

OBSERVATIONS ON A FORM OF NERVOUS PROSTRATION, (NEURASTHENIA,) CUL- MINATING IN INSANITY.

BY E. H. VAN DEUSEN, MEDICAL SUPERINTENDENT OF THE
MICHIGAN ASYLUM FOR THE INSANE.*

Our observations have led us to think that there is a disorder of the nervous system, the essential character of which is well expressed by the terms given above, and so uniform in development and progress, that it may with propriety be regarded as a distinct form of disease. Though analagous with, and presenting in certain cases a few symptoms similar to those found occasionally in irregular forms of malarial disease, the difference between the two morbid conditions is well marked, and easily recognized.

Among the causes, excessive mental labor, especially when conjoined with anxiety and deficient nourishment, ranks first. It is also traceable to depressing emotions, grief, domestic trouble, prolonged anxiety and pecuniary embarrassment; hemorrhage and debilitating diseases, following or coincident with depressing mental influences and sleeplessness. Prolonged exposure in a malarial region under certain circumstances may also induce it.

Its leading symptoms are general *malaise*, impaired nutrition and assimilation; muscular atonicity, changing the expression of the countenance; uterine displacements, with consequent results, and neuralgias of debility, cerebral anæmia, with accompanying tendency to hyperæsthesia, irritability, mental depression, impaired intellect, melancholia and mania. In cases terminating

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fatally, death ensues from exhaustion, or from coma, with extensive sub-arachnoid effusion.

If an individual exposed to malaria is in robust or usual good health, and the exposure be recent, we may have the ordinary phenomena of intermittent fever, as generally met with in all malarial districts. If the reverse be the case, and the resistive power of the individual be less, the result is often a series of neuralgic affections and disabilities, of frequent occurrence in the experience of every practitioner of medicine; but occasionally, when the struggle is prolonged and under circumstances of a peculiarly depressing character, the nervous system is weakened and its functions become disordered, the secretions are more or less deranged, digestion is enfeebled, the patient becomes irritable and depressed, and serious intellectual disturbance ensues. Thus may malaria develop the morbid condition now under consideration.

In by far the larger proportion of cases, however, which have been presented for treatment in this Institution, malaria can have had no influence, either recent or remote, in the causation of the disease. In most of them there had been a coincidence of depressing influences under which even the most robust and healthy organizations have finally yielded.

The exhaustion consequent upon protracted attendance at a sick bed, with loss of sleep and irregular meals, solicitude as to the final issue, and, in case of a fatal termination, the shock of the bereavement, is a cause. It has occurred, too, in the persons of those occupying positions of great responsibility, the duties of which were of a nature to make heavy demands upon the nervous energies of the individual, and at the same time deprive him of the large amount of sleep rendered requisite by the exhausting labors of the position.

The early married life of the wives of some of our smaller farmers seems especially calculated to predispose to this condition. Transferred to an isolated farm-house, very frequently from a home in which she had enjoyed a requisite measure of social and intellectual recreation, she is subjected to a daily routine of very monotonous household labor. Her new *home*, if it deserve the name, is, by a strict utilitarianism, deprived of everything which can suggest a pleasant thought: not a flower blooms in the garden; books she has, perhaps, but no time to read them. Remote from neighbors, as in sparsely settled districts, for weeks together, she sees only her husband and the generally uneducated man who shares his toil.

The urgency of farm work necessitates hurried, unsocial meals, and as night closes in, wearied with his exertions, the farmer is often accustomed to seek his bed at an early hour, leaving his wife to pass the long and lonely evening with her needle. Whilst the disposal of his crops, and the constant changes in the character of farm labor afford her husband sufficient variety and recreation, her daily life, and especially if she have also the unaided care of one or two ailing little children, is exhausting and depressing to a degree of which but few are likely to form any correct conception. From this class come many applications for the admission of female patients.

The hot-house educational system of the present day, and the rash, restless, speculative character of many of our business enterprises, as well as professional engagements, are also strongly predisposing in their influence to debilitating forms of nervous disorder.

Among the earlier symptoms is an impaired appetite, and perhaps slight loss of flesh, but with a degree of mental and physical languor singularly disproportionate

to the other symptoms and circumstances of the case. The careful observer, having his attention directed to the imperfect assimilation due to the loss of nerve tone, will often detect a marked excess of urea. To the same deranged functional action of the kidneys may be traced the strange drowsiness occasionally observed. In a patient treated here in 1860, in whom this somewhat unusual drowsiness was well marked, it was found that the urine nearly semi-solidified on the addition of nitric acid. As a general rule, however, the urine in these cases is paler than in health, and is secreted in larger quantities.

A succeeding symptom is marked muscular atonicity, manifest in the position and gait, and which often singularly changes the expression of the patient, more particularly of the mouth and the lower portions of the face, and especially so in females. Thus the approximation to a more natural expression marks the progress towards restoration. To the same muscular atonicity is attributable the frequent occurring uterine displacements, and the distressing train of accompanying symptoms.

Irritability and hyperæsthesia, increasing proportionally with the increasing nervous prostration, we have next a new series of morbid manifestations—the neuralgias on the one hand, or disordered intellection on the other—developed in accordance with the direction of the morbid action. With these neuralgias we have, in this connection, very little to do, and will dismiss them for the present, with a few remarks relative to the difference existing between them and similar neuralgic developments in certain forms of malarial disease.

Physicians practising in malarial districts are familiar with the multiform nervous phenomena, occurring as a

consequence of exposure to the malarial poison, so frequently met with in certain localities. They are constantly meeting with neuralgic and morbid mental manifestations, sometimes carried even to the point of maniacal excitement, all solely attributable to the effects of this strange poison. They find no difficulty in detecting their nature and cause, and applying suitable remedies. Many of our physicians, also, are perfectly familiar with the particular ailment now under consideration, and have readily recognized the points of differential diagnosis.

As a general rule in the malarial neuralgias, when once located there need be little apprehension of further complication or transfer to any other portion of the nervous system, but not so in the neurasthenic. In these we have the premonitory symptoms before alluded to, and even, as previously remarked, if the direction of the morbid action for the time being develop a simple neuralgia, judicious treatment alone can arrest the tendency to mental complication. The recognition, therefore, of this form of nervous disorder, the presentation of a few hints as to the agency most likely to arrest this tendency, and the course of treatment we have found most efficacious in the mental alienation accompanying it, is the object of this paper.

As to the term *neurasthenia*, it is an old term, taken from the medical vocabulary, and used simply because it seemed more nearly than any other to express the character of the disorder, and more definite, perhaps, than the usual term "nervous prostration."

Secondary to the earlier symptoms of irritability and the depression of the vital power already mentioned, is a marked tendency to hyperæmia. The earlier morbid conditions having failed to attract attention, it is not strange that observers have occasionally regarded one

of these located hyperæmias or congestions as the *fons malorum* itself.

In the case of all patients who have suffered from nervous prostration for any length of time, cerebral anæmia may be anticipated, and when, coincident with irritability, it exists as a secondary result, or, in consequence of impaired digestion and assimilation, cerebral hyperæmia, with its distressing train of symptoms, is very readily induced, by any cause calculated to quicken the circulation. Hence the importance of great caution in protecting the patient from influences likely to produce this.

To this circumstance is due the fact that neurasthenic patients seldom tolerate the use of alcoholic stimulants. A single teaspoonful will often produce flushing of the face, burning heat of the eyelids and distress in the head. Mental emotions, ill-timed interviews with friends, and the injudicious acts and remarks of an attendant may also speedily induce an unpleasant hyperæmia.

It is a well recognized fact in mental pathology, that in the asthenic the earliest marked morbid psychological symptom is *distrust*. It is true that this is usually preceded by irritability and other modifications of temper and disposition—grave symptoms always—which should promptly receive the attention both of physicians and friends, but, as before remarked, the first clearly marked morbid sentiment is *distrust*. If the sufferer be an individual of deep religious feelings, to whom there is but the one only, great and vital interest, there is distrust of God's promises, morbid views of personal relations to the church, and to society—in fine, what is improperly termed "religious melancholy." If the acquisition of gain and the possession of broad acres have been the great object of life, there are torturing apprehensions of poverty; the poor-house stares the patient in the face,

and pauperism is his inevitable fate. Title deeds are filled with flaws, his notes are forgeries, and even gold and silver to him are worthless. If the conjugal relations have been peculiarly close and tender, there are the tortures of jealousy. In a few exceptional cases the morbid feeling has been general in its application.

If at any time during this stage there occurs a *sudden and entire* change in sentiment; if hope takes the place of despair, and the jealousy and suspicion be suddenly supplanted by the opposite sentiments, it almost invariably betokens still greater prostration, and but a trifle more will then be required to develop mania.

As before observed, in the earlier stages, through deficient innervation, there is derangement and suppression of secretion, and, as would naturally be expected, very uniformly in female patients, menstrual suppression. If, through a misapprehension of the character of this suppression, active emmenagogues and uterine excitants be resorted to, with the view of forcing the organ to a resumption of its function, the attempt will not only fail, but will induce uterine and vaginal hyperæsthesia, create delusions of a most unpleasant character, and sometimes develop an almost uncontrollable furor uterinus. So, also, when dyspepsia is the prominent symptom, an analogous course of treatment will frequently cause great local distress, and often develops delusions of apprehensions of personal danger from poison with a disposition to refuse food under the influence thereof. Uterine displacement with leucorrhæal discharge, is very commonly present, and at some stage is apt to be the most prominent difficulty under which the patient labors. Through muscular atonicity the organ sinks and finally rests upon the vaginal walls, the pressure producing congestion, ulceration and discharge. In several cases admitted here, the condition of the patient

from this cause had become one of great misery; still in no single instance has it become necessary to resort to any local treatment whatever, and in no case has there been a failure to give the patient entire and permanent relief by remedies addressed to the constitutional condition solely.

Headaches are not a prominent or frequent symptom, except as an accompaniment of cerebral hyperæmia, and sometimes, perhaps, when it occurs in association with uterine irritability.

Sleeplessness is a common and, at certain stages, a most distressing symptom. As previously observed, drowsiness sometimes occurs as a consequence of disordered renal function; it may likewise depend upon venous cerebral hyperæmia. Healthy, refreshing sleep is of course not to be expected under such circumstances. As the debility increases, the morbid irritability and activity increase therewith, and maniacal excitement soon follows.

A few patients, especially, in the earlier history of the attack, suffer from wakefulness only during the earlier hours of the night. When, through the composure induced by quiet and the recumbent position, the circulation is equalized and the cerebral hyperæmia relieved, a few hours of healthful and natural rest is enjoyed. To this is due the frequent statement of these patients that they sleep much better towards morning than at any other time.

A profuse, saturating perspiration is another frequent, and to the patient, very annoying and distressing symptom. Its occurrence usually accompanies extreme nervous prostration, and very clearly indicates the character of the remedial agency to be employed. It may occur at any hour of the day, and may or may not be preceded by shiverings; more commonly, however, the patient

falls into a profound sleep after a few hours of restless tossing, and on awakening from his brief rest, finds himself bathed in perspiration, his clothing, and sometimes a portion of the mattress and pillow saturated.

At a still later stage, when the exhaustion is very profound, copious, oft-recurring mucous stools frequently occur. They are sometimes of a very offensive and nearly putrid odor, a circumstance supposed to be due to the acknowledged tendency to spontaneous decomposition, which accompanies low vital power. So, also, the urine is often found of very disagreeable odor, and probably from a similar cause. The breath sometimes is so fetid as to suggest mercurial sore mouth; indeed, the room occupied by a patient in this stage of the disease, unless it be thoroughly ventilated, is pervaded by a peculiarly characteristic and unpleasant odor.

In two cases ascites existed, and was at first a puzzling symptom. The sounds of the heart being modified, in a measure, by the impaired character of the blood driven through it, a cardiac complication might be suspected by an inexperienced auscultator. The condition disappeared as the patient improved; and where it thus exists, it is probably to be relieved only by restoring the tone of the system, and thus constricting and rendering firmer and closer the coats of the weakened and relaxed vessels. When a portion of the skin is taken up and pinched into a fold, it very slowly returns to its position. By comparing this want of natural elasticity from time to time, a tolerably correct opinion can be formed of the progress towards restoration.

Through deranged innervation, and cutaneous hyperæsthesia dependent thereon, patients sometimes experience very strange sensations. In the case of a lady under our care, no amount of atmospheric heat, and no application of clothing, could change in the least these morbid

sensations. Warm as the room could be made, and wrapped up in blankets and shawls, she still complained of cold.

In our experience, after convalescence commenced there has been no tendency to relapse. The improvement, both mental and physical, has been *pari passu*, and in no case has there been a return of the disease.

Although it is generally supposed, that masturbation and venereal excesses rank among the most potent causes tending to debilitate the nervous system, the most careful investigation has failed to show, in a single case of this disorder, any reason to believe that these improper indulgences could be correctly assigned even as a predisposing cause.

During a single season, three cases were presented, two in the persons of ministers of the gospel, and the third, a member of a clergyman's family. Each were well-marked instances of this form of disorder; in each, over-exertion and an insufficiency of healthy, nutritious food was the undoubted cause. Not one of them had ever resided in a malarial region previous to the commencement of treatment. Under the use of nerve tonics, and a nutritious and easily digested diet, speedy restoration followed in each case.

We cannot but regard the *early recognition* of this condition as of special importance, convinced that properly directed treatment will, in the larger proportion of cases, stay its progress. In the analogous affections of malarial origin, a few months delay is not of vital moment, and a change of residence, to a mountainous region or a sea-side district, is often sufficient in itself to effect restoration. In the neurasthenic, the morbid tendency is strongly *progressive*. If, in the early neuralgic stages, a course of medical treatment analogous with that employed in malarial neuralgias be instituted, with

proper general hygienic measures, a cure may be anticipated. Sciatica is by far the most frequent form of neuralgia accompanying neurasthenia. The blisters, counter-irritants and purgatives, so efficacious in the sthenic form of the disease, are of no service—on the contrary, usually aggravate the symptoms. Relief from intense pain, to secure sleep and preserve the strength of the patient, may be procured by the hypodermic use of the acetate of morphia, which will generally be found successful. This, with a carefully conducted course of nerve tonics has, in the cases coming under our observation, uniformly restored the patient to his previous health.

Where, however, there is present instead of the neuralgic pains, depression of spirit, irritability and disturbed sleep, there is evidenced a location or direction of the morbid action, which should create the liveliest apprehension and induce prompt treatment. Proper hygienic and medical agencies, with relief from previous cares and anxieties, and change of scene and occupation, will, we think, in the larger proportion of cases, preserve the patient from confirmed melancholia or mania. These are the only forms of mental alienation in our experience associated with neurasthenia. Hypochondriasis has not been recognized in a single case.

In the organization of those portions of the nervous system designed more especially for the performance of the mental functions, or intellection, there is found a far more liberal supply of blood-vessels than elsewhere. This shows an anticipation of more rapid tissual destruction here, and at the same time provides a medium of nutritional repair and renewal, properly proportioned to the extreme requirements of this portion of the organization. Through this medium the remedial and preventive efforts must mainly act. Whatsoever agency

therefore, or hygienic influence, can be made to improve nutrition and enrich the blood will be curative, and will act in the right direction.

The mysterious fluid or whatsoever it may be, the normal constitution of which is essential to the healthy action of the nerves, seems thereby to be restored or corrected. The several organs again receiving a healthy nerve influence, resume the proper discharge of their respective functions. Assimilation is rendered perfect, digestion becomes vigorous, the muscles are toned, the liver, kidneys and skin perform aright their important duties, the brain function also is healthfully and naturally performed, and the work of restoration is complete.

It must be borne in mind that we have not failed to recognize the fact, that loss of nervous power, does much more largely than heretofore, characterize many of the disorders now presented for treatment. Cases of well-marked asthenic mania and melancholia are also frequently received and easily enough recognized. The intellectual disturbance, in the cases under consideration, is not sympathetic with physical derangement, nor due, either to the sluggish action of eliminating organs or to the circulation of impoverished blood, but seems to be purely a functional derangement, strictly identical in character with the neuralgia, the muscular atonicity and the other evidences of deficient innervation preceding it; the brain, as under other morbid agencies, being slow to yield to disturbing influences.

This peculiarity in the character of the psychical disturbance, and the fact, that in a large number of cases submitted for treatment, this, and the other symptoms previously enumerated, have observed a uniform order of sequence, have led us to regard it as a distinct form of disease, which, as a matter of convenience of record, we have placed under one head.

The *moral treatment* is the same as that adopted in corresponding forms of mental alienation from any other cause, and is conducted on the same general principles.

Frequent and long-continued gentle exercise in the open air is of great service in relieving the morbid irritability. It should never be carried to the point of fatigue. Its quieting influence is well shown in the effect of a slow, lounging walk about the grounds by this class of patients. An individual laboring under a considerable measure of maniacal excitement becomes calm and composed, while the same exercise in a corresponding state of sthenic maniacal excitement would still more disturb.

In the earlier stages, *recreative occupation* is a term expressing the exact requirements of the patient in this direction. Physical exercise and occupation, to be of any special service must be recreative and of a character to engage the thoughts of the individual healthfully. It should secure the satisfaction of some useful object or purpose fully attained. If it does not fully occupy and engage the attention, it must constantly remind the patient of his invalidism, and thus fail entirely in securing the object suggesting it.

As a relief for the depression, traveling is very likely to be suggested, but is very seldom beneficial. The different stages of a journey cannot be so arranged as to secure regularity in sleep and in taking meals. The mode of preparing the food and its character cannot be made to meet the requirements of the case. Ideas and thoughts are presented and suggested so rapidly as to cause great weariness, and it is not at all unfrequent to meet with instances, in which a patient leaving home suffering from depression simply, returns more deeply melancholic, or even maniacal.

The form of mania in its more general features, does

not differ decidedly from asthenic mania, at the same time it is of the utmost importance to distinguish between the two. The usual treatment of acute mania with great prostration, by hyoscyamus, or by hyoscyamus, morphia and camphor, brandy and the prolonged hot bath, is inadmissible in cases of neurasthenic mania, death usually ensuing from coma, and sometimes, with great rapidity. The use of tart. ant. et pot., which so pleasantly arouses secretion in sthenic mania, and thus renders efficient the anodynes indicated, is here of no service and does positive harm.

Sponge-baths, while the patient is lying in well-warmed blankets, with brisk and prolonged spirit frictions, is very soothing in its effects, insomuch that patients have fallen asleep during the process, as in the hot bath in sthenic mania. While this is being administered, a few spoonful of beef-tea at occasional intervals, or a little wine in extreme cases, may be necessary. When an equality of temperature between the head and the extremities is established, and the skin has become warm, moist and natural, small quantities of wine, or a teaspoonful of brandy, prepared with milk and egg, should be cautiously administered in small quantities, at stated intervals.

When there is great irritability of the stomach—a very common symptom—a teaspoonful or two of champagne, or of water charged with carbonic acid, may be given with advantage through a syphon, with sinapisms to the epigastrium. When there is reason to suspect hyperæmia of the stomach, the tendency to vomiting continuing with pain on pressure, ice-cream and nutritious gelatines should be the principal diet.

In treating the melancholia of this class of patients, morphia, of such marked service in other forms of mental depression, is inadmissible.

Quinine, in the experience of this Institution, ranks first as a nerve tonic. The cases in which it is not tolerated are very rare. Though accustomed, except in extreme cases, to defer its administration until attention has been given to the secretions, it is not necessary or advisable to await the cleaning of the tongue. Indeed, in many cases alteratives have but little influence in this direction until the use of the quinine has sufficiently toned the nervous system to secure their proper application and effect. It appears to be contra-indicated only where there exists a very marked tendency to cerebral hyperæmia, and then only at particular stages of treatment. It is usually given in single grain doses, rendered soluble by five or ten drops of dilute phosphoric acid, repeated four times daily.

Arsenic has, in very many instances, proved itself a most efficient remedy. It has been especially beneficial in cases marked by considerable irritability, with emaciation, and the ill-conditioned skin occasionally met with. Under its use in this class of patients, the skin soon becomes smooth and fair, flesh is gained rapidly, and the irritability proportionally decreases. The instances, however, in which it disturbs the stomach, and is intolerable, are not few; and when this intolerance really exists, it is manifested towards even the smallest doses. It is generally well adapted to cases in which quinine is, for any reason, contra-indicated. At the same time, as an antiseptic, it probably arrests the rapid tendency to tissual disorganization characterizing this form of disorder, and it is our opinion that in the earlier stages it will be found of great service. It may be ranked as a *nerve nutrient*.

Strychnine is most serviceable in cases accompanied by intestinal torpidity and muscular atonicity. It has been prescribed, also the ext. nuc. vom. in combination

with the vegetable bitter extracts and taraxacum. As an efficient laxative in these cases—and often unaided—its action is decided. In the case of a female treated here, a moderate dose of the solution in the evening, followed by a second early in the morning, invariably afforded pleasant relief a few hours afterwards. It is much less likely than arsenic to disturb the stomach. In the dyspepsia of the neurasthenic it has always acted well, and no other remedial agent in our hands is more sure and positive in the direction of its action. Wherever the morbid action may be, there will this singular agent be found manifesting its presence.

Iron and its various preparations, we have come to regard, as of but little positive service in the earlier treatment of the severer cases presented. It seems to be of much service, only after there has been secured some measure of nerve force; and that form should be used, which, by actual trial is found best suited to the particular case under treatment. When the malaise, restlessness and irritability is persistent, a very efficient formula is the one introduced many years ago, and known as the *Mist. Conii et Ferri*. We can easily understand the strong preference expressed for it by the older practitioners. It is not at all unpleasant to the taste, and is almost invariably tolerable. The preparation of iron entering into its composition here, is the soluble ammonio citrate.

Phosphorus, though considered an efficient renovator of nerve tissue and nerve power, has not, in our hands, given such satisfactory results as to lead to its very frequent administration. It is quite possible that its specific effect would be more marked in the earlier stages of the disorder. In combination with the phosphate of iron, it is especially valuable in chlorotic females, in whom the blood impoverishment is due to impaired assimilation from defective innervation.

Skillful pharmacutists have recently placed in the hands of the profession many attractive preparations, the constituents of which would seem to adapt them almost perfectly to the precise requirements of this class of patients. In treatment at this Institution, however, we have had more satisfactory results from extempore prescriptions. Careful daily observation at the bedside will detect many slight variations in symptoms, indicating corresponding modifications of prescription. The combination of remedies used, are presented in the histories of the cases prepared to illustrate this subject. These, with the statistical tables covering our experience in this form of disorder, necessarily omitted in this, will be given in full in a future report.



THE LATE PROFESSOR GRIESINGER.*

We proceed to give some account of the life, character and labors of this eminent man, in fulfillment of the promise made to our readers in the announcement of his death in the January number of this JOURNAL.

WILLIAM GRIESINGER was born at Stuttgard, on the 29th day of July, 1817. His father was steward of the hospital there, and upon him as such the chief administrative functions of the establishment devolved. Young Griesinger received his primary education at the Gymnasium. Here both Roser and Wunderlick were his fellow students; all having been born in the same street in Stuttgard. From one of these we learn that at the

* Archiv. fur Psychiatrie. Transactions of Berlin Psychological Society. Memorial Addresses of Drs. Westphal and Lazarus. Gedenkfeir fur W. Griesinger in Wien. Addresses of Dr. Billroth and Baron Mundy.