting paper translated from Von Melsens, in which this experimenter appears to have proven, that iodide of potassium seizes upon mercury lodged

in the living fibre, whether pure or in any possible combination, and carries it suddenly away by the Kidneys.

But alas, there is no safety even in this, for the poor jaws; the triple compound thus formed, though quickly carried away, has yet time to bring on a profuse salivation, hence it is more dangerous than the metal it was given to expel. I will now say a few words on the diseases wherein calomel is preeminently beneficial. Among these are considered all the idiopathic fevers, or the cases of them wherein there is a want of bile, or there may be an oppression of the brain present or threatened.

The remittent miasmatic fever of children, and scarlatina often come on with convulsions and here a powerful dose of calomel, as soon as the excitement is broken down,

must not be omitted. The brain must be thoroughly relieved of its obstruction, lest the convulsions return with the diurnal exacerbation, and there is no medicine that disencumbers the brain as does calomel in large doses.

In scarlatina, even of the mildest grade, I would give two or three calomel purges, for this reason:— these mild cases are as apt as the severe, to be followed by dropsy, suppuration of the ears, paracrusi, and glandular swelling continuing a long time, all of which may be prevented by low diet, purging, and minute doses of antimony. I am always sorry to find any writer maintaining, as the present fashion is, that "the less we do in such mild cases the better;" I would not run into the opposite extreme, in contraria, like <sup>the</sup> Heracl's fool, and say the more we do the

better, but I do assert that there is great  
 good to be done by an active treatment.  
 A case, moreover, which is now mild  
 in the onset, may become very severe.  
 "*Respicere finem*, says that cautious yet  
 great Practitioner, Dr Rush, should  
 be our motto in every case"; let us hear  
 what Dr Armstrong says directly to the  
 present purpose, "When in attendance on  
 a family in which scarlet fever existed,  
 I was requested to look at a boy who had  
 just sickened, for whom I prescribed a  
 laxative and a mild emetic, as the  
 symptoms were then slight; but early next  
 morning, I received an urgent message,  
 and to my surprise, found him expiring  
 under coma and convulsions." "Other  
 examples of a like insidious nature  
 have come under my observation, and they  
 seemed utterly inexplicable, until I had

obtained some morbid examinations and then the manifest mischief of the visceral congestion, &c." In a case of open and free reaction, though the fever may run high, the eruption be copious and the throat be inflamed, there is little danger in trusting the cure to bleeding in the arm, an emetic of ipecacuanha, calomel purges, tartar emetic, ice in the fauces - totally dispensing with a ~~three weeks~~ greasing with the medusa of Hogs.

But let me repeat that calomel purges are a great help in preventing the distressing sequelae of the disease. In the congestive cases it cannot be omitted, and in the malignant form of the disease, whether congestive or not, it often finds a place.

There is no medicine that so greatly relieves the congested brain as does calomel. "The power," says Dr Armstrong, "which

calomel has of equalizing the circulation, is more  
 where more conspicuously displayed than in  
 diseases of a congestive character." And in  
 another place he says, "through the experience  
 of every succeeding year tends more firmly  
 to establish my faith in the efficacy of  
 large doses of calomel in highly congestive  
 diseases, yet having once made the desired  
 impression, they ought not to be repeated,  
 such an extraordinary practice being only  
 requisite or justifiable during the urgency of  
 extraordinary cases." We see then how this  
 great medical hero, shows caution as well  
 as vigor. In cholera infantum, we can  
 not practice without this noble deobstruent.  
 Here the greatest danger lies in the state of  
 the brain, and this medicine, as I said  
 before, is the great emulgent of this organ.  
 The most blundering Physician, I don't  
 mean Homeopathist, can stop a vomiting

and purging; but these are not the disease, they are merely symptoms of something worse.

Every Physician knows that the state of the Brain is to be intensely regarded. Only look to the excellent paper of Dr. Hallowell, in *Hay's Jour.* for July, 1847, and see what the encephalic devastation he found in those who died in what he calls the 2<sup>nd</sup> and 3<sup>rd</sup> stages; now the pathological state will be aggravated by stopping the vomiting and purging, unless some salutary evacuations be substantial therefor, and one of these is that universal secretion that calomel affords. Never were calomel and mercurial Oint. more used and abused than in the meningitis of children, by which I mean an inflammation of one or all of the encephalous membranes; that disease called hydrocephalus, most beautifully described by <sup>W. Hyatt</sup> and then by *Bain*:

There calomel must be used in very large doses,  
 so as to work itself off by all the emunctories,  
 thus changing the constitution of the whole  
 system at once, and making a powerful derivation  
 from the head, according to the views of  
 Cartwright. To give it day after day in  
 small doses, would greatly endanger the maxillae,  
 particularly as ice or the cold douche must  
 often be used to the head.

Dr. Rush, in treating of this disease, says -  
 " my reasons for not giving mercury as a  
 sialagogue are, the uncertainty of its opera-  
 tion, its frequent inefficacy when it excites  
 a salivation, and above all, its disposition  
 to produce gangrene, in the tender jaws  
 of children; " and Dr Michael Ryan  
 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. "



I could say much on the use of calomel in other diseases, were it not high time for me to close; but first, hear the eulogy of Dr. Armstrong, which I heartily adopt.

"Only let Practitioners put calomel fairly and extensively to the test in febrile diseases, and we shall soon cease to have imaginary and unfounded clamors against its free employment; for here it is a medicine which, like an injured and innocent individual, will have its character restored by an impartial and a strict examination.