

AN
INAUGURAL DISSERTATION

ON

Inflammation & its Treatment

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Inflammation & Treatment

Inflammation may be defined to be a state of altered nutrition attended with increased vascularity & sensibility, with a tendency to morbid secretion & change of structure. Ordinarily attended with redness pain heat & swelling inducing more or less disturbance of the general system. The transition from health to true inflammation may be divided into three stages. Simple vascular excitement Active congestion and true inflammation Simple vascular excitement is produced by the application of any irritant to the surface its impression is produced through the nervous system which is manifested

particularly through the blood vessels
At first the blood circulates with
great rapidity although the small
arteries & capillaries are of diminished
calibre. Afterwards the vessels yield
& are dilated & an increased quantity
of blood circulated with great rapidity
with a tendency to serous & plastic
exudation. The function of the part
is exalted & this may be manifested
by excessive nutrition & secretion
This is simple vascular excitement
In Active congestion there is a
superabundance of blood sent to a part
& the minute arteries & capillaries begin
to give way under the increased
pulsation of the larger arterial trunks
by over distension the vascular
coats lose their tonicity the lymph

globules unusually adhesive to each other & to the walls of the vessels thus the circulation loses its accustomed rapidity & becomes slower even than in health. Exudation is more copious than in the previous stage it consist of serum & liquor sanguinis the latter usually predominating & when the action has been for some time sustained & as it were established in the part fibrin alone may be deposited. The natural function of the part is not simply excited but begins to be perverted, for example secretion is not only increased but changes in its character. Nutrition is becoming more & more disturbed this is the commencement of diseased action. This action may resolve after

The removal of its simple exciting cause
or it may be sustained for some time
as in the healing of wounds & the closing
of ulcers or it may advance to ~~Chronic~~
Inflammation: The local symptoms
of slow Inflammation are redness
heat pain & swelling: Redness is said
by Hunter to be due to an afflux of
blood to a part: The vessels become dis-
tended The capillaries convey red blood
The proportion of red globules is also in-
creased by the exudation of the serum:
The degree varies in different tissues
& according to the intensity of the
action The tint varies between a bri-
=ght scarlet & a deep purple: Permanency
of redness is the pathognomonic sign
of Inflammation The redness of blush-
ing is not indicative of inflammation

Because it is momentary & not conjoined
with other symptoms the Heat is owing
to the rapid oxidation of the tissues
which are also supplied with an
increased quantity of blood heat of
inflammation may be partly ac-
tual as ascertained by the touch
or the Thermometer & partly the result
of a perverted nervous function estima-
ted only by the patient. It must
be permanent & conjoined with other
symptoms to be characteristic for
in fection there is burning of the
hands & feet yet no inflammation
is present Pain is occasioned by
the pressure upon the nerves of the
inflamed part & the distension
of the arteries which are supplied by
the small nerves & partly by disordered

function. Mechanical pressure increases
it for instance if the hand is peritonitis
or inspiration in pleurisy Pain varies
with the natural sensibility of the
part affected Thus inflammation
produces more pain in bones and
ligaments than in mucous membrane
It is not always indicative of infla-
-mmation for example in neuralgia
in which the pain is intermitted &
not so in inflammation in the latter
the pain gradually increases from
the first if it suddenly disappears su-
-spection is excited lest gangrene has
taken place. It may be sympathetic
& felt at a remote distance from the
point of actual disease in affections
of the hip joint the patient complains
of pain at the knee joint in inflammation

of the liver the pain is felt in the
shoulder in the kidney at the vertex
of the neck thro. Swelling is caused by
increased quantity of blood and an ef-
fusion of serum or pus. The swelling
of inflammation must be in conjunc-
-tion with other symptoms also for
in oedema there is swelling yet no
inflammation. It must be gradual
in its development. The sudden swell-
-ing produced by the dislocation of the
wrist is not that of inflammation
It must also be recent, not like
the slow growth of a tumour It
may be insidious as in the brain
or it may be an advantage as in a
fracture It is most remarkable in
loose testis. The causes of inflamma-
-tion are predisposing & exciting

Predisposing causes are sanguine Temperament excitability; plethoraceps in food, drink or exercise; debility, miasmata bad air food & clothing
Exciting causes may be direct as the chemical effects of acids indirect as heat & cold specific as the bite of a Rattle snake The Results of inflammation. Inflammation has only one genuine termination I mean that of resolution or recovery the inflammatory action subsiding & the part returning to its former state but beside resolution it may have either of the following terminations or consequences as I think most appropriate Hemorrhage an escape of blood from the distended blood vessels effusion of serum

Effusion of fibrin or of coagulable lymph which when organised produces adhesion. Suppuration The formation of a peculiar fluid called pus closely allied with which is the change called ramollissement or softening. Ulceration The disappearance or removal of the inflamed part. Mortification or the death of a part The causes of which are a want of vital power & may be the result of high inflammation, mechanical injury, pressure, heat, cold, any obstruction to the return of the blood, deprivation of nervous agency, interruption to the arterial supply as by an aneurism or bandage, general debility or improper food. The Treatment of inflammation. Inflammation The Great enemy of us all

Which I conceive to be the foundation
or groundwork of two thirds of the
many formidable diseases that the
Human family is heir to has from
the time of the Father of Medicine
to the present received the most rigid
attention & minute observation. All
agree however as to the general principles
still there is discrepancy of opinion. The
great object is to remove the cause
and afterwards to prevent or diminish
the inflammatory action.

The chief means are termed anti-
phlogistic & at the head stands
Genl. Bloodletting which if carried
far enough induces a state of insensibility
& suspended circulation to which
the name syncope or fainting is given.
The suspension of the heart's action depends

upon two causes first The abstraction
of its natural stimulus I mean the
Blood & secondly & principally on a
peculiar sedative influence transmi-
-ted to it from the Brain when the
latter does not receive its due share
of arterial Blood And although
The mere loss of Blood may be of
service by securing the system from
a source of excitement still the
principle good effects of bloodletting
in inflammation depend upon its
sedative effects on the Brain &
through the Brain on the Heart
And as it is often absolutely necessary
to bleed persons in acute diseases
who are extremely debilitated it is
of importance to produce as much
of that sedative effect with as

little loss of blood as possible. For
this purpose the blood should be
drawn as quickly as possible from
a large orifice & above all the pa-
-tient should sit or stand upright
For if the blood is drawn slowly
so that the vessels have time to
adapt themselves to their diminished
contents or if the patient is in the
recumbent posture so as to assist the
flow of the blood to the brain the
bleeding may be continued almost
to death without the occurrence
of syncope. We invariably bleed
for effect whether one or thirty
ounces be abstracted as a general
rule the blood should be permit-
ted to flow till paleness of the
lips ensue sighing nausea fluttering

pulse or relief of pain indicate the approach to syncope but full syncope should always be avoided because of the force of the reaction & the danger to the patient. Toleration or the power of bearing bloodletting is a sure indication as to the type of the inflammation & in doubtful cases should be ruled on the age sex & temperament. Local bleeding is only preferable when the inflammatory action is not high the powers of the system are low when the inflammation on the one part has been fully established & there would be no benefit from general bleeding and when extreme age forbids incising.

we have the advantage of general
bleeding combined with local abstrac-
-tion Leeching is only useful
where cupping is inapplicable

Purgatives are also depletive in
their action They deplete by causing
an increase of mucus exhalation
from the bowels They also prevent
assimilation of nutrition & promote
absorption They are particularly
useful in diseases of the head. But
are contra indicated in bad fractures
& inflammatory affections of the
bowels Mercury is not only a good
purgative but gradually introduced into
the system seems to exert a tonic
effect on both the extreme blood-
-vessels & lymphatics That is in the
absorbents Thus preventing or limiting

effusion & at the same time expediting
the removal of that volume had
already been evaded Opium is
useful when combined with Calomel
& given after bleeding Before it
has the power of arresting secretion
& stimulates - afterwards it soothes
the nervous system relieves pain &
prevents reaction. Emetics ^A & Diuretics
& Diuretics are useful at the outset em-
ptying the stomach & promoting
perspiration (nothing reliable is expected)
Sedatives not evacuant These remedies
reduce fever & inflammation by
acting on the nervous system with-
out increasing the secretions They are
Hyoscyamus Conium Digitalis the
two first of which are of emusive
service when combined with Calomel

& Antimony to prevent reaction
& soothe pain in inflammatory
cases attended with great nervous
debility. The warm bath acts in
every way analogously to Opium &
requires the same precautions as it
stimulates. Before it soothes it must
be preceded by evacuations if the
habit be plethoric. The proper
temperature is $94^{\circ} F$ & it should
be continued long enough to pro-
duce complete relaxation.

Diet as a general rule should be
of the least stimulating nature
Water-gruel & Tea might for many
days suffice for the robust & plethoric.
The starving system must not be in-
criminably applied to children or the
old or debilitated on the contrary

Their strength must be supported
by mild fluid nutriment as sou-
=root beef-tea & even wine if necessary

Regimen There must be a total
avoidance of every thing that would
irritate mind or body Perfect
rest in the recumbent posture &
in a position as easy as can be made
cool air free ventilation The exclu-
=sion of light & sound with mental
consolation to allay all doubts or fears
& inspire resignation & cheerfulness
are most potent aids to medical
treatment which without them
would often be utterly fruitless

I cannot close without saying some-
=thing of my high appreciation of
the application of cold & The other
Lancashire. Where the head or the

extremities and implicated cold to
the forward & back to the later
and services of the highest value
without which no case of acute
inflammation can be said to be
scientifically treated. Cold applica-
tions are of use to diminish heat
& cause contraction of the capillaries
but they should be applied contin-
uously otherwise the pain will
be aggravated when the heat returns
the bandage controls the circulation
in the part. Stimulents and
astringent^x solutions are of great
service in inflammation of
mucous membranes by decomposing
& washing away their irritating
secretions & inducing contraction
of the capillaries. Counters

Irritants & blisters are the best form
of counterirritants in recent inflam-
mation but they should never
or scarcely ever be applied too near the
seat of an acute disease & not till
its activity has been subdued by
previous antiphlogistic remedies

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