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AN

INAUGURAL DISSERTATION

ON

Inflammation

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Inflammation

As Inflammation comprises a large and dangerous class of diseases, it behooves evry physician to be acquainted with its pathology at least as well as it is understood and taught in his day; but since there are conflicting opinions on some points of its pathology, I fear he is likely to fall into some error, at least in theory, and what is still worse, in practice also.

Inflammation has some phenomena, which are considered characteristic. of these I shall first speak in few words. These phenomena are Swelling, Redness, Heat and Pain

Swelling is one of the phenomena, which is more or less present in evry case of Inflammation no matter in what tissue situated. In the soft it more readily supervenes, but it hardly goes to a greater extend in the soft than in the hard tissue. for even bones may attain more

than double their natural size. Swelling of an inflamed part is due to several causes. 1st in the soft tissues, to an enlargement of the vessels and the greater amount of blood contained in them. 2nd to the effusion of fluid (sometimes blood) 3d to the an increased in size of the tissue involved.- hypertrophy to a greater or less extent. being a hypernutrition from an increased vascular action of the nutrient vessels, which may be abnormally altered. This hypertrophy is the product, especially of chronic inflammation; perhaps more in the osseous than the soft tissues.

Redness is caused by an increased amount of blood in the part. This is usually the first phenomena observed. The colour varies according to the degree of vascular action, the condition of the blood in the part whether stagnant or not. the colour and character of the tissue involved. The vessels being always enlarged in the first act

of inflamation. they will, of course contain a greater amount of blood. and as some of them burst sometimes the blood flows into the interspace of the tissue, producing a deeper and darker colour of the part. therefore the darker the colour, the as a general rule, the greater the danger and degree of inflamation, or at least the more likely is the part to loose its vitality. and an abcess ulcer, or gangrene may supervene. But the same degree of inflamation will be attend with a different degree of colour, according to the constitution of the patient: Thus, while it would produce only a bright rose colour in the robust, it would be darker in the feeble or debilitated: and the same degree of inflammation would be more destructive in the feeble than in the robust. and that in about the same proportion as the difference of colour. Therefore the colour may assist us in a prognosis.
But the same degree of inflammation in different tissues of the same individual would be attended by different degrees of colour according to the tissue

affected. Thus in the hard where the vessels cannot much if at all dilate nor can there be much extravasation of blood the colour would be lighter.

Heat is another phenomena of inflammation or rather a production of inflammation. This heat is not always in proportion to the degree of danger of the inflammation, but to the degree of vital action of the part, which causes an increased amount of blood in the part, and its rapid circulation. Wherefore the heat of an inflamed part will be greater than the blood that is going to it. That the heat of an inflamed part is greater than the heat of the blood going to it, is proven by the thermometer. to what else them can we ascribe the increase of heat, than this increased vital action of the part

Pain is more or less present in evry case of inflammation; It is sometimes the first thing that calls the patients attention to the part. It even preceeds redness or swelling, which very

often increase the pain at first and afterwards relieves or greatly alleviates it by pressing on the nerves so as to deaden their sensibility. The causes of pain are. 1st exaulted vitality or increased irritibility of the part. which are the first steps in inflammation. 2nd the swelling by pressing on the nerves, or by distending them by displacement. But the pressure, that at first gave rise to pain, may, after it becomes very great, so deaden the sensibility, that there may be a decrease of pain, or even a suspension in the midst of the onward march of active inflammation. For this cause, pain, of itself will not always be a sure sign of the degree of inflammation. The pain will vary according to the exciting cause of the inflammation, and the tissue affected: generally the harder tissue give rise to most intese paine.

Having written in few words on some of the phenomena of inflammation. I shall

next proceed to mention the deferent kinds of
infla tion and their divisions and subdivis-
ions. and confin my remarks under this
head to the different degrees of infla tion
which some would call different kinds of inflam-
-mation, but I am convinced that the same
pathology obtains in all. all being one and the
same disease. and may and do run into each other
in insepera ble grades.

There are different kinds of inflammation.
which may be set down as follows. Common
& Specific. Each of these may be divided into
Accute. Subaccute & Chronic. and each into
Sthenic & asthenic. and each into different
degrees of inflammation. which may be set down
as follows— beginning with the least departure
from health— Hypernutrition, Adhesion. or
Granulation, Suppuration, Ulceration,
and Abortification. including Gangrene & sphacelus.

To write of these different divisions of inflammation would make a book and not a thesis. and since it is not my object to teach any one a knowledge of inflammation. but to write a short thesis for the faculty. I will pass over all those different divisions and kinds of inflammation and write of the different degrees of inflammation. Viz Hyper-nutrition, Adhesion, Granulation, Sup-puration. Ulceration, and Mortification. The different degrees of inflammation are here put down in the order of their severity and danger in a general sense. but are always more or less modified according to the different conditions of the same individual and different constitu-tions and temperaments.

Perhaps here will as appropriate a place as any to mention the seat of inflammation; i e those parts or vessels, which are more immediately con-cerned in the morbid action. and which are first involved

Professor Martyn Paine says that "the seat of inflammation is the extreme arterial system" In this, I think the Professor correct in sense; but I am inclined to think it would have been better to have put it down about as follows The seat of inflammation is the nutrient vessels i c those vessels which are immediately concerned in the nutrition of the system. those vessels whose office it is. to supply the waste. build up the tissue. I think that Adhesion granulation and Hypernutrition are proofs of the fact; as I believe these productions are the effects of an increased action of the nutrient vessels; and he, who will carefully study the action of Adhesion, Granulation and Hypernutrition, will be convinced that I have correctly stated the seat of inflammation

Now for what I shall write on the different Degree of Inflammation.

I trust it will not seem

Strange to any. that I have put down Hyper-
-nutrition as a degree of inflammation. I must do
so because I believe hypernutrition to be an
increased action of the nutrent vessels, in an oth-
-erwise healthy tissue, causing an increased growth
and size of the part, by the more rapid depos-
-tion of plasma, and formation of granules &c
of the same kind, character and consistency as the
the part: if a muscle, muscular. if bone
osseous. Where this takes place throughout the
whole extent of the tissue we have hypertrophy
Where in one part of the tissue we have the sim-
-plest form of tumor. Hypernutrition is the
same kind of action as adhesion or granulation
there being, in reality no difference in the action
of the part. There is a difference in the effects
one increasing al already existing tissue, the
other repairing a loss, but the action and production
are the same. I have placed hypernutrition as a
distinct grade of inflammation, on account of its exist-

ing in an adverse healthy, being a very little departure from health, i e in action an effects. except. when the vitality is morbidly altered. — then we have more or less a malignant tumor — and an account of its effects, also its more chronic and enduring - slower - condition. Both hypernutrition and granulation as well as nutrition, throw out plasma, which form into fibrils & granules, adjacent and adherent to the tissue or nearest granule already in existance. and strange to say, but nevertheless true, that the plasma taken from the blood is the same in all tissues - slightly modified and vitalized before thrown out - yet the cell, fibril or granule formed will be just like its fellow upon which it formed and cleaves to as if by instinct or intelligence. But this is explained by the fact, that the vitality of the part is imparted to it, and as like produces its like. we could not expect but that one granule would produce another just

like itself: and the whole of it a purely vital action. Paine's Institutes of Medicines.

(Just here allow me to depart from the subject long enough to say: that here we may gain an insight as to how it is that diseases and constitutional pucculiarities are transmitted from one generation to another. Yea may lie dormant in one and another and arise in the third or fourth. For this I am indebted to Pains Institutes)

I have placed Adhesion as a greater degree of inflammation than hypernutrition because the action goes on more rapidly, even to the production of a new tissue: and as a distinct grade from granulation. because all the plasma appears to be immediately converted into fibril granules etc. the vital action of the part being so increased that the production goes on rapidly without any distruction. These granules being young and tender, they are in acondition to immediately coalesce with others of like character and form with them a tissue: so that when two such surfices are brought together, the

young granules so arrange and adapt themselves to their fellows of the oposite surface — that being their natural vital affinity — as to form one continued tissue. The vessels rapidly follow and establish a circulation through the new part; and as soon as this is accomplished, the action of the part has a natural tendency to go back to health. When this is all soon accomplished there will perhaps be no line to mark the adhesion: But when the action continues much beyon necessity, there is apt to be left (or rather made) a solid line of granulations to mark the wound. Where this new formation goes on rapidly and to much extent — as where the oposite surfaces are much seperated — and vessels fail to follow sufficiently soon, the granule not receiving their due nutrition, which the vessels must supply they will not be able to complete the formation into granule of the tissue from which the plasma was thrown out; but will stop at consistency allied to the plasma. Hence we have more or less a

fibrinous structure no matter what the tissue be. This structure is always of a low vitality. on account of the scarcity of vessels of nutrition; perhaps maintaining its vitality as much by juxtaposition of the surrounding tissue, as by its own nutrient vessels.
Another reason for placing adhesion as a lower grade of inflammation than granulation; is because it is not attended with any distruction, such as suppuration, while granulation often is. Suppuration is undoubtedly a greater degree of inflammation than either adhesion or granulation, for suppuration is a distruction of tissue. Now if adhesion is never attended with suppuration while granulation often is; is it not clear that granulation stands between the two.
We have seen that adhesion and granulation are nearly allied, being in fact one and the same action of the part so are granulation and suppuration nearly allied, both are very often present at the same time, in the same

wound. Granulation is a reparative process one in which plasma is thrown out and formed it granules, fibril &c. forming a tissue exactly like the one involved in the action; as before stated. But it is nearly the same as suppuration for when granulative inflammation is only increased - or aggrevated, granules cease to form and puss is the result. Suppuration is a greater degree of inflammation than granulation

Suppuration and granulation may go on at the same time in the same wound; and suppuration and ulceration may go on at the same time, but suppuration and adhesion never, and suppuration and mortification never: It therefore follows that there is a grade between suppuration and both adhesion and mortification

These are: on the one side granulation - between suppuration and adhesion - and on the side ulceration - between suppuration and mortification, for ulceration is connected

to both suppuration and mortification, and unholy seperates them. But again suppuration is a distruction of the tissues, so is ulceration, but granulation never. yet suppuration is nearly allied to granulation. Suppuration is a morbid action in which corpuscles (granules) are formed. Whence these granules or corpuscles? I answer, it is an abortive attempt to form granulation. The vitality is so morbidly altered, that although the act of nature is the same as granulation for the repaire of loss, or nutrition ~~for~~ to keep up the tissue. yet there is only a sufficent accomplished to form an imperfect granule. and then a fermentative death takes place, and a corpuscle is the result.

Ulceration is a greater degree of inflammation than suppuration. Ulceration is a local distruction of the tissue, without any other product, than a filthy death like exudation, there being no appearance of an attempt to repair. But this

exudation often not in quantity proportionate to the extent of the ulcer. The reason is, that the absorption is also increased. The absorbants being increased in activity, and they carry off the deadened tissue as fast as the vital affinity (& the vitality) is sufficiently destroyed to allow the absorption (destruction) to prevail.
Ulceration is nearly allied to mortification Rarely does mortification ~~exist~~ take place without ulceration both preceeding and following it. The only difference between ulceration and mortification is, in one the death of the part takes place not more rapidly than it can be carried off, in the other death goes on more rapidly. being a greater degree of inflammation. the death blow is struck to the tissue at once. But when the death does not go on so rapidly, but allows some of the tissue to be broken down and carried off, the balance will slough a-

away; we have sphacelus or sloughing Phagedena
Mortification is the death of the part. An in-
flammation of a very active, high degree. The
vitality of the part, - the vital action in the
first step being increased or exaulted above endurance
is correspondingly depress or sinks rapidly below
ahealth standard and is soon extinguished (There
are different kinds of mortification. the one here
mentioned is one that takes place from active
inflammation)
Now let us take a case of mortification and trace
it to health in a very brief way. When a limb
is affected with mortification, there may be
seen dead, badly inflamed and health flesh on
it. the healthy flesh on the one extreme and
dead on the other: both gradually fading a-
way into the inflamed. The inflammation contin-
ues to incroach on the sound flesh, and the mor-
tification following, there being no well de-
fined mark between the dead and the inflamed

so long as this condition lasts. the treatment should be directed to overcome the inflammation or to reduce it to a much lower grade (granulation is the propper point) When the inflamatory action begins to subside. it will go from one grade-or degree- of inflammation to another. From mortification. through ulceration, suppuration to granulation. where it should stop; but may go lower in depraved constitutions.
When the inflamnation has subsided from mortification to ulceration, a line of demarkation will be formed. for in ulcerative inflammation the tissue is carried off as fast as destroyed: and in proportion as it continues for a longer or shorter time, and also in proportion to its activity. will the dead and living part be siperated to a greater or less distance. This line of demarkation, as it is called is always formed at the expense of the living tissue. for ulceration can never take place in a dead

but a living tissue. When we see this line, we know that the inflammation has subsided to that of ulceration, and the part is returning to health. Still our treatment should be antiphlogistic, until the inflammation has subsided lower (at least to suppuration)
When the inflammation has still further subsided we shall see some appearance of puss this is hailed with pleasure by the surgeon, for he knows that granulation is near. The puss at first will be of a bad quality, because the inflammation is yet too high, there being yet some degree of ulceration going on. But as the inflammation goes lower, puss of a more health appearance will be formed. When healthy or laudable puss, as it is called, is formed, we know that granulation may begin. But if the puss is very abundant, the inflammation is still too high-active) a still further reduction is necessary, for rapid granulation. It would be better, for the inflam-

mation to subside to that grade, where pus would not be formed; i.e just below suppuration, that granulation might the more rapidly form. But we always like to see a little laudable pus, for then we know that the inflammation is neither too high or too low for granulation.

This granulation ~~or~~ granulative inflammation, carefully fostered and kept up, will heal the breach made by the foul monster, too little understood by physicians.

Theory

Inflammation is truly a departure of the vital properties of the part from health; and this departure is not one of depression, or lowering from their healthy standard, or one in which the vitality first depart from health towards extinction; but on the contrary, the vitality is exalted, the vital action increased. The first act of inflammation is to exalt the vitality, and increase - as a consequence the vital-action of the part. This, I am aware, is a somewhat disputed point among physicians: wherefore I may be allowed my opinions if I will give a few reasons. This I shall attempt to do in few words.

In order to arrive at a knowledge of the inflammatory act, its nature etc: let us observe the phenomena as they arise and progress

for this is the only means we have of arriving at the true knowledge of inflammation
There are some things of which we can have no knowledge but by their phenomena. Inflammation as well as all other diseases belong to this class. Microscopist tell us, that the first step in the inflammatory act as observed by the microscope, is a dilatation of the extreme vessels. The vessels enlarge in caliber: then next, the blood is seen to rush into the dilated vessel from both ways, to fill the vacuem. Then there is seen an oscilatory motion of the blood, and the blood either stops and remains stationary or moves on with a greater rapidity than before or else the vessel bursts and the blood pours out into the tissue. While in others the blood moves on with a greater rapidity and more compactness of blood corpuscles. Shortly coagulable lymph is poured out which begins to form its self into a new and living tissue. This discription

is roughly drawn from memory, and is sufficiently complete for our present purpose

What are we to learn from these phenomena? and how does it show that the vitality of the part is exalted? We will examine it a little.

The dilatation of the vessels some would think is a relaxation of the vessels, consequently shows a lowered or depressed vitality of the part. But some others and I among them, believe the dilatation of the vessels to be the first act of an increased vitality of the part, and of itself shows that the vitality of the part is not lowered, but exalted. We see that as soon as the vessel dilates the blood rushes from both ways to fill the vacuum. This backward motion of the blood Professor Wood supposes to be caused by atmospheric pressure. Let me say the suction power of the dilating vessel. Now if the dilatation was the result of a relaxation of the vessel, the dilatation would not take place until the blood

entered and produced its distention – neither can we understand why the blood should have a backward motion – but we see the vessel dilating first, and then the blood rushing in. aya the vessel dilates with that power sufficien to cause the blood to have a backward motion (contrary to nature) to fill the vacuem attempted to be made by the dilating vessel. We would therexpect, that, as the vitality of the part is exalted (consequently the vital action increased) there would be an increased rapidity of the circulation through the vessel; but we see, in some of the dilated vessels, that there is a stagnation, the blood remaining cramed and stationary. how is it? Indeed there is an increased rapidity of the circulation in some of the vessels, and that in a ratio always corresponding with the vitality. But where one of the vessels is so deranged ~~is~~ differently affected in it vitality, some part of the vessel being more affected than another. one part of it may

be larger than, or if it should be of equal size throughout it whole extent. one part is made so by active expansion and another by distention. by crowded corpuscle. Such a vessel as this would be unfit for the transmission of such a fluid as blood: And these crowded corpuscles may and are sometimes so crammed, that the vain attempt of the vis a tergo to compell them on, would burst the vessel.

Where one of these vessels is equally affected throughout its whole extent. the blood will pass with greater rapidity. and always in proportion to the increased vital activity of the part. In this way the rapidity of the circulation (the pulse) becomes a sign of the activity of the inflammation.

Now allowing the walls of the vessels to be made up of a number of granules. each granuleing in the inflamatory act. and of course will enlarge the caliber of the vessel; for the same number of large granules will make a larger circle than small ones. We can understand how an increased vital-

ity would enlarge the vessel: but are at a loss to know how a depression or relaxation would. The white corpuscle which naturally roll along against the side of the vessel. are said to accumulate in greater numbers in the part. This thing is readily accounted for. by the fact that the granules. which enlarge and increase the size of the vessel. enlarge in every direction. and project more inwardly. they make the inside of the vessel more rough or uneven. and will affor a greater resistance to the progress of the corpuscle. But the natural vital affinity that draws the white corpuscles to walls of the vessel, being increased in the inflamed part. the corpuscles are held more firmly against the side of the vessel. thus rendering their progress slower. consequently a greater number of them to the same distance. Since large granules have larger interspaces than small ones, may this not account in part for the greater amount of effusion.

We cannot but see that all this is in perfect harmony with the doctrine of exalted vitality. How can it be with depression and relaxation.

But again: the effusion which takes place will form itself into a living tissue. This I am unable to understand only by supposing ~~that~~ the vitality of the part to be increased, and that to a sufficient degree. to impart vitality to the effusion sufficient to cause it to form into fibrils, cells, granules, and — as an ordinance of nature common to every tissue — they will arrange themselves one upon another, by their own peculiar (natural) vital affinity, to form a tissue. This forming of a tissue out of a effusion, I suppose no one will deny its being a vital action. But this effusion is not a mere mechanical act. It is an attempt at rapid nutrition. The vitality of the nutrient vessels is greatly increased. There is a greater amount of nutritious fluid thrown out — yes this

very fluid, which is constantly taken by every part of the system for nutrient purposes, and as this, in health, is always formed into fibrils granules &c: we can not wonder at its forming a tissue. whether in proper place or not.

for it is the identical action that takes place when granulation repairs a loss. This will not be denyed. to be a vital act. And the rapidity with which this false or true tissue is formed will sufficient to make, every one, who studies it, believe that the vitality of the parts is increased or exalted.

There is one undeniable fact about it; and that is. whatever it is, that assists the heart in circulating the blood through the small vessels, is increased or exalted. for the blood is increased in its progress through these small vessels of an inflamed part. Now if that which assists the heart in circulating the blood through these small vessels, is the vitality of these vessels then beyon a cavil that vitality is increased

As a further argument, to show that the first departure from health in inflammation (as seen by the dilatation of the vessels) is an increased or exalted vitality, I bring forward bloodletting. Sanguinis Missio is set down by Prof M. Pain as the best direct sedative.
Now a pure direct sedative, as bloodletting Tartarized antimony in emetic and nauseating doses, &c is a marbific — or remedial — agent whose action on the system is to carry the vitality directly towards extinction, without first increasing or exalting it. The first effect of bloodletting on the system, is set down by Prof's Paine as being on the extreme vessels constricting or reducing their caliber. These vessels being thus constricted, the blood is driven from them, and accumulate in the larger vessels. leaving the extreme vessels comparatively bloodless; the very opposite of what takes place in inflammation. Now if when the

vitality is depressed or lowered as it is by the sedative bloodletting— the extreme vessels are constricted or reduced in caliber: what must be the state of their vitality when they are dilated. Is it not clear, that their vitality is increased? Two things so opposite in their phenomena, so antagonistic, so contrary in their effects, and all we can see and know of them, must be opposite in their cause nature and all we cannot see of them.

Here I had designed to end my thesis without saying any thing about the treatment of inflammation: because I thought, that what I had written of inflammation, hardly demanded that I should give any thing like a treatment. But as I think it may be desireable to the faculty, I will give some thing of the treatment of a common accute inflam[illegible]

Treatment.

Every case of accute inflammation, in the commencement, must be treated with what are commonly called antiphlogistic remedies Of these phlebotomy stands first in order as the remedy. But as this is a powerful remedy, it should not be used indiscriminately it is only admissible in the early stages. We shall find it of most value in the very beginning of the disease. when we may, by full and free venesection overcome the disease at once. or so far reduce it. that other remedies as tartarized antimony &c may finish the work of cure. But if much time is past we should use venesection with more caution. Nevertheless of one deside to bleed a case, he should not thro. fear, stop the flow of blood. untill its full effects is produced. for in so doing he waists the vital fluid. without doing any good Whenever one bleeds. he should sit his patient

upright and open a vein freely in one or both arms so that the blood may flow in a full stream; for in this way, the best authors tell us, we gain all the good of bleeding with the least possible loss of the fluid. The blood should flow till the patient begins to feel sick or faint or as professor Arnold use to tell his class. "Bleed to insipient deliquiem".

But, as before stated, bloodletting should not be used indiscriminately; for although it is the best remedy for inflammation, while it is still going on: yet if the inflammation has gone to much extent and there is much effusion and the tissue is gorged to much extent with its effusions, while the bleeding may stop the further progress of the inflammation it may also extinguish the last spark of vitality in the engorged tissue and thus the mischief done by bleeding, ~~will~~ may be more than the good effect derived from it.

Although the vitality in the first acts of inflammation is exalted and demands depletion, yet after the tissue has suffered much and effusions have taken place, interfering with the vital functions of the part; the vitality will sink correspondingly below health and needs tonics or sometimes stimulants, to enable it to overcome the effects of the inflammation. absorb the effusions &c.
This is especially the case in the spongy tissue, as the lungs. This is one reason why the bark and wine practice has obtained in Pneumonia. I trust it will be seen from what I have said; that I think there is a time to deplete, and a time to withhold. as well as a time to use tonics and stimulants.
Both in their proper place are valuable. out of it ruinous. After bleeding. when we may think further depletion necessary. or in cases where we may judge bleeding (venesection) not admissible. we

resort to cups and leaches. Here also an emetic. Ipicac. &c are of service. here also is the proper time for cathartics. They are valuable to clear out the prima via. removing any source of irritation in them. Some of them acts as depletants to the system.
The cathartics in the order of their value as antiphlogistics, are about as follows. Hydrargyrum sub murias. Hydr. cum creta et Hyd. cum mag. Hydrg. pillula. Jalap. Podophilum. Olium Ricini. Aloe. and the salines. &c.
Depleting remedies should not be carried too far an extent or use indiscriminately for they may do mischief. When the inflammatory act is over come. there is alway more or less effusion or other effects of inflammation which remedies cannot remove. nature must and will remove it. if she is kept to a healthy state of vitale action. These effusions cramp the tissue and stifle its healthy functions

and the vitality here is always as far below the healthy standard as the inflammation carried it above - and if we still use depleting remedies we but deprive nature of her only means of recovery. It is at this stage that tonics and stimulants are of use. Here it is that the bark and wine practice may & ought to is of value. if not carried so far or use so too freely. so as to again set up inflammation in the invadable tissue. In all cases of inflammation of the loose spongy tissue — as the lungs — what good we expect from depletion must be obtained very soon, or it will be too late; for the effusion will soon so stifle the tender-delicate tissue, that their vitality will be extinguished. if with out some support very often. from that class of remedies called tonics. and to continue active depletion. will be hazardous to that part of the tissue, that is loaded with the effects of the inflammation

But again we have some cases, that while one part of the tissue is groaning with the effusions and depress vital action: inflammation is going on actively in another part. Here we need two opposite classes of remedies for the active inflammation we need depletants for the oppress part of the tissue we need tonics or stimulants to support failing nature This appears to me to be the worst condition that a poor mortal can git into. especially if his lungs are involved. In this condition when the indications are equal for both class of remedies: we would do about as well to do nothing. But to do nothing will never do in the world for all the old women will be after us with broom sticks. and Quacks will obtain practice and very often git praise for what nature accomplished in spite of his remedies. Here it is that Homœopathy has done so much in pneumonia. But

the intelligent physicial will combind his remedies of depletion with such tonics as he may judge appropriate, equal with the depletants if the indications are equal. and which ever indication prevails. let those remedies prevail in his formula.
Here it is that the following pill has done its shear of good Calomel grVj to grXij. Opii grj Spicae griij to grVj. Mk. ft pil. Six one b. one every two, four to six hours. continued until the gums are slightly touched or the symptoms so change as to require different treatment should slight ptyalism be produced we should think the patient mending.
This with some cathartics to keep the bowels open. and some. mucilaginous. or diaphoretic. or if need be a diuretic drinks. may be continued till the symptoms change. then our remedies must change accordingly.

I hope what I have written will be consider as quite sufficient. without is was better than it is.

Considering the author. the faculty will know well how to look over any thing that may be amiss. knowing, that it is the common lot of novicies to err, which error, they may be able to detect and correct in riper years.

With the higest regard for the faculty. to whom I present this thesis. I remaine theirs

Obediently

D. M. Wellborn