

Thesis on  
Pneumonia

To

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Physiology in the University of  
Nashville this thesis is dedicated  
by his pupil as an expression of  
admiration for his attainments  
and gratitude for his favors.

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# Pneumonia

This is a subject which has brought to its elucidation the talents, of some of most the distinguished lights of medical science. And is still engrossing much of the medical mind. In taking up my pen, to say some thing on this subject; I do not flatter myself, that I shall be able to throw any new light on the pathology, or treatment of this most interesting disease. In these lines my only object is, to draw a faithful picture of the disease under consideration as present to my observation by nature, during a practice of 3 years on the alluvial plains of an Illinois prairie; where it occurs in almost every variety of form, <sup>from</sup> the most simple & mild to the most malignant & fatal character.

There is no one who feels an interest in the onward progress of medical Science; that does not feel proud of the achievements in the history of this disease, made in the light of the nineteenth century.

As long as Pneumonia shall continue to afflict our unfortunate race; so long will the names of Laënnec, Andral, Lewis & a host others be held in grateful remembrance by the medical mind.

There is no one who has engaged in the practice of the Science of Medicine whose <sup>heart</sup> does not glow with gratitude to these noble chieftains for the light their discoveries reflect along his dubious pathway. What a consolation to the medical practitioner; to be able at a glance to recognize the enemy, with whom he is to contend.

By the light of the present advanced state of medical science he is afforded this satisfaction. Who can contend successfully with an enemy, unless he be acquainted with that enemy, and know with what kind of weapons to store his armory.

To our fathers this disease was of difficult recognition; but to us it is of familiar features. He who would fail to recognize uncomplicated pneumonia, in our days, would justly be considered incompetent to the duties & responsibilities of a practitioner of medicine. For the purpose of facilitating the investigation of this disease, methodical authors, are in the habit of dividing its course into 3 distinct stages viz: 1<sup>st</sup> the stage of Splenization, 2<sup>d</sup> stage of Hepatization and 3<sup>d</sup> stage of Supuration. Preparatory to a proper appreciation of these different stages it is nec-

essary that we should familiarize ourselves with the normal sounds of the lungs during health.

For this purpose we must practice the arts of auscultation & percussion and by becoming adepts in these important arts, we are enabled justly to reestimate the language of disease; as our esteemed professor of Theory & Practice impressively remarked, in his Lectures on Pneumonia

By careful auscultation & percussion, the intelligent practitioner is enabled to hold an interesting, and intelligible converse, with the diseased lung.

thereby enabling him, to ascertain the extent of inflammation, and stage of that inflammatory action.

But to the subject. We now propose to consider the stages of Pneumonia through some of the phenomena.

which they present. During the stage  
 of incubation the most marked ind-  
 ications that point to the development  
 of the disease under consideration, is the  
 occurrence of cough now and then, with  
 sense of fullness in the chest - some  
 fever, and the usual symptoms of cold.  
 These symptoms continue for an indefi-  
 nite period, terminate in a distinct chill  
 which usually continues <sup>1/2 hour to</sup> ~~3~~ hour, followed  
 by febrile reaction, with still occasional  
 exacerbations of chilliness. This state of  
 affairs may continue 24 hour or longer before  
 reaction is fully established, and the fever  
 fully established. By this time there is  
 considerable pain in the side of the chest  
 affected. Cough increased with an in-  
 creased sense of fullness in the chest,  
 with considerable dyspnea. pulse some-  
 what accelerated but neither very  
 hard or full. Now this being the

State of affairs if you place your ear on the chest you may distinctly recognise the sound of crepitation such as is denominated in works on Pneumonia crepitant soncus. With this information you at once conclude that the patient is in the first stage of the disease.

During this condition of things, there are important changes, going on in the parenchymatous structure of the lung. The lung is now become loaded with stagnant blood, if we may be allowed the expression, and in order to free itself from this oppressive load, assumes the office of a secreting gland - pouring large quantity of bloody serum into the bronchial tubes. This effort of nature, in many instances proving effective in throwing off the diseased action - the patient soon returns to health.



But in many cases notwithstanding  
 the efforts of nature, and the well  
 directed use <sup>of</sup> medicines, the disease  
 continues to advance and we soon  
 find the disease ~~xxxx~~ advanced to  
 the 2<sup>d</sup> stage; or that of red hepatization.  
 This stage is known by the dul & flat  
 sound emitted on percussion.  
 On the accession of this condition  
 all the symptoms become more deci-  
 ded. Skin hot & dry - pain continu-  
 ing in the side - sputa of frothy consist-  
 ence & yellowish red color. Tongue coated  
 with a yellowish white coating - dysnea  
 proportioned to the extent of the inflamed-  
 mation. This condition may continue  
 from 3 to 9 days most usually about  
 the medium between these extremes  
 when the case either becomes decidedly  
 better or grows rapidly worse, In the latter case  
 the circulation gives way - patient

Becomes more restless - features sunken -  
 mind wandering - expectoration diffic-  
 ult - and he suffers almost low his  
 breath in fruitless efforts to throw  
 off the accumulated effusion, into  
 the bronchial tubes. If this state of  
 affairs continues; <sup>unforgable</sup> which is usually the  
 case; the victim gradually sinks into  
 a state of coma; which deepens into the  
 sleep of death in <sup>a short</sup> ~~at least~~ time.

But in a large majority of cases, the  
 symptoms give way - the expectoration  
 more consistent; and of a yellowish <sup>pale</sup> color  
 the tongue moist and disposed to  
 throw off its coat, which breaks up  
 from the tip and edges some time in  
 large flakes - this desquamation continuing  
 till the organ is again gradually return-  
 ing to its normal condition.

The pulse becomes slower - more regular  
 and of better volume.

Appetite returns and the patient gradually but steadily continues to improve till convalescence is fully established. The above is an imperfect sketch of the ordinary form of the disease as it is presented to our observations on the wide spread prairies of central Illinois as it occurs in the latter part of winter and first of Spring.

But during the Fall and early portion of Winter and we may truly say in the Spring ~~the~~ also <sup>the</sup> disease is evidently complicated with malarial; constituting what professor Bowling denominates Malarial pneumonia with distinct exacerbations and remissions; such as might be expected, when we consider the agency, brought to bear, in the development of the disease.

My observation leads me to the conclusion

that those persons most obnoxious to this  
 form of the disease, are such as have  
 their constitutions broken down by  
 repeated attacks of intermittent fever.  
 Our portion of country is in a most  
 remarkable manner, exempt from  
 typhoid pneumonia; having had  
 but one partial visitation of that  
 form of disease; in 5 or 6 years, and  
 those cases, seemed to be engrafted  
 on typhoid fever. Thus having passed  
 over, so much of the consideration of  
 this interesting disease, as pertains to its  
 different phases, as they present them-  
 selves to the casual observer; we would  
 in the next place consider the prognostic  
 signs of pneumonia, as they have occurred  
 to our mind. When the disease is un-  
 complicated occurring in an ordinary  
 constitution, not involving a very large

amount of lung, the case with, or without  
 judicious treatment, usually does well.  
 But in the malarial, or typhoid  
 form, with out the most timely and  
 scientific treatment, and maytimes  
 with this the case ends unfavorably,  
 especially where there is a small soft  
 and frequent pulse, in the beginning,  
 which does not become developed, as the  
 disease advances to the second stage.  
 If there is a livid flush on the cheek,  
 with sharpened, and anxious expression  
 of the countenance, hands & feet cool &  
 of a blueish cast - bowels inclined to  
 run off - with discharges of a thin watery  
 or greenish color; ~~added to the above~~ we  
 are led to look with the most anxious  
 solicitude to an unfavorable termination  
 And unfortunately for the patient we have  
 been seldom mistaken in our prognosis  
 in a combination of the above symptoms

Some authors lay much stress on the pulse exclusively, as a prognostic sign in pneumonia; but according to my limited experience there is no one symptom so well calculated to mislead the unwary practitioner. On visiting my patient, I have found his pulse promising all that the physician would want <sup>but</sup> with the tongue dry and coated with a yellowish dark material & hurried breathing - under these circumstances the mind is disposed to cherish with pleasure every thing pointing to a favorable issue. The circulation is taken as the basis of our prognosis; and we may easily be led to the conclusion; that our patient is in no very imminent danger; but on our return the next day, we may find our patient in the very jaws of death; the system having given away and the pulse dropping right down. Will not dwell on this branch of the

subject but turn to the consideration of the Causes of pneumonia. Writers are in the habit of dividing these into 2 classes called predisposing & exciting causes.

Such things as tend to debilitate the general system may be denominated among the ~~excit~~ ~~ing~~ ~~or~~ predisposing causes; while such circumstances as tend to spring the disease into action, are called exciting causes as the irritating influence of cold air, as it is brought in contact & with the bronchial tubes. Among the former class of agents may be classed Malaria. The debility produced by the agency of this poison produces that form of the disease, known by the name of Malarial pneumonia. One of the most prolific exciting causes of the disease under consideration is exposure to the vicissitudes of the weather on the damp or mucky ground with thin boots; through which the feet may get wet such exposure as this I think is the most of our pneumonia in the prairies of Illinois. Sometimes causing <sup>which is by no</sup>

means a stranger in our locality. I have thought also that the direct inhalation of cold wind, as it sweeps cold and dry over our unbroken fields of prairie, making the blood of the most staid pedestrian run cold as he bends his hurried steps towards some distant wood, might be a very efficient agent as an exciting cause of this disease. With these reflections in relation to the phenomena of this disease we are led to the consideration of that subject in connexion with pneumonia which most deeply interests the practitioner.

The Treatment:

I am sensible of the great discrepancy among our most distinguished practitioners in relation to this subject. I approach it with the utmost diffidence. No one who has engaged in the practice of medicine in the valley of the Mississippi has



failed to notice how in applicable  
 the treatment so highly lauded, and  
 so confidently recommended, by our  
 eastern brethren, is to the disease as  
 it occurs to us. The cold and continued  
 use of the great trio of our New England  
 brethren would as effectually destroy  
 many of our Malarial cures, as a rifle  
 ball driven through some vital organ.  
 Experience has afforded me ample ex-  
 planation of the above seeming strong  
 remark. When in the spring of the year  
 1853 I made a visit to the medical  
 Department of the University of Nashville  
 I hastened to the far west and having  
 located I was soon called to treat one  
 of the most marked cases of Malarial  
 pneumonia. Guided in auscultation  
 and percussion by the lucid works  
 of Professor Wood & Watson the  
 last lingering doubt as to the nature of the  
 disease

which I was called to treat, was at once  
 dispelled, as I listened to the distinct  
 and unmistakable sound of crepitant  
 rhoncus. No sooner was I done my exa-  
 mination than prepared to inform the  
 friends of my patient, that he labored  
 under Pneumonia. Guided by these  
 distinguished authors to so satisfactory  
 diagnosis; I felt doubly sure they would  
 point me to a course of treatment; that  
 would prove equally satisfactory; but  
 how signally disappointed were my  
 expectations. I bled gave tartarated  
 antimony & mercury and had the  
 mortification to see my patient grow  
 worse and worse until the fifth  
 day, when he bade farewell both  
 to me and my medicines, leaving  
 behind for my benefit a useful admon-  
 ition. From the simple details of this  
 case I was led to this conclusion,

That the western practitioner of medicine must not follow the teaching of our eastern friend, which conviction was but a reiteration of what I had been previously taught by our talented professor of theory & practice of medicine. But from these considerations I have been led to a more rational, and successful course. In the beginning of the disease where there is high reactionally fever with full and bounding pulse; in a strong vigorous constitution my conviction is that there should be some blood drawn from the arm <sup>(one good bleeding long enough)</sup> watching the effect of the remedy with the utmost caution. After this the local abstraction of blood may be resorted to, if pulse continue full, hard and frequent, with hot dry skin. One general bleeding in our locality is as much depletion in this way as

~~much~~ as necessary and indeed the most  
 plethoric cases of our locality will not  
 bear more without showing signs  
 of exhaustion. ~~Though~~ <sup>frequently</sup> one timely bleeding  
 in many cases, will produce the best  
 results - Diminishing pain - bringing  
 down the frequency & hardness of the  
 pulse - relieving nausea & dyspnea -  
 promoting expectoration and exciting  
 copious diaphoresis.

In a word bring on a crisis from which  
 the patient goes on improving untill con-  
 valence is fully established.

But in many cases the effects of the  
 remedy are much mixed with  
 uncertainty or rather obscurity. After  
 exhibiting the lancet as above indicated  
 I am in the habit of giving dose of calo-  
 mel and Dovers powders at night  
 with ~~red~~ administration of small dose  
 of tartar emetic every 2 or 3 hours

But in many cases I do not use the  
 Tartar emetic at all using as an  
 expectorant the compound syrup of  
 squill and Senega; or an infusion  
 of serpentaria, thus getting a good  
 eliminative from the lung, without  
 that dangerous prostration, which we  
 run the risk of incurring in the  
 use of emetic Tartar. An expectorant  
 of this nature in my judgment is in  
 nine tenths of our cases much better  
 and safer than the Tartar emetic.  
 It may not be out of place for me  
 to say, that this remedy is becoming  
 unpopular, with our most success-  
 ful practitioners. They say they find  
 much difficulty in preventing too  
 much depression of the vital forces  
 denoted by a cool skin small &  
 frequent pulse. This is my experience

Would attempt to do but little  
 with purgatives in this disease, but  
 keep the bowels in regular condition -  
 if possible for the safety of patient may  
 be compromised, in the advanced stage  
 of this disease, if the bowels take on an  
 inevitable condition and impoverish the  
 circulation, by an undue secretion  
 from the blood. Thus bringing about  
 in some sort the same condition of the  
 blood, which the improper use of tartar  
 emetic does - A small dose of calomel  
 with Dover's powder or blue mass at night  
 will followed in the morning by some  
 mild laxative, will accomplish all  
 that should be expected from the bowels.  
 The blue mass at night, followed in the  
 morning by mild purge to insure the  
 daily action of the intestine, with the  
 use of tartar emetic or squills & sennae

will in the first stage of Pneumonia  
 in its simple form accomplish the most  
 that can be done. If the disease cont-  
 inue to the second stage involving  
 extensive hepatisation - skin hot and  
 dry - pulse frequent - tongue covered  
 with a yellowish white coat - dull  
 pain in the chest - difficulty of breathing  
 increased - cough dry and hacking  
 expectoration tough & adherent thrown  
 off with much difficulty. With this  
 condition of things would begin with  
 the mercurial course having the found-  
 ation laid by the previous use of the  
 small doses of calomel and Dover's  
 powder. For this purpose would give  
 about 1/2 or 2 gr. mild chloride of  
 mercury every 3 or 4 hours according  
 to the urgency of the case until  
 there was slight improvement made

on the system. This being established the  
 cure almost universally does well.

The tongue becomes moist & begins to  
 throw off its coating <sup>along</sup> towards the tip &  
 edges. pulse not so rapid and hard  
 Secretions generally improved much.  
 delirium where that occurs less violent  
 Cough less dry - with increased ~~and~~  
 secretion from the bronchial Tubes.

The dyspnea is much less marked  
 On percussion we find the lung gradu-  
 ally to diminish in dullness until  
 it is lost in the general resonance of  
 health. And by applying your ear with  
 the stethoscope you distinguish the crepitant  
 rhoncus of the first stage - that diminishing  
 by little and little until this is  
 entirely lost in the resonance of health.

In conjunction with this I am in the  
 habit of issuing large blisters over the surface



of the affected side in violent cases during the 2<sup>d</sup> stage of pneumonia which I think one of our most available medical means in this stage, producing a revulsion from the lung and acting as an excitant to the skin. After the action of a large blister the patient seldom continues to complain of pain in the side, thus obviating one of the most distressing symptoms of the disease, at the same time disposing to diaphoresis the skin becoming soft and moist. But as Drs Wood & Watson remark we should not use the blister too soon while the case is recent & the inflammatory action still unsubdued. These are the remedies on which I rely with the most confidence in an ordinary

case of uncomplicated pneumonia  
 in the first and second stages. ~~of~~  
 In the 3<sup>d</sup> stage or that of supuration  
 I am inclined to the opinion that  
 there are but few recoveries if any  
 when I have reason to apprehend  
 the approach of this condition can  
 be noted by a sinking of the pulse -  
 sharpening of the features - copious  
 dark bloody expectoration, with  
 inability to throw off the effusion  
 in the bronchial tubes as fast as it  
 is exuded into them from the blood  
 vessels. I am in the habit of using  
 in this state of things stimulating  
 expectorants such as carbonate of  
 ammonia, compound syrup of  
 squills, and senega with wine  
 or brandy to sustain if possible  
 the circulation with nutritious  
 diet such as rice, eggs, mutton &c.

The ~~follo~~ preceding remarks in relation to the Treatment of pneumonia is applicable only to the form uncomplicated with malarial as the reader will observe. We next proceed to the consideration of this disease as influenced by this poison. In the ~~p~~ treatment of this malarial pneumonia where there are distinct exacerbations & remissions; there is no medicine, that will answer the purpose of quinine. It acts like a charm - breaking up the disease in a few days and restoring the individual to health.

The lancet in this form of inflammation of the lung will not bear the lancet at all, if blood be extracted the vital powers are usually much depressed. denoted by a sinking of the pulse with cool-

of the skin and great prostration  
 of the strength. Tartar emetic in this  
 condition of things, is equally hurtful  
 depressing the vital contractility and  
 diminishing the fibrin of the blood  
 already too much impoverished by  
 the poisonous action of malarial.  
 Mercury itself does not seem to do  
 as much here as in the uncomplicated  
 form, but still I am unwilling to  
 dispense with it entirely, for I think  
 we may facilitate the cure much  
 by the use of an occasional dose of  
 mercury in a mild form. Here we  
 have much torpidity of the liver as in  
 all other conditions of malarial  
 disease and all know where this  
 is the the case there is nothing of  
 equal efficacy to mercurials.  
 Hence in malarial pneumonia we  
 in the habit of resorting to quinine

Zealous and stimulating expectorants  
 of which professor Bowlings combination  
 of Sanguinaria, and Senega is one  
 of the very best according to my  
 experience, with the judicious use  
 of these remedies I am persuaded that  
 a great majority of these cases may  
 be very easily managed. Having  
 had but little to do with what is called  
 Typhoid pneumonia as before intimated  
 I will detain the <sup>reader</sup> but for a moment in  
 its consideration. As I know but little  
 about this form of the disease I will not  
 say much about it. My course of treat-  
 ment was much as I would treat a case  
 of Typhoid fever, with the addition  
 expectorants and revulsives to the  
 chest in the form of blisters & mustard  
 Thus having passed through a brief and  
 imperfect history of this disease I con-  
 clude