THE UTERUS AND OVARY OF NEURASTHENIA.*

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Summary: This study is restricted to the chronic and aggravated type of neurasthenia, and is based on full histories of a hundred cases.

I. The associated lesions in *cases of this degree*, and their frequency, as indicated by this series, would be as follows: (a) In the ovary, chronic ovaritis, chiefly microscopic, was found in nearly all; (b) in the uterus, endometritis, usually cervical, was present in the majority of cases, and was seldom accompanied with thickening; (c) a high degree of sclerosis of the vessels of the uterine walls, and of those of the endometrium, was sometimes discovered in cases of long standing, and the venous enlargements were many; (d) about the vulva, certain hypertrophies were noted in two-thirds of the cases; (e) in the bladder, congestion of the trigone was frequent (about 40); (f) in the rectum, catarrh, congestion and atony were persistent in a large number.

II. In this class of cases pelvic symptoms are prominent and lumbar pain constant.

III. In almost all of these cases the pelvic disorder is coincident, not causative.

IV. Correction of moderate abnormalities of structure and function by prolonged local treatment or by operation lessens pelvic pain very little and betters the general condition not at all. Treatment should be directed almost entirely to the general condition.

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V. Operation on pronounced pelvic lesions is warrantable in a few selected cases, such as persistent and exhausting hemorrhages, and the larger tumors, and, if thorough-going, brings about a revolution in the general condition in a very small percentage of cases.

VI. Anatomic cure frequently fails to bring about symptomatic cure.

While the bearings of pelvic disease on hysteria and insanity have been so studied, and the neuroses in general, what is new in this small series of cases is the clinical analysis, from the standpoint of the gynecologist, of the relations of pelvic disease to long-standing neurasthenia; the claim of the frequency of chronic ovarian changes, of chronic congestions of trigone and lower bowel, and of the vulvar hypertrophies of self-abuse; the statement that laterocession of the uterus and thickening of the left uterosacral and broad ligament, with left-sided ovaritis, in the absence of adhesions is always due to chronic proctitis; and figures bearing on the small percentage of cures after operation.

Literature.—There is a great body of writing concerning the interrelationship of insanity and diseases of the pelvic organs, and no small amount bearing on hysteria and pelvic disorders. Anent neurasthenia less has been published, but the general tendency is in one direction.

W. A. Freund ("Neurasthenie Hysterica der Frau," Berlin, 1904, pp. 40; "Das Bindegewebe beim weiblichen Becken, Gynaekologische Klinik," 1885; Gratulations-Schrift für Chrobak, 1903) believes that certain alterations in the connective tissue of the pelvis cause notable anatomical changes in the nervous system in the internal genital organs in women, whence follows a series of constant disturbances in distant organs, as well as peculiar physical changes. One form occurs after acute parametritis, to wit,—scar pressure. The chronic variety is due to long standing catarrh of the bladder, rectum, or cervix, causing scar-like changes in the internal pelvic fascia. The veins are thick-encircled, dilated, or compressed, the arteries narrowed, the ureters drawn upon. The first effect is a venous hyperemia, the last a marked atrophy. He pictures alongside the lower half of the body of the uterus, and alongside the cervix, and beneath the cul-de-sac, extensive neuro-fibromata,—paravesical, parametric, paraproctal. Striking varicosities in the venous system of the vertebral canal and the pia in the sacral and lumbar regions were also found in those women who presented grievous lumbar cord symptoms. Therefore Freund stands for the genital cause of hysteria. He enumerates as causes: Masturbation, excessive coitus, or coitus interruptus, malnutrition, overwork, rapid childbearing and lactation. But he particularly distinguishes women with hypoplasia of the genital and vascular systems, who are condemned to excessive use of the sex function.

F. C. Müller ("Handbuch der Neurasthenie," Leipzig, 1893), under the head of etiology, states that chronic catarrh of the genital passages does not readily set up neurasthenia (as in the male), because the female does not brood over such matters, and associate them with loss of sexuality. Nevertheless, affections of the uterus and adnexa, including uterine displacements, erosion of the portio, and chronic endometritis, are able in themselves to determine not only neurasthenia, but other neuroses and psychoses.

Savill ("Clinical Lectures on Neurasthenia," 2d Ed., N. Y., 1902), under etiology, only speaks of masturbation. This, he believes, to be more common in women than is usually thought.

But the majority of observers are all on one side

Engelhardt ("Zur Genese der nervosen Symptom-Complexe bei anatomischen Veranderungen in den Sexual-Organen," Enke, Stuttgart, 1886, pp. 3, 69), reports on four groups of cases, from Hegar's Freiburg Clinic, many being given in detail—109 cases in all:

1. Marked anatomical changes in the sex organs, *with* lumbar cord symptoms.
2. The same, *without* nerve disturbances
3. Absence of alterations in the sex organs, *with* lumbar cord symptoms, and other nerve disturbances; and,
4. Minor pelvic changes with the above symptoms.

Although two-thirds of his cases are available for comparison, that number includes few that belong in the class of severe cases which I have selected for study;—this is to be borne in mind in reading his conclusions. These are, in part:

"A local pelvic disorder can alone cause nervous manifestations, and often these are confined to the nerves belonging to the lumbar cord. A single distant reflex may be started. Severe widespread neuroses, however, are produced only when such a local disease has been of long standing. Reflex and sequent influence is then rarely alone at fault." Yet it may be the primary and important cause. "To attribute a constitutional neurosis like hysteria to a concrete anatomical alteration contradicts all clinical experience." "In the majority of sufferers from combined sexual and nervous disorders, a very complex set of conditions exists. Congenital predisposition, a tendency acquired in childhood, bad hygiene of puberty, physical injuries, sexual irritations, acute or chronic illness, hard labors, hemorrhages, these damage the nervous system and lead, in combination with the pelvic trouble, to the functional nerve disorder."

A cause which Engelhardt's observations develop is coitus imperfectus and onanism. "We are obliged to maintain that the very severe neuroses which develop (hysteria, with epileptiform seizures, asthenopia, etc.), as well as the pronounced cystic degeneration of the ovaries, with slight perioophoritis,—that these are coeffects of the unnatural irritation of the peripheral genital nerves and of the psychic excitation."

In Engelhardt's cases, one without knowledge of the cause can hardly doubt the primary affection of the nerve center. Unhappily, the conditions are not so simple as this. The symptoms permit of the supposition that a peripheral origin exists. Changes in the sex organs exist, but may be secondary. A fair proportion of Engelhardt's cases do not exhibit nervous symptoms and dysmenorrhea until late in their history. Exhaustion from difficult labors and overwork are then combined with serious pelvic trouble.

Grasset and Rauzier ("Traité Pratique des Maladies du Système Nerveux," 1894).—Under the head of *surménage genital* as a cause of neurasthenia, the authors suggest that masturbation may be an effect rather than a cause, *i. e.* there is no certain way of differentiating between cause and effect. They quote Charcot's distinction between psychical and organic neurasthenia. The latter may proceed from the stomach, liver, genitals, etc.

Löwenfeld ("Pathologie und Therapie der Neu-

rasthenie und Hysterie," 1894; on page 71, summary of views of relations between Neurasthenia and Genital Lesions): 1. Sexual lesions are in themselves sufficient to determine nervous disturbances. The former comprise flexion, prolapse, catarrh, and chronic endometritis and ovaritis. As a rule, there is a neuropathic predisposition. As for the mechanism, the nervous disturbances are in part, of reflex origin, due to compression of the local nerve filaments, in part due to losses of blood and pus, etc., and finally, in part, due to brooding over the disease. 2. Other causal factors usually coexist. 3. The two conditions represent a mere coincidence. 4. A woman already neurasthenic may become worse as a result of some genital lesion or disorder.

Binswanger ("Pathologie und Therapie der Neurasthenie," Jena, 1896) writes at length on the influence of pelvic disease in causing neurasthenia. The burden of his introductory remarks is "coincidence." He does not deny that the local lesions may set up the general condition. The pelvis is rich in nerve filaments and plexuses, centrospinal and sympathetic. The prolonged peripheral irritation may excite and then exhaust the nervous centers; and again the failure of general health may complicate the nervous system indirectly. Under this head we may mention chronic endometritis and metritis, malpositions, tumors of the uterus, para- and perimetritis, oophoritis, ovarian tumors, tubal affections. Profuse menorrhagias and leucorrheas should especially be mentioned for their general effects. A local treatment is, of course, indicated, but in the majority of cases this does not cure the neurasthenia. On the contrary, it is not uncommon to see the latter become worse. Hence, even if the pelvic state has been the cause of the neurasthenia, the latter in time becomes an independent condition, uninfluenced by local treatment.

If a woman, not an hereditary neuropath, has a chronic pelvic affection, and some local nervous manifestation occurs secondarily, treatment of the pelvic lesion often produces an astonishing degree of improvement in the consecutive disorder. But when a woman's nervous system is entirely compromised, local treatment is almost impotent to secure improvement, and the neurasthenia may be aggravated. In certain cases the pelvic lesions may be due to that general disturbance which also brings about the neurasthenic state, the latter considerably antedating the former. Again, on account of the great frequency of both the local and general states, very many cases probably represent coincidences. In a few cases arrested development of the genitals may be associated with neuropathic manifestations .

Dercum, the Philadelphia neurologist ("Relation of the Great Neuroses to Pelvic Disease," *American Gynecological and Obstetrical Journal*, 1898, XIII, 119) has the ablest and clearest paper on our subject; he says that when neurasthenia and pelvic disease coexist, it does not imply that there is any necessary causal relationship between the two affections. If a neurasthenic have pelvic disease, the local symptoms are very prominent by reason of the increased reaction of the general organism to local impressions. If neurasthenia coexist with pelvic disturbances, surgical treatment of the latter cannot remedy the former. This is now so well understood that the day has almost expired in which such operations are attempted. The nervous symptoms caused directly by pelvic lesions do not constitute neurasthenia (pain in pelvis, loins, hips, thighs). When pelvic disease and neurasthenia coexist, the latter state is not a contraindication to operation. Nevertheless, neurasthenics bear operation badly, and are extremely prone to nervous shock. Again, surgical intervention in the apparently healthy may be followed by postoperative neurasthenia. To prevent accidents of this character, patients should be treated by baths, massage, rest, forced feeding, etc., before operation. Any idea that operation on the pelvic organs can cure neurasthenia and hysteria, Dercum insists, must be given up entirely. (It is because I see operation urged on these cases still, that renewed protest is in order.)

Loewenfeld of Munich (Sexualleben und Nervenleiden, 1899, pp. 260; very full bibliography) warns against all hasty conclusion that the association of genital disease and nervous diseases implies any causal relation (174). He believes that the protest of the neurologist has brought about important results in checking overzeal on the part of the gynecologist, and draws attention to the Hegar findings among women with symptoms of irritability of the lumbar cord; to wit, that in 15 per cent. the pelvic organs were normal. Loewenfeld admits that the lower the resistance of the nervous system the more intense and widespread the nerve disturbance produced by pelvic disorder—even though that disorder be not great. Even in the case where the pelvic trouble is the sole originating cause of the nervous disturbances, we have to deal with complex relationships, and even when the two are closely tied together a number of other troubles are brought about at the same time—greatly obscuring clear judgment as to what influence is to be attributed to the sex-disorder; and all is complicated by a variety of apprehensions—of marriage, of sterility, of pregnancy, of treatment and operation, of cancer, and he adds, by our method of keeping girls and women ignorant of sexual hygiene.

Loewenfeld's conclusion regarding hysteria is, that "we must confess that in the present state of knowledge no trustworthy criteria are available concerning the reflex interdependence of any one of the hysterical symptoms of women and the disorders of the sexual organs" (p. 190). For the worry-neurosis, the most frequent age is between thirty and forty; and hereditary tendency exists in 80 per cent. As causes among women, he found congressus interruptus, and the want of sexual satisfaction from various causes; anesthesia; abstinence, absolute and relative; masturbation; but there is wide variation between individuals in the weight to be given to the sexual harm.

Krönig ("Ueber die Bedeutung der funktionellen Nervenkrankheiten für die Diagnostik und Therapie in der Gynäkologie," Leipzig, 1902) gives an unusually full bibliography of many hundred titles. Of all this number there is no title relating to the connection of pelvic disease and neurasthenia. In contradistinction to the above, there is a copious literature as to the relationship between pelvic disease on the one hand, and insanity and hysteria on the other. Various works on neurasthenia (*e. g.* De Fleury) touch but lightly or not at all on the relationship between this affection and pelvic disease.

Krönig quotes several older authors as to a connection between the neurasthenic state and pelvic conditions. Speaking for himself, however, he is very skeptical. When endometritis is accompanied by profuse hemorrhage the nervous

system must, of course, suffer. However, in most cases of pelvic disorder associated with neurasthenia, there is no causal relation—nothing beyond a mere coincidence. Krönig appears to be an extremist, and his views may be unsafe to follow. He differs from the majority of authors in his views of women. Thus he believes that sexual apathy or frigidity is the rule among civilized women; also that masturbation is a rare vice with the sex. There is a wide divergence between his views and those of specialists on sex, like Havelock Ellis.

Cappelletti ("La Neurasthenie," Milano, 1903) states that the genitals exert a certain influence on the development of neurasthenia, but that this has been exaggerated. In 250 cases of neurasthenia in females, Krafft-Ebing found but nine cases in which affections of the generative organs could be regarded as cause of the nervous condition. Windscheid, in his study of the relationship between gynecology and neurology, attributed but a mediocre influence to the genitals in the production of neurasthenia. However, in treating the latter malady, recovery is favored by treating the local pelvic condition.

The literary reviews in the *Neurologisches Centralblatt*, etc., do not contain much to the point. Special monographic literature on the subject is very scarce.

In presenting a new study of the relation between pelvic disease in women and neurasthenia, I will exclude cases which obscure the inquiry, such as:

1. Patients weak or delicate from childhood.
2. Hysteria.
3. Melancholia, well defined.
4. Mild or transient cases of neurasthenia.
5. Cases with congenitally defective pelvic organs.
6. Cases not fully examined nor long under observation.

The hundred cases are from private practice, selected from nearly three hundred. They are at the opposite end of the social scale from the series studied by Engelhart in Hegar's clinic. They are not merely from the office work of a specialist, as they were partly gathered in the time before I practised gynecology exclusively. Teachers and musicians (14); young women worn out by long attendance on sick relatives; older women, exhausted by rapid childbirth; a few suffering from the shock of accident or operation; college girls, or society women—all are pronounced types of nerve exhaustion of considerable standing. Many are extreme cases. About twenty had come with the office habit fully established, and a few of these in its extreme form. Most of them have been long under treatment. A year of "electricity" within the pelvis, twice a week; weekly "local treatment" for two years; at various stretches for ten years by regular practitioners; biweekly "straightening" of a "telescoped bowel" by our most ignorant and successful quack; and worst of all, innumerable pessaries and tampons holding up normal uteri.

The acquisition of the office habit is not infrequently due to our medical sisters; the general practitioner who does some pelvic work is often at fault; the male gynecologist is far from blameless; and the writer confesses freely that he has been taught most of what he thinks he knows of this subject, by his own lapses from common sense. That obscure and rebellious symptom-complex which we are considering and which we may dread beyond all other ills, presents such a variety of pains and disturbances of function in and about the pelvis in women, that it is little wonder one looks for the causes of hysteria and neurasthenia and melancholia in the sex organs. In these conditions of the nervous system, too, the patient herself, owing to her habits of introspection, emotional excitability, exalted sensitiveness, and self-consciousness, naturally emphasizes this group of disturbances. Her doctor may thus direct his chief inquiry toward her dysmenorrhea, and may persistently treat an insignificant endometritis and sensitive ovary, ignoring mental and physical reconstruction. Thus neurasthenic women readily become sexual hypochondriacs—in the physical sense, not in the moral sense.

A well-balanced therapy would study to keep far in the background this part of the consciousness, for the emotional woman is overbalanced on the sexual side, whether she be conscious of the danger or no. Exalted states of the nervous system are in some inextricable way connected with sex feeling, as for instance during that period in life which develops a religious fervor characterized by its intensity—the period between fourteen and eighteen. This is the period of extreme and unreasoning emotional affection, and it is also the danger-zone for solitary sexual indulgence. There is a secondary time before the menopause that corresponds with the period of most frequent appearance of neurasthenia; but for this earlier crisis one may hardly lay too much stress on sanity and reserve in treatment, and on wisdom and frankness of teaching and training, whether physical or intellectual.

Symptoms Referred to the Pelvis.—I find that *all these women have lumbar pain.* While all complain of sacral distress, at and between the periods, only 46 suffer from "cramps" or pain in the lower abdomen while unwell; 43 complain of irritable bladder; 24 of leucorrhea, and nearly 10 per cent. are *entirely free* from any pelvic distress or disturbance, save backache.

Frequency of Pelvic Disorders.—In 65 the uterus is in normal position. In the remainder, the following abnormalities of that organ are present:

Anteflexion.—In the days when the normal angle in the uterine canal was called anteflexion, and the normal forward tilt onto the empty bladder was classed as anteflexion and a deformity, great bugbears were made of these two. Nor is the practice altogether obsolete. Therefore, a protest against this explanation for the severe dysmenorrhea of the neurasthenic should be again and again placed on record. In our series, if we label "anteflexion" only those cases wherein cervix and body point nearly in the same direction, six cases are found. In five the office habit was strong, yet the results of treatment had been but temporary. Accompanying endometritis was not marked, but accompanying ovaritis was present in five. One case was operated on, an excessive flexion with very pronounced endometritis and scant ovaritis. Incision, and watchfulness after, put an end to all dysmenorrhea and pelvic distress.

Retroversion.—There is one retroversion to every five cases in this series. This is about the usual average among gynecological patients. Among parous women, one in ten exhibited marked retroversion. Of these ten all but one have been anatomical cures, yet failures as far as striking improvement to the general condition goes. Pessary and operation have permanently replaced all but one uterus, and to the pelvic distresses

there has been afforded more or less local relief (as of dysmenorrhea and menorrhagia), but the other symptoms persist. The menstrual upset occurs still. The patients come back asking for pelvic treatment.

Including postpartum retroversion, there are 21 cases. On these 10 operative anatomical cures have been done, either by shortening of the round ligaments or by suspension, but not one *perfect* symptomatic cure accomplished. Partial relief, yes. Glad they had it done, a short time after operation, almost all. Entirely happy they had it done, two years after operation, only 2 out of 10.

Moreover, these are the patients prone to relapse after operation for retroversion. As far as I know, and this was in the time before the post-operative pessary was my rule, my only relapses after suspension or Alexander, have been in patients of this type—patients with great and incurable enteroptoses, patients with the whole weight of the bowels piled onto the uterus. The same is true of kidney fixations in neurasthenics; anatomical cure is easy; *complete* symptomatic cure infrequent.

"It is to be remembered always that it is not, primarily, the amount of displacement, or flexion, that counts; it is the amount of inflammation, hemorrhage, or enlargement produced." These are the criteria as to the stress to be laid on the mechanical defect.

Endometritis.—Very commonly encountered in its milder types, and chiefly affecting the cervix, it is found in 61 of this series. Only five times in 20 operations (and in 1 of these in connection with retroversion) was much material removed from the uterine cavity by the curette. I venture to think, therefore, that the nervous and vascular disturbances of the endometrium are more common than gross changes in the mucous membrane, and that the curette can promise little.

Chronic Ovaritis.—In two-thirds of the individuals on this list (63), I find ovarian abnormalities. Martin quotes 13 to 17 per cent. as a fair average in gynecological office practice. The most frequent condition is chronic ovaritis, chiefly microcystic. Ovarian tenderness of a very pronounced character, and distinct enlargement, and prolapse into the cul-de-sac make up the balance. While the diagnosis of chronic ovaritis is not proven in any case which has not been subjected to ocular demonstration, the findings by bimanual seizure must be approximately correct, as they tally with the exhibits during laparotomy. As many of these patients are thin or have lax abdominal walls, and as many of these ovaries hang low, accurate touch is frequently practicable. Chronic rectal irritations in neurasthenia cause many of the persistent irritations and inflammations of the left ovary. On direct inspection and palpation or resection by laparotomy, the following changes were noted in twenty-two chronic neurasthenics (many of them outside of this series). Ovarian cysts of considerable size were present in 3 cases, ovarian abscess in 1. Chronic microcystic ovaritis was present in 20. Not one abdomen, let it be said, was opened for this condition, in this class of patients.

If you ask, What constitutes a normal ovary, or, Have I ever seen one, or, Is the microcystic ovary a diseased ovary, I answer by this evasion:

For clinical purposes, we may classify the minor variations as abnormal or diseased, should we find alteration in the degree here specified:

The edematous ovary, when the swelling is marked or the knife finds much fluid in the structure; the hyperesthetic ovary, found acutely sensitive at more than one palpation; the varicose ovary, enlarged, with thickened ovarian plexus, seen on opening the abdomen; the dislocated ovary, in the cul-de-sac; the small-cyst ovary, with distinct *tension* of several cysts of a diameter of one-fourth inch or more; the chronically infected ovary, belonging either to adherent salpingo-oophoritis or to chronic proctitis with thickening of the uterosacral or broad ligaments (rare); the sclerotic ovary, in younger women, markedly shrunken as seen by section.

Yet I admit that one and all of these conditions may be present in certain women and the organ functionate without protest.

It would seem plausible, then, if laparotomy demonstrates that the ovaries of these neurasthenics are abnormal, and bimanual palpation can hnd two-thirds of such ovaries to be in trouble, to reason, from this small series of cases, that the two conditions belong together,—that most chronic neurasthenics have chronic ovaritis. And removal of such ovaries has brought much discredit on surgery.

Fibroids and Arteriosclerosis of the Uterus.—This extensive subject far outreaches my limits. I may only express a belief that there is a large proportion of arteriosclerosis in old cases of neurasthenia; that a single organ may be selected for the vascular changes, and that the uterus is frequently the chosen organ. Alterations in the blood-vessels were extreme in degree in four uteri removed for incoercible and exhausting hemorrhages in women with a long history of nerve exhaustion. (Dickinson, "Intractable Menorrhagias of arteriosclerosis of the uterus," *Brooklyn Medical Journal*, 1906.) After operation the anemia betters, the "monthly tragedy" no longer enacts itself, but the general condition alters little.

With fibroids the usual rule of operating for marked pain, for pressure, for active bleeding, or for complications, must be modified somewhat under the first indication. As we recall that the neurasthenic pain-gauge has the habit of pointing unduly high, we shall be chary of promise of relief by operation. These be our celiotomy ghosts, that will not down, nor cease to haunt us with so-called "adhesions."

Varicosities of the broad ligament are not easy of determination, except in the most pronounced cases, and such a diagnosis should be verified by laparatomy to be tallied. I believe these to be frequent, but cannot prove it. Indeed, chronic disabling of the pelvic vasomotor apparatus is probably constant. The explanation of the relief given to pelvic aches in certain neurasthenic women by the pessary and the tampon underneath the normally located uterus and ovary, lies in the support of the varicose veins of the broad ligament and ovarian plexus, exactly as the suspensory helps the analogous male varicocele.

The kidneys were subject to a considerable degree of displacement in 19. Of *bladder irritations*, there was complaint in 43, but the systematic study of the bladder in the cases which are troublesome enough to warrant inspection by the cystoscope is too recent to make the report of any value. My observations suggest that the majority of patients presenting an aggravated habit of self-abuse have slight chronic inflammation and varicosity of the base of the bladder.

Rectal Catarrhs.—I have learned that latero-

cession of the uterus, chronic tenderness or thickening of one uterosacral ligament, chronic unilateral ovaritis, and retrocessions of the uterus, anteflexed or not, in the absence of a history of acute pelvic peritonitis, and in the absence of pelvic adhesions and salpingitis, are due to chronic rectal inflammation. Indeed, one may go so far as to predict, in the presence of any right-sided trouble in the above list, that the patient owns a right-sided rectum. As neurasthenics are common subjects of constipation and proctitis, the rectal examination is important and the cause of the pelvic disorder and its therapy are made clearer. Treatment of long-standing rectal catarrh is productive of distinct results, but complete cure is often missed.

Masturbation.—If the following alterations about the vulva are certain signs of solitary sexual indulgence, as I have elsewhere argued at length ("Hypertrophies of the Labia Minora," *American Gynecology*, Sept., 1902), then sixty-five of this series had been, *at some time*, addicted to the habit in a degree sufficient to produce profound changes in the external genitalia. Of these alterations, one or more may be present: labia minora (one or both), greatly enlarged, with cockscomb corrugations; pigmentation, sometimes pronounced; their sebaceous glands often numerous and distended; prepuce usually (alone or in combination), and fourchette (alone or in combination), strikingly duplicated, corrugated or folded, at times pigmented; varicosities about prepuce; dilated meatus, usually with lateral flaps and deep urethral glands; strong levator and anal sphincter. In the ordinary run of 1,000 consecutive cases in gynecological office practice, more than one-third of the patients presented these hypertrophies; of 150 neuropathic women, over half showed them, and in these aggravated neurasthenics, two-thirds, as stated above. At some future time I may have the temerity to try to correlate masturbation and neurasthenia. For the present, let me say that I believe the two matters are coincident, not consequent. It is noteworthy that twenty-one of the women with vulvar hypertrophies are all of the most grievous type of neurosis. On the other hand, four severe nerve exhaustions show no signs. And, moreover, the most extreme and prolonged solitary venereal excesses, in a limited number of individuals, may be shown to bring about no exhaustion of the nervous system.

Endometrium, uterine wall, ovary, bladder base, rectal mucosa,—all suffer from a chronic vascularity, a persistent venous engorgement, and some proven instances of arterial spasm and thickening. These vasomotor changes are alterations, I believe, that belong to the condition, and I hope to see in the discussion light thrown on the question of neurasthenia as a psychosis and where it belongs, and neurasthenia as an arteriosclerosis, and where it belongs—perhaps as a late development, in these worst cases.

Treatment.—The *minor measures*, for relief of pelvic symptoms, are in brief: For dysmenorrhea, bromides with hydrastinin (and helonin); for the menorrhagias, good ergot, stypticin; for rectal mucous catarrh, irrigation with astringents, and cure of constipation; for bladder irritations, water freely, and urotropin.

The *major measures*. After a careful study of the conditions of the patient's life, we plan such remodeling of the habits that each day she spends less nervous energy than she makes, such radical changes in ridding her of special worry or strain as by greatest effort of sacrifice may be possible; such thorough-going training in outdoor life,—first by resting methods, if necessary;—then by development of the muscular system; such a program of forced feeding and long sleeping, and healthful mental attitude and occupation, as to constitute gradual but complete readjustment. These are to be preceded by operation in a very limited number of cases, such as tumors (*e. g.*, ovarian) growing, and necessarily fatal; or exhausting hemorrhages, as from submucous fibroids, or extreme retroversion associated with marked endometritis that will not yield to lesser measures. But with the distinct understanding that the operation is to save life, or to initiate the cure, a first step to the more important measures above, and attended with danger of prolonged nervous disturbance.

Thus, in confirmed neurasthenics with pronounced pelvic symptoms, the hopefulness of the outlook depends not so much upon the operative cure of the few life-endangering conditions as upon the measure of our success in persuading patients to live and work contentedly within the fences of their limitations; on happy mental occupation; on the outdoor habit and outdoor hobby; on graduated muscular training and hydrotherapy; on regulated feeding and resting. What hospitals now are to major surgery, country and suburban sanatoria will become for the education of the sufferers from chronic illness.