

AN  
INAUGURAL DISSERTATION  
ON

*Scarlatina*

SUBMITTED TO THE  
PRESIDENT, BOARD OF TRUSTEES,  
AND MEDICAL FACULTY  
OF THE  
UNIVERSITY OF NASHVILLE,  
FOR THE DEGREE OF  
Doctor of Medicine.

BY

*Lewis S. Freeman*

OF

*Tennessee*

1858

W. T. BERRY AND CO.

BOOKSELLERS AND STATIONERS, NASHVILLE.

## Scarlet Fever

I have selected this as a subject for my Thesis from the fact that I had better opportunities of witnessing this than any other disease.

It prevailed epidemically in the spring of fifty seven on Elk river. The stream on which I now live, developing itself in all of its three forms, spoken of by writers.

Presenting itself as it did here in some of its forms is one of the most alarming and dangerous

diseases that can affect any family. Scarlet fever like measles is an eruptive fever, propagated by contagion, running a definite course, and as a general rule to which indeed the exceptions are extremely rare affecting persons but once in the course of their lives.

Its origin is no more known than its cause. By many it is supposed to have spread from its first seat by communication from one to another and in this way only.

It would appear to me that the same combination of influences could occur, capable of generating it at this day and

time, which of old engendered  
The disease originally.

This disease certainly does originate  
- to at times without our being  
able to presume that it had  
been imported to the locality  
in which it prevailed, which  
was undoubtedly the case in  
my own neighborhood, what  
these combination of influences  
were I am not able to say,  
nor does any one know.

The most common belief I  
think at this day is, when once  
an individual has become affe-  
-cted with the disease, a poison  
is generated which can be trans-  
-mitted by diffusion of the  
miasm through the atmosphere

- from one to another.

After this contagious poison has impregnet the system of an individual it remains for some length of time in a quiescent state, without affording any indication of its presence, this is called in this and other contagious diseases the latent, or period of incubation.

Scarlet Fever has been divided by writers into four varieties.

I have seen it develop itself in three of its varieties, Scarlatina Simplex, Anginosa & Maligna. These are the main varieties, but every variety is Scarlet fever modified by particular circumstances, as by the constitution of the patient,

and The locality in which  
The epidemic prevailed.

It has also been affirmed  
by writers That epidemics of  
Scarlet Fever are more frequ-  
-nt during The winter than  
at any other season of The  
year, when atmospheric chang-  
-es and copious rains followed  
by continued heat is thought  
to be favorable for its produc-  
-tion.

Scarlet Fever is a disease that  
attacks all ages, and prevails at  
all seasons, yet there may be  
a favoring influence exerted  
by the seasons to the spread  
of the disease, and again there  
may be greater predisposition

in some than others, for we frequently observe persons who has never had the disease pass through epidemics unaffected, whilst others cannot pass with like immunity.

The young of both sexes are equally liable to be attacked, the young rather than the adult or aged, I might say it was a disease confined to childhood, from the fact that it is seen comparatively seldom in after periods.

In more advanced life the system appears to be but little impeded with it.

Simple Scarlet Fever occurring in a healthy individual, is a

disease devoid of but little danger, yet danger does arise at times from the super-  
-vention of more urgent sym-  
-ptoms, which characterize  
The Anginose, or Malignant  
variety of this disease.

It is often indicated by the sudden recession of the erup-  
-tion, as well as by its tardy  
or irregular appearance.

Scarlatina seems to occur at times without the eruption which is not characteristic of the disease, leaving a doubt as to whether it was genuine Scarlet Fever or not.

This variety if it may be so called, is thought to be as



capable of producing the disease as well as the other variety. Scarlet Fever is thought to be communicable from the very commencement of the attack through the eruptive stage, and until desquamation has ceased. The period which elapses between the time of exposure to the poison, and the eruption of this disease (which is called the latent period) is from two to eight days.

Scarlet fever is a disease which cannot easily except at the commencement of an attack, be confounded with any other disease except measles.

At the first appearance of the

eruption it may be impossi-  
-ble to distinguish it from  
measles, but time soon discl-  
-oses the fact.

The eruption of scarlet fever  
is not so prominent as it is  
in measles, and the spots  
are larger, and they do not  
leave between them those  
irregular spaces in which the  
skin preserves its natural color.  
There is a difference also in  
the desquamation of the cuticle,  
in scarlet fever it takes place  
in large flakes, whilst in measles  
it is thrown off in small sca-  
-les. The circumstance too of  
our knowing the existence  
of an epidemic in a locality

and of a probability of exposure to its influence will aid us to some extent in making out our diagnosis.

Sometimes in simple Scarlatina the fever varies both in intensity and duration, being sometimes very slight, at others more violent. Those whom I had an opportunity of seeing affected with this disease, was in a family with whom I was very intimate, and related, consequently had every good opportunity of witnessing the disease in all of its varieties, from the simplest to the most malignant. Those affected with the simplest variety of this fever first complain

of nausea and vomiting followed by slight chills, and afterwards heat of skin, Thirst, head-ache, and more or less stupor.

About the second or fourth day from the invasion of these symptoms, the unmistakable symptoms presented themselves, high fever, with efflorescence of the skin in the form of small diffused spots, but not distinct from each other, and not above the level of the skin, as in measles.

These spots gradually coalesced, so that on the face, neck, and upper extremities, the eruption was uniform and continuous; but over the trunk it was

diffused in large irregular patches. About the fourth day the eruption was at its height, to gradually disappear in the order in which it invaded the skin. After the expiration of a week or ten days desquamation set in, separating flakes of skin from the hands and feet.

Such has been the course with those I have seen laboring under the milder varieties of the disease, and the course most usually taken by the disease, but it sometimes becomes modified by certain circumstances, which makes it at times assume new characters, that are quite different from what it was at

first. Frequently these symptoms become so urgent as to characterize the Anginose variety, which is essentially the same disease, only modified, as I remarked before, by certain circumstances, as by the constitution of the patient, and locality if it may be said to exert any influence on the disease, in the way of making it assume this new type.

Those whom I saw affected with the Anginose variety were taken pretty much like those who had simple Scarlet fever, first nausea and vomiting, but soon more urgent symptoms were ushered in, their throats soon became affected, which was very distressing,

voice hoarse, and deglutition difficult. Their Throats soon became covered with a viscid secretion, or flakes of matter of a yellowish cast analogous to what is seen in certain diseases of those parts, This secretion often giving rise to constant, and distressing efforts for its expulsion.

The eruption did not make its appearance on those affected with the Anginose, so soon as it did on those affected with the simple variety. In some few cases it did not make its appearance for several days after the attack had set in, and then it was not continuous over every part of the body.

The efflorescence consisted of patches of a rasbury hue, scattered over the chest, neck, and extremities, these patches soon disappeared. I have seen several affected with the Anginose variety, where there was no eruption discoverable to the eye.

When the efflorescence was irregular, and scanty, desquamation was very slight, when great desquamation was in proportion, leaving the patient enveloped in a new skin.

The febrile symptoms, with the affection of the Throat, usually began to disappear with the cutaneous eruption, leaving at times however, some degree of febrile



excitement, and soad Throat,  
 after ~~the~~ The eruption had  
 intirely disappeared.

The Anginose variety of patients  
 seemed to suffer a great deal  
 more than those who had  
 simple scarlet fever.

Those affected with this vari-  
 ety of the disease, was at their  
 worst on the sixth or seventh  
 day after the commencement  
 of the attack when the pulse  
 became frequent, but its strength  
 was by no means equal, respiration  
 was greatly oppressed, and thirst  
 urgent.

This variety is said to be very  
 dangerous, from the great tenden-  
 cy to inflammation in some of the

Serous membranes - Encephalic -  
Thoracic - or Abdominal, as well as  
from The great Strep That lies  
on The Throat.

I have seen several laboring  
under This variety of The disease,  
but none in which These effec-  
tions of The serous membranes  
presented Themselves.

The inflammation of The mouth  
and Fauces often extended to The  
mucous membrane lining The nose,  
so as to give rise to an acrid  
discharge from Them, and a disa-  
greeable itching.

The chances of recovery are much  
greater in This variety of The disease,  
when The eruption remains out  
on The surface. When it disappears

suddenly we apprehend some internal mischief will be set up, such as inflammation of the mucous membrane lining the intestinal canal, giving rise to diarrhoea that may prove fatal.

The progress and degree of severity of scarlet fever, differ greatly in different subjects; sometimes the deviation from the natural feelings of health is so very slight, as scarcely to deserve the name of a disease. When at other times it assumes new characters, that are even worse than those we have enumerated. It is not unfrequently the case that the symptoms become so urgent as to defy all treatment.

Writers have given to this, the name of *Scarlatina maligna*.

I have seen ten cases with this variety, and but two to recover from it; four died within twelve hours after they were taken, and four others within two or three days from the invasion of the first symptom,

They were taken much like those who had the other varieties, but soon the malignant type became indicated by fever distinctly of a typhoid form, in which the pulse was small, and irregular, tongue covered with a brown or dark incrustation, and their eyes much injected, vision greatly confused; difficult respiration, and

persistant Coma announced the approaching dissolution.

The efflorescence is said to be extremely irregular in this variety, both in its appearance and duration, frequently appearing late, and remaining out only a few hours, or it recedes and recurs several times in the course of the disease. It is also said to be paler in this variety, than in the other varieties of the disease. how this is I am not able to say. Those I saw laboring under this variety had no efflorescence on the surface that was discoverable to me, but this might have been owing to the fact, that most of the patients died before the efflorescence had time to

develop itself. In this variety there was greater inflammation than in the other varieties. In some cases the inflammation was so extensive, that deglutition was impossible, fluids taken in to the mouth being thrown off by the nose. The inflammation marks in a measure the severity of the disease in the Anginous and malignant varieties, where this is slight, the danger is less, but if extensive, and tumefaction great, danger is in proportion. After the disease has assumed this type one of its best characteristics is the pulse which becomes frequent and feeble, and continues so up to the time the patient expires.

The Tongue too, becomes dry, brown, and Tremulous; debility extreme, The Throat ulcerated, and The respiration impeded by the viscid mucus which collects about The fauces. Patients laboring under this variety of The disease most always die, and suddenly. or at least Those did I saw affected with it. After a brief description of each variety enumerated, it becomes necessary at This point for me to say something of The sequell of The disease, which is almost as dangerous as The disease itself. The one most common is anasarca, sometimes however dropsy takes place in some of The larger serous cavities Abdom-

inal or Thoracic. The sequel is thought to follow most commonly after the milder variety of the disease, rather than after the severe. This is thought to be owing to the fact, that less care is observed in the milder, than in the severe varieties, during the period of desquamation and convalescence. ~~This~~ The severe varieties, convalescence is slow and more doubtful, and accidental or careless exposure is more guarded against; whereas in the slighter forms the patients are apt to go out, not knowing the danger of such exposure.

I will arrange what I have to say of the treatment of Scarlatina



according to the three varieties which I have enumerated.

The treatment of a disease has to be according to the symptoms that present themselves, which must be met with appropriate remedies. The first of these, called Scarlatina simplex, if not complicated with any other symptoms, than those that usually follow this variety, nothing more is required, but to enjoin confinement to the house, and paying particular attention to the state of the bowels, if costive it would be necessary to administer a gentle cathartic so as to move them gently. Should the heat of the surface become too great, I should

recommened my patient to be sponged with cold water, provided no unpleasant sensation was produced by it, if any I should withhold the cold, and use in its stead the Tepid water.

As long as the febrile symptoms were great I should recommend the internal use of ice or cold water to favor the eruption.

Formerly heating drinks were administered with the view of favoring the eruption, but they are now known not to be so good as colder ones.

With respect to the management of the more severe forms of Scarlatina, great difference of opinion have prevailed. Some recommending

Emetics, whilst others again recommend  
~~The~~ affusion of cold water to  
 cut short the disease at the time  
 of the invasion of the first symp-  
 tom. I do not believe any great  
 benefit can be derived from the  
 administration of either of them,  
 as the fever depends, as I believe  
 on a poison in the blood, which  
 cannot be removed by vomiting,  
 or washing the skin with cold  
 water. But I do think cold spon-  
 ging would be very refreshing to  
 the feelings of the patient.

Particular attention should be  
 paid to the state of the bowels,  
 as was done in the milder variety,  
 so as to keep them gently moved  
 by some mild Laxative.

Should the Throat become much inflamed and swollen so as to cause difficulty of deglutition, I should recommend leeches, or blisters to be applied, which will in a great measure <sup>relieve</sup> the tumefaction by attracting the circulation of the diseased part to the surface on <sup>which</sup> they were applied. Should no encephalic symptoms present themselves, nor the affection of the Throat did not become too urgent, I should content myself by giving some cooling draught, ice water or lemonade.

With respect then to this variety I think the principal of treatment should be not to interfere unnecessarily, but to meet any unfavorable symptom that may

present itself during the attack.  
 I should recommend in this as I  
 did in simple scarlet fever, cold  
 sponging if it created no unpleasant  
 feelings, at the same time allowing  
 ice if the Thirst was urgent.

In the Angino variety most of the  
 strep lies in the Throat, and which  
 should be treated with appropriate  
 remedies, such as I have enumerated.

I should also expect to derive great  
 benefit from gargles, their efficacy  
 has been highly extolled by some  
 in this affection of the Throat.

They remove the vicious secretion,  
 and excite the inflamed parts  
 to healthy action. for this purpose  
 a great many have been recomme-  
 nded. but I should give preference

above all others, To The muriatic Acid gargle which is grateful and removes more reddily The vicid secretion from The diseasul parts.

Rx Acid muriatico ꝑtt++  
Mellis ʒ III  
Aqua ʒ VI

Should my patient pass through the fever, and affection of the Throat, I should think it necessary to give him a nutritious diet, and to allow Tonics if debility was extreme, which is not unfrequently the case after attacks of this variety.

It remains for me to speak of one of the most formidable varieties of Scarlatina, to which has been given the name Scarlatina maligna and one too in which all our care

will be too often in vain.

In this variety there appears to me to be two main sources of danger one arising from the impression of the contagious poison upon the system, and particularly on the nervous system. and the other source of danger is from the ulceration of the Throat afterwards.

I am at a loss to say any thing about the treatment of this variety of the disease, for one treatment seems to act as well as another, as for the benefit we derive from either. The depressing influence of the poison on the system is so great, that it cannot hold up under its influence long enough for medicine to exert its salutary effects. If we could save such patie

nts as These it would be I Think  
 by The liberal administration of  
 diffusible Stimulants, so as to sustain  
 The flagging powers until The debility  
 agency of The poison had in some  
 degree passed off;

I should my patient be so fortunate  
 as to pass out of This state of depression,  
 Then we might expect The next source  
 of danger to arise from The ulceration  
 of The Throat. I should in This stage of  
 The disease Think it proper to keep up  
 Stimulants, at The same time using gargles  
 as recommended in The Anginose variety  
 which will remove all offensive matters  
 from The diseased parts. Lastly my  
 patient having got Through The affection  
 of The Throat, and much debilitated,  
 I should put him on Tonics, and let him  
 recover at his leisure.