Searlatina

Of the class of febrile diseases there is none which from its frequent recurrence, especially among the juvenile portion of the community, as well as its formidable symptoms and complications, should more interest the physician than Searlatina.

Definition: Searlatina may be defined as an exanthematous and contagious febrile disorder, in which the eruption commences on the second and declines from the fifth to the seventh day. It is accompanied by more or less affection of the throat and fauces and apt to be followed by numerous
to sublime and dangerous sequel.

Cullen defines this disease as "Sympha Contagiosa. Quarto morti die facies aligiuatium tumens, simul in cote passum rubor floridus, macula amplest tandem contacentibus, post tres dies in squamulae furfuraceas abies."

Savages describes it as "Eruptio maculosa, rubra, prurienus, papulosa, lata, parum uniformis, in squamulae furfuraceae abies, sed sine praedico catarrhalis, et cæpe ad secundam tertiam viceem se prodesse condens in vicicissim."

History. This disease Dr. Copeland, was probably unknown to the Greeks, Romans or Arabsians, and it was for a long period confounded with Malaria or Plaque. It was known by the name of Rosalia or Rosaria till 1556 when Ingrassias, according to Hildenbrand and Frank, describes it as a distinct disease. Scarratina appears to have prevailed...
In 1564-65, Gallinius says it was epidemic in Paris in 1581. De Rœtia describes it as "Angina Maligna". The disease which was epidemic in Naples in 1620, of which accounts are given by Carnevale, Nola and Spangardi, was probably "Scarlatina Angina" then variously named, but most frequently "Epidemic phlegmonous angina". A pestilential affection of the face, etc. Domenic first gave a true description of Scarlatina in 1619 and afterward Winkler in 1642. Welch of Leipzig and Schulze in Poland observed severe epidemics of this malady, and described it by the name of "Malignant purpura" by which it was then known. The epidemic described by Sydenham from 1667 to 1673 appears to have been comparatively mild; whilst that described by Morton from 1672 to 1676 seems to have been much more severe. But he has noticed the disease as differing from Measles chiefly as regards the character of the eruption.
During the 18th Century medical attention was directed particularly to this disease and during the early part and middle of that Century it was variously named and生姜 not only from other diseases attended with efflorescence, but especially from Measles and Pox. At Aberdeen and Borthgill in this country first showed the distinct nature of this malady, and the researches of Withering confirmed their statements.

Etiology. The causes of Scarlatina may be considered under two heads.

I. The specific cause or attack directly from the poison of the disease.

II. The existence of such circumstances as predispose healthy persons to a reaction of this poison. Persons who are exposed to the influence of Scarlatina contract the disease in many cases from the emanations from the bodies of the sick;
the atmosphere becomes laden with
to those emanations and the disease is
thus communicated. The exact nature
and origin of this poison we are unable
to define, but we can mark the effects
produced as well as the circumstances
which favour its operation. Dr. Witen
says "the original source of the poison
is distinctly traceable to Arabia; and
the disease has now spread over the
whole world. It prevails at all sea-
sons of the year, is always epidemic
and often epidemic"
Substances which surround those af-
flicted with scarlatina are media by
which the disease may be transmitted
to the healthy, even to those residing
at a distance, and these substances
may to retain the poison of the dis-
ease for an uncertain length of time.
According to Dr. Sims the infection
remains in the house some, but not
many, weeks after the patients have
recovered; while Dr. Witen says that
the Contagion of Scarlet fever lurks
about an apartment it clings to furniture and clothes for a very long time, even after some case has been taken to purify them. He adds one from a number of cases in which the disease has communicated by a slip of flannel, after the house had been uninhabited for a year after the occurrence of the disease. In concluding this part of his subject Dr. Watman says, "you will be asked at what period the danger of impinging the disease on the one hand, or of catching it on the other is over, and I would recommend you to answer that you don't know. I am sure I do not and therefore I always decline the responsibility of giving an exact opinion in the matter."

Dr. Bellan and others have insisted on the impossibility of being infected a second time with scarlatina, but exceptions to this rule have occurred though seldom. Dr. Bellan says that out of 200 cases that he attended he witnessed no instance of
a second attack. Dr. Bims has seen cases of Scarlatina recurring twice in the same person, and Dr. Gilbert mentions the case of a young lady who was affected twice from this disease.

The existence of such circumstances as predispose healthy persons to a recurrences of the Scarlatina poison

The condition of the atmosphere has been supposed to act as a predisposing Cause, and there is no doubt that the disease occurs as an Epidemic in places which are secluded and in general healthy, and where no perceptible Cause can be assigned for its presence. The age of Childhood is stated by most authors to be peculiarly susceptible of the poison of Scarlatina. Mr. Richardson says that up to the age of ten years the liability to Scarlatina is very great, but that after that age it decreases; he showed a report of 402 cases, 310 of which occurred in
Children under 10 years of age: he also drew attention to a table derived from the Registrar-General's returns in which it was shown that out of 31,744 deaths from scarlatina, 21,469 occurred in patients under 5 years of age; 7,956 at 5 years and under 10; 1,933 at 10 and under 20; 5,522 at 20 and under 40; and only 2,122 in the later periods of life. He said that many authors, and among them Withering, stated that children under 2 years and babies at the breast were not subject to this disease; this statement he denied, adducing in support of his opinion a report of 2,122 cases, no less than 1,400 of which occurred in children under 2 years of age. Dr. Churchill does not believe that children are more liable to the disease than adults, but thinks that they are exposed to the infection while children, and therefore come to have the disease before they grow up. The same author says, that
Fetus in utero may have Scarlatina. Bretzzer has collected cases of this kind; and Dr. Gregory mentions that a child of his own was born with this disease. According to Mr. Good, Scarlatina is more liable to prevail in low, damp, or badly drained districts; and individuals residing in such places are more susceptible of the worst influences of the climate; their vital powers being reduced by the influence of such an atmosphere, it thus renders less resistant to infections or contagious matter. That climate and situation predispose & render persons susceptible to the fever is believed by many of the most careful observers. Dr. Churchill says: "Scarlatina seems to be more prevalent in temperate climates; it is more severe & propagated more extensively in warm, humid weather, & in marshy districts, and the crowded, dirty, ill-ventilated portions of cities."
Dr. Redhead of Speville believes that the predisposing cause of Scarlet fever is whatever generates a quantity of acrid bile; the precipitate cause, the sudden transition from heat to cold, and the contrary. The papuleum morti he says, is acrid bile — this is certainly known by the immediate case of the sick who apply very soon after the seizure, and take such medicines as act smartly on the stomach and bowels; by the great relief all others find by vomiting and purging; and is confirmed by the contents of the evacuations, which are little else than acrid or putrid bile.

Symptoms. The period of incubation in Scarletina is usually from four to five days, but the disease may remain latent for a longer or shorter time.

Dr. Churchill says the term of incubation may be only for a few hours or it may last 10 or 12 days.
In some cases of Dr. Matisse, it appears to be 24 or 25 days. The following are the varieties of scarlatina which are generally described:

1. "Scarlatina Simplex". 2. "Scarlatina Anginosa". 3. "Scarlatina Maligna". 4. "Scarlatina Fine Emptive" (Scarlatina Latius). After treating of the general symptoms of the disease, those which more particularly appertain to each of the varieties above mentioned will be considered. The earliest indications of scarlatina are similar to those observable in nearly all fevers and particularly in those of the exanthematous class; the disease is ushered in with a feeling of lassitude and uneasiness—the mal aise of French writers—rigors, pains in the back and limbs; at the same time the patient feels the desire for food and is afflicted with considerable thirst. Immediately after this stage a feeling of uneasiness in the back of the throat commences, attended
With some degree of pain, and difficulty in swallowing. The skin becomes hot and dry, and the pulse is quick and full; the tongue is loaded for a day or two with a thick fur, after which it becomes bright red, and is covered with projecting papillae especially in the anterior portion; the bowels are generally confined; the urine is scanty and high-coloured, having a peculiar heavy odour and depositing a dense sediment of Amorphous urates.

The eruption appears generally on the second day, on the upper part of the body, in the form of rose-coloured dots which gradually coalesce, causing the body to present a bright-crimson appearance, which has been compared to the hue of a trilobite lobster: the skin has a peculiar rough feeling resembling fovee-skin; the tongue becomes clean and of a bright-crimson colour, while the inflammation of the fauces and tonsils, which probably existed in
the earlier stage, is much increased and accompanied with swelling. The rash is usually developed in 24 hours, subsiding after it has continued distinct for three complete days, when desquamation of the Cuticle commences.

The heat of the skin is intense during the eruptive stage, being often 105° or 106° Fahrenheit, but it is stated to have reached 112°. The highest temperature observed in these experiments of Arndal and Rogers was 41°C. or nearly 106°F. The pulse is commonly very frequent, often reaching as many as 120 or 130 pulsations in a minute.

In most instances the urine, during the desquamative stage, contains some albumen, but this cannot be said to be generally the case. The skin separates in small scales, and the process usually commences in that part of the body where the rash first appeared. On the palms of the hands and the soles of the feet, the Cuticle, being firmer, is often thrown
off in larger pieces, and may with care be removed in one large piece resembling a glove. The hair during this stage of the disease sometimes falls off, according to Dr. Churchill, and several authors have mentioned the shedding of the nails. Dr. Haverstock speaks of a case of this kind. Dr. Churchill says the process of desquamation may last from 8 to 15 days or even longer (30 to 40) but under these circumstances repeated exfoliations are observed.

Simpler is an exceedingly mild form of the disease, and is described by most authors as being unaccompanied by affection of the throat; Cases are very rare, in which no throat affection exists, yet in this division such affection is always of a mild nature. It may be said that it is fatal only when accompanied by complications or followed by sequel of a dangerous character. Sydenham says: "It is fatal only through the officiousness of the doctor."
It may be stated that simple cases of scarlatina are more apt to be followed by sequelae, than others which present in themselves more formidable symptoms, and this may, in a great measure, accounted for by the fact, that there is too often a want of proper care, and attention, both on the part of nurses and patients, to the commands of the physician. No distressing or alarming symptoms being observable, the patient desires to rise from his bed is too soon complied with, or he is too soon allowed to omit the necessary caution with regard to diet, and the result is the appearance of one or more of those numerous sequelae, which have hitherto only required some favourable condition to insure their advent.

S. Anginosus is distinguished by a greater degree of sore throat, and fever than is present in Scarlatina-Simplex: the pulse is more frequent and the tendency to delirium is increased
The jaws are stiff and sore, and the eruption is often longer in making its appearance, occurring in the form of dark patches which have a tendency to disappearance and reappearance; the case indeed is altogether of a more alarming nature. Dr. Wood says the eruption is often less copious and less diffused, sometimes affecting only one part of the body, as the hand or forearm; he has seen it in dots scattered sparingly over the body.

The fauces, soft palate and uvula are often covered with a false membrane of an ashy colour, which sometimes extends into the pharynx; this membrane may be easily removed, at least in most instances, and the surface beneath it is usually smooth and red, though it may be ulcerated and sometimes even gangrenous. The patient experiences much difficulty in swallowing, and liquids are often returned through the nostrils. All the mucous surfaces
are inflamed, t a yellow, of tenacious, liquid having a peculiarly offensive odour is discharged. The fever and throat symptoms often continue after the diagnostatic stage has set in, but in a milder form. Though more often fatal than the Scarlatina simplex, the majority of cases recover. The fever in this form of Scarlatina tends to assume the adynamic type.

Scarlatina Maligna is the name applied to the truly adynamic form of the disease. Occasionally the patient is prostrated at once by the violence of the attack and death may occur before any efficient resistance can be made. Dr. Wood says: "No and then during the prevalence of Scarlatina, cases may be met with in which the patient is attacked at once; either with Osmerosis symptoms, or with oppression, faintness and great anxiousity; the pulse being slender, feeble, frequent and irregular; the surface
either cool, or hot in one part and cold in another; the respiration prematurely slow or hurried and irregular; the face pale or livid and the muscles almost powerless. Feeble attempts may be made at reaction; and even violent shudders may be seen as if they were endeavouring to struggle through the skin. But the resistance of the system soon ceases and the patient dies upon the second or third day.

In Scarletina Maligna the eruption is spot-like, livid and purple. Petechia and Vibrius occur on the limbs. Blood is passed either with the stool, with the urine or by hematemesis. The fauces become gangrenous and there are sores upon the teeth and gums.

Scarlatina Latens occurs generally during an epidemic of Scarlet fever, attacking such persons as are exposed to the Contagion, and having all the symptoms of Scarletina with the
exception of the rash. Medical men who are much in attendance on cases of Scarletina, and who have previously had the disease, are very often affected with its latent form. Hillen states that these cases are capable of im-
parting Scarlet fever.

Diagnosis. Previous to the appearance of the eruption Scarletina may be mistaken for many other febrile diseases; though the redness of the face and the extraordinary frequency of the pulse may serve to guide the physician in its recogni-
tion. After the eruption has made its appearance the diagnosis becomes more easy; in fact there are only three diseases with which it may be confounded. These are Rosela, Erythema and Rubela. It is difficult
to discriminate between cases of sim-
ple Scarletina and Rosela inso-
much as in each there is more or-
less constitutional disturbance.
often accompanied by sore throat.
The rash in Rosela is however,
more regular than in Scarlatina
and there is less disturbance of
the constitution. After the disease
is over we may from careful atten-
tion to its cause, course, and effects
arrive at a correct conclusion; and
for this the physician is often
obliged to wait—before he can
express a decided opinion.
Erythema is more easily distinguished
as there is a marked difference in
the eruption which is not punctu-
ated nor widely and uniformly
diffused like that of Scarlatina.
Erythema like Rosela is not
contagious, nor does it run a pe-
culiar course.
Scarlatina was for a long time
confounded with Measles, and it is
to the distinction between these
diseases that great importance
is attached. There is in Scarlatina
an absence of the Catarhal
symptoms which are attendant upon Measles, and the crescentic appearance of the rash observable in the latter disease is also wanting. Cullen says that Scarlatina comes on with those symptoms which introduce the other exanthemata, but without the Cough and other Catarhal symptoms of Measles. The Impetigin in Scarlet fever usually appears on the second day while in Measles it does not appear till the fourth. Sydenham says "The whole skin is covered with red spots which are more numerous, larger, and redder, but not so uniform as those which constitute the Measles." Dr. Watson in speaking of these diseases says "Although Scarlet fever and Measles were so long confounded together, the differences between them are now pronounced, and when once pointed out are easily
though recognised: Rubella is distinguished from Scarlatina.

1. By the presence, at the outset, of Catarhal symptoms - by the sneezing, the cough, the discharge from the eyes and nose, which precede the rash. There is doubtless in many cases of Scarlatina a running from the eyes and nose, but not till late in the disease; at any rate not prior to the eruption.

2. By the absence of severe inflammation and ulceration of the throat; symptoms which always accompany, severe cases at least, of Scarlatina.

3. By the character of the eruption itself. The rash in Measles is more elevated above the surface than in Scarlatina, and of a darker colour. In Measles it is said to present somewhat the tint of a Raspberry and in Scarlatina to have that of a Viole blister. In Measles the papulae are collected
into semi-lunar groups, leaving interstices between them of healthy skin.

The redness of Scarlatina commences in minute points, which speedily become sonorous and crowded, that the surface appears to be universally red. They begin in the face, neck, and breast, and extend to the extremities, pervading at last every part of the skin. The Scarlet Clavus is deeper, in general, about the groin and in the flexures of the joints than elsewhere. Lastly, the rash of Measles, in its most regular form, appears on the fourteenth day of the disease; that of Scarlatina in the second. There is a disease called by the Germans Rötheln, which is a hybrid of Scarlatina and Measles, and which was described by Dr. Pateren of Leith in 1840. The poisons of both diseases seem in this instance to be united, and the diagnosis between it and Scarlatina is often difficult.
The same care must be used in this disease as in scarlatina, and the treatment, according to those physicians who have written on the subject, should be also similar. Prognosis. There is no disease in which the physician should exercise more caution in the expression of an opinion than in scarlatina; as even in that form known as scarlatina simplex, though there is but little reason in general to expect an unfavourable termination, yet the occurrence of dangerous sequeles may induce such symptoms as totally change the nature of the case and render the disease formidable in the extreme. The character of the epidemic should always be kept in view, as when this is of a mild nature the prognosis in apparently favourable cases need not be so guarded. Sometimes the members of the family are particularly subject to the worst forms of
Scarlatina, and two or three of the children die - in these families the prognosis will be more unfavourable than in others.

Dr. Wood says that the disease is attended with much danger to pregnant women, and to those in the puerperal state, but that with these exceptions women bear it better than men, so that in the latter it is exceedingly prone to a fatal result.

As unfavourable signs there may be mentioned a deficiency in the eruption, which is late in making its appearance and often presenting a purple or livid colour; delirium; lividity of the faces with extension of the false membrane into the larynx; much swelling of the glands in the neck; the presence of gangrenous ulcers, either in the throat, or in the fauces, or on the fauces and other parts exposed to pressure; and great protrusion of the physical powers. Dr. Watson says "whenever I see the glands much
enlarged at the angle of the jaw, and beneath the jaw, in a child labouring under scarlet fever, I augur ill of the case. Of course the absence of the above unfavourable symptoms may be considered as an indication of the favourable termination of the disease; but in so subtle and capricious an affection as this, a too guarded prognosis cannot be made.

Treatment. In considering the treatment of scarlatina, the question naturally arises, is there a prophylactic treatment? and the answer to this question is—that the only true prophylactic is freedom from infection. 

Hoping to produce a milder form of the disease, as in Small-pox, Sir C. Farrwood and others have inoculated healthy children, but though in some cases the disease was transmitted, there was no diminution in its violence. 

Belladonna was first introduced as a prophylactic by Hahnemann, about two years
after the birth of vaccination. He has led to the use of this drug from his observation of the power which it possesses, in common with all the Solanaceae, of producing a prickly heat of the skin and dryness of the fauces; effects analogous to the symptoms of Scarlatina. It is now generally admitted that after a fair trial Bella-
donna has not been proved to possess its reputed power, and its utility as a prophylactic is certain.

The frequent sponging of the patient with warm vinegar has been highly spoken of by Dr. John Webster of London, and it may be said in favour of this treatment, that even if it should be found wanting in its action as a prophylactic, its use as a means of affording relief to the patient is great. Nearly all the mineral acids have been sup-
posed to be prophylactic. Odland in combination with the Sulfur Sulphur-
trit of Antimony has been used, it is said,
with good effect by several physicians of Groningen, wearing others by themselves. We must, however, after according a full share of attention to the many so-called prophylactics against Scarletina, come to the conclusion that there is not one of them which possesses any preventive power; and the duty of the physician is therefore, by the regulation of diet and other precautions of a similar nature, to place those who are still uninfected in such a condition as may best enable them in case of an attack to battle successfully with the disease.

The general treatment must vary according to the nature of the case; but in all cases too much stress cannot be laid on the importance of confining the patient to bed for a period certainly not less than twenty-one days. The enforcement of this rule is difficult in simple cases, but it should be rigidly insisted upon, and in addition the return to a highly nitrogeneated diet should not be
permitted too early. In Scarletina 'Simplex the treatment consists of a cool regimen, attention to diet, regulation of the bowels and the administration of some simple ferments such as the Liquor Ammonico Acidatic. A gentle emetic is generally considered advisable in the commencement of the disease. If food invariably gives emetics composed of Sepia and Sulphate of zinc, provided the child has not previously been sick. The use of Sarsaparilla is condemned. After the action of the emetic he recommends the use of purgatives such as Senna and Calomel, continuing this treatment till the fever has subsided, the tongue is clean, and the stage of desquamation is thoroughly past. If diarrhoea supervenes, Castor-oil with Laudanum may be given, but care must be taken that the patient be not exhausted by too frequent purging. Bleeding has been strongly advocated by some, and just as strongly objected to by others.
Statistics as well as the opinions of experienced physicians lead us to infer that bleeding is not promotive of any good result in scarlatina. Dr. Adam says: "Of cases treated at the Foundling Hospital by bleeding in 1766, and of cases treated at the London Fever Hospital in 1829 in the same manner, it seems proved that no one has died after bleeding, while only one in twenty-two has died after a milder or a directly opposite mode of treatment." In cases of scarlatina anginosa, a gang of vitriol of nitre or chlorate will afford considerable relief, and a dilute tincture of the muriate of iron has been highly spoken of. Liniments may be used externally, care being taken that the skin be not irritated too much, as there is a great tendency to ulceration. If the disease should assume the adynamic form, the strength of the patient must be sustained by wine and Sal Volatile, or Seapuri Carbonate of...
Ammonia. In order to develop the rash the use of rubefacients and the warm bath have been recommended. If there is delirium, opium and antimony are considered useful and the body should be sponged with their bath containing a few drops of nitric acid.

A solution of nitrate of silver of the strength of from ten to twenty grains to the ounce, may be applied to the throat, and in cases where the cervical glands are affected a warm bran poultice will afford relief.

Sequela. The sequela of scarlatina are numerous, and many of them are so annoying, and even dangerous in their character, that it may not be thought amiss to consider some of the most important generally. With a brief reference to first scarlatina droopy, in particular. Swelling and hardness of the cervical glands is a very common attendant upon scarlatina; as this sequela may be pro-

actice
active of much pain and may even proceed so far as to cause extreme difficulty of respiration; it may be necessary to have recourse to rigorous measures to arrest its progress. The application of leeches has been recommended and seems to have the best effect; the strength of the patient being sustained meanwhile by tonics and nutritious food, where the swelling assumes a chronic form the iodine ointment will be found useful. When itching manifests itself, simple injections of warm water are used, and when the discharge is chronic lime water may be injected with advantage. Dyena is treated with chlorine brush and much relief is given by this application.
Which it may be arrested: perhaps the best of these is a solution of acetate of lead of the strength of 4 grains to the ounce. If there should be effusion into the serous cavities, the milder anti-aphlogistic regimen may generally be followed. Mercury may be employed but it must be used with care. Rheumatic affection must be treated by warmth and anti-rheumatics, such as Colchicinum and the Acetate of Nitrate.

Important as the above complications undoubtedly are, there still remains one sequela of scarlatina to be considered, which, from the uncertain period of the disease at which it may make its appearance, from the frequency of its recurrence, and from the alarming nature of these symptoms which are attendant upon it, is that most to be dreaded, and therefore in the highest degree worthy the attention of the medical practitioner. This sequela is the
Insipid which occurs after Scarlet-
tina even in its mildest form, in-
deed, it has been stated that it is
more liable to supervene after
a mild than after a severe attack of
the disease. Exposure to cold is
considered by most writers to be
its chief exciting cause, and there
is no doubt that during and after
the period of desquamation the skin
is delicate and consequently more
susceptible of a change in tempera-
ture. A too sudden return to a highly
nutritious diet is considered as
another cause for its appearance, and
consequently care should always be
taken that the diet of convalescents
should be well regulated. It is
emphatically a general disorder, effusion
often taking place into the Pleura and
Pericardium, and sometimes but more
rarely into the Peritoneum.

The most constant pathological
condition is however the active con-
striction of the Kidneys. In some
instances the urine may not be passed at all, but this condition is happily rare as when such is the case, little or any treatment can be adopted. Convulsions, coma and death supervene. The urine may be found in three conditions: 1st when it is diminished in quantity and contains blood, having also a dark red colour; blood also being present in the sediment. In addition much epithelium from the kidney and bladder from the straight and convoluted tubule wimini; 2nd when the quantity of the urine is increased, slightly dark in colour, having a emaciated appearance. 3rd when the urine is less sensibly diminished, its colour less distinct. In the first case the urine is completely coagulable on the application of heat or nitric acid; in the second the urine is extremely coagulable, highly so even in the third condition. The treatment is to be directed to relief of the kidneys by the proper action of the skin and blood.