

AN
INAUGURAL DISSERTATION
ON
Scorbutus

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Scorbutus

Definition, "Scorbutus is a disease in which the blood is depraved, the system debilitated, with local congestion, or feeble inflammation," foetor of the breath, sponging of the gums, spontaneous hemorrhages, livid spots beneath the skin, particularly at the bases roots of the hairs, and frequently contractions of the limbs. In Cullen's classification it is placed in the class Cachexiae, and order Impetiginosae.

History. This disease must have been known to the earliest writers in medicine; although the fact is disputed by many medical authors of the first celebrity. Its history can be traced back through the different ages, to the time of the crusades of Louis ~~14~~, to whose armies it proved very destructive. It afterwards became endemic throughout Europe, and was for many years, the terror of sailors and soldiers.

During the 17th and 18th centuries, it proved

very fatal to the sailors, and 'tis said that more mariners died of scurvy, than of all naval engagements, added to those who died at sea, by shipwreck and otherwise.

Cases have sometimes occurred in the country, especially in besieged towns, ~~And~~ and in places where it was ^{difficult} to get a supply of vegetable food. In former days, the City of London suffered greatly from this terrible scourge.

The years of famine in Ireland and Scotland, saw numbers carried to their ^{graves} by this disease. Our own army suffered greatly, during the Florida war, ~~the war with~~ Mexico.

Many more instances of its ravages might be given were it necessary. Suffice it to say, that 'tis apt to appear in crowded prisons, on ship board, in armies and other places, where there is a want of proper attention to cleanliness, food, &c.

Symptoms. The first symptoms of scurvy are, unhealthy paleness of the complexion; indisposition to bodily action; unusual weariness,

after exercise; fatigue and aching of the limbs,
as from over exertion, though the patient may
have been at rest; Some swelling, soreness, &
and tenderness of the gums, with a disposition
to bleed, from slight causes. As the disease ad-
vances, the face becomes more pale, puffy, and
assumes a dusky, sallow hue. The lips and
tongue are pallid, and form a strong
contrast with the gums; these are pur-
ple or livid, especially at the edges; they
are soft and puffy, rising up be-
tween & ~~around~~ the teeth, and bleed from
the slightest cause. The breathing is offen-
sive. Purplish spots appear on various
parts of the body, usually beginning
on the lower extremities, and after-
wards extending to the trunk, and
neck; they also appear on the hands
and arms, but seldom affect the
face. Haemorrhage often occurs, from
the nose, mouth and gums; and some-
times from the stomach, bowels &
urinary passages. The lower extremities
become painful and swollen, and the

general debility increases. Panting, vertigo
dizziness, and a feeling of fainting, with
palpitation of the heart, are apt to follow
muscular exertion. Petechial spots are
some times obvious, being sometimes
small; at other times as large as the
palm of the hand. These are said to
resemble the ecchymosis following
blows.

If the disease is not
checked, all of the symptoms are increased.
The complexion assumes a livid, or
leadn hue; the gums become greatly
swollen, and put forth a black
fungus growth, which sometimes
conceals the teeth; Sloughing takes
place, and frequently extends to the
cheeks; this sometimes lays bare the
necks of the teeth, which becoming
loose from this cause, drop out.
Blood oozes from the gums continu-
ally; the patient cannot chew solid
food on account of the softness and
soreness of his gums.

Hard and painfull tumours form under the jaws, in the hands, calves of the legs, muscles of the thighs, and upon the tibia. There is stiffness and contraction of the joints, especially the knees, and severe pain upon every attempt to move them.

As the disease advances the debility increases, till the least muscular exertion becomes dangerous, and patients have been known to die, or being removed from bed. Wounds and sometimes the seats of old ulcers, assume a new morbid action, small scratches frequently degenerate into unhealthy sores, from which blood flows, and coagulating, forms a crust, or soft gony mass, which on some occasions, increases rapidly, and attains considerable size. The edges of the ulcers, are pale and flabby, and covered with large unhealthy granulations. The bones become soft, and the seats of old fractures occasionally separate.

The epiphyses, in young persons have been known to separate from the bones.

The skin assumes a purple or livid hue, and if the gums have been ticked with mercury, they are much more liable to suffer than if they had not.

The vital powers are greatly prostrated, and there is often a tendency to congestion of a low inflammatory character.

This is frequently accompanied with an effusion of fibrine, or blood, which often coagulates, and is in a vital organ, proves highly dangerous.

This is said to be the cause of the hard tumour in the extremities just spoken of. It may take place in the substance of the lungs, simulating pneumonia.

In the pleura or pericardium, causing great oppression and dyspnoea. In the cranium, causing apoplexy, drowsiness, or coma.

Sometimes extravasations of blood take place in the synovial cavities.

These however, seldom separate. Serous effusions frequently take place in the cellular tissue, and closed cavities, and some times in the ~~parenchyma~~ ^{interstitia} of the lungs. When in the latter situations they greatly embarrass respiration. Sometimes this effusion is so great, as to amount almost to general apoplexy.

The appetite and digestion, are generally good, till towards the close of the disease. Some times there is a craving for food, especially for vegetables, which the patient is unable to partake, on account of his gums. The tongue is generally moist and clean, till towards the close of the disease, unless complicated with febrile symptoms. Frequently there is vomiting and gastric distress. The bowels are generally castive, some times obstinately so. This however is not always the case. Diarrhoea occasionally sets in, with blackish stools. The pulse is usually small.

feble and slow, and the skin below
the natural temperature; but occa-
sionally the pulse becomes quick, and
the skin febrile. The latter is usually
dry, slick and shining on the ex-
tremities; if they are much swollen.
The urine is scanty, and highly coloured.
Cerebral disturbance is not a frequent
symptom, though it sometimes comes
on towards the close of the disease.
Perhaps, the most distressing symp-
tom, is an inability on the part
of the patient, to sleep. And another
very singular symptom, is, that patients
suffering with scarlet fever, scarcely
know how very feble they are, and
frequently persist in rising from
their beds, when they are barely able
to move.

Course. This is variable. generally
it is gradual; the patient not being
able to say, when the disease commences;
but says he has felt well, sluggish ~~xxxx~~

and inactive, for some time before
he took his bed. At other times, it re-
mains latent for a considerable time,
then breaks out violently and runs
its course rapidly. In other cases
it remains for a great length of
time, without aggravation, and finally
ceases under a change of circumstan-
ces. The severity of the disease, depends
in a great degree, on the previous
condition of the system. Debilitated
persons, especially the aged and intem-
perate, sink soonest. It is said
also to be more severe on sea, than
land, though ^{there} is generally more diffi-
culty in the treatment of land-
than sea scurvy. This may, I think,
be attributed to the different circum-
stances which bring on the disease;
the land being perhaps less favourable
to the production of scurvy, than ^{the} sea.
There is little, or no appreciable differ-
ence, between scurvy on land, and
scurvy on sea; the pathology and

treatment being the same; all other things being equal. It generally occurs towards the close of winter, or beginning of spring, and is more prevalent among poor people, than those in better circumstances.

Anatomical Characters. The phenomenon most generally observed, after death, is extravasation of blood in various parts of the body. This is what we would most naturally expect, from the character of the disease. The purplish spots turn out to be ecchymosis in the substance of the skin. Similar spots are found on mucous and peritoneal coats of the intestines; Blood and fibrine are found in the cellular tissue; in the muscles, and between the periosteum and the bones, and sometimes in the serous cavities. Blood is sometimes found coagulated in the heart, and liquid blood is found in the large veins.

Bloody effusions have been seen on the brain, and large quantities of fluid have been found distending the pleura, pericardium and peritoneum. The bones are found fragile in some cases, and as has been stated, not unfrequently separate at the seat of old fractures, and from the epiphyses in young persons. The mucous membranes are generally pale and flabby, if not coloured by the effusion of blood.

Causes Various causes have been attributed to the production of scurvy, and fortunately for us with the cause the remedy suggests it self and many a poor fellow otherwise doomed to the grave at an early age, is now secured from the ravages of this once terrible malady. Among the many opinions that have been advanced, as to the cause of scurvy, may be enumerated, salt food; putrid water, bad

air, spiced meat, a want of person-
al cleanliness, unwholesome bread &c. All
of these are, no doubt, strong pre-dispo-
sing agents for the production of the
disease; still cases have originated,
that could not be attributed to
these causes alone, and this circumstance
would lead us to search for it
some where else. This is now known
to be the want of fresh succulent vegetables,
A strong proof of this ^{is} the rapidity with
which the disease disappears, when they
are furnished to those persons suffering
with scurvy. And again, no matter how
clean a ship may be kept, or how
well a prison may be ventilated, scurvy
is apt ^{to} appear, if vegetables compose
no part of the diet of their inmates.
Its prevalence in the latter part of the
winter, and beginning spring, is also
strong evidence of the truth of this as-
sertion. For at that season of the
year, vegetables are scarce, and the disease
to a greater extent than at any other time;

but as soon as the vegetables of spring come in to market, it disappears entirely.

Though the want of vegetables, may not be the only cause assigned for the production of scurvy, it must be the chief one.

This when combined with other depressing agents will seldom fail. I witnessed a case, ~~and~~ during the latter part of last winter, where it was evident that fear, acted as the remote cause of its production. The patient was a merchant, who visited the eastern cities for the purpose of laying in a stock of goods. It happened that the cholera prevailed to some extent on the river, and for fear of being in this disease, he abstained from all vegetable diet for 6 weeks, or 2 months. On his return home he was attacked with a well marked ~~case~~ of scurvy, which yielded readily, to usual remedies for this disease.

Some authors of high repute, have expressed it, ^{as} their opinion that indigestion was the principal cause of Scur-

ory. That the digestive organs failing to perform their proper functions generate unhealthy chyle and that forms vitiated blood. This appears to be inconsistent, to me at least, for the appetite and digestion in a majority of cases, are good as in health, til near the close of the disease. Some have found fibrine deficient, others state that the red corpuscles of the blood are wanting, while others again, have found an insufficient quantity of albumen, and each has attributed ^{to the cause of} the production of scurvy, to his own discovery.

It is more than probable, that each of these particular conditions, may have been found in the blood, but appears to me, to be a mere symptom of something else; or a mere effect of ~~some~~ some unknown cause. But well marked cases have been seen where ~~these~~ lesions of the blood were wanting, showing that the disease might originate, independent of them. There

question that would naturally arise, is, what is the cause of this Malady, if none of the circumstances mentioned can be? Reasoning a priori, ~~of the cause from~~ the effect we would say, that it was a want of some principle, or ingredient of the blood, supplied by fresh vegetables, but what that substance is, remains for the chemist to say.

Diagnosis - There are few diseases scurvy can be confounded ^(with) the only one, for which it is likely to be mistaken, is purpura. This is considered identically the same, by some authors; but there is a marked difference between the two. In the first place, scurvy depends on a want of fresh vegetables, purpura comes on often when there are most plenty. Scurvy begins in the latter part of the winter, and beginning of Spring, purpura in ^{the} fall, or latter part of summer. In purpura there does not exist a tendency to the formation

of hard, painfull tumors. as in scurvy.
The gums in purpura are not sub-
ject to swelling, redness or softness, as in
scurvy. Nor is there pain, or stiffness
of the joints in purpura, as in scurvy,
and the colour of the spots in scurvy
is said to be lighter, than in
purpura, especially in the beginning.

There is also great difference in
the treatment. Remedies that cure
scurvy, are found to aggravate purpura.
And to sum up the whole, so obvious is
the difference that we are compelled to
look upon the two, as distinct diseases,
arising from different causes, and
and requiring different treatments.

Local injuries are to be known
by their character and the circumstances
connected with them.

Some skin diseases are said to
resemble scurvy, when they are con-
nected with a state of the system
similar ^{to} that found in scurvy; or
purpura, these however, may be generally

known by this history and general symptoms

Treatment. In giving an account of the causes of scurvy, we have necessarily anticipated its treatment, and perhaps no disease to which ~~the~~ human flesh is heir, yields so readily to proper treatment, ~~as~~ as this disease. Nor are there many that admit of simpler treatment than scurvy. As a want of fresh vegetables, is the principal cause of ~~the~~ ~~production~~ of scurvy, we would naturally expect a supply of them to remove the cause, and cure the disease. This is found to be true. When the first thing to be done, when called to ^a case of scurvy, after giving such attention ^{as} may be necessary for his comfort, would be to supply him with such vegetables as are known to possess antiscorbutic properties.

I would remove him as far as convenient, from the place where the disease was contracted, as well as from every peccis

posing cause. The vegetable matter
most highly recommended is lemon
juice. This should be given freely
and at the same time, the patient should
be supplied with such farina-
ous and animal food, as he can
best chew and digest. The meats
in all cases, ^{should} be fresh, as they are
much easier to digest, than any
other kind. Among the vegetables
best suited for this state of the dis-
ease, may be mentioned, the cabbage
and potatoes. Cabbage in the
form of sour cress, and the po-
tato with soup, are good substitutes
for harder vegetables, when the gums are
sore. Garlic, celery, and lettuce, are
said to be valuable agents, in
the cure of scurvy. The different
pines, spruces and furs, are said
to possess antiscorbutic principles.
Milk has also, ^{been} recommended, but
has not sustained its character, ^{as}
antiscorbutic.

Ciaer, some of the Malt liquors, and
wine, are also mentioned as having
his property, and they may be given
with advantage, if there is much
debility, before moving the patient
from his bed, which should
never be done, without great
caution.

Little is necessary ^{or} in ^{the} way of
medical treatment. If the bowels are
obstinately confined, they should
be relieved with a mild laxative,
such as castor oil, or rhubarb.
Astringents may be used for the purpose
of checking haemorrhage, opium to
obtain sleep, if there is much
restlessness. If the appetite ^{be} feeble,
bitters, and the mineral acids may
be given with advantage. Nitre,
or a solution of this salt, has been
advised. Cantharides have also been
used, but these remedies have not
the entire confidence of the profession.
Mercury is said to be very pernicious.

tious, and if blood letting is resorted to, it should be with great caution.

As a local ~~remedy~~, a solution of the chloride of lime, or very dilute solutions of muriatic acid, may be used for raising the gums. A solution of Creosote, may be used to correct the foetor arising from the ulcers. Dressings of lint, soaked in lemon juice, one part, water two parts, should be applied to the ulcers, and covered with oil silk, to prevent evaporation.