

No. 495

AN  
INAUGURAL DISSERTATION

ON  
*Cystitis.*

#493

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

BY  
*Harrison Whitfield*

OF  
*Tennessee.*

1857-8

W. T. BERRY AND CO.

BOOKSELLERS AND STATIONERS, NASHVILLE.

# Cystitis.

The importance of this disease is a sufficient apology for its selection as the subject of a Medical Thesis; as neither age, sex or condition of life gives entire immunity from its sufferings and dangers.

The importance of the functions of the bladder in the animal economy, and the rapidly fatal termination of some forms of disease to which it is subject, render the study of this organ both in health and disease of the highest importance to the medical practitioner.

Few diseases have claimed his attention more seriously than Acute Cystitis or Inflammation of the bladder; not so much

perhaps, from its frequency in comparison with other diseases, as from the dangers entailed on the patient, even in mild forms of the disease. To say nothing of the difficulties consequent upon its existence in an aggravated form, or the not unfrequently lifelong sufferings of its chronic stages.

The writer of this does not claim to offer anything new upon either the treatment or nature of the disease, and is compelled in the arrangement of the subject to follow the one usually observed by those who have written on the subject.

It is usually ushered in with chilly sensations followed by flushes of heat, and afterwards with

continued fever; pain in the hypogastric region, with some swelling and tenderness upon pressure; occasional nausea and vomiting; constipation of the bowels; sometimes the disease is attended with painful tenesmus and almost invariably with frequent desire to pass the urine; severe pain in the glans penis and down the inside of the thighs adds greatly to the inconvenience of the patient.

The bladder either refuses to retain more than a few drops of urine at a time, or swelling or spasm about the neck of the ~~bladder~~ organ prevents the escape of the fluid and adds to the danger of the case that of Retention. The urine is high colored and scanty, occasionally bloody

and mingled with specks of mucus. The tongue is covered with a white fur — The patient complains of great thirst and has an anxious expression of countenance.

The pulse is full and greatly increased in rapidity. As the disease progresses the muscular and peritoneal coats become involved in the inflammation and it sometimes spreads over the whole abdominal surface. When the disease goes on to a fatal termination, death is generally preceded by hiccough and vomiting of dark bilious-looking fluid; frequent diarrhoea; small and rapid pulse; extremities cold; skin generally bathed in a clammy perspiration; delirium

followed by coma or perhaps convulsions and death; mortification of the organ, of course, taking place in such cases.

The foregoing, I believe, constitute most if not all the symptoms of this formidable disease; and they are certainly such as call for, in the practitioner, the exercise of sound judgment and a discriminating use of remedies for their relief.

The disease is not uniformly so virulent as described and may vary in different cases according to the modifying influences which may happen to surround the patient, such as age, habits of life &c. &c, or the different causes which may have given rise to the

attacks, A case brought on by an external injury would, no doubt, differ in many particulars from one induced by the use of Cantharides or other poisonous articles, and require a treatment somewhat different. Where death is not the immediate consequence of the disease, Recovery or Chronic Cystitis follow.

Some portions of the mucous membrane seem to be more susceptible to inflammatory attacks than others — that portion in the neck of the bladder being most uniformly its seat, when the mouths of the ureters become involved, Smelling,

And sometimes complete occlusion takes place, greatly dilating the ureters with urine and exerting a pressure on the kidneys which speedily brings the case to an unfortunate issue.

Cystitis in a mild form and in its early stages, increases considerably the secretion of mucus, without otherwise presenting any great change in the appearance or composition of the urine; but in later stages or more virulent attacks, the <sup>mucous</sup> membrane undergoes changes of a marked character, resulting in ulceration and puriform discharge, or in an effusion of lymph and the formation of

false membrane. Thickening of the coats ~~is~~ <sup>is</sup> more generally the result of long-continued irritation, mechanical or otherwise.

Ulceration is rather difficult of detection, as the amount of mucus is largely increased and the pus, mucus and urine are so intimately commingled as to render it uncertain whether the pus proceeds from the kidneys, ureters, bladder or urethra. The muscular and peritoneal coats are, by their contiguity, often involved in this disease; inflammation of the former sometimes resulting in abscess and ultimately perforation either ~~of~~ into the peritoneal cavity, producing

instant death; or into the vagina of the female or the rectum of the male; resulting in the one case in vesico-vaginal fistula in the other in recto-vesical fistula.

When the peritoneal coat becomes involved it is usually in extreme cases and the patient does not generally long survive it. The causes which induce this disease are numerous; many of them being mechanical — such as wounds directly made, or bruises sometimes received by violent horseback exercise, thus bruising the part of the urethra near the bladder. Foreign bodies introduced into the bladder awkwardly or with undue force — The existence of

urinary calculi in the bladder; enlargement of the prostate gland — strictures of the urethra or indeed any obstruction to the steady and natural escape of urine. Acute Gonorrhoea occasionally acts as the cause of Cystitis by following the extent of the urethra and assailing the bladder. Hemorrhoids not unfrequently induce the disease by their close proximity and the general congestion of the parts which uniformly exists when they are present. It is likewise induced by Cantharides taken internally in large doses or absorbed by external application to blistered surfaces. Sudden exposure to cold after having been

heated — except in drinking  
metastasis of Rheumatism,  
Pout and some eruptive diseases  
are among the causes that are  
known to excite the disease  
Treatment.

Acute Cystitis should be  
met in its early stages by the free  
use of the lancet, not regulating it by  
amount, but by its effect upon the  
system. and an impression once  
made should be carefully kept up  
by the free use of Antimonials in nau-  
seating doses. The bowels ought to be  
kept open though much purging is  
objectionable. Leeches applied over  
the pubis or around the anus; warm  
anodyne fomentations over the hypogastrium—  
frequent warm general or hip baths;

demulcent drinks, occasional ~~in-~~  
odyne injections thrown up the  
rectum and retained for a time.

When brought on by the presence  
of calculus, of course, all treatment  
not surgical is merely palliative.

This constitutes the usual course of  
treatment in a case of Acute Cystitis,  
and will in the generality of cases  
be sufficient to effect a cure, when  
the disease, however, becomes Chronic,  
the mucous membrane becomes perma-  
nently thickened and the discharge of  
mucus is greatly augmented in quantity.

The muscular coat, too, from the  
frequent efforts to empty the organ  
is very much increased in thickness  
and produces a corrugated appearance  
when the organ is examined.

The discharge of mucus becomes quite large, being thoroughly mingled with the urine when first voided, but settling to the bottom of the vessel after standing some time.

The long-continued inflammation acts upon the general system by bringing on emaciation, loss of appetite, sleeplessness, great susceptibility to the influence of sudden atmospheric changes, and finally hectic fever, with its train of evils. The pathological condition shows thickening of all the membranes of the bladder, particularly of the muscular coat; and it is not uncommon to find the organ adherent to other viscera by bands of false membrane which have formed in the progress of the case.

The treatment of Chronic Cystitis differs materially from that of the acute disease. Depletion is rarely called for unless it be locally,

Many internal remedies that are supposed to exert their beneficial effects upon the bladder by being absorbed and carried directly to it through the urine, have at various times enjoyed the confidence of the profession, such as Turpentine, Balsam Copaiba, Cubetsze, and they are still used, perhaps, in the majority of cases.

Buchu, Parira Brava and the stimulant diuretics of that class are likewise much used and with marked benefit in most cases. Strict attention must be paid to the skin, and authors unite in the propriety, if not the absolute

necessity of securing a uniform secretion from the surface of the body, and at the same time warding off the injurious effects of sudden vicissitudes of the weather. This can only be secured by the wearing of woollen clothing next the skin and keeping the temperature of the patient's room uniform. Demulcent injections thrown slowly into the bladder are recommended by some, whilst others rely strongly on the virtues of injections of Sulph. Zinc - Acet. Plum. or Acid. Nitric. When the latter is employed it will, of course, be necessary to dilute it very largely.

This is a favorite remedy with Sir Benj<sup>m</sup> Brodie, who used only 1 drop to the ounce of water increasing the strength

of the solution at each successive  
time of using it - Recent experience,  
however, seems to demonstrate pretty  
clearly the advantage of the solution of  
Nitras, Argenti, as an injection over all  
other remedies. The patient be-  
fore using this or the Putric Acid  
should be placed in a warm hip-  
bath and take a full dose of some  
preparation of Opium, with the view  
of diminishing the sensibility of the  
parts and escaping the intense pain  
which would be certain to follow the proceeding  
without this precaution; indeed, it should  
not, on any account be neglected.

Directly upon leaving the bath a  
warm demulcent injection should  
be slowly and carefully thrown ~~up~~<sup>into</sup>  
the bladder, and permitted to remain

for a few moments, and immediately upon its escape the solution of Nitrate of Silver (one to four grains to the ounce of water) should be thrown up, permitting it to remain in the bladder one or two minutes.

The patient should again be placed in the warm hip bath for ten minutes, or until the pain has in some degree subsided. After the operation, a period of ease follows; generally to a greater extent and of longer duration than the patient had for some time felt. The proceeding should be repeated once or twice a week and it is generally sufficient after a few times using it to effect a permanent cure.

When the general health suffers, the patient will require tonics, generous.

diet, though such as is easily digested; gentle exercise in the open air, if possible, not omitting, of course, strict attention to the functions of the various other organs.

In the foregoing I have given, I believe, a correct, if not a full account of the Causes, Symptoms and Treatment of this really important disease; and although fully conscious of my inability to furnish a Thesis upon this, or perhaps, any subject, wholly free from such imperfections both of style and arrangement, as usually attend a first effort, I offer this with the confident hope that it will not be submitted to those rigorous

tests so necessary and proper  
to effusions destined to see the  
light.