IN AUGURAL DISSERTATION
ON
Inflammation and Ulceration of
the Cervix Uteri.

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BY
J. W. Blodoe

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It is demanded of each student of medicine, who presents himself for the honor of the degree of M.D., to the faculty of this institution to write a thesis upon some medical subject, and where there are some seventy-five who are candidates for that honor in this institution, there is scarcely a subject but what has been selected by some student. And as very few have written upon the diseases of the urinary organs, I have selected for my essay, Inflammation and ulceration of the Urinary bladder. But before going into the investigations of the various pathological phenomena which present themselves in the various diseases connected with this important organ, it is necessary to notice the anatomical structure and physiological functions of this organ. Though it is not my intention to go into the minute anatomical structure and physiological functions of this organ, but merely to point out the features of its structure and functions which bear closely upon its pathological.
Conditions. The uterus is a very peculiar muscular organ. In the virgin or non-pregnant state it weighs from one to one and a half ounces. Its muscular tissue is in a complete rests, more like a mass of fibrous tissue than that of muscular structures. But on the contrary, the impregnated uterus is easily demonstrable. The muscular fibers lying in bands, circles, and ellipses which are very perceivable to the slightest glance, it is then a highly vascular organ and instead of weighing one or one and a half ounces as in the unimpregnated state, it now weighs several ounces, its arteries and veins distended with blood and its vitality exceedingly great, and indeed it becomes an exceedingly vitalized organ and in consequence of this great physiological change in its structure and functions of this organ, diseases of various grades and character must be a necessary result.

In the unimpregnated state these phenomena rarely
occur, owing to the extreme condensation of the fibrinous tissue. The blood vessels are very small and so compressed as to admit of but very little red blood to circulate in them, and as a necessary result of these anatomical facts, the vascularity of the nonpregnant uterus is very low; therefore it is seldom attacked with inflammation, and when it does occur, it assumes most invariably a chronic character. There is considerable difference between the anatomical structure and physiological functions of the uterus and its cervix. They both have muscular fibers and supplied with blood vessels and nerves. But the cervix is more freely supplied with cellular tissue and is much more freely supplied with nerves and blood vessels; a condition which greatly increases its liability to inflammation. In viewing the anatomical structure of the body of the uterus in the nonpregnant state is devoid of cellular tissue; and presents a very mucousular structure, and its cavity is lined
nearly by a simple mucous membrane. On the contrary, the uterine wall contains cellular tissue is of a less dense structure; it is more vascular and has a cavity quite distinct from that of the body of the uterus, and is lined by a thick vascular mucous membrane studded by numerous mucous follicles; we also find that immediately adjoining the uterus are serous organs lying in a bed of filamentary cellular tissue between two peritoneal folds, but without the peritoneal cavity, and they themselves containing cellular tissue and firmly supplied with blood vessels and nerves. With regard to the physiology of the uterus throughout the whole period of its non-pregnant state, it has an important function to perform, that of menstruation. The function of menstruation consists of a puerperal secretion, or excretion of a certain quantity of blood from the cavity of the uterus; menstruation is preceded, accompanied, and followed by a determination
of blood to the uterus, if an examination be made a few days, or during, or a few days after menstruation, the mucus membrane will be found turgid and of a deep red color establishing the fact of a considerable passive congestion of this organ. When there exists a disease of this organ, the congestion often extends to a much thinner portion, and must necessarily be greatest in the most vascular part of the organ. The mucus membrane lining the cervix is the periodical return of menstruation is most generally every four weeks and last for several days and, a few days before and after menstruation this mucus haemorrhagia will last from eight to ten days. It thus appears that one third of each month, the uterus of a menstruating female is in a physiological state of congestion; a state which immediately precedes inflammations, and nearly all the female who apply for medical advice when labouring under some uterine affection will be found on a careful examination, labouring under this disease. You will often be req-
... to prescribe for leucorrhoea, while menorrhagia, 
dysmenorrhea, prolapsus, and inable uteris, all these 
symptoms of diseases are immediately the result 
of inflammation of the cervix uteri and are to be 
treated successfully only by ascertaining the primary 
disease to which they are their origin, and more 
especially chronic leukorrhoea when it is present and 
accompanied with menstruation. Having said this much 
upon the physiological relations of this organ, I will 
first notice the diseases incident to the virgin female. 
Inflammation of the cervix uteri may commence in 
the mucous membrane lining its cavity, or the mu-
cous follicles which that membrane present, though in 
the majority of cases both are implicated; prior to 
menstruation. The uterine is dormant its vitality is 
very low and is very little exposed to inflammation. 
Menstruation once established is a very different 
state of things intervenes. The uterine system becomes 
more vitalized and at each menstrual period.
This organ is in a passive or physiological state of congestion; but so long as this physiological state of congestion remains in its proper bounds, it is nearly an element of its natural functions. Unfortunately this is not always the case. In some females this congestion is morbidly great, and menstruation is attended with a great deal of pain throughout the whole period of menstural life. In all females the catamenia is liable to be periodically increased, diminished, or suddenly arrested by a host of exciting causes, and when this is the case, the natural uterine congestion may become morbid, and these give rise to inflammation and this is not unfrequently the cause of inflammation and ulceration in the neck of the virgin uterus. In the married state there are other fruitful causes of this disease, especially when conception does not take place, the congestion and irritation which follows sexual intercourse may, if too frequently renewed, give rise to inflamma-
...mation; or the same result may arise from physical confusion of the organs themselves. In some females the urinary system is so extremely sensitive, that inflammation follows intercourse, when the bounds of discretion have not been overstepped. When Conception has taken place a new era adorns upon the uterus and its appendages instead of remaining in its quiescent state only disturbed at its regular periods. It assumes a high degree of vasculari-
ty and becomes the seat of the most active nutrition and rapidly increases in size; all the vessels become enlarged and distended with an active circulating fluid. This Conception itself may be considered a predisposing cause of inflammation. Vaginal inflammation is also a frequent cause of inflammation and ulceration of the womb caused by mechanical pressure upon these organs producing laceration, confusion and even modification.

The symptoms of inflammation may be local or con-
stitutional. The local symptoms may be divided into
anatomical and functional changes in the organ itself. The constitutional symptoms are those which manifest themselves in the general constitution of the patient. The acute or chronic symptoms are those which manifest themselves by the touch, and speculum; by the appearance from and structure of the cervix uteri. When mucous membrane is inflamed, it ceases to produce or present to the touch. They are thin and smooth, as the appearance that it does in health, it becomes turgid and enlarged; and from its weight most always falls more or less into vaginal cavity, and when brought into view, by the aid of the speculum, instead of presenting the pale rose color of health, it presents a vivid red, tinged and dotted with florid papillae; or with white papillae of pus, and often considerable ulceration with increased heat of the part, and pain upon the slightest touch, and frequently complains so it is a matter of impossibility to get them to submit the necessary examination. There will be found important modification
taken place, both in the is and cervix. In the healthy condition, the cervical orifice is closed and so as barely admit of a small pessaro. But when in a state of inflammation, it expands and is considerably opened. The discharges from the ulcerated surface: where ever its seat is puncotent, the pus may be thick and of a healthy colour; or it may be thin and serous according to the state of ulceration. When the secretion is abundant or mixed with mucus, the patient is said to have the whites. Inflammation of this nature, when severe, often exerts considerable influence upon the patient, also the urethra seriously affecting the proper or natural functions of these organs. The constitutional symptoms, are numerous in this affection. Pain in back or lumbar and several regions, the patient feels and complains as if her back was broken and can neither sit or stand erect with any degree of comfort, and the pain radiates or extends all over the lower limbs gastric region. There are other pains
present which must be attributed to the same cause.

The patient often complains of pain in the hips, groin, and down the thighs. The periodicity of menstruation
is often changed in this disease; the menses either return
too frequent or are retarded, as its manifestation. The
influence of uterine inflammation upon digestion
is the most marked and important of all the symp-

The chief relation we have to meet with, with some
the digestion is nearly weakened, but with the major-
ity of cases, the digestion is seriously impaired,
and a host of marked symptoms supervene, such
as dyspepsia; gastralgia; and to such a degree as to
destroy both patient and physician from the true
cause of the disease; There is frequent pain in the
region of the stomach, in the chest under the ribs
of the left side; and in the region of the heart.
The pain is of a dull acheing character. The patient
often complains of heaviness and pain in the head;
and cannot sleep without being disturbed or affrighted.
with disagreeable dreams. The kidneys are also often affected in inflammation and ulceration of this organ. We often find the lungs sympathizing in this disease the pains radiating still through the chest, and so severe, as to interfere with the action of the lungs and render respiration difficult and laborious. The function of nutrition often becomes impaired the patient becomes emaciated, pale, chilly, languid, and weak, and generally falls into an enervate state. I have briefly sketched at most of the important symptoms both local and constitutional in this affection. No patient with colds are often marked symptoms, but most cases will be attended with a majority of them.

Treatment. In considering the means best adopted to the treatment of the diseases of the cancellini, we will first take up the treatment of simple inflammation, without ulceration, and secondly inflammation with ulceration of the
Cervix, or, simple inflammation of the mucous membrane lining the neck of the cervix in its incipient stage, can be subdued by mildest and mild astringent ingredients with the tepid hip-baths and attention to the general health. Though the physician is hardly ever consulted in this stage of the disease, but if called to a patient laboring under this form of the disease, vaginal injection properly used constitute a valuable means in arresting the disease. Water alone or slightly medicated, or cold water freely injected into the vagina several times a day, so as to dislodge and remove all excretions from the inflamed cervix, will perform an important part in the therapeutic treatment of this disease. The patient must be in the recumbent position and remain in that position for some time. If you wish the case to be benefited by the use of vaginal injections, medicated ingredients may be either emollient,
Astringent, with and water, or a decoction of marsh marshmallows, used tepid or cold. The astringent injection consists of various astringents combined with the emollient injections. I do not believe they are of much importance now. They are very frequently resorted to. The extract of myrtus and glycerin belong to all others of this class. Astringent injection are the most valuable remedies in this affection. Those that are generally employed are numerous. Alum, sulphur, the acetate of lead, nitrate of silver and decoction of oak barks. Of this class of astringent injection alum is most generally preferred in small doses as all families have it, and are familiar with it, and will use it more readily than any other article. And this preparation will accomplish all that any of the injection will, except the nitrate of silver. The nitrate of silver stands at the head of the list of all applications in this affection.
and should be used so as to reach every part of the inflamed surface; and to secure which, the patient should be in the recumbent posture, when the injection is administered, and the injection should be administered by an assistant, if the and shiner bathes will decidedly benefit the patient and should be neither too warm nor cold. The patient, regulating the temperature by her own feelings. Local measures by the application of leeches to the inflamed surface or in the neighbourhood of the inflamed part, aid materially in subduing the inflammation. Considerable benefit can be obtained by scarifying the corpus, so as to relieve the local congestion of organs. Curdling the leeches often affords considerable relief, with attention to the general health of the patient, with the local measures that have been mentioned. Is all that is requisite, or necessary in the treatment of simple inflammation of Cornea Ultra, as the treatment of ulceration of the cornea Ultra
In addition to the local means above mentioned, other and more efficient, becomes necessary. In cases of slight ulceration of the cervix taken to be relieved by the local means enumerated, for the relief of simple inflammation of the cervix, such results however are rarely obtained. And it would be irrational to attempt a permanent cure of this disease when once satisfied of the existence of ulceration of the cervix, either by ocular demonstration by means of the speculum, although great relief may be obtained by such a course of treatment, and the patient may be led to believe that she is permanently relieved, but after a discontinuance of the treatment. The disease will soon manifest itself again; and all the time employed in attempting a cure by these means, i.e., 2 months once the existence of ulceration is ascertained, to exist in the cervix; other and more efficient means should be resorted to.
for by endeavoring to affect a cure by those means
The disease is insidiously encroaching upon the const-
titution of the patient, and becoming more perma-

nently seared, and consequently more resisting to the
proper remedial agents, then the most efficient
means in our power should be resorted to at once.

That is cauterization; this can be affected by the
direct application of nitrate of silver in Substance
or a concentrated solution applied by the means
of a common hair pencil; and if the hair pencil
cannot be procured, moisten a small piece of
soft sponge and apply it directly to the inflamed
surface. In order to do this effectively, a speculum
must be introduced, and the ulcerations exposed
and the speculum left to remain while the apply-
lation is made, which will require some ten or fif-

teen minutes. But previous to the introduction of
the speculum, the corne should be thoroughly cleared
by frequent injection of wash or streptocorset.
in order to dislodge all matter or pus from
the ulcers, that you may ascertain the extent
of ulceration and apply the Poultie appositely
to the ulcers. But previous to the application
of this remedy, all local or general inflamma-
tion should be subdued by local or general
blood letting in conjunction with saline
cathartics and enemial injections. After
the first application of the cautery, it should
be repeated every fourth or fifth day, until
the ulcers completely be abraded. For if you sus-
pend or withhold the treatment, aggravating cases
and the ulcers will spread and go back into the
same unhealthy state again. There are a great ma-
ny cases which will not yield to so mild an esca-
rod as the nitrate of silver. In such cases
as will not yield to the nitrate of silver, the best
application is Cuticular potassa. This is the most
powerful escordie we possess and should be
used with a great deal of caution. There are several preparations expressly prepared for cauterising ulcers within the cervix uteri. The one most generally used is in sticks similar to the sticks of the nitrate of silver, those sticks of caustic potassa are contained in various proportions with lime; great precaution should be observed in the application of this potent remedy to protect the surrounding parts of mucous membrane of the vagina and cervix uteri. Cotton moistened with some vegetable acid should be introduced prior to the application of the potassa; and when the potassa is applied, the cotton should be placed in contact with the ulcers, and suffered to remain for several hours, and then removed, and the part thoroughly washed by injection of tepid milk and water. This application should not be reapplied oftener than once in every four or six weeks, and the part should
be touched once every six or eight days, with a strong solution of nitrate of silver, to check or keep down the luxuriant granulations which will spring up from the application of the caustic potassa. Other remedies of this class have been employed successfully, the mineral acids and the actual caustic, but I think they are much inferior to the nitrate of silver and caustic potassa, and that they are highly objectionable. The acids on account of the liability to spread and contaminate the surrounding healthy part; the actual caustic cannot possibly superior advantages over the caustic potassa and has connected with it many valid objections to the female. The idea of introducing a red hot iron into the vagina is frightful to a female, and perfectly shocking to her feelings, and it requires great caution in applying it, for there is considerable danger.
of injuring the surrounding parts, I have said all that is necessary in the local treatment of this affection. I shall now make a few remarks upon the constitutional treatment. All that is necessary is a proper regulation of the patient's diet and a proper amount of exercise. The diet should consist of a simple nutritious vegetable diet, allowing some animal diet of the most digestible kind once every twenty-four hours, and that should be taken at dinner. There is a great error amongst most physicians and the people in general in regard to diet in this affection. They are in the habit of prescribing or allowing the most stimulating article of food in affections of this kind, believing that all that is necessary for the complete restoration of the health of the patient, is to allow them a very rich stimulating diet, in conjunction with their medicines and stimulants, such as brandy wine or a...
to the health of the patient. When this disease is of long standing, the secretion of the liver becomes impaired or suspended, and digestion becomes very imperfect; and the patient is often troubled with attacks of dyspepsia, and to relieve this affection all that is necessary is to give a mild mercurial occasionally combined with a little rhubarb, or to relieve an unpleasant sensation about the stomach after eating, give a few gr. of the subnitrate of bismuth. The kidneys are often sympathetically affected in the course of this disease. In order to relieve that, it may become necessary to apply leeches over the kidneys, or cupping to relieve those organs. It may be necessary in conjunction with the local means, to administer diuretics.