scesses, lymphangitis, phlebitis, phlegmasia dolens. All these complications, or some of them, may arise not only as consequences of labor, but also from suppressed menstruation, cold, local injury, conditions arising out of uterine tumors, or of tubercular or cancerous disease.

Dr. West has described as "metritis hemorrhagica" the intense acute inflammation which occurs when a piece of nitrate of silver falls into the cavity of the uterus. In such a case, free hemorrhage is very apt to arise.

The difference of structure and of function of the cervical portion of the uterus confers upon it pathological liabilities distinct from those of the body of the organ. It may be true that by continuity of tissue, and by receiving its blood supply in great part from the same vascular system, inflammation of the cervix is apt to spread to the body, and *vice versâ;* but practically, we often have to deal with cases in which one or the other part is so much more profoundly affected than the other that it demands special attention.

This consideration, and the advantage of avoiding much repetition, have led me to curtail in this place the description of inflammation of the cervical portion. The complement of this subject will be found in the section devoted to the changes consequent on labor, and in that on prolapsus and hypertrophy.

INFLAMMATION OF THE SUBSTANCE OF THE UTERUS: METRITIS.

The inflammation of the submucous stratum which occurs in *acute endometritis* spreads sometimes to the whole uterine substance, and rises to such a height that the uterus swells to the size of a goose's egg, becomes softened, reddened, unusually succulent and infiltrated with small extravasations. This acute metritis next invades the peritoneal covering of the uterus and of the neighboring organs. In some rare cases the issue has been in suppuration, and the formation of abscesses in the walls of the uterus, which, like the puerperal abscesses, lead to various secondary destructive actions.

Chronic metritis proceeds from the acute form, or is developed out of persistent hyperæmia. It not uncommonly arises slowly, even insidiously, out of irritation produced by other morbid conditions, as tumors or cancer; and that without being preceded by any condition that can rightly be called acute inflammation. It leads to hypertrophy of the uterus, with preponderance of the connective tissue, which affects the whole organ or prevails in the body, cervix, or vaginal-portion. Its most frequent foundation is undoubtedly laid in retarded involution after labor. Much, therefore, of what might, in strict order, be discussed in this place, has been anticipated in the chapter on the consequences of labor; and which should, therefore, be read in connection with the description of metritis.

Chronic metritis thus takes its rise in hyperæmia. Whatever produces retardation and accumulation in the uterus or in the utero-ovarian system of vessels, leads to chronic metritis. Scanzoni[1] says the influence of heart disease in producing chronic metritis is under-estimated. Stenosis and

[1] Die Chronische Metritis, 1863.

insufficiency of the mitral valves, by inducing retrograde venous stagnation, causes hyperæmia of the uterus. He also insists that chlorosis and other forms of anæmia, by favoring pelvic hyperæmia, frequently lead to chronic metritis.

Scanzoni has distinguished two stages of metritis: namely, 1, a stage of *infiltration* or *softening*, in which is observed more or less extensive hyperæmia, a sero-sanguinolent infiltration of the uterine tissue, which in consequence becomes soft, relaxed, thickened; and 2, a stage of *thickening or induration*, in which general or partial anæmia of the organ, dryness, firmness, and hardness of tissue are the principal lesions.

In the first stage, that of softening and hyperæmia, there may be excess or alteration in the secretions of the mucous follicles; especially, new formations may arise, or there may be general hypertrophy of the organ. In this stage the softened uterus is flaccid, so that it can be bent backwards or forwards, and pressure of the finger leaves a depression. The surface of the organ often exhibits stringy peritoneal adhesions to the neighboring structures. When a section is made with a scalpel, there is absence of that creaking sound which is heard when the healthy dense tissue is cut through. It is like cutting through an ordinary muscle. Fluid blood flows from the cut vessels, and serum from the tissue. The cut vessels are seen of larger calibre, gaping in places, but not universally. In intervening spaces the vessels may, to the naked eye, show no alteration. The parenchyma itself has lost something of its resistance; it is more succulent and friable. The increase in thickness of the wall at this stage, Scanzoni says, is not demonstrably due to increase of muscular fibre, but mainly to the serous infiltration. It is more swelling than new growth. He has also observed advanced fatty metamorphosis of the muscular-bundles, and in the interposed connective tissue a great number of free fat-globules. This more especially applies to the upper part of the organ. The mucous membrane is almost invariably the seat of chronic catarrh.

In the second stage, that of thickening or induration, there is a general or partial anæmia of the organ. The tissue is dry, tough, and hard. This hardness strikes the observer as the next feature after the increase of volume. The hardness resembles that of dense fibroid tumors. These characters are very clearly seen when the hypertrophied vaginal-portion is amputated. This tissue-change, Scanzoni says, is more evident in the posterior than in the anterior wall, and he attributes this to the fact that the hinder wall is the more frequent seat of the placenta. The indurated places look pale, yellow, or yellowish-red, and this appearance is made more striking in those cases where these places are surrounded by others still in the stage of infiltration, and which will be soft and red. But cases are frequently observed in which the whole organ is thickened and indurated. In the hardened parts the vessels are contracted. The chief contribution to the increase of volume of the tissue is made by excessive growth of the connective tissue, although the muscular element may to some extent contribute. As far as I can trust my own observations made upon the hypertrophied vaginal-portion after amputation, I must concur in this statement. The same operation also gives evidence of the contraction of the vessels. Incision made with the knife divides no large

vessels; there is at most an oozing from the surface. The greatest part of the blood comes from the divided mucous membrane.

Chronic metritis, although it may predominate in the body or cervix, almost invariably affects the entire uterus, more or less. Scanzoni has taken great pains to verify the statements of those pathologists who contend that the anterior or posterior wall or the fundus may be the especial seat of hypertrophy from chronic inflammation. He has occasionally found a part more thickened than the rest; but invariably the entire body of the organ is enlarged. The growth is outwards; it leaves the cavity expanded, impairing more or less its triangular shape, so that it becomes more ovoid. This is in exact conformity with my own observations.

The mucous membrane is swollen, softened; the glandular orifices are prominent, open, visible under water. The gland-tubes themselves are much elongated. Mucus, stained with pus, is generally found in the cavity.

The origin of the increase of bulk undoubtedly, in many cases, lies in acute metritis. The effused fluids not being entirely absorbed, what remains becomes organized. But there are many cases in which it is difficult to prove the existence of inflammation. Under simple hyperæmia fluids are effused into the tissue, and the non-absorbed excess may undergo the same change into dense tissues. It is thus that during long-persistent hyperæmia there may be intercurrent attacks of metritis. But this is not shown to be necessary—the process is one of *disordered nutrition*. Klob denies that the hyperplasia is due to inflammation, and says the origin is in habitual hyperæmia.

The changes produced in the cervix uteri by chronic inflammation involving the whole uterus have been partly described in a preceding chapter. Those which are necessarily dependent upon antecedent pregnancy, are the following:—

The *follicular excoriations of the cervical canal* arise, according to C. Mayer, in the following manner: There is an inflammatory process in the mucous membrane, so that the follicles being involved, their excretory orifices are closed. Then three several pathological changes proceed: 1. The follicles swell gradually to the size of a millet seed, and form round, smooth, elastic cysts containing a delicate, viscid, stringy matter, known as ovula Nabothi. Often the contents assume a purulent condition: and at length the follicles burst, and leave round, follicular ulcerations. 2. The follicles do not reach the above-described development, but stop as it were on the way, as small, roundish bodies with thickened investments, and scanty contents, like hard knots on the surface, and so persist. 3. Or the follicles project more and more out of the mucous membrane, like ovula Nabothi, become bigger, and hang down, stalked, like scarlet-red pearls out of the os uteri. These are called mucous polypi.

These three forms give rise to three distinct forms of follicular erosions and ulcerations, different in their symptoms and in their appearance.

In the first form the os uteri is nearly always large, gaping, its scarred borders everted; its whole surface feels rough, uneven. The profuse secretion is often yellowish, puriform, not seldom mixed with blood, and offensive. The lips are dark-red, even purple, hyperæmic. The prominent smooth follicles are easily recognized; they have a turgescent, often finely granular surface. A thick stream of opaque, yellowish-white secretion flows from the cervix. Where the follicles have burst, roundish ulcers remain. This condition is not limited to the os uteri, it extends to the interior of the cervix.

These follicular affections, C. Mayer says, are almost always associated with chronic metritis. Scanzoni associates them with retarded involution of the uterus. The mucous membrane, with its glandular apparatus, hypertrophied during pregnancy, remains stationary, and gives rise to the affections described. That this is in many cases true, I do not doubt. But the explanation I have given in the chapter on the changes the cervix undergoes after labor is, I am equally sure, more generally true. The mucous membrane, at least its epithelial element, falls by a necrotic process; and one does not usually see in the post-puerperal cases distinct rounded follicular ulcers, but a large surface bared of epithelium; the granular aspect being due, not so much to the enlarged follicles, as to the swollen villi no longer bound down by their epithelial investment. (See Fig. 102.) The roundish erosions resulting from burst follicles described by Mayer, are often seen independently of pregnancy, that is, years after the last pregnancy, and even in women who have never had children.

There is another form of erosions described by Scanzoni and others, which ought not to be confounded with the foregoing. These result from *aphthous eruptions*. Partly in the immediate proximity of the os uteri, partly scattered at some distance are small vesicular points as big as a pin's head. The epithelium is easily rubbed off by a brush, leaving a small livid red spot. Sometimes several of these vesicles run together, and give rise to a large erosion. This kind of erosion is distinguished from the preceding one in the absence of follicular swelling of the cervical mucous membrane, by the thinness of the superficial wall of the vesicle, by the ease with which the vesicles burst; and in their leaving, not a sharp deep ulcer, but a superficial, perhaps irregular, erosion. This appears to be the herpetic, dartrous or eczematous ulceration of Huguier and Courty, terms, which, I think, Aran rightly finds fault with, since they imply a connection with herpetic disorders of the skin, of which there is no proof. On the other hand, Scanzoni relates a case of an otherwise healthy woman who suffered from aphthæ of the mouth, who, whenever she had a fresh eruption here, always had attacks of pruritus vulvæ and slight leucorrhœa, attended by vesicular eruption on the mucous membrane of the vaginal-portion. These were speedily cured by light touches with nitrate of silver; but a relapse always followed the formation of aphthæ in the mouth.

The *papillary erosions* I have described under the changes following labor under the name of "villous." I believe they are more frequently the cause than the consequence of chronic metritis. Dating from the act of labor, arising in traumatism, they precede metritis. Although the metritis may, and often does, arise out of the hyperæmia attending retarded involution, yet even in cases where involution has proceeded fairly well, the raw surface left by the fall of the epithelium, keeps up

irritation and attracts an undue flow of blood to the part; maintaining a condition constantly liable to merge into subacute inflammation.

In connection with chronic metritis, it is not rare to find a form of erosions to which the name of "cock's-comb ulceration" has been given. It appears to be a transition-form from the papillary or villous erosion to the cauliflower-excrescence. When this occurs, the tumefaction and enlargement of the whole cervix as well as of the vaginal-portion are considerable. There is intense hyperæmia, and often some degree of loss of mobility of the lower segment of the uterus. This appears to be due, at least in those cases where evidence of malignant disease is not pronounced, to infiltration of serum, with some inflammatory process in the cellular tissue immediately outside the cervix. These cases are difficult to deal with. Absolute rest is essential. Local applications of chromic or nitric acid answer the most effectually.

Scanzoni, in 1856, described the "*varicose ulcer*" as a form of disease of the cervix uteri arising in this way: Some time after the existence of a marked increase of volume of the uterus, and of a profuse secretion from its cavity, a bluish-red coloration is developed on the vaginal-portion and the adjoining part of the vagina; some dark blue spots gradually appear, upon which, after a time, numerous varicose venous branches become manifest. Upon these spots the mucous membrane softens, and forms elevations recognizable by sight and touch. The epithelium is thrown off, and an erosion is the result. At a further stage the loss of substance extends deeper, usually giving rise to free hemorrhage. The surface of the sore looks remarkably pulpy, so that the sound easily penetrates it. Scanzoni has only seen these varicose ulcers in women who had borne children, and in whom there had long existed obstruction to the portal circulation, or in the subjects of heart disease. I have, however, notes of a case taken at the London Hospital, in which there was a vascular nævus-like growth on the os uteri of a woman who had never had children. She was said to have had three abortions; but the cervix and os uteri had the features which I have almost invariably found significant of sterility. This woman had frequent metrorrhagia. Under applications of nitrate of silver the varicose mass disappeared, and the hemorrhage ceased.

Chronic metritis sometimes brings about a papillary swelling of the mucous membrane of the vagina. This was at one time called "follicular." But since Hassall, Henle, Mandl, Kolliker, and others, have shown that the mucous membrane of the vagina is nearly destitute of glands, the papillary nature of the affection has been recognized. It is generally attended by a profuse milky or creamy leucorrhœa. This papillary hypertrophy is often observed in the course of pregnancy, which condition must be regarded as its chief cause. After labor it is sometimes so marked as to resemble a papilloma.

The Course of Metritis.—Inflammation, if it does not terminate in resolution, may become chronic, and lead to hypertrophy, or it may tend to softening and liquefaction. This termination is, I believe, not very uncommon in women past the climacteric. In such cases the whole organ is enlarged. It feels flaccid, swollen, pulpy, between the internal and external examining fingers. The body falls either forwards or backwards,

or may seem to squat down on the vagina. The sound passes the os internum easily, provided there is no flexion, or when the down-bent body is tilted up. It penetrates usually rather more than two and a-half inches before resistance is encountered; and the wall of the uterus is so pulpy, that the point might easily penetrate into or through its substance. More or less oozing of blood commonly follows the examination. By the speculum the os externum and vaginal-portion are seen deep purple or dark red; the mucous membrane is villous-looking, it easily bleeds.

If there be a tubercular element complicating this metritis, recovery is hardly to be expected. It may be doubted whether, even apart from such complication, recovery takes place, if the softening be general or far advanced.

Abscess in the uterine wall is, I believe, rarely seen unless in the puerperal state; and in this case it does not, unless exceptionally, arise in the parenchyma, but may be traced from the foci formed in the venous tissues or lymphatics, whose walls are first inflamed by the reception of septic matter from the cavity of the uterus. Abscess does not occur readily in purely muscular tissue.

Metritis proper may, however, run on rapidly to the formation of abscess, as in the following case told by Scanzoni. A young woman had violent metritis after suppression of menstruation. The pains were very acute, resisting all treatment for eight days. The sensibility increased, rigors were repeated several times, and suddenly there was developed, above the horizontal portion of the pubes, a tumor the size of a hen's egg, somewhat resisting, and accurately defined. On the twenty-second day of the illness, symptoms of violent and extensive peritonitis set in, and the patient died on the thirty-first day. Dissection proved that the cause of death was the rupture of an abscess, situated in the right and upper part of the uterus, the pus from which had worked through the outer strata of the uterus and its peritoneal investment.

It can hardly be doubted that this case was one of metritis proper passing into abscess. But a case related by Hervez de Chégoin (Soc. de Chirurgie, 1868), in which an abscess was found at the fundus of the uterus quite closed, the size of a uterus at the fifth month of pregnancy, with enormous development of the fleshy fibre, was probably the result of suppuration in a fibro-cystic tumor. This source of fallacy must be borne in mind.

Amongst the consequences of chronic metritris, Scanzoni lays stress upon the frequent implication of the ovaries. Supplied by the same system of vessels, these readily partake in the like hyperæmia, and in the increased action attending the uterine condition. He says ovarian cysts are a frequent complication. They arise out of chronic oophoritis; probably in this way an ovum may ripen, but owing to thickened condition of the surrounding stroma the follicle cannot burst, and the fluid cannot escape. Succeeding menstrual periods with attendant hyperæmia cause fresh exudation into the follicular cavity, and so this grows to a cyst. The other forms of cystoid of the ovary are also often found as complications of chronic metritis.

Chronic catarrh of the Fallopian tubes often comes as an extension of the affection of the uterus; and one of its consequences is adhesion to

the ovary. And, either by adhesion or by simple closure of the tube at its abdominal end, the tube may become distended by accumulation, producing dropsy.

The vagina, in the higher grades of the disease, is almost constantly in the state of chronic catarrh, with more or less swelling and relaxation of its tissues. This is especially true of the upper part or fundus of the vagina.

The bladder participates in the disordered circulation of the pelvis, being involved in chronic catarrh, and perhaps thickening of its coats.

The rectum is also, in like manner, liable to chronic catarrh, attended with varicose dilatations of the hemorrhoidal veins, especially when there is retroversion or retroflexion of the uterus with enlargement.

In various ways the *skin* shows evidence of disordered nutrition. Hebra says the influence which uterine disorder exerts over the origin of skin diseases, especially of the eczemata, is manifested in the fact that all the chronic skin affections in women undergo a marked deterioration, a fresh irritation, during menstruation. Many women, he says, feel a day or two before this process—commonly in the course of the vessels of the extremities—smarting, burning, and twitching, so that by these symptoms they can foretell with certainty the speedy appearance of menstruation.

Hebra also calls attention to the frequency with which women suffering from uterine disorder *lose their hair*. Every one who sees much of these disorders is familiar with this complaint. In not a few cases it is associated with syphilitic complication. But in a great number of cases there is no reason to invoke this explanation. It appears to be induced by the deteriorated nutrition which follows upon chronic uterine disease. It is often cured, the hair-growth being quite restored, when the uterine disease is removed.

The influence on *pigmentation* is often very striking. Independently of the pale, sallow, or dull earthen hue, the result of the circulation of impoverished blood, more or less tainted with unhealthy elements, there are frequently seen on the face, namely, on the forehead, cheeks, or chin, brownish spots or patches of *lentigo* or *chloasma uterinum*. This chloasma is a form of *pityriasis versicolor*. I have seen marked examples on the chest, which underwent striking increase in depth of color during menstruation. Although in all likelihood due to disordered nutrition of the skin, it is not determined whether the yellowish-brown color of the epidermic scales depends upon the peculiar fungus developed in this disease, as G. Simon believes, or upon the marked accumulation of fat—smegma—as Wedl suggests.

Acne is not at all uncommon. I have known this disfiguring eruption disappear soon after cure of uterine disorder, aided by iodide of potassium, arsenic, and other appropriate remedies.

Fugitive attacks of erythema, erysipelas, or furuncle, are more frequently observed during the anæmia of amenorrhœa, but are not uncommon at the climacteric period.

Nervous Symptoms or Complications.—The seat and intensity of the *pain* are very variable. There is most commonly a painful sense of weight, pressure, at times of forcing, in the hypogastrium and pelvis.

This is more or less constant, but is aggravated by standing, walking, or other exertion. There is often a sensation as of a large body tending to force its way out of the vulva. On coughing, sneezing, or other forcible expiratory acts, the pain is increased, and these bring out new pains in the loins, sacrum, and groins. There is often distress at the anus, and down the thighs. At the menstrual epochs, the hyperæsthesia is more generally diffused. The frequency with which pain is felt in those regions which are supplied by the lumbar plexus, is remarkable. It is deserving of attention in a diagnostic point of view, that the intense pain often complained of in chronic metritis in the inguinal region is so explained, and is therefore not indicative of oophoritis. In two cases, says Scanzoni, in which an autopsy was made of women who had suffered intensely from pain in the ovarian region, so that he was all but convinced that they had organic disease of the ovaries, these organs were found perfectly sound. Bennet, as we have seen, has long insisted that this pain is pathognomonic of chronic inflammation of the cervix. I have on several occasions known intense ovarian pain produced at the moment of touching an abraded surface of the os uteri with caustic.

The nerve most frequently affected appears to be the ileo-hypogastric. The pain often runs along the course of this nerve from the anterior border of the crest of the sacrum, downwards to the inguinal ring. When the pain extends to the labia pudendi, we have to conclude that the external pudic nerve has been seized. I have known this, or the external pudic nerve, to be the seat of persistent pain concentrated there, of the most distressing kind. It seems as if, after long irritation of the nerves involved, pain settles in a particular branch, and becomes difficult to dislodge, even after the disease which provoked the nervous trouble had ceased. This remark applies peculiarly to the dorsal, lumbar, and sacral aching pain which often lasts weeks and months after the uterus has been restored to a comparatively healthy condition. In these cases, it seems highly probable that the long-continued irritation of the lower part of the spinal cord has induced a chronic alteration of nutrition. This lingering ill is often the source of disappointment and discouragement to patients who have really recovered from metritis. It is necessary to explain that effects do not immediately cease after the cause is removed; that the return to healthy nervous function, to vigorous muscular power, is necessarily gradual. Muscles long disused have fallen away; all the functions exhibit the weakness of structure of the organs which execute those functions. Healthy tissues can only be built up by regulated exercise and other hygienic measures.

A not uncommon attendant symptom of chronic metritis is the "*Coccygodynia*" of Simpson. This is sometimes so distressing that the sufferer cannot sit in the ordinary way, but is obliged to rest upon one or other ischium; and some women on this account constantly use an air-cushion. Pain is often felt on defecation. Since the metritis to which this pain is due, itself probably arose after labor, it is natural to conjecture that the sacro-coccygeal joint received injury during labor, and became the seat of chronic inflammation. In some instances this is really the case. But in most no evidence, beyond the pain, will be found of local mischief. It is a form of neuralgia. It is, however, desirable to

determine the local condition by examination. For this, the forefinger of one hand is passed into the rectum, whilst the other hand feels along the sacrum or down the joint externally. In this way the joint is closely approached on either side, and the relation of its constituent bones, the mobility of the coccyx, the condition of the joint can be accurately made out. The removal of this sacro-coccygeal neuralgia must be waited for in the same way as the subsidence of other nervous disorders, when the causing disease is cured. Dysuria and dyschezia are apt to be especially troublesome at the menstrual epochs.

A nervous affection of a peculiarly distressing kind is *pruritus vaginæ et vulvæ*. This is not an uncommon symptom of chronic metritis. It is due to the general hyperæsthesia of the pelvic nerves, and, in some cases, to inflammation of the mucous membrane. The nervous filaments distributed in the papillæ being involved, of course present extensive points of peripheral irritation. Where there is inflammation of the mucous membrane, there will commonly be more or less spasmodic contractility of the vulva, constituting vaginismus. But an equal degree of irritability is not uncommon where there is no local inflammation. This distressing complication is sometimes successfully treated by belladonna or morphia pessaries. But the only effectual remedy is the use of the "vaginal-rest."

The wear and tear of the nervous system, and the degradation of the blood attending chronic metritis, hardly ever fail to bring about disturbance of distant parts. This is manifested in various sympathetic nervous disorders. One of the most frequent is *facial neuralgia*. The association of this disorder with uterine and ovarian trouble, is placed beyond doubt by the exacerbations which so often accompany the menstrual periods. *Hysteria* is another frequent attendant. Where the disease has lasted some years, being prolonged into the climacteric age, the nervous disorders characteristic of that epoch will be earlier and more strikingly produced.

A symptom, says Peaslee,[1] almost pathognomonic of uterine affections, is the "*uterine headache*," referred to the top of the head, usually extending over a circular or oval surface, and relieved by pressure. Sometimes a "crazy feeling," a sensation of cold or heat, or a numbness is complained of, or the surface is tender on pressure, or hot.

The Symptoms and Diagnosis.—The disease is usually so protracted, coming under treatment, perhaps, long after its earlier stages have been passed through, that it is difficult to gather up a complete orderly history of the symptoms. The later symptoms will, in many respects, differ from the earlier ones. Still, the subjective symptoms, when corrected and complemented by the objective ones, are clear enough to mark what is going on.

The most marked symptom is acute hypogastric pain, differing from the pains of retention by being persistent, and becoming more intense. It frequently comes on suddenly, with initial protracted rigor. Fever is constant in acute metritis, and not rare in the chronic form. Inflammation is apt to spread to the surrounding organs, and if the peritoneum

[1] American Medical Monthly, 1860.

become involved, as it frequently does, the pain may extend from the pelvis to the abdomen. The patient complains of a feeling of burning heat in the hypogastrium, vagina, and vulva. She usually lies on her back, with the knees drawn up.

On examination, the vagina feels hot, tense, tumid; pressing the cervix uteri produces acute pain, especially if so pressed as to move the uterus. Arterial pulsations may be felt in the utero-vaginal sinuses. The uterus is felt to be increased in bulk. If the sound be introduced—and this ought to be avoided if we find the foregoing signs present—the most acute pain is caused by the passage along the cervix, and some oozing of blood is very likely to ensue.

The diagnosis, indeed, admits of being perfectly established, without the sound. The state of the uterus—perhaps softened, easily bleeding, even easily penetrable by the point of the instrument—is a valid reason for not using it.

The pain is intensified by movement, by the slightest jar or shock, and even by the action of the bowels or bladder. If acute metritis attack during menstruation, the menstrual flow is commonly suppressed. In the chronic form it may also be suppressed; but sometimes an attack of menorrhagia or metrorrhagia supervenes. Dysmenorrhœa is almost inevitable. Suppression of menstruation is more characteristic of parenchymatous metritis. When the mucous membrane is principally affected, there is more often menorrhagia.

Nausea and vomiting are hardly ever absent. Bennet looks upon nausea as a characteristic symptom of parenchymatous inflammation. The active engorgement of the vessels and tissues stretching the uterine fibre accounts for this symptom.

The "*facies uterina*" is commonly well marked. Sterility is almost constant in metritis. In the acute stage pain would prevent intercourse, and in the slower chronic forms the altered tissues and secretions are unfavorable to conception, and to the retention of the embryo in the rare event of conception taking place.

In the more chronic forms of metritis, the simple vaginal touch may not in every case produce pain. If the surrounding structures be not involved, so as to impede the mobility of the uterus, and the body of the organ be the chief seat of the inflammation, it rises and retreats before the examining finger, so that the tender inflamed part escapes pressure. But when we combine external pressure by the hand above the pubes, pushing the fundus down we evoke pain by bringing the inflamed part under compression.

By this mode of examination we are sure to bring out with precision the signs of disease in the uterus; and by, in like manner, examining the remaining organs in the pelvis, we may exactly trace the disease to the uterus.

The enlargement of the uterus which always attends metritis, chronic or acute, is easily determined by the abdomino-vaginal, or the recto-abdominal touch. The fundus of the uterus in acute puerperal metritis almost invariably rises above the symphysis pubis. In the non-puerperal acute, and in the chronic forms, it is usually not difficult to feel the fundus by pressing the fingers a little firmly behind the symphysis, having previ-

ously emptied the bladder. Indeed, in the acute and sub-acute forms, the fundus may be generally felt three or four inches above the symphysis. If the inflammation arise out of, or be associated with, cancerous, fibroid, or other disease, the enlargement of the body of the uterus is usually greater, and the fundus rises proportionally so as to be easily reached.

This enlargement of the uterus imparts some degree of tumefaction to the lower abdomen. And it is a point to attract attention, that the tumefaction or distension of the abdomen is almost always much greater than the mere increase in size of the uterus can account for. The surplus is, I believe, often due to the disturbance in the state of the intestines, which the neighboring inflamed organ produces. All parts in contact with an inflamed organ are constantly disordered. This is especially the case when movement is a necessary condition to the due performance of the organs implicated by proximity. The intestines are in this case; and they appear to be compelled to a state of inaction or paralysis, in order to spare the sensitive inflamed uterus. Hence distension. This is made manifest by tympanites.

So long as the inflammation is limited to the uterus, not involving the peritoneum or the broad ligaments, the uterus remains mobile. If it be found at all fixed, we may conclude that the inflammation has extended to the surrounding structures. Although in a large proportion of the cases of chronic metritis the uterus retains its mobility, we must always be prepared for extension of inflammation to the neighboring parts. In acute metritis the uterus is almost invariably more or less fixed. When this occurs, as it may do under the influence of cold, over-exertion or violence, especially if encountered during a menstrual period, there will be exacerbation of pain, and this more widely spread; and there will be some febrile excitement.

Metritis may be mistaken for congestion, fluxion, uterine tumor, or perimetric disease. The diagnosis will be made out by the comparative study of the description given of these several disorders.

In simple congestion, fever is usually absent. There is not the burning heat in the vagina, nor the same degree of tenderness of the uterus.

The *duration* of acute parenchymatous metritis, if not complicated with septic conditions, or perimetritis, is generally from a month to two months. The usual termination is in resolution.

But in patients who have neglected care, rest, and appropriate treatment, and especially in those who are the subjects of strumous or other morbid diathesis, or who are simply of weak constitution, the inflammation merges into the chronic form, and is not unlikely to spread to neighboring structures.

Perimetritis, or inflammation of the peritoneal investment of the uterus, will be more conveniently described in connection with pelvic cellulitis and pelvic peritonitis in a subsequent chapter.

The Curability of Metritis, Acute and Chronic.—There can be no doubt in the mind of those who have had large opportunities of observing puerperal diseases, that acute and even subacute metritis is often followed by virtual, if not complete, recovery. We can avoid this conclusion, if we accept as evidence of restoration the return to healthy functional

activity. Who has not known women who have suffered metritis after labor or abortion, subsequently menstruate easily, become pregnant, go through labor, lactation, and resume the duties of life with comfort? It is scarcely possible that a history such as this should be frequent, if any decided uterine disease persisted.

The case is somewhat different, however, with chronic metritis. Slow changes of tissue, continuing over months and years, are with difficulty counteracted. Still, appealing to the same evidence which proves the cure of acute metritis, we cannot absolutely deny the curability of chronic metritis. Pregnancy is assuredly, if I may trust my own observation, not infrequent. It sometimes, no doubt, takes place whilst the uterus is still in an imperfectly restored condition. But the value of this test of return to functional work is strong. I think this fact should qualify the discouraging conclusion of Scanzoni that, perhaps, with the exception of some extraordinarily rare instances, it is not in the power of the physician so to cause the tissue-changes of chronic metritis to disappear, that the uterus is completely brought back to its normal condition. When once the process of hypertrophic induration with condensation of tissue has been accomplished, it is certainly contrary to experience to find that, either by internal remedies or by local applications, we can reverse the process which has taken place, cause the new material to be absorbed, and restore the uterus to its pristine condition. We have the clearest evidence of the permanent character of the tissue-changes wrought by chronic metritis brought directly under our senses in the chronic hypertrophic elongation of the cervix. Growth with induration having taken place, it may be confidently said that nothing short of surgical agency will remove the disease. It may by analogy be contended that like changes in the body of the uterus will be equally permanent. Although this part is liable to similar tissue-changes, still this does not appear to be so frequent. Now if, as Scanzoni himself asserts, there is no such thing as chronic metritis absolutely limited to one part of the organ, of course when we have hypertrophic induration of the cervix, about which there can be no doubt, before us, we must infer that the body of the uterus is similarly affected. Now, it is a fact beyond dispute that pregnancy is not uncommon in cases of very advanced, even extreme, hypertrophic elongation of the cervix. I have notes of many such cases. Some are described in my *Obstetric Operations*, 3d edition. We are driven, then, to conclude that the hypertrophy resulting from chronic metritis may either be so far cured that the uterus can resume its highest function, or that the persistence of the hypertrophic change is not an absolute bar to this resumption of function, or, what is more likely than either, that the hypertrophy of the cervix, a part not essential to pregnancy, may exist without involving the body of the uterus.

This brings us to another question of great practical interest. *What is the influence of pregnancy in curing chronic metritis and its results?* If we assume that all must be cured before gestation can go on, of course the question falls to the ground. But if, on the other hand, we assume that conception may take place and gestation proceed to term, in an organ which is the seat of chronic metritis or of its results, what will be the effect upon these conditions? Speaking from clinical observation and