

AN

INAUGURAL DISSERTATION,

ON

Inflammation

SUBMITTED TO THE

PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY

OF THE

University of Nashville,

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

BY

C. L. Sanders

OF

Berkeley Georgia

18 55

CHARLES W. SMITH,
BOOKSELLER AND STATIONER,

NASHVILLE, TENN.

St Paul of Cork

Chief of Surgery in

The Medical De

partment of The uni
versity of Cork

This I have I

Respectfully Inscribed

By Wm Sanders
of Lexington Va.

Inflammation

In Choosing a Subject for my Inaugural dissertation, I have selected Inflammation, I have not been influenced in my selection, by its difficulties, but its great importance to the Surgeons, and Physicians. I shall attempt to recall and embody a part of the instructions I have received since I commenced the Study of Medicine, in reading and attending lectures, last season in the Jefferson Medical College, and this Session in this Institution.

Whatever truth or value there may be in what I write, I owe principally to the Lectures which it has been my privilege to hear within these walls.

Errors however may arise from
my Misapprehension, and in attempting
to advance my opinion on the subject.

Definition.— The definition of in-
-flammation, varies with the fancy
of different writers. That of Miller
is as generally received as any, he
defines inflammation to be "a per-
-verted Condition of the blood and
blood vessels of a part interrupting
its healthful function, and chan-
-ging its Normal structure, ordin-
-arily attended with redness, pain,
heat, and swelling, and inducing
more or less disturbance of the gen-
-eral system."

On the importance of a correct kn-
-owledge of the subject of inflam-

=mation in all its bearings, would indeed be a work of supererogation to enlarge upon it.

The greatest improvement in the healing art seems to have resulted from appreciating the unity of Nature's operations in a great variety of dissimilar diseases.

We can scarcely conceive of a Practice of Medicine, or a School of Surgery without, some distinct knowledge of inflammation,

And in recent times has not the progress of physic been chiefly promoted, by the establishment of more complete analogies between internal diseases, and the external inflammatory, with which we

were necessarily more familiar.

Inflammation is not so much a disease, as a mode of action; common to nearly all diseases. It is not only the process by which Nature in a majority of cases, destroys life, but that by which in less unfavourable circumstances, she preserves, and restores, health & life. It is similar to the Surgeons Knives or Soldiers sword; that which saves or destroys life; what is called functional disturbance may occur, and in some cases destroy life, without actual inflammation; but it is more than probable that morbid conditions never proceed so far as to produce structural lesions, with-

-out the supervention of inflammation.

Even in some of the most necessary functions, not morbid, a process occurs entirely like inflammation, and differing from it perhaps only in degree. The development of the foetus in utero, the occasional action of the erectile tissues, even digestion, exhibits some of the characteristic features of inflammation; and on the other hand there are inflammations strictly so called which for want of a better name, we distinguish from others as healthy inflammation, - rather a bad name.

Most writers make three stages of transit from health to inflammation, "first simple vascular excite-

=ment, second active congestion, third true inflammation. Nervous excitement, from whatever cause produced, generally occasions a greater flow of blood to the part affected, and on any obstruction to the return of the usual amount of blood in its turn excites the nerves; blood would seem to be the material, & nervous influence the power, with which Nature in organic bodies, does her work; when excitement, or stimulation, stops short of inflammation, it is the Irritation of Pathologists. The subject may, or may not, be conscious of this state, but in a higher degree, the nervous excitement manifests its=

Self in pain, and the sanguinous accumulation by its color, visible through the integuments, or on exposure of the parts; the redness not being transient but diffused through the capillary vessels;—Swelling also results from this state of the vessels, or from the effusion which are its consequences. There is an increase of heat, either from the state, or action of the nervous or vascular systems, or both; this elevation of temperature although the most striking sign, and that which has given name to this state, is more apparent than real. The more delicate sensibility, at that times, being such that a change of two or three degrees has all the effect.

apparently, of twenty or thirty degrees.

There is also frequently throbbing in the part, and an alteration, or suspension of the natural secretions of the part affected.

The four phenomena enumerated were known and designated by name, by the oldest writers, and are as convenient names as they were two thousand years ago. — By carefully regarding the above symptoms, we will generally be able to distinguish inflammation from the Neuralgias, and the other near irritations; and on the other hand from Congestion and plethora. — How much the Nerves have to do with its development is hard to determine. — That some causes

of inflammation, irritation, operate first on the Nerves, is probable from the following facts; a mechanical injury, may act on the sensitive nerves long before inflammation begins; thus, the pain from the sting of an insect, is felt instantaneously; and still more in the effectual manner in which it is prevented, or restrained, by the bandage to a degree much greater than can be accounted for by the effects of the pressure on the bloodvessels alone.

According to its intensity or something peculiar & specific, in its action, and varying also with the structure or situation of the part affected, inflammation has been observed to

have tendencies to various results,
Most of these have been technically
enumerated.

Terminations.— There is by no means
the same agreement with authors
about the terminations, as the sig-
-ns of inflammation, scarce any
two books will agree in their
enumeration of them. Professors
Mutter and Ore, give only three
which I think is correct.

Terminations.— first Resolution, se-
-cond Metastasis, third Mortifica-
-tion. Resolution, this is the most
favourable result;— if the cause be
not too violent or long continued
the excitement passes off, the effus-
-ion, if any, is absorbed and the ba-

-blance of the circulation reestablished; There is a gradual disappearance of all the symptoms; the purpose for which inflammation was required being effected. - Resolution is the sudden disappearance of inflammation; and when it is attended by the establishment of the same symptoms in a new part, the term Metastasis is used.

Necrotification and Gangrene by most writers are considered products of inflammation, but I think they are more properly terminations.

Local death may occur from direct Mechanical violence or Chemical agents, from the nutrition of the part being cut off, or from excessive inflammatory action exhausting its vitality.

Parts may be so enfeebled that any degree of inflammation is relatively excessive; hence in parts frostbitten the necessity of caution in slowly applying warmth and other stimuli; any reaction, but the most gradual, being relatively inflammatory, and almost certainly ending in gangrene. When from the extent of the local injury, or the state of the general health, Nature cannot prevent mortification, she entrenches herself against it and endeavours to prevent its diffusion. In external parts the putrid odour is one of the distinguishing signs; often suddenly the pain and heat abates, and the circulation is arrested in the part; and vesicles filled with serum, appear over the skin.

The products of inflammation are various and differently treated of by writers, I will mention some of them only. Adhesions, after a solution of continuity, if the divided parts are brought, and kept in contact, there appears under favourable circumstances to be no inflammation developed, or if any no more than is necessary for their reunion; the minute vascular ramifications are elongated across the line of union, and the parts become one again. This disposition to take on adhesion is most manifest in the Serous Membranes; and the wisdom of the arrangement, and the evidence it furnishes of providential design on the part of nature, is at once obvious, when we consider what would

be the consequence of every attack of Pleuritis occasional emphysema or ulceration of the lungs

It has been supposed that when inflammation runs high, the Mucous surfaces like the Serous take on adhesion; ^{the} Cases in which this appears to take place are explained, by the previous sloughing away of the Mucous membrane, and the union of the denuded Cellular substance. — What would be the tenor of life if the mucous Membrane, so much more exposed to inflammation than the Serous, were it subject like it, to adhesion. The adhesive process is useful in the formation of Cysts, in healing Wounds, &c. Sealing bloodvessels, enveloping pus, adhesion may be serviceable or injurious.

Suppuration is a very frequent product of inflammation. It is often required to remove foreign bodies before the inflammatory action can terminate.

The consequence of Suppuration and the collection of Pus in the Serous cavities is dangerous and often fatal; in the Cellular tissue it gives rise to abscesses, which if well circumscribed and favourably situated is very far from putting an end to the inflammation. Pus it is believed is not as was formerly taught a product of putrefaction; but a true, though morbid secretion. Tissues not naturally secretory become so in this stage of inflammation, and secreting surfaces, however different their natural products, throw out when inflamed

the same well known matter.
Profuse Suppuration when long continued or in a debilitated person is apt to produce a fever called hectic. The eyes are peculiarly bright though sunk in hollow orbits, there is a general Pallor over the surface except upon the cheeks, where the well known hectic blush is, which if once seen can never be forgotten. Laudable pus is not corrosive but bland and protective to tender granulations; the access of air to a wound or Serous Membrane promotes the formation of pus.

Ulceration.—Hunter and others supposed that ulceration was entirely the result of absorption, but more recent writers think it is more

properly a vital softening of a texture, changed by inflammation and Suppuration; becoming disintegrated and fluid, it passes away with the pus. The intemperate and debilitated, from what ever cause produced, and those of Scrophulous or Syphilitic taint are most liable to be affected. The parts most liable to be affected, ^{are} those most distant from the heart, and where the circulation is weakest. The extremities and parts of recent growth, Cicatrix, and Callus.

For want of time and space I have written but little or nothing on many of the products of inflammation. Effusions, Hardening or softening, Atrophy or Hypertrophy.

Diagnosis. From experience I can say but little of diagnosis, yet I think by closely observing the general symptoms it would not be difficult to distinguish inflammation from mere congestion; active determination of blood to a part, ~~or~~ nervous irritation or Neuralgia. — Congestion is an accumulation or stagnation of venous or capillary blood in a part, the cause may be a mechanical obstruction to its return or by weakness or want of tone in the vessels. Congestion may produce some weight, pain and disturbance of function. Neuralgia generally may be distinguished from inflammation by its often being relieved.

by applications that would augment inflammation, Pressure and Stimulants, and by the pain being severer than the symptoms would justify - And the pain usually intermits, and many other signs I might mention

Treatment the treatment of inflammation must be varied according to the various modifications and tendencies mentioned, and to many circumstances besides, that cannot be alluded to here. The kind as well as degree of inflammation, its seat, connection and stage, have all to be considered. The general indications of treatment might be summed up in a few words. While a particular account of all kinds & cases of inf-

Inflammation might be extended to
Volumen.

The word Antiphlogistic appears
to have been long in use and con-
-veniently expressive of the regimen
appropriate for most inflammations
or fevers. It may be understood to
-imply the utmost possible avoiden-
-ce of all Stimuli; physical, mental,
or Medicinal Stimulants included, un-
-less applied as Revellents or counter
irritants. In proportion as our know-
-ledge of inflammatory disease has
increased, their treatment has been
generalized and a few judicious
remedies have taken the place of the
innumerable applications and presc-
-riptions of empiricism.

With but few exceptions the first

the first object should be to remove the cause and then to prevent or diminish the inflammation,

General Bloodletting, This is not required unless the inflammation is severe or when important organs are involved, - for instance, the lungs, brain or their membranes or the peritoneum; - for example, in Child bed fever. - Which I think is nothing more than inflammation of the womb or veins of the womb and peritoneum. In the above cases general bloodletting will frequently be required, the patient should be sitting and the the blood should flow in a full stream, the benefit to be derived from bleeding is not merely the loss of superabundant blood but also the sedative influence. Where by the empt-

-tied Capillaries can resume their natural tone.

Local bleeding is often preferable when the inflammatory action is not high or is external or the strength of the patient forbids general bleeding.

Purgatives are generally of much service in inflammation, they act as derivants, prevent nutrition and promote absorption, but generally are contra indicated in inflammation of the bowels.

Emetics, diuretics and diaphoretics are of great service in unloading the stomach and promoting the excretions. Mercury is also highly beneficial in many cases, it prevents or limits impending effusions and adhesions and at the same time

expedites the removal of that which has already been exuded.

Opium or some of its preparations in a majority of cases is indispensable at some stage during a severe attack of inflammation.

It is of much importance to attend to the diet and drinks in inflammatory diseases, and at the same time the mind and body should be at rest and comfortable. Ventilation is of the greatest importance, the inflamed part should be as quiet as the case will admit of.

Position, The part should be elevated so as to assist the return of blood from the part.