THE HIGH-GRADE NEURASTHENIC.

BY HERBERT J. HALL, M.D., MARBLEHEAD, MASS.

THE average man is not as well as he would like to be and perhaps it may be said, as he ought to be. Health is, in fact, a hard matter to define. Counting out at once the surgical cases, the gross organic diseases and the true psychosis, every doctor has to deal with a large so-called neurasthenic group made up of men and women who cannot successfully meet the demands of life and who complain of a great variety of symptoms. These are the patients who go from one physician to another, who are sometimes cured by Christian Science or Chiropracty, by a tonic or a few weeks at a sanatorium and unfortunately also, they are the patients who more often do not get well or reach a level of efficiency and comfort which they or we may fairly call health.

It has been evident for a long time now that we may not intelligently use the terms neurasthenia, nervous prostration, nervous exhaustion, or even psychasthenia and neurosis, without a finer classification. There are symptom groups which are easily "neurasthenic," but which spring, as we know, from diverse causes. Dr. Wm. J. Mallory, in a recent issue of the *Journal of the American Medical Association*,* has made a very interesting and valuable classification. He writes of six types commonly called neurasthenic, but divisible into "(1) neurosis or anxiety neurosis; (2) mild, rare or atypical psychosis, *e.g.*, manic depression, psychosis and dementia praecox; (3) incipient tuberculosis; (4) low grade cryptic infection; (5) early exophthalmic goitre; (6) cerebral arteriosclerosis." "Neurasthenia," he says, "should be considered as an abnormal, imperfect, inadequate type of reaction, expression or auto-erotic fixation; an infantile type of reaction in which the individual takes an undue interest in his own body, of which he is acutely and abnormally conscious. On these sensations he often erects a more or less organized system of false ideas (auto-erotic inversion)."

This is surely a long step beyond the blanket expressions which have so long served to cover our ignorance of "functional" medicine. But I believe that the general practitioner into whose hands most of these cases fall will have a good deal of difficulty in fitting all of his "neurasthenic" patients into these classes. First of all, he sees many patients who are neither infantile in their outlook nor are they manic depressive or praesox, they cannot be said to suffer from any sort of psychosis, mild, atypical, or rare. Under the most careful examination by the most reliable methods, they show no evidence of cryptic infection, of tuberculosis or of exophthalmic goitre, they are relatively normal physically and mentally, and yet they are tired, inefficient, nervous, irritable, sleepless; they have rapid hearts and low or high blood pressures, they have dyspepsia, they are depressed, worried, apprehensive, but they obstinately refuse to fall into any of the above categories.

Medical men of experience will give rather widely differing explanations, but are we not somewhere near the mark when we agree that the best human machine will not stand unlimited abuse without signs of breaking? A careful inquiry into the lives of these "relatively normal" people will very often reveal a surprising disregard of mental and physical hygiene. There are men and women who can live fairly comfortable lives without such regard, and there are others who have very limited resistance, whose nervous and physical mechanism is so delicately balanced that the utmost care is necessary to maintain comfort and effectiveness in life.

Whether the nervous invalid falls into the classification of Dr. Mallory or belongs to some other group so far unclassified, it should be the physician's duty to study his case from two points of view, the point of view of conduct, and that of physical and mental limitation.

Broadly speaking, we are all in need of conduct regulation. It would be hard to find a person wholly normal within his limitations, and such a person once found would probably be a disagreeable individual, abnormal by virtue of his extreme normality. We all have our foibles, our excesses, we all overwork or underwork, our very personalities and individualities imply some degree of unbalance. It is only when our activities are seriously beyond our capacity for rapid recuperation or when our nervous and physical resistance is unduly low that we must be brought to book, that we must reëducate and reform our lives. Then it will be evident that we should take more rest, or more exercise, that we must be content with

* The Neurasthenic Patient and the Internist, By William J. Mallory, Jour. A. M. A., March 19 1021.

what may seem like serious restrictions. On the mental side, if we are great worriers, we must in some way acquire a philosophy which will make worry incongruous or impossible. If we have been eating too much we must eat less—if we have been working at high tension we must change our habits, modify our work, or give it up altogether. If there has been over-emphasis of sex it must be subordinated to something better or different, and so on through the list. Diagnosis and treatment go hand in hand, we cannot make one without suggesting the other.

But suppose we have recognized the need of of habit modification, suppose we have made all the changes that we can make, and without relief of the disabling symptoms. And suppose, too, that physical examination fails to reveal any organic disease. Suppose the machine still works badly. We must be untiring in our search for hidden ills, such as cryptic infections, such as latent tuberculosis, we must more or less empirically apply the simple rules of mental and physical hygiene in the hope that by improving the general health, we shall relieve the symptoms and put the patient back into effective life again.

And here we might have to stop were it not for some most interesting and suggestive appreciations which have come strangely enough not from the neurologists or the alienists, not even from the internists, but from the orthopedists. It happens that a good many sufferers from flat-foot, sacroiliac strain and backache belong also to the relatively normal or what might be called the high grade neurasthenic class. They have nervous dyspepsia, chronic fatigue, irritability, glandular disturbances and all the rest. The orthopedists discovered that they could not bring about permanent relief for back and foot strain without rebalancing and rebuilding the entire body. Now rebalancing the body in relaxed, slumped, flat-chested individuals, which most of these patients are, has involved taking up the abdominal slack by appropriate exercises and supports, lifting up the chest, and putting the disused diaphragm into action. It has involved a flattening and strengthening the weak and lordosed spine;—in short, a general physical setting up.

Very interesting results have been found to follow such treatment. Not only have the orthopedic difficulties been relieved and cured, but functional disturbances, even those of very long standing, have frequently been disposed of. Fatigue has disappeared, and the patient, if he was not organically diseased, has often been "made over" to a most surprising extent.

The next step tried out the same setting up process on chronic nervous invalids who showed none of the unusual orthopedic disabilities but who did possess the general relaxation, the abdominal ptosis, the poor carriage so commonly observed among the neurasthenic. Here the result was no less striking and encouraging. In spite of many discouragements and failures, it was evident that perseverance along these lines might be depended upon to bring about functional improvements most gratifying to patient and doctor. And why not? Really, it is too simple. Backstrain, with or without pain, is comparable to eye strain in its accompanying fatigue. When one thinks of it, how can the abdominal viscera function at their best if they are crumpled up in the pelvis and literally sat upon by the weight of a thorax which telescopes downward? Can we fairly expect good service from a solar plexus whose blood supply is diminished by the mechanical pressure of an inactive diaphragm? Can we expect vigorous, healthy circulation anywhere when the flattened chest expands fully only by an effort which is rarely forthcoming? It is plain enough that the "relatively normal" neurasthenic needs exercise for one thing.

But we have to thank the orthopedists for yet more enlightenment. Every experienced physician knows that in cases of chronic fatigue, adequate exercise is rarely possible. There is not enough vital energy left for such a course, and the attempt results only in more fatigue and discouragement. In their process of restoring bodily balance, the orthopedists have realized that it is not muscular development which is needed first, but rest and the over correction of the faulty spinal curves by appropriate postures carried out in bed, with all other physical and nervous demands eliminated. It is possible by a combination of special exercises and over-correcting postures to lift the chest, spread the ribs, and pull up the ptosed abdominal viscera without prohibitive physical effort. So the beginning is made. The lean retro-peritoneal spaces are padded up with fat by virtue of forced feeding, the long,

stretched stomach begins to empty itself on time, the festoons of the colon are straightened out and the whole clinical picture begins to change.

Here is rest cure with some important modifications. Weeks of this treatment, with massage and careful feeding, may be required before results begin to appear. As a matter of fact, and as might be expected, the digestive symptoms are often made temporarily worse, we may have extreme anorexia, neusea, and a troublesome distention. But persistence meets with due reward. The logical course includes short walks and frequent rest periods, and in the well ordered sanatorium, where alone such treatment may be adequately and safely carried out, the treatment includes occupational therapy, which helps to dispose of introspection and worry, which teaches the impulsive to proceed slowly and the distracted to concentrate attention.

One of the hardest experiences of the relatively normal neurasthenic is the implication that there is nothing the matter with him, that it is "nerves" and he ought to be ashamed of himself. It will be a relief to some of these sufferers to know that sometimes at least there is a physical basis for their many symptoms and that a careful restraining and an adequate setting up may actually cure the "gurgling stomach," which after all, had reason to gurgle, because it could not do much of anything else.

It is not fair to leave the subject without emphasizing the fact that this kind of treatment cannot, as a rule, be carried out offhand, and by a few casual directions to the hopeful patient. It is an expert job requiring much patience and experience. If the internists or the neurologists are to attempt such treatment, they should, at the present stage of our knowledge, learn the details from the orthopedists. The job is often mechanically difficult and manifestly the course must be modified to the peculiarities of the patient; but it is astonishing what changes, what improvements in configuration and poise and what corresponding improvements in function may be accomplished by a carefully conducted physio-therapeutic campaign. The orthopedist himself may readily enough fail unless he understands temperament, unless he is able to deal with the patient as a human being and not as a machine, and here he may well need the coöperation of the neurologist and the general practitioner.

Whatever measures may be used in the treatment of the high grade neurasthenic, if so he may be called, it seems logical enough that we should look for faulty body mechanics and employ some such restorative measures as have been suggested. We may not effect a cure, it may often enough be quite impossible to overcome entirely the bad habits of mind and body which have been operating for years. We may be dealing with psychoses that will not yield, or with constitutional disease that cannot be reached, but we shall be improving the general vigor, without doubt, and in many a weak and flabby physique we may be removing some of the occult causes of chronic fatigue. To employ such measures as a routine would be hardly logical, but it will be distinctly worth while for those of us who see these functional cases to ask for orthopedic advice and to give the patient the benefit of some such setting up as has been described. There is so little that we can do medically that it is well to know that in the lean and visceroptotic types, at least, there is hope of general improvement by mechanical readjustment of the body.

Let us pass from the high grade neurasthenic to the great range of human beings who are below par, whose confining work, often involving cramped sitting postures, almost inevitably means a lowered vitality. Might it not be possible to do some good missionary work among these men and women, by giving them certain exercises to improve the breathing capacity, and some physical instructions that will relieve the inevitable drain upon their vitality. Perhaps we might prevent here and there the onset of functional or even organic disability and nervous exhaustion.

A most striking demonstration of the importance of posture as bearing upon endurance came to light in our field army in France. Hundreds of men from the front lines, and after long marches, were sent back to the base hospitals utterly fagged and unfit. No disease, no injury was found, but after a while the general hospital men began to realize that these were functional disability cases and they were turned over to the orthopedic reconstruction system. The disabled men were clerks and men from all sedentary occupations; many of them had flat feet, hollow back, flat chests, lax

and protruding abdomens. After a few weeks of special training along the lines of better body mechanics, great numbers of these men were sent back to the front, able and efficient, ready to bear the brunt of hard service. Who knows how many of the men who broke nervously under the war strain were of this type also?

Not always is it necessary to wait in civil life until serious symptoms develop and we have to deal with the notoriously difficult chronic nervous invalid.

The orthopedists have accomplished a great service to medicine in calling attention to the effect of body mechanics upon the metabolic processes and so to a relationship with the general health of body and mind.

CONGENITAL HYPERTROPHIC PYLORIC STENOSIS.*

By Charles A. Sparrow, M.D., Worcester, Mass.

[From the Children's Service of the Memorial Hospital, Worcester, Mass.]

There has been a great deal of discussion as to the proper classification of pyloric stenosis in infants. The usual division into the hypertrophic and spasmodic types is unsatisfactory, especially from a pathological point of view. Clinically there are cases which would justify the spasmodic type because the symptoms appear abruptly and disappear in two or three weeks. However, at autopsy the record generally reads, a hard, firm tumor about the size of an olive was present. At the Babies' Hospital in New York, such a condition was found in every one of twenty-six autopsies. The evidence at hand indicates that there is no definite persistent spasm of the pylorus without hypertrophy. The presence or absence of a palpable tumor is not a satisfactory basis for classification because many men claim that a careful, experienced examiner can find a tumor in every case.

Therefore it will be found more accurate to limit the classification to mild or severe cases of congenital hypertropic pyloric stenosis. This classification will be especially useful in determining the proper treatment.

ETIOLOGY

The etiology of this condition is unknown. There are at present two theories which attempt to explain it. "From the embryological point of view we know that the pylorus is not a place of developmental fusion, such as the lower end of the esophagus; but that a temporary obturation of the lumen of the duodenum takes place in the embryo at an early stage. There is an overgrowth of mucous membrane caudal to the ducts of the liver and pancreas, causing this obturation, which is relieved in embryos of a slightly later stage." Even if this intestinal block should continue beyond its normal time it would require a vivid imagination to attribute a great hard pyloric mass of muscular tissue, perhaps the size of an olive, to excessive muscular activity for a period of 3-4 weeks. The best theory, as advanced by Downes, to explain this condition is that "there is a true malformation present at birth consisting of an abnormal thickening of the circular muscles of the pylorus, and that the effort necessary to force food through the narrowed and elongated pyloric lumen, produces circulatory disturbances resulting in edema. As the food is increased in amount, and the muscular effort becomes greater the lumen narrows down until finally at the tenth day or later it becomes more or less completely obliterated." The evidence in support of the congenital character of this condition is greatly substantiated by well marked tumors of hypertrophied stenosis, being found in the new born and infants born prematurely.

The fact that this congenital abnormality occurs more often in males than females, the proportion being 4 or 5 to 1, is not explainable. It more often occurs in the breast fed for its onset is generally in the first month of life when most infants are on the breast. However, artificial foods are generally resorted to in the course of the disease.

PATHOLOGICAL ANATOMY.

Dunn says: "This disease has definite pathological anatomy, on which alone its certain diagnosis can rest. The hypertrophy is chiefly in the circular layer of muscular fibres at the pylorus, which layer is usually two or three times its normal thickness. This thickening is due to an increased number of fibres rather than to the presence of fibres of increased size. The layer of longitudinal fibre is usually of normal thickness. The mucosa is somewhat thickened, particularly in its longitudinal folds and the sub mucosa may be slightly thickened.

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