

THE DISORDERS OF THE NERVOUS SYSTEM ASSOCIATED
WITH THE CHANGE OF LIFE.BY GUSTAVUS ELIOT, A.M., M.D.,
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DURING the fifth decade of a woman's life she is subject to a group of peculiar symptoms. The cessation of the function of reproduction is an event second in importance only to the death of the individual. It is not strange that the loss of this wonderful power should be accompanied by changes in the mental and emotional condition, and that the action of the entire nervous system, connected as it is with every organ of the body, should be profoundly disturbed. The women in whom the change of life occurs unaccompanied by disagreeable sensations and symptoms are in the minority. The object of this paper is to enumerate some of these symptoms, to discuss briefly their nature and origin, and to present some suggestions with reference to their prevention, amelioration, and cure.

In ancient times it was commonly believed that menstruation was, at least in part, an excretory function; that with the menstrual blood some indefinite and unknown excrementitious substances were eliminated from the body; that retention of these waste products occurred when the function of menstruation was inadequately performed; and that such retention was productive of very serious results. This idea has been gradually abandoned by most men who use their intellects and are not abnormally credulous. It is now generally recognized that the absence of menstruation is often not only attended by no unfavorable results, but, on the contrary, is an important aid to the preservation and increase of the vital forces.

It might perhaps be not unnatural to suppose that, when menstruation finally ceased at the menopause, the failure of the periodical sanguineous flow to occur would result in the presence in the vascular system of an abnormal amount of blood, and that this would give rise to important disturbances of various organs. It will subsequently be shown that this is, at least, improbable, and that on the other hand a deficiency of blood, or of certain of its more important constituents, is frequently present at this period.

It may be premised that the average woman is exceedingly neglectful of her health. Her clothing is often insufficient, and so arranged as to produce positive injury to her body. Her food is unsuitable in character, improperly prepared, taken at irregular intervals and in insufficient quantity, and not properly digested. Tea and coffee are frequently used to excess. Work, both productive and unproductive, is carried on with little regard to the limits of her strength or the necessity for rest. The

excretory functions are, as far as possible, forgotten, and constipation becomes habitual.

Such disregard of the recognized laws of health, persisted in for forty years, predisposes to the occurrence of serious disorders. It is at the menopause that many women begin to pay the penalty for their long-continued negligence.

Furthermore, the period of life between the fortieth and fiftieth years is likely to be especially trying to the emotional faculties. The loss of aged parents, of brothers or sisters in the prime of life, of children just arriving at maturity, or of trusted and life-long friends—one or more of these bereavements is likely to befall one at this time. Frequently a succession of these sad events produces an almost overwhelming depression of spirits. Besides these great and more obvious trials, the ordinary cares, troubles, and worries of life weigh one down at this age with more than ordinary irresistibility, because then one begins to feel that the years of greatest activity and vigor have passed, that old age is approaching, and that if the expectations of youth have not already been in some measure fulfilled, they will not be likely to be realized in the future. These depressing events and conditions act as exciting causes of many disorders to which the woman has predisposed herself by years of careless living.

After she has been suffering for weeks, and perhaps for months or years, she is very likely to wander into a physician's office and tell him that she has malaria. There are, it is humiliating to confess, a good many doctors who will tell her gravely: "Yes; you have malaria. You must take plenty of quinine."

If you inquire carefully in regard to the clinical history of one of these patients, you will find that she suffers from more or less of the following symptoms: Indisposition for exertion, inability to work, forgetfulness, headache, dizziness, insomnia, flushes of heat followed by chilly sensations, sweating, palpitation, flatulence, abdominal distention, and constipation. On making further examination you will probably find that her heart and lungs show no evidence of any organic lesion, and that her flesh is flabby, her pulse soft, her tongue coated, and the conjunctivæ are pale. She may have considerable intercostal neuralgia and frequent backaches, and tender spots may be detected in her head, back, and chest. She also sometimes complains of swelling of the face, hands, and feet, which, however, is often not a real œdema.

A study of the clinical history of these cases, and a consideration of the inconstant and changeable character of the symptoms, is sufficient to convince one that they are not of organic origin; that they are not associated with any distinct pathological change in the nervous system, but that, on the other hand, they may occur in connection with a variety of different conditions.

In some cases a disordered digestion is the most important factor in the causation and perpetuation of these very distressing symptoms. The chief disturbance may be in the stomach. Then eructations of gas and flatulent distention of the stomach are frequently the most annoying and most important symptoms. Or, on the other hand, the intestines and the associated glands may be chiefly at fault, and the most marked symptoms obstinate constipation and flatulent distention of the abdomen. Not infrequently these two conditions are found coexisting in the same case. They may then give rise to, or be associated with, a number of other symptoms, the most common of which are headache, dizziness, palpitation, and dyspnoea.

In some cases anæmia is an important element. This may be associated with disturbances of digestion, either as cause or effect. If both exist each may intensify and aggravate the other. If anæmia is present the patient usually complains of headache, dizziness, and dyspnoea.

In other cases insomnia is a prominent feature. This also may be a result of pre-existing derangements of function of various organs, and in turn, when present, may aggravate other disorders.

Finally, in many cases there is a distinct and well-marked element of nervous exhaustion. This is frequently the starting-point of other disorders, and when they are fairly established is intensified by them.

In making the diagnosis of this condition one should be very careful to exclude the possibility of the existence of any organic disease. In many cases organic diseases are accompanied by symptoms which resemble those which have been described as of frequent occurrence in connection with those functional disorders of the nervous system which are the subject of this paper.

Careful exploration must be made of the chest—of the lungs, but more particularly of the heart, to which many patients think that their troubles are referable—in order to detect the possible presence of commencing or latent organic disease. Careful analysis of the urine should be made occasionally, in order that no organic change in the kidneys may escape notice. The temperature should be taken now and then, especially if the action of the heart is at all accelerated, so that no febrile disturbance may be overlooked. Naturally inquiry should be made as to the manner in which each organ of the body is performing its function, and any deviation from the normal must be carefully noted and duly considered in deciding upon a plan of treatment.

The prognosis of these disorders is rather uncertain on account of the variety of circumstances which influence their progress. Many patients are exceedingly dilatory in seeking medical advice for these troubles. Many are very negligent about following up the treatment which is prescribed, and some fail to receive proper treatment because their

physicians make an erroneous diagnosis, or do not understand what therapeutic measures are adapted to the case.

The natural tendency of these disorders is to persist for months and years. They do not, however, have any inherent tendency to terminate in death. With proper treatment their severity may be mitigated and their duration very much abbreviated. If the patient seeks advice early, is judiciously managed, and follows up the treatment conscientiously and persistently, the prognosis is good. Care must be exercised to remove, as far as possible, the conditions which permitted the development of the symptoms in the first place, lest they return again after treatment has been discontinued.

In the management of these cases it is necessary to combine very careful hygienic regimen with appropriate medicinal treatment. Worry and care must be avoided as far as possible. Regular and prolonged rest must be secured. A moderate amount of mental occupation during waking hours is useful. Abundance of fresh air and moderate exercise are essential. Food which can be easily digested, and which has been properly prepared, must be taken regularly and in sufficient quantity. It must be eaten slowly and chewed thoroughly, and time must be allowed for the process of digestion to become fairly established before the resumption of mental or physical exertion. Tea and coffee must be entirely abandoned, and abundance of milk and water must be taken. Bathing and rubbing influence very favorably the circulation and the processes of nutrition. The body must be properly protected, so as to maintain an equable degree of warmth throughout, care being taken to avoid the extremes of an excess or a deficiency of clothing.

If the functions of any organ are not properly performed, the treatment must be so directed as to restore and maintain the normal action.

The digestive organs are perhaps more frequently deranged than any others, and require most careful attention to secure a proper performance of their functions. Constipation, flatulence, and anorexia are the most common and the most important indications for treatment. If constipation exists alone, a pill of aloes and myrrh taken at night, and followed, if necessary, by another in the morning, will generally produce a pleasant effect. Another excellent pill under these circumstances is one containing one-fifth grain of aloin and one-sixtieth grain of sulphate of strychnine. Two or three of these may be taken at different times through the day, if one at night is not sufficient. The object to be aimed at is to secure one easy movement of the bowels each day, unaccompanied by nausea or griping, by means of small doses, repeated if necessary, of some not very irritating laxative.

If anorexia, constipation, and flatulence are all present, a bitter mixture will generally prove useful—a combination of *nux vomica*, *casarea*

sagrada, cardamom and gentian, with aromatics, is exceedingly valuable under these circumstances.

If anæmia is well marked, iron and arsenic are very useful. If there is no, or only slight, disturbance of the digestion, pills containing sulphate of iron with carbonate of potash, known as Bland's pills, with the addition of arsenous acid, produce excellent results.

If constipation accompanies anæmia, a pill or capsule containing arsenous acid, aloes, nux vomica, and reduced iron may be advantageously prescribed.

If neuralgia is a prominent symptom, five-drop doses of fluid extract of gelsemium will give relief in many cases. In connection with gelsemium, or in place of it, benefit will often be obtained from the use of sulphate of quinine with extract of hyoscyamus.

If the nervous symptoms are not accompanied by derangement of the functions of other organs, or if they persist after proper attention has been paid to the regulation of these disorders, it is necessary to prescribe remedies which act more directly upon the nervous system. The most useful drugs of this class are bromide of sodium, phosphorus and its compounds, nux vomica, and arsenic.

The use of arsenic has been already mentioned in connection with the management of cases in which anæmia is an important factor. In the treatment of certain forms of anæmia it is of great value. But besides increasing the production of red blood-cells, it unquestionably possesses the power, also, of promoting the nutrition and vigor of the nervous system. In combination with iron and nux vomica it is exceedingly useful.

The utility of phosphorus as a nerve tonic has long been recognized. A combination in pill form of one one-hundredth grain of phosphorus with one-quarter grain of extract of nux vomica has been used extensively and with excellent effect. One great drawback to its use is the difficulty of securing pills which have been properly made and in which the original characteristics of the drugs have been retained.

Phosphide of zinc is frequently substituted for phosphorus. One-tenth grain of this compound with one-fourth grain of extract of nux vomica will often prove of benefit.

The compound syrup of the hypophosphites is another preparation which is very popular with the profession, and which has positive value as a nerve tonic.

As a palliative agent, to produce sleep, to equalize the circulation, and to relieve the condition of nervous irritability commonly called nervousness, no drug is more useful than bromide of sodium. This salt is preferable to the other bromides because it is less unpleasant to take, and is less irritating to the stomach, while at the same time it is not inferior in therapeutic value. In prescribing this very valuable drug, one should never forget that it does not increase the strength or nutrition of the

nervous system. It should not, therefore, be relied upon for continuous prolonged administration to the exclusion of other remedies. On the contrary, its use should be supplemented by the administration of general tonics and of special nerve tonics. Iron and arsenic are especially well adapted for this purpose.

In conclusion the following propositions are presented:

1. At the time of life when the menopause occurs the various organs of a woman's body are likely to be in a state of depression as regards either their nutrition or functional activity, so that the normal equilibrium of healthy action may be easily disturbed, and abnormal action, the manifestation of disordered function, may be inaugurated and perpetuated.
2. The cessation of menstruation is an event of great physiological importance, and is perfectly competent to produce grave disturbances of the nervous system, if any predisposition to them already exists.
3. The more common disorders of the nervous system occurring under these circumstances are functional in character, and are associated with disturbances of functions of other organs, and especially of the digestive, circulatory, and hæmatopoietic systems.
4. In their treatment, attention should first be paid to improving the general nutrition of all the tissues of the body, and restoring each organ to its normal activity.
5. If, after all the other organs have resumed the proper performance of their functions, symptoms referable to a disordered condition of the nervous system still persist, recourse must be had to remedies which act directly upon the nervous system, either by improving its nutrition or by modifying and regulating its action.

THE FULL CORRECTION OF MYOPIA.¹

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STATISTICAL studies of ametropia, the natural history of eye-strain and the behavior of emmetropic and ametropic eyes under the requirements of our present social organization, all support the idea that the emmetropic eye is the ideal eye; that emmetropia is the standard toward which the evolution of the eye has proceeded. The mass of eyes present low hyperopia; that is, they approximate the emmetropic standard from

¹ Read before the American Ophthalmological Society.