Pelvic Inflammation in Women:

A PATHOLOGICAL STUDY.

BY

WILLIAM WARREN POTTER, M. D.,

BUFFALO, N. Y.

REPRINTED FROM

THE AMERICAN GYNECOLOGICAL JOURNAL,

DECEMBER, 1891.

THE BEE JOB ROOMS, TOLEDO, OHIO.

PELVIC INFLAMMATION IN WOMEN,—A PATHOLOGICAL STUDY.[1]

BY WILLIAM WARREN POTTER, M. D., BUFFALO, N. Y.

As pelvic inflammations and their resultant complications and residues comprise the largest proportion of the disorders that are brought to the notice of the gynecologist (Winckel says 33 per cent), and as many of the essential principles of pathology and treatment relating thereto are still under observation and not fully established, the importance of frequent discussion of these cannot be questioned, and their interest is always great.

While it is not expedient at this time to pass in review the anatomy, physiology and histology of the female pelvic viscera with minute precision, I shall yet endeavor to make the thoughts presented as clear and consecutive, as is possible in the time that I feel warranted in appropriating.

The relations of the organs to each other and their enormous vascular and nerve supply are well known to all, and are simply referred to for the purpose of reminding you of one of the reasons—an essential one—why these inflammations prevail with such amazing frequency. This intricate and labyrinthine arrangement of tissue, fibre, vessel, and nerve has its wise purposes to fulfill in health, and its weaknesses that become manifest in disease. It permits the highest state of nutrition so necessary to the healthful performance of the various functions imposed on these organs, and it is equally a source of innutrition, when once these vessels and nerves become irritated and obstructed by the various morbid processes that provoke and maintain blood-stasis.

When Emmet, who was one of the first to call attention to the importance of a knowledge of pelvic disease, first advanced his doctrine of pelvic cellulitis, it was seized upon by a large

1 Read before the Mississippi Valley Medical Association at St. Louis, Oct. 16, 1891.

number of gynecologists as the most rational pathology that had yet been made known; in it was supposed to lie a true solution of the many difficulties that had previously surrounded a most perplexing field, and the pathway out had, under his guidance, become an easy one. It was a very plausible and seductive theory that the avenue of approach of all inflammations in this region was the pelvic connective tissue, and that from this tissue they spread, if unarrested, into the other organs that it surrounded, overlapped or interlaced. Hence, pelvic cellulitis was the great first cause of all the sexual woes of woman, and to arrest or subdue it was the gynecologist's shibboleth. With a strange tenacity Emmet still clings to the main features of his early pathology, though admitting that there are a few exceptional cases where the order is reversed, the invasion beginning in these in the tubes or ovaries, and extending thence to the areolar tissue.

When Bennet, in 1843, asserted that to inflammation of the cervical canal was due the greater part of the sexual woes of woman, it was accepted with an almost universal belief. Bennet asserted with dogmatic zeal, that from cervicitis came ulceration, displacements, leucorrhœa, menstrual derangements, even ovarian disorders, and that by the application of strong caustics to the offending os and cervix all these could be cured. This was the beginning of the caustic treatment which ran riot until arrested in its mad career by Sims and Emmet. These two —master and pupil—did the sex a service that must remain unrequited from everlasting to everlasting, in laying bare the faults the monster Bennet had unleashed and which others could not or would not curb. Sims, the surgeon, addressed himself to repairing the damage caustics had done, by invoking surgical means to accomplish the end sought. He would rend with the knife the stenotic wombs the silver stick had caused. Emmet, the physician, sought the same end by gentler agencies —those of cleanliness, heat, soothing applications, and the hygienic and nutritive aids of rest and food.

Emmet stoutly denied that ulcerations (so-called), erosions, and other manifestations that Bennet attributed to inflammation of the cervix, existed at all *per se*, and affirmed that these numerous visible changes were due to arrested or impaired nutrition with only one possible exception, viz.: when consecu-

tive to cervical laceration. To this latter he also attributed the so-called pelvic cellulitis in a considerable proportion of cases. Hence, when erosions did not disappear under the milder means addressed to this care, he would freshen the torn surfaces, cutting away all the proliferations, and unite them with sutures—the operation to which the name trachelorrhaphy has become attached.

If Emmet made war against the ancient heresy of Bennet, and waged it with a surprising and deserved success, he has equally resisted the advances of the modern pathology which has nearly driven his pelvic cellulitis from the field. He seems to be as unwilling to accept the views of Price, Tait, Hegar, McMurtry, Wylie, and their followers, as he would be to return to the obsolete and heterodox doctrine of Bennet. Nevertheless, the world moves, and we must move on with its progressiveness, else we shall find ourselves sitting with folded hands, watching the busy life around us, "forgotten, uncared-for, the slaves of our own inactive wills."

For a better understanding of the true pathological intrapelvic state whose manifestations we call inflammation we are indebted to operative surgery which has dared to open up the peritoneal cavity to daily exploration. This has demonstrated the relation of diseased tubes and ovaries as well as puerperal, specific, and traumatic infections to pelvic inflammations. It has led to the recasting of opinions in regard to the origin of these in flammations, as well as to the morbid changes that are taking place within the pelvic cavity during their various stages of progress.

The feeling is fast laying hold of the men who are at constant work in this department of medicine that these inflammations generally take origin in some disturbance of the ovary or Fallopian tube and extend into the contiguous structures as the inflammation progresses; or, if the cause be puerperal, the nidus resides in the uterus itself, and so travels up and down, right and left, hither and yon, according to its severity, or the resistance it meets.

A pelvic inflammation may be so slight in a few instances as to give little discomfort, and it may pass to recovery without treatment. A severer form occasions subserous congestion, transudation of serum, and exudation of plastic lymph. In still more severe cases serum is poured into Douglas's pouch

much as it is into the pleura during the course of pleurisy with effusion. Lastly, we may have suppuration—the so-called pelvic abscess—which demands prompt surgical treatment.

The residues which these acute inflammations leave behind —their sequelæ—depend upon the severity and extent of the invasion. The slighter forms may leave equally slight traces, or none that constitute a disability; in other words the resolution is complete. But in the higher grades of inflammation, where the products are deposited over a great extent of surface —over uterus, tubes, ovaries and ligaments, these organs become matted together in a greater or less degree—they become entangled and bound down by strong adhesive bands, just as we observe happens in the pleural cavity. These adhesions contract and grow firmer with time; the ovaries, imprisoned in their relentless grasp, become sensitive, painful and swollen, or degenerate or become atrophied under their influence. Each recurring menstruation seems only to increase this woeful condition until finally pyosalpinx or even abscess of the ovary results from the retained secretions, and pent-up fluids; or secondary pus-sacs may form outside these organs in the connective tissue, constituting what has been described as true pelvic abscess.

It would be difficult in such a case, unless familiar with it from the outset, to fix the precise starting point of the inflammatory process, but at this stage and in such a case there remains little to do, except to open the abdomen, remove the pus whether in ovary, tube, or sac, and break up the adhesions as much as possible. In a woman who must earn her bread in the sweat of her face, there should be little delay in resorting to surgical interference. Such can ill-afford to spend much time with expectant methods. The argument against unsexing a woman by removal of her organs has small weight here, for the disease itself has already destroyed her procreative power, or else made pregnancy a dangerous complication to happen.

This simple grouping of the essential features of pelvic inflammation, imperfect and unsatisfactory though it may be as a pathological picture, is, nevertheless, a faithful setting forth of the salients of the disease as far as now understood. The discussion might be prolonged to an entire afternoon's discourse, but as I am talking to a learned audience, elementary details have been omitted.

It will be observed by an examination of the modern literature of this subject that the terms perimetritis and parametritis are gradually disappearing. No little confusion has resulted from the use of these terms, and it is therefore well that they should be dropped. And so, too, with cellular abscess, for it may be questioned whether there is any such condition, the pus-sac being really the diseased tubes and ovaries, or secondary to such conditions. After adhesions are formed, pus may burrow in many directions, usually following the route of least resistance. It may traverse the cellular tissue planes, but the original seat of the abscess is within the peritoneum and in the tubes or ovaries. I have seen a pus-degenerated ovary not larger than a small English walnut, when taken out of the abdomen leaking pus guttatim, so to speak, from the site of the pavilion, which at intervals through this leakage, caused by overflow or contractions, had set up recurrent inflammation until the surrounding peritoneum had no rest—only recovering from one attack to find another about to be precipitated. And yet the mass was so small as to be felt with difficulty, and the diagnosis before section was of course obscure.

Perhaps I cannot interest you more than to quote what Mr. Tait says in his latest work about cellulitis and peri- and parametritis. These are his words:

"In the employment of the terms perimetritis and parametritis, as introduced by Virchow and advocated by Matthews Duncan, we have introduced a wholesale confusion into gynecology which will take many years yet of industrious work to get right. This confusion has been vastly aided by Dr. Emmet's teaching about cellulitis. If parametritis and cellulitis be relegated to their proper place—and they may be taken to mean the same thing—it is one of the rare conditions we have to deal with among the special ailments of women.

"By perimetritis we mean an inflammatory action of the peritoneal investment of the uterus, so that the products of the diseased action are found chiefly, or it may be entirely within the serous cavity.

"By parametritis we mean inflammation of the cellular tissue in the neighborhood of the uterus, the results of the process being mainly found outside the peritoneum. Perimetritis is a much more fatal disease than parametritis, and occurs with

greater frequency in association with two particular conditions. These are parturition either at full time or prematurely, and gonorrhœal infections. . . . By far the larger number of cases of perimetritis, or pelvic peritonitis are the result of some traumatism of parturient women, and most of them, therefore, come under the care of the obstetric physician. . . . Puerperal and other forms of septic perimetritis are very fatal, for it rapidly becomes general peritonitis. In recent years I have proposed in such cases to open and clean out the peritoneal cavity, and I have followed out this plan in five cases, of which two have been successful. . . . Before the light came, which was shed upon these ailments by modern abdominal surgery, I believed as others did and do still, that parametritis, or pelvic cellulitis, was a common disease; and in my writings up to 1878, it is evident I confused cases of damaged uterine appendages with pelvic cellulitis. The latter disease is rare, and occurs in two forms, depending for their characters on the situation of the disease. If it is situated in the inner half of the broad ligament, it is to be recognized as a mass lying close to the uterus and in front of it, between the uterus and bladder, and into the bladder it generally bursts. If it exist in the outer half of the broad ligament it is to be recognized as an ill-defined mass lying on the brim of the pelvis, and fading off on that ridge. In this position it bursts over the brim of the pelvis and constitutes the familiar 'pelvic abscess,' whose sinuses go on for years . . . I treat all such cases, as I shall afterwards tell, by abdominal section and drainage, and the patients are cured in as many days as it takes them months to get well if treated in any other way."

Though somewhat lengthy, this excerpt could not well be shortened without doing imperfect justice to the author's views. It is interesting as giving the matured opinions of a man who is never dull in expression or dry in thought, and who has an experience of more than 2,000 abdominal sections made with his own hands, from which to enrich literature and to fortify his opinion. Moreover, his educated finger-tips seldom fail him in diagnosis; but when in doubt and the patient is in extreme danger or great suffering, he does not hesitate to open the abdomen to ascertain the cause, relying upon his marvelous skill, great dexterity and scrupulous care to cure his patient; *and these seldom fail.*

Mr. Tait's views are in striking line with those fore-shadowed by Bernutz and Goupil thirty years ago. Listen a moment to M. Bernutz. After challenging the correctness of M. Nonat's pathology of what he called peri-uterine phlegmon, Bernutz goes on to say: "These researches, then, have led to the conclusion that inflammation of the pelvic peritoneum, which is the cause of the visceral adhesion, is a disease that is very commonly met with. . . . Lastly I conclude that inflammation of the pelvic serous membrane is symptomatic, and that it is generally symptomatic of inflammation of the ovaries or Fallopian tubes. Thus, great interest is attached to the study of this affection, and it is very important to understand thoroughly the symptoms, in order to describe satisfactorily the uterine, and more especially the tubo-ovarian disease which occasions it. . . . It follows from all this that unless we take fatal cases to enable us to determine anatomically where the pelvic inflammation began, we cannot state positively whether it came from inflammation of the ovary or of the Fallopian tube; nor whether it was caused by the puerperal state, by blenorrhagia, scrofula, or any other malady. Thus, we can only lay hold, as it were, of the two ends of the pathological problem, the primary disease, and the serous inflammation—the intermediate gap we can only fill after death."

Strange prophesy! and yet so nearly true. Only now the intermediate gap has been filled during the life-time of the patient, thanks to the aseptic surgery of the present. How singular that this almost perfect pathology should slumber in lethal repose so long! Strange that the masters of a quarter of a century should have overlooked it so completely. But there it is, as true a picture as can be drawn to-day, only lacking the "intermediate gap"—but which has now been supplied by the courage and skill of a few men who have dared to say that they did not know, and then opened Pandora's box to see what it contained. Fortunately, they have been able to rightly interpret the meaning of the curious contents they have exposed to view, and we need not now wait for the intermediate gap to be filled up after death.

I cannot stop without speaking of another contribution to this important subject, that of Bumm, published in the *Archives fur Gynakologie* (B. XXXV. H. 3.), who has made some important observations with the view of determining the true

cause of so-called cellulitis. Where pus is present he thinks it much easier to decide as to its cause than in a case of simple serous exudation. Cellulitis, he says, is usually divided into the infectious and traumatic varieties, but he punctured a supposed traumatic exudation in five cases, two of which he found to be of gonorrheal origin, while the fluid of the other three contained streptococci. His conclusions from experiments on animals are that wherever streptococci are present, there must be infection *from without*, that they are never found in the healthy genital secretions; that anto-infection is extremely improbable, and that the legitimate inference from his studies is that there is no purely traumatic cellulitis; that, where pelvic cellular inflammation arises, it is directly attributable to the operator, and not to the operation—to infection and not to traumatism.

But I detain you too long; there is so much of interest connected with this subject that one finds it difficult to pause. It is possible that the studies of Bumm may lead to a further modification of the present classification of causes of pelvic inflammations. We shall see. Meanwhile, the following formulated by McMurtry may be named as about the best grouping of cases I have seen.

1. Inflammation of serous and cellular intra-pelvic tissues cannot be separated clinically nor histologically, hence they cannot be properly distinguished by the terms perimetritis and parametritis.

2. The pelvic cellulitis of Emmet, which corresponds to the peri-uterine phlegmon of Nonat, is as rare as inflammation of the cellular tissue elsewhere.

3. Pelvic inflammation is, generally speaking, peritonitis resulting from disease of the ovaries or Fallopian tubes, or both.

4. Pelvic peritonitis presents every grade of activity, and is always symptomatic, never idiopathic.

We may name three general groups of these inflammations:

1. Those of Puerperal origin.
2. Those of Gonorrheal origin.
3. Those of Miscellaneous origin.

Under the latter are included all infections carried to the endometrium by unclean instruments, tents or medicinal agents or those arising from traumatism.

TREATMENT.

Since all our efforts in the study of disease ultimately lead us to the goal of treatment, and raise the question, How can we best apply our therapeutics with a view to speedy cure? It is presumed a word or two on that subject, in conclusion, will be pleasantly received even though they appropriate a little more of your valuable time.

Would I operate on all cases of pelvic inflammation? you ask. I answer, no. It is well known that large inflammatory exudations do exceptionally disappear when treated by rest, counter-irritation, hot sitz baths, vaginal douches, and attention to the digestive organs and general health. It must be born in mind, however, that many of these cases are reported cured, whereas, in reality if the history of each were followed it would be found to be, in many cases, one of repeated relapses. So, after all, complete restoration to health under the tentative plan, will depend upon the condition of the tubes and ovaries. If the tubes have been secreting pus, or if blood or serum is collected in them, future trouble—it may be after years—will surely come. Hot douches and iodine, curetting and electricity will not avail in such cases, and may result in positive harm. Non-surgical treatment in these cases simply removes the products or residues of peritoneal inflammation, but cannot do much, beyond the beneficial influence exerted by rest on all inflamed organs, for a diseased tube or ovary. Neither has electricity in such given anything but negative results. A frequently recurrent pelvic peritonitis is strongly suggestive if not positively pathognomonic of leaky tubes.

The question then arises, Is abdominal section to be had recourse to in all these cases of chronic pelvic peritonitis? To this the answer may well be in the affirmative, if there is danger to life. But when life is not in danger, is the woman to live inactively, and constantly harrassed by pain—a chronic invalid? It is then for her to select. Non-surgical treatment will not cure her.

In concluding this desultory presentation of a most important subject, I desire to modestly, yet earnestly add, that the object of my visit to this enterprising society of progressive men will have miscarried if I have not succeeded in impressing the importance attached to careful study of these cases by each

and every member, many of whom I presume enjoy the honorable distinction of general practitioners. It is of the first as well as final importance that early recognition of conditions be made, with a view of placing the patient under the supervision of competent surgical skill, before the damage to important viscera shall be too great to justify the expectation of successful operation.

284 Franklin Street.