

sciences are brought together to work in unison for the benefit of the individual, the nation and the race. No single medical science, by itself, is competent to solve a single problem, whether in state medicine or individual therapeutics. All the sciences embraced in our medical art (and they are many) are necessary to the solution of these problems. And unless they all work together in harmony to a common purpose little will be accomplished; and this is what I conceive is meant by the unity of the medical sciences.

234 Clinton Street.

Original Articles

THE NERVOUS DISORDERS IN WOMEN SIMULATING PELVIC DISEASE

AN ANALYSIS OF FIVE HUNDRED AND NINETY-ONE CASES*

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In presenting this paper, I have been prompted by a desire to give the result of several years' experience obtained in the treatment of gynecologic patients in the clinic of the Woman's Hospital of Philadelphia. The symptoms of the two great neuroses, neurasthenia and hysteria, are constantly being misunderstood in their relation to pelvic disease. The nervous phenomena of these affections present only confusion to the minds of many of us, nor is this strange when nervous specialists are still contending among themselves as to their symptomatology. Morton Prince, of Boston, maintains that the whole symptom-complex of neurasthenia is but one of the manifestations of hysteria, while Babinski goes so far as to maintain that hysteria itself is but a disease of suggestion brought on by the examinations made by the physicians. We may, therefore, pardon the great body of the medical profession if under such trying circumstances the symptoms of these neuroses are misinterpreted. In order that the vagueness in regard to these affections may be eliminated from the mind and replaced by clear ideas concerning these diseases, it is necessary to reason from certain basic principles formulated by the majority of our eminent neurologists.

NATURE OF NEURASTHENIA AND HYSTERIA.

Hysteria and neurasthenia occur in those persons of a normal as well as in those of a neurotic inheritance, and men and women both are subject to these affections, though the largest number of cases occur among women. A close study of these nervous disorders proves that true organic pelvic disease plays but an insignificant part in their development, and that their real origin must be sought elsewhere. The exciting factors are to be found in the environment plus heredity. When neurasthenia occurs in those in whom hysteria is latent, it acts as any other cause in the development of the latter. Hitherto the symptoms of both affections manifested in one individual have commonly created confusion as to their true import. In the adolescent and adult state, all humanity is subject to great strains. The most prominent among these are, first of all, the results of a defective education in which self-control and restraint are not inculcated early in life, and a too

close application either to pleasure or to study; later the bearing and rearing of children, household cares and worries, nursing of members of the family—a strain not only physical but also mental—financial stress, grief and shock occasioned by death, by accidents, by troubles, by frictions of all kinds, great and small. Anxieties and cares, no matter how trivial in character, must be viewed from the standpoint of the patient. The strains mentioned are far more potent as causes of the neuroses than organic pelvic disease. The nervous symptoms connected with organic pelvic disease are, indeed, very limited. While it is not to be denied that there are present local pain, pain referred to the back, to the hips and thighs, together with general indications of ill health, these symptoms do not of themselves constitute true functional neuroses, such as neurasthenia or hysteria. They are but symptomatic of the pelvic disorder, just as they may manifest themselves in connection with any other visceral disease. The distinctive term "neurasthenia symptomatica" or "spurious neurasthenia" has been applied to nervous symptoms present under such conditions. The hold of the doctrine of "reflex nervous disorders" on the profession for so many years is little short of marvelous, but its fallacy has been demonstrated beyond dispute by our increasing knowledge of nervous diseases.

On account of limitations of space, it will be necessary to present in a brief and concise form only the most prominent symptoms of neurasthenia and hysteria. True neurasthenia or "neurasthenia simplex" is essentially a "fatigue neurosis" (F. X. Dercum). The cardinal symptoms are a ready exhaustion of the nervous system with diminished elimination of nervous energy, increased irritability, and as a result decreased resistance to impressions from without. In this affection the wear and tear of the nerve cell is greater than its recuperative power and the physiologic equilibrium is impaired. The symptoms of this great "fatigue neurosis" are divided into motor, sensory, psychic and somatic phenomena. Those of the motor system consist of ready muscular fatigue made manifest on exertion due to loss of strength in the muscles of the back, legs and arms. Actual paralysis, however, is never present in neurasthenia.

The backache is usually referred to the lumbar and sacral regions; it often extends upward over the dorsal area and downward over the gluteal muscles. Aching of the limbs, when present, is referred to the thighs, legs, arms and shoulders. The special senses also present the symptoms of fatigue. On reading, the letters may become blurred, and, if it is persisted in, headaches, both limited and diffuse, supervene. The hearing may become dull, as may the other special senses. The psychic condition manifests itself by a lessened capacity for sustained mental action. Persistence of mental effort brings on the symptoms of exhaustion with its fatigue sensations. Thoughts do not flow readily, the will power lessens, indecision arises and increased mental and emotional irritability manifest themselves. Sleep becomes broken and disturbed, bad dreams ensue and in severe cases obstinate insomnia may result.

The somatic phenomena are commonly gastrointestinal atony, with its diminished secretions, flatus and constipation. The circulatory disturbance is usually shown by more or less enfeeblement of the heart's action with cold hands and feet. This condition is often accompanied by accidental heart murmurs.

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In addition to these symptoms, others may make their appearance, called the secondary or adventitious symptoms of neurasthenia. They are but the outgrowths of the essential fatigue symptoms and also present motor, sensory and psychic phenomena. The motor symptoms are tremor and spasmodic fascicular jerkings due to the primary muscle fatigue.

The sensory symptoms are those sometimes associated with a neurasthenic headache, such as sensations of constriction, of pressure, of throbbing, of dizziness and of fulness. The not infrequent phenomena of ringing, roaring and buzzing in the ears are also secondary phenomena. These sensory outgrowths are due to lowered vasomotor tone so that the slightest exertion may at times affect the intracranial circulation.

The secondary adventitious psychic symptoms are manifestations of loss of will power, as shown by indecision and uncertainty. Sometimes special forms of fear, the various phobias, are added to these psychic phenomena and are also outgrowths of chronic fatigue.

Symptomatic or "spurious neurasthenia," as before stated, is the result of visceral or somatic disease and very imperfectly simulates nervous exhaustion. Hysteria, the great "psychoneurosis," a functional disease of the cerebral cortex, is a common disease of daily life and is constantly unrecognized by physicians. Erroneous diagnoses of visceral and grave organic disease are frequently made because physicians are unfamiliar with its syndrome, especially unfamiliar with its sensory stigmata; that is, its areas of painful hyperesthesia. The attendant suffering is often far in excess of that from organic lesions. The painful areas are most frequently found in most unexpected places on the skin and mucous surfaces and are commonly misunderstood as indicating visceral disease. On examination, especially pelvic, every anomaly discovered must not be considered as explaining the symptoms. Usually the findings are nothing more than individual peculiarities and do not of themselves indicate medical or surgical interference. Under normal conditions the uterus now and then deviates laterally, is often more or less anteфлекed, is sometimes in the vertical position and again inclines backward to a varying degree until there is present a retroversion. There is some justification in regarding the latter when existing uncomplicated as a reversion of type or morphologic arrest and not an abnormality. It is well known that in intrauterine life the uterus still maintains the vertical position in the eighth month and that in apes retroversion is a normal condition.

The syndrome of hysteria is fixed and definite and includes motor, sensory, psychic and somatic phenomena. The motor symptoms of hysteria, the palsies, contractures, tremors and incoordination, are not misleading and are naturally referred to their nervous origin. Some of the sensory phenomena also, such as the anesthesia, hypesthesias and alterations of temperature sense, need not be considered here. It is especially important, however, to consider in detail the various cutaneous painful areas met in hysteria, as these are of extreme interest because of their simulation of pelvic disease. Not infrequently the areas of hysterical hyperesthesia become areas of hyperalgesia and then are not only tender to touch, but spontaneously painful. They bear no relation whatever to sensory nerve distribution or segmental representation in the cord, which fact at once stamps them as cortical or psychic in origin. These areas of hyperesthesia are sometimes found on both

sides of the body, though they are most frequently found on one side only, usually the left. These painful areas are most varied in extent and distribution, but as a matter of clinical observation they seek by preference certain localities, especially the inguinal region. On account of the anatomic relation which the ovary bears to the inguinal region, the true significance of these painful areas has been greatly misunderstood, and as a result these areas have been misnamed areas of "ovarian tenderness." As to the incorrectness of this term there can be no doubt, as these areas are often observed in men as well as in women in whom the ovaries have been removed. These areas are usually superficial, but occasionally there are cases in which the pain is deep seated, just as in some cases of spinal tenderness or of *clavus hystericus* of the head; but even in these the pain can be demonstrated to exist in the abdominal wall. The method adopted to demonstrate these areas is as follows: After the painful area has been carefully located on the abdominal wall, the tip of the forefinger of the right hand is allowed to rest lightly on it; the forefinger of the left hand is then introduced into the vagina and directed upward, to one side or the other, until its tip is immediately below its fellow of the right hand which is on the abdominal wall. Just as soon as pressure is made between the two fingers, the patient flinches, which does not occur when pressure is made in other directions, or when other portions of the abdominal walls are included. This hysterical inguinal pain has been compared to the boring and penetrating pain of *clavus hystericus*, the name used when the area is located in the tissues of the scalp. The so-called "inframammary" tenderness is a painful area usually located under the left breast; it is sometimes found, however, in the same situation on the right side, either alone or in conjunction with the area upon the left side. This pain is often very intense in character; occasionally it centers in the nipple and then gives rise to so-called *mastodynia*. Other painful areas are occasionally found above the spines of the scapulae, to the sides of the cervical, dorsal and lumbar spines, over the sacrum and at the tip of the coccyx, giving rise to so-called *coccygodynia*. The hyperalgesic areas may be found on the mucous surfaces of the vulva, vagina, rectum, bladder, nose and tongue. They are usually most distressing in character and give rise to intense suffering, especially when located in the vagina and rectum. Under such conditions sexual intercourse becomes impossible and bowel movements become agonizing.

The concomitant existence of somatic symptoms of hysteria, such as *globus hystericus*, hysterical vomiting and anorexia, amblyopia, contracture of the visual fields and like phenomena are, of course, strong corroborative evidence. Among other somatic disturbances of hysteria we find fever, cough, disturbances of the heart's action, of the general circulation, of digestion, of loss of voice, phantom tumors and like obscure phenomena.

The psychic phenomena of hysteria are of great interest and are not difficult of recognition when we bear in mind that the evidence of disturbed mental balance is always present. Emotional inhibition is defective and phases of exaltation and depression are present without adequate cause. The hysterical subject reacts inordinately to suggestion. In health organic and visceral sensations do not enter into the makeup of consciousness. In hysteria, however, these sensations pre-

sent themselves in an illusional form and are wrongly interpreted. The pain in the groins suggests to the patient grave pelvic disease or appendicitis; the "inframammary tenderness" suggests serious disease of the breast. The abnormal reactions of the patient to the suggestions furnished by her own body are but exceeded by the reactions which ensue upon suggestions from without, that is, suggestions furnished inadvertently by physicians, nurses and relatives. Hysterical stigmata, when in abeyance, are often developed by incautious statements. Therefore, under such circumstances, a pelvic examination should never be made without unmistakable indications. For, even independent of the moral shock, a fixed belief is engendered in the patient that she is the victim of some grave and mysterious disease to which she attributes all her symptoms. In hysteria the basic condition consists in a degree of suggestibility that is pathologic, and it can be readily understood that in such a soil almost any nosophobic ideas can be developed.

ANALYSIS OF CASES

In keeping with the above considerations, an analysis of 591 cases presenting themselves in both clinical and private practice will prove interesting and instructive. Of this number 179 cases were excluded because they bore no direct relation to the matter in hand. They consisted of pregnancies, miscarriages, venereal diseases and unimportant affections. In the normal pelvic conditions all non-inflammatory affections were excluded, such as lacerations, antelexions, retropositions embracing the retroversions, retroflexions and antelexions retroposed.

STATISTICS

TABLE 1.—Hysterical or neurasthenic phenomena or both were found in cases presenting the following conditions:

	No. Cases.
Pelvic organs entirely normal.....	181
Tubo-ovarian inflammations and exudates.....	34
Fibroid growths.....	4
Cervical and perineal lacerations.....	21
Dysmenorrhea.....	23
Anteflexions.....	28
Retropositions.....	36
Splanchnoptosis (relaxation of uterine supports).....	3
Lacerations that were repaired.....	2
Where both ovaries had been removed.....	9
Where one ovary had been removed.....	2
Where the appendix had been removed.....	4

TABLE 2.—Hysterical or neurasthenic phenomena were absent in cases presenting the following conditions:

	No. Cases.
Cystic degeneration of the cervix.....	3
Tubo-ovarian inflammations and exudates.....	53
Fibroid growths, including one weighing 17 pounds.....	11
Cervical and perineal lacerations.....	39
Dysmenorrhea.....	7
Anteflexions.....	24
Retropositions.....	44
Splanchnoptosis (relaxation of uterine supports).....	19
Carcinoma (no nervous symptoms found in any case of carcinoma).....	9

TABLE 3.—The painful cutaneous areas of hysteria present in absolutely normal pelvic conditions were as follows:

	No. Cases.
Both groins (so-called ovarian tenderness).....	70
Left groin (so-called ovarian tenderness).....	40
Right groin (so-called ovarian tenderness).....	20
Under both breasts (inframammary tenderness).....	2
Under left breast (inframammary tenderness).....	26
Under right breast (inframammary tenderness).....	1
On either side of the spine in the cervical region.....	3
On either side of the spine in the dorsal region.....	14
On either side of the spine in the lumbar region.....	9
Over the sacrum.....	14
At the end of the coccyx.....	10
Above the spines of the scapulae.....	4
Clavus hystericus.....	5
Deep intrapelvic pain (hysterical).....	10
Painful areas on mucous surfaces, vagina, vulva, rectum and tongue.....	4
Hysterical vomiting.....	3
Hysterical pain in one eye during menstruation.....	1
Hysterical globus.....	9

The other nervous phenomena present in absolutely normal pelvic conditions were as follows:

	No. Cases.
Limbache (legs, thighs, arms and shoulders).....	40
Sacral backache.....	60
Dorsal backache.....	2
Headaches, vertical.....	3
Headaches, diffuse.....	6
Headaches, frontal and occipital.....	35
Headaches, occipital.....	26
Headaches, frontal.....	16
Disturbed sleep.....	18
Insomnia.....	3
Gastrointestinal disturbances of nervous origin, such as constipation, flatus, gastric distress, diminished secretions and anorexia.....	96

TABLE 4.—Painful areas found in pelvic diseases were as follows:

	No. Cases.
Both groins (so-called ovarian tenderness).....	14
Right groin (so-called ovarian tenderness).....	3
Left groin (so-called ovarian tenderness).....	14
Under left breast (inframammary tenderness).....	2
On either side of the spine in the cervical region.....	1
On either side of the spine in the dorsal region.....	2
On either side of the spine in the lumbar region.....	4
Clavus hystericus.....	3
Over the sacrum.....	3
At the end of the coccyx.....	2

The other nervous phenomena present in pelvic disease were as follows:

	No. Cases.
Limbache (legs, arms, thighs and shoulders).....	3
Sacral backache.....	10
Lumbar backache.....	7
Headaches (frontal and occipital).....	3
Headaches (frontal).....	3
Headaches (occipital).....	5
Headaches (diffuse).....	2
Gastrointestinal disturbances of nervous origin such as constipation, flatus, gastric distress, diminished secretions and anorexia.....	12
Disturbed sleep.....	5

The above tables speak for themselves; there is obviously no relation between hysterical stigmata and pelvic disease; this is likewise true of the symptoms of neurasthenia. That hysteria and neurasthenia can co-exist with pelvic disease goes without saying, just as they may coexist with a brain tumor or a broken leg. The above statistics do not even show that neurasthenia or hysteria exist as frequently in pelvic diseases as in other visceral affections. Certainly the above facts prove that operations on the pelvic and other viscera for the relief of nervous symptoms have no justification. It is perfectly clear that no operation should be performed which has no positive surgical indications. When this subject is fully understood the fastening up of so-called loose kidneys, the removal of normal ovaries and tubes, of normal uteri, of normal appendices, of pieces of normal coccygeal bone, will cease, as will also repair of trivial cervical lacerations. A careful examination of the records from hospital laboratories will abundantly testify to this assertion of the removal of normal organs.

NECESSITY FOR CAUTION WITH REGARD TO SURGICAL TREATMENT

In looking over the above tables it will be seen that there are more retropositions of the uterus without nervous symptoms than retropositions existing with them. It is the same when we compare the antelexions, the lacerations, the splanchnoptoses and malignant disease. Dysmenorrhea is most striking in that the tables show in almost every case symptoms of functional nervous disorders associated with it, suggesting that dysmenorrhea in many instances is but one of the many phenomena of these nervous affections. This view would greatly reduce the number of dilatations which are regarded by some as useless, senseless and cruel except for diagnostic purposes. Uncomplicated retroversion requires no surgical or medical interference and presents practically no symptoms. Lucy Waite and Byron Robinson of Chicago experimented on the cadaver by injecting air into the bladder and rectum, and they dem-

onstrated an extensive deviation on variation of position regarding the uterus. Anatomically and physiologically the uterus is a mobile pelvic organ and not an abdominal one, and to force it upward and forward, to stitch it to the abdominal wall, compromises it in its function, circulation and nerve supply, substituting one pathologic state for another.

A word as to Alexander's operation. Byron Robinson and others maintain that it is an unnecessary, harmful and unnatural operation and should become obsolete. The round ligaments do not support the uterus and can be but forced substitutes, that is, pathologic. They are found relaxed when the abdomen is opened. If they are forced into assuming the function of supports of the uterus they will elongate and a patient will require an Alexander operation "about as frequently as a man will need his hair clipped." He claims that it is a cosmetic operation at high risk and cost to the patient. Frank H. Hancock¹ finds that 26 per cent. of gynecologic patients have retroversions and proposes that they be all corrected by hysteropexy. Byron Robinson² of Chicago asserts, in answer to Dr. Hancock's article, that such bids for surgery tend to "scalpel storms." He further says that "surgeons have gone mad, diagnosis and medical treatment are becoming buried, obscured in surgical technic. The postmortem is useless, forsooth, because diagnosis must be made in the living by abdominal incision and direct vision. The mechanical surgeon has arrived with his commercial tool-chest, the cutter with his 'scalpel storms' is multiplying rapidly, surgery is becoming a by-word, the 'pexyite' is abroad in the land, the suspicion of the people is beginning to arise from the slaughter of the mechanical surgeon. Irrational surgery is debased surgery, a misapplication of the art. Unnecessary surgery is criminal, harmful surgery; it injures both patient and physician and creates misery. Because a woman becomes well subsequent to a gynecologic operation without positive surgical indications affords no proof whatever that she required it."

No one will deny, however, that when the uterus is dislocated, that is, fixed by adhesions, surgical means should be employed to loosen it after medical measures have failed, but it should not be subjected to a new dislocation by fastening it to the abdominal wall. The pelvic floor should always be repaired when lacerated, as it is so intimately connected with the support of the uterus. In all inflammatory conditions of the pelvic organs, such as exudates, endocervicitis, endometritis, metritis and prolapsed tubes and ovaries, induction of hyperemia, that is, a fresh supply of blood to the parts, presents the only means of cure. This hyperemia can be induced in no better way than by means of the hot douche frequently repeated, glycerin tampons, hygroscopy, electricity, menstruation and gestation.

It has been frequently stated as a truism that a gynecologist should be first of all a wise physician. From a close observation and study of these tables "gynecologist" should be further interpreted as "one skilled in functional nervous disorders," for the gynecologic clinic of to-day is largely neurologic. How imperfectly the neuroses are understood is best illustrated by a casual remark made by one of our foremost gynecologic teachers that a wandering pain was a hysterical pain, and a fixed pain was one indicative of organic disease. How

far he was from a realization of the truth may be conceived from the fact that hysterical pain is often so fixed in character that even the psychic impress made on the cerebral cortex by the removal of pelvic organs, normal or diseased, does not alter it in the slightest degree, but often makes it more fixed than ever. A prediction from a study of these cases would not be out of order in reference to the gynecologist of the future when he has grasped the neurologic simulation of pelvic disease. His greatest endeavor will be to have the fewest operations to his credit instead of the greatest number. The conservation of normal pelvic organs and the restoration to health of diseased ones by medical means whenever possible will be his highest aim.

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CANCER OF THE UTERUS

OUR PRESENT MEANS OF LESSENING ITS MORTALITY *

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The question of lessening the mortality in cancer of the uterus is a subject which ought to be of interest to every member of the profession, since, as has been shown by the painstaking statistics of Welch, cancer of the uterus ranks first in incidence when primary carcinoma is considered, forming practically one-third of all the primary cases. The frequency of its occurrence can well be shown by a concrete example. According to Kelly, of the first 11,382 patients admitted to the gynecologic service of the Johns Hopkins Hospital in fifteen years for all gynecologic affections, 412, or 3.06 per cent., were cases of cancer of the cervix. Crile, in his oration before the American Medical Association at Chicago in 1908, states that statistics show that one woman in every eight who reaches her thirty-fifth year dies of cancer, and that, taking the prevalence estimate of the British Isles and applying it to the United States, there must be at this present moment approximately 80,000 cases of cancer in this country alone. These figures, of course, include cancer of all organs, but, as I have said before, uterine cancer easily heads the list in frequency. This is the condition which is confronting the race, and the question arises what we have done and what we can do to prevent its mortality, which in untreated patients is 100 per cent. Of course, we ultimately hope to find the cause of the disease and so attack it at its source, and to this end thousands of dollars are being expended in careful and painstaking investigation, and through munificent benefactions the services of some of the keenest minds in medicine are engaged in research along this line. But so far we may say, in all candor, that the results have been from a practical standpoint universally disappointing. For the present the cause of cancer is as far from a solution as it was years ago, but we must be optimistic and trust to the future for its solution, since many as seemingly impossible problems have been conquered in the past.

At the present time, then, we are concerned with the enormous prevalence of the disease, while we are still in the dark as to its cause. Such being the case, there

1. A Plea for the Correction of Uterine Displacements. Med. Rec., New York, March 7, 1908.
2. Uterine Displacements. Med. Rec., New York, April 11, 1908.

* Read before the Maine Medical Association, at its fifty-sixth annual meeting, Bangor, June 10-15, 1908.