

Original Articles.

SUBINVOLUTION OF THE UTERUS AND NEURASTHENIA.

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THE chief purpose of this paper is to invite attention to the importance of neurasthenia as a factor in the production of subinvolution of the uterus, with a view to promoting, on the part of the obstetrician, an increased sense of responsibility for the remoter welfare of certain of his puerperal patients.

I shall present brief notes of a group of cases wherein neurasthenia was manifestly the sole or principal cause of subinvolution, and where, in return, the presence of subinvolution was the sufficient cause of a wearisome persistence or recurrence of neurasthenia. If the fact of this intimate relation between the two conditions be admitted or established the conclusion is obvious that, since each condition is insidious, and often fails to announce its presence by positive symptoms during the puerperal period, each should be watched for with an attentive eye and purpose, to prevent what may well be likened to a malign conjunction of unlucky stars. In entering upon a brief examination of this subject, some remarks of a prefatory nature are needful.

As to the importance of subinvolution as a factor in the production of disease, I believe a fair statement of the present advanced position of authorities upon the subject to be this: that as a general rule it is the cause of areolar hyperplasia, the so-called chronic metritis,¹ and that by itself it is seldom a disease, but to become apparent it needs to be associated with some other pathological condition.² To these statements certain qualifications are necessary. Enlargement of the virgin uterus without the presence of heteroplastic growth is not very rare, and this fact alone is conclusive in favor of the assumption that morbid processes attended by enlargement may arise in the wombs of women who have borne children independently of influences having their origin in the puerperal state. My belief is that subinvolution among pluriparous women is frequent, and increasingly frequent, and is the cause of a very large proportion of the cases of chronic metritis in women who have borne two or more children. I also believe that subinvolution of itself and independently of any attendant or consequent morbid state, such as displacement or catarrh of the endometrium, does harm to the health of the woman. Venous engorgement and stasis naturally attend the condition in question. Increased weight of the passive uterus heavily taxes the supporting tissues. From these conditions arise not only menstrual irregularities, but disordered innervation and blood distribution throughout the body. These most natural inferences are verified by the results of treatment. Cure and correct all the resulting complications, and leave only enlargement, even then aid in the support of the womb at its proper elevation by a perfectly adjusted pessary, and though the patient's condition is immensely alleviated and rendered tolerable she is yet not cured. Restoration to something near the normal size and texture of the unimpregnated uterus alone signalizes full recovery of health.

If subinvolution be an evil, *per se*, and if it be in

addition responsible for but a tithe of the ills that follow in the train of chronic metritis, and if it be further, as it is universally admitted to be, a condition very unsatisfactory to treat for cure, if the beginning of treatment be long delayed, then, surely, it takes rank as a subject of prime importance in the department of preventive medicine.

The literature of the subject is especially unsatisfactory in the department of ætiology. One author sees no cases of subinvolution apart from laceration of the cervix; with another inflammation or congestion hold the leading place as causes; while a third has reached the conviction that malnutrition is always at the bottom of the disorder. When faulty innervation or general debility has been somewhat vaguely admitted as a factor, it has been, with barely an exception, as a remote or predisposing condition, local or general, rather than an immediate and all-sufficient influence. I have no controversy to maintain with the advocates of either of these views, but in following my present purpose I pass them by with only one or two remarks.

While malnutrition is often associated with neurasthenia, so that the two conditions are to each other as both cause and effect, I think that the priority of causative influence belongs to neurasthenia. Neurasthenia and subinvolution are often seen together without any evidence of malnutrition, but never are malnutrition and subinvolution combined without very manifest tokens of neurasthenia. If, as is doubtless true, instances of enlarged womb are found associated with laceration or inflammation, it by no means follows that the enlargement is due to the presence of either of these lesions, nor, indeed, that the enlargement is subinvolution at all. In order that cases shall indubitably support the affirmative of such proposition, they must have been observed from the time of confinement, and from the inception of the lesions, and the agency of another possible cause eliminated. The advocates of the theory of laceration will also be asked to prove that subinvolution occurs most frequently after first labors, as lacerations confessedly do. I believe the contrary is susceptible of proof. There is certainly a considerable proportion of cases wherein inflammatory or congestive features appear to predominate. There are others, however, where these features are singularly wanting, and although many cases occupy a middle ground, where traits merge, and become scarcely distinctive, yet it may be convenient for practical uses to admit two types of subinvolution, and to name them respectively the congestive and the neurasthenic varieties.

A characteristic example of the congestive type will most easily be found among those whose circumstances are unfavorable to ease, the laboring poor, or the women, naturally strong, who do their own household work, and are physically overworked. It is characterized by a marked predominance of local over general and reflex symptoms, that is, by pelvic aches and pains, menorrhagia, and leucorrhœa.

The other variety oftenest occurs in delicately organized ladies of great nervous susceptibility, who have encountered overstrain from care and anxiety, such influences as especially depress the energies of those possessed of high nervous mobility. The distinctive traits of this variety are the reverse of those named above. Menstrual flow and leucorrhœal discharge scanty, oftener than profuse; little pelvic pain unless as the result of complications; passive engorge-

¹ Thomas. Diseases of Women, page 285.

² Tilt. Lancet, July, 1876, page 6.

ment rather than active congestion; but a great variety and intensity of reflex nervous disturbance. It is to the examination of this latter type that the remainder of this article is limited.

It is needless to enumerate here the more remote and underlying conditions, so increasingly active and potent in this day and generation, which lead to neurasthenia. They are all comprised in the influences of heredity and those of education. These influences combine to form a being of mobile, susceptible organization, keenly alive to enjoyment and as keenly sensitive to sorrow; one with high capabilities and wakeful activities, and these probably already overwrought, even before marriage comes, with its certain domestic trial of patience and fortitude, its possible bereavements and reverses of fortune. She makes earnest efforts to maintain the accustomed round of social intercourse and domestic responsibility, while the physical functions of matrimony and maternity, either natural or perverted, asserted or unnaturally suppressed, are imperiously demanding and appropriating their moiety of vital force. A nervous system thus overburdened needs but a feather's weight to be overborne. The higher the tension and the more delicate the poise, so much the greater is the strain of the natural power of accommodation of the nerve centres to maintain the just equilibrium of organs and functions. Let now the last feather's weight be applied in the puerperal state, and let this power of accommodation then waver and yield, and the needful nerve influence is wanting which should conduct the process of involution. Unless this failure be recognized and remedied promptly, the womb thenceforward becomes a centre of baneful influence capable of perpetuating weakness and creating innumerable reflex disorders, manifested throughout the system, which may cause every organ and function of the body to become a separate woe. The patient is for a time unconscious of her plight. She rises from childbed and resumes her customary life. The nerve forces may suffice for a period to keep a show of maintaining digestion, nutrition, and muscular power; but the woman is tired, tearful, fearful, and irritable.

Two chances there are for reprieve, and perhaps complete escape, from the doom of chronic invalidism. One lies in the possibility of another, and more fortunately issuing, pregnancy, occurring before inflammation shall have shut the door; the other is held by the physician who, recognizing the dual character of the trouble, shall be able so to deal with its two elements, the local and the general, as to cause each step of improvement on either part to facilitate and confirm a corresponding step on the other, and so lead towards ultimate cure.

The cases I have chosen in illustration of the subject are typical. They all belong to the best class of our countrywomen in respect of mental endowments and strength of character. All have the brunette complexion, with dark eyes and hair, and present the traits usually associated with the nervous temperament. All had had a plurality of children, and were not far from thirty years of age when they came under treatment. All sought professional aid, not for pelvic distresses nor for any suspected uterine ailment, but for persistent debility, symptoms of physical or mental exhaustion, or both, associated with a variety of nervous disturbances, against which combination they had found themselves unable to maintain a struggle. All

were alike wholly free from any trace of laceration of cervix or perinæum, and from any marked atony or relaxation of the walls of the vagina, bladder, or rectum, a fact important as evidence against the idea that excessive or premature bodily exertion had any direct or mechanical influence on the pelvic organs.

CASE I. Mrs. A., mother of three children, from early girlhood had suffered from a variety of nervous pains. These, in part affecting the stomach, had simulated dyspepsia, and she had never dared to be otherwise than very abstemious in eating. Sometimes she went almost without food for two or three days. Her pregnancies were exceptions to this rule, for then she always ate heartily.

Nothing unusual marked her experience at or immediately after her last confinement, but for many months, both before and after, she shared with her husband the burden of financial anxieties. After unavailing attempts to eat well and nurse the infant, at the end of three weeks from its birth she was carried to her carriage, and drove several miles in search of a wet-nurse. It was not until a year later, and after much watching over serious sickness in the family, and eating less than ever, that a convulsive fit occurred; violent and distressing palpitation of the heart followed, with feelings as of impending suffocation, and her strength suddenly and totally collapsed. Four or five months of extreme nervous exhaustion followed, during which time she was intolerant of noise, of food, incapable of any excitement or effort, obtaining sleep chiefly by the aid of chloral. She then placed herself under my charge. At this time her weight was less than one hundred pounds, its former average being about one hundred and fifteen.

The diagnosis, made complete in due time, was chronic neurasthenia as the primary trouble, with malnutrition (starvation, in fact), present as one result, subinvolution as another. The uterine cavity measured at least nine centimetres.

The first necessity was to inspire the patient with a proper confidence in the powers of her stomach. Having taught her to gratify the cravings of appetite for wholesome, generous food, it was not many weeks before a weight of one hundred and thirty pounds testified to the absence of malnutrition. Restoration of muscular tone and strength followed in due order; but nerve power, steadiness and trustworthiness of nerve function were withheld.

This is the point to take note of, for this is what happens again and again in subinvolution arising from neurasthenia. Either subinvolution reacts, and from being a consequence becomes a cause of neurasthenia; or subinvolution, as a uterine ailment, by virtue of its power to perturb the nerves and simulate other disorders, gives rise to a pseudo-neurasthenia, differing from the real in being not constant, but capricious and variable. Perhaps both forms occur, and combine in different individuals in varying proportions. Certainly a very attentive study of the individual patient is often needed to secure the solution of doubts, and the removal of perplexities having important bearings upon treatment, and one's judgment upon the requirements of a case is liable to frequent need of revision.

What is certain from more than five years' observation of the case of Mrs. A., is this: That after good nutrition and fair muscular strength had been restored, an appearance of chronic neurasthenia continued, varying in degree of severity, however, very nearly in

proportion to the degree of intensity of the uterine engorgement and catarrh. According as the local condition improved under local treatment, the patient's power to do became more continuous, and her perturbations of nerve force became less trying. And further, when all appreciable endometritis had been removed, the engorgement very much lessened, and the uterus comfortably sustained at its natural elevation, by the aid of a high-reaching pessary, there still remained, on the one hand, a liability to depressions and disturbances of nerve influence, — such, for example, as several successive nights of utter sleeplessness, or sudden invasions of general nervous weakness, — and, on the other hand, recurrences or exacerbations of uterine catarrh and engorgement; and the tide of general nerve untrustworthiness was always tolerably synchronous with ebb and flow of local disorder. Only as the basic lesion, the uterine enlargement, at last and radically diminished under a more vigorous and persistent local treatment, has normal, uniform, and continuous capability of energy and tranquillity been possible.

It is several months since Mrs. A. has been released from professional care, and she remains in thoroughly good health. Her uterine cavity now has a depth of sixty-nine millimetres, a measurement which represents a cure of the subinvolution.

CASE II. Mrs. B. had no previous history of neurasthenia, and of uterine disorder only an inconsiderable experience, following a miscarriage which occurred between the two completed pregnancies. When two months advanced in her latest pregnancy, she experienced the shock and grief of a sudden and great bereavement, but maintained throughout the remainder of her term her accustomed cheerfulness and calm. She may have been aided to do this with comparative ease by a certain exaltation of mind associated with her sense of duty towards the unborn child; but the prolonged exercise of will to control or put aside natural emotion doubtless involved a heavy strain upon her nerve power. No unusual experience attended, or immediately followed, her lying in. The usual period of quiet was observed, and all was presumed to be well with her. After a few weeks, however, feelings of mental depression began to grow upon her; and these would alternate with an excited state of feeling impelling her to go. She sought every opportunity for diversion, and got more and more into a state of unrest. A year and a half after confinement she underwent more domestic experiences of a very trying nature, and also suffered some shock from a fall, by the breaking of the cord of a hammock in which she was swinging. Finally she began to show a disposition to faint; and the occurrence of a fainting attack in a theatre was the immediate cause of her placing herself under my professional care, two years after confinement.

The womb was found to be retroverted; and its replacement removed the only pelvic discomforts which she had experienced. It was also deeply congested, tender, and harder than normal to the touch. Its cavity measured ten centimetres in depth, and was filled with very tenacious, transparent mucus, and was easily made to bleed. The vagina was deeply injected and the hæmorrhoidal vessels swollen with blood. Accompanying this local condition were symptoms of disordered, one might almost say, collapsed, innervation, affecting almost every important organ and function. The emotions were not always under control of the will; sleep was uncertain; paroxysms of dyspnoea

sometimes occurred. The circulatory system was disturbed; the heart's action weak and frequent. There was total disrelish for food, and constipation. She was unable to apply her mind to reading, or her hands to any employment. Attempts at these, or at walking, were followed by increased prostration. Notwithstanding this extreme state of neurasthenia, there were no visible signs of impaired nutrition. Face and figure remained full, and weight was probably undiminished.

Treatment was begun sixteen months ago. During the last six months the patient has resumed much of her former activity. The only recognizable deviation from the normal state of the uterus is its size, for the subinvolution is not cured. Associated with this, and, as I believe, now chiefly dependent upon it, is a liability to occasional nervous perturbations, and an uncertainty and capriciousness in the display of nerve power, of which power I think she has now regained a moderate reserve supply.

CASE III. Mrs. C. is introduced because it is an example of subinvolution arising solely from neurasthenia of constitutional origin. The lady had always been delicate, and during her first two pregnancies had been greatly restricted in her capacity of effort, but during the whole course of her third and latest pregnancy debility was so profound as to excite anxiety for her safety. All possible means were used for invigoration, including frequent feedings, massage, and the withdrawal of all care, yet she remained a nine months' prisoner to her bed, totally unable to exercise either mental or bodily power. So extreme was the nervous exhaustion that she could not bear the prolonged presence in her room of her dearest friends without harmful effects. Normal labor of two hours' duration took place in September, 1879, terminating in the birth of a healthy female child. The utmost care was used to guide the patient safely through her puerperal convalescence, to reinvigorate her, and at the same time to restrain her from any premature exertion. Trusting to these precautions and to the absence of all suspicious symptoms, no uterine examination was made for nine months after confinement. It was proposed because it was found that with every advantage the patient still remained weaker than was reasonably to be expected, and that she began to experience nervous feelings, which she could scarcely control. The uterus was found inclined towards retroversion, somewhat engorged, patulous, and catarrhal, and with a depth of eight centimetres, indicating a grade of subinvolution, when the patient's natural delicacy of organization is considered, quite sufficient to produce and perpetuate debility and nervousness.

Eighteen months have now elapsed since her confinement, and she has at last regained a near approximation to her earlier standard of strength and efficiency, and is not nervous except for reasonable cause. The uterus is very nearly healthy, and has a depth of seven centimetres.

CASE IV. Mrs. D. is the last which I shall mention. In October, 1876, when her fifth child was three weeks old, she arose from bed, and began a long and devoted attendance upon a member of her family, whose illness resulted fatally four months later. This double strain upon mind and body was attended by menstrual derangements and pelvic sufferings, and was followed by profound prostration of all her energies. The presence of subinvolution was recognized by her physician. Eight weeks of repose was succeeded by

six months of active, congenial, out-of-door life in the parks of Colorado, and she returned home, to appearance, wholly reinvigorated, with pelvic symptoms gone. Soon she began to be annoyed by persistent general pruritus, later, by distressingly severe headaches, and by a sense of returning debility. The uterine cavity measured eight and a half centimetres. The use of the probe caused pain and bleeding. The form and position of the uterus were normal. There was some sensitiveness of the body of the womb and of the left broad ligament, which latter was somewhat thickened. This tenderness was subsequently increased by too violent horseback exercise, and by imprudence in lifting. Local treatment was entered upon in July, 1878, and continued over a period of rather more than a year, with an interruption in the spring, occasioned by a brief absence of the patient in a trip to Europe. About the middle of August, 1879, the menstrual flow came on with unusual and startling copiousness. After this occurrence treatment was discontinued, the womb having regained a sufficiently healthy condition, and a calibre of scarcely more than seven centimetres. Another very abundant catamenial flow occurred in September, and thence dated her sixth pregnancy.

Especial solicitude was felt for the progress of involution after confinement. There was some adhesion of the membranes, and the lochia were not quite normal. Quinine and ergot and hot vaginal lavements were used, the stay in bed was prolonged, and the first effort permitted was carriage exercise. Progress was delayed by an attack of severe abdominal colic, from indigestion, on the thirteenth day after delivery. At the end of five weeks the uterine cavity still measured eighty-one and a half millimetres. At the end of nine weeks the second measurement was made, and indicated the very satisfactory result of sixty-nine millimetres. The patient supplied her infant in part from the breast, and has since remained in good health.

I have reported the foregoing selected cases to emphasize the importance of watching closely all the symptoms in puerperal patients which may be connected with checked involution; of watching these with peculiar solicitude in those patients who may be constitutionally inclined towards neurasthenia, or in those who, not being especially so inclined, have undergone any unusual mental trial or nervous shock; the importance, further, of determining the question by actual measurements, when the *general condition* of the patient presents room for a reasonable doubt, even though the usually accepted local indications, derived from the course of the lochial discharge, etc., be wholly reassuring; the importance, finally, of retaining the full responsibility of *accoucheur* until the vitally important process of involution in each case committed to the physician's charge shall be, in his enlightened judgment, successfully completed.

A CONTRIBUTION TO THE ÆTIOLOGY OF CYSTITIS.

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"To know the natural progress of diseases is to know more than the half of medicine" said Trousseau, and few of us would be loth to admit that nothing would advance the science of rational therapeutics more than our increasing knowledge of the natural course of

diseases and their self limitations in many instances. But the very nature of medical practice, as a humane art bent quite as much on the alleviation of human suffering as on the cure of disease, has prevented the rapid growth of a knowledge of the natural course which many maladies would take were it not interfered with by the laudable attempt of the physician to relieve painful symptoms and so, in many instances, to modify, for better or worse, the natural progress of the affection.

In this paper I wish to draw attention to one form of cystitis and to its natural history; or rather as much of it as could be learned from a case of long standing occurring in an intimate friend, and offering every facility for close investigation.

M. B. had the following history: From birth until manhood he was in good health; when at twenty years of age he was kicked by a horse, the blow falling on the side of head near one temple. No fracture was found, but he lay insensible for nearly three days. He recovered perfectly except that ever afterward he had frequent and severe headaches accompanied by slight dizziness, and an inability to fix his mind long upon any one subject, yet he was a very active man and carried on a large business. As years passed on his memory became so defective as to seriously annoy himself and others.

When about forty years of age he began to have attacks of sub-acute rheumatism several times a year, but never confining him to bed. He suffered at intervals from spasmodic asthma and accompanying bronchitis; this was a disease of many years' duration. From forty to fifty he was seized from time to time with sudden diarrhoea of a watery character, not connected with any error in diet, but due apparently to nervous exhaustion. When forty-eight years of age he complained of coldness and numbness of the legs from just above the knee to the foot, and walked with a stiff and somewhat staggering gait, especially when he had previously been seated for some time. Locomotor ataxia was feared, but he failed to reveal the proper symptoms, and the trouble with his lower limbs was not progressive. He still considered himself in fair health and pursued his ordinary labors. In this condition, and when fifty years of age, he was seized with a dragging sensation in the region of the bladder and frequent calls to urinate, the water being passed slowly and with difficulty. Soon a thick glairy mucus appeared which adhered firmly to the bottom of the vessel; this continued for several weeks, then mucus mixed with pus was voided, and later, greenish pus in large quantities; no blood was seen at any time. The existence of stone being suspected, Dr. T. B. Curtis kindly explored the bladder several times but discovered nothing. The urethra, which was healthy, allowed a No. 20 (French) bougie to pass freely but would not admit a larger one, owing to the naturally small size of the meatus. The prostate gland was moderately enlarged but not enough to sensibly occlude the urethra or make it difficult to pass a fair-sized catheter. The urine was acid at all times when examined, and was passed in fair quantity except at one time when the patient had an almost complete suppression of urine for two days. The cause of this anuria was not ascertained and the trouble never reappeared. Roberts¹ says "Disturbance of the innervation of the organs is probably the primary cause and, possibly also in many cases, the direct cause of the suspension of the secretion." The patient drank freely for a

¹ A Treatise on Urinary and Renal Diseases, 2d ed., page 41.