



DISEASES OF CIVILIZATION

The rise from anthropoid ape to civilized man has not been without its liabilities, including the "kinetic diseases," points out GEORGE CRILE. (Decoration by ILLONKA KARASZ.)

PECULIAR TO MAN

"Kinetic" Diseases Alleviated
By Adrenal Operations *

Among the penalties of civilization, affirms GEORGE CRILE, M.D., Cleveland, may be listed a certain group of "kinetic" diseases peculiar to civilized man. The kinetic diseases include hyperthyroidism, neurocirculatory asthenia, diabetes, peptic ulcer, and polyglandular disorders. Wild animals do not get them; domestic animals, rarely. The noble savage does not feel their taint except in a fractional frequency to their incidence among civilized man. The farther man is removed from the primitive, the more he falls prey to the neuroglandular laws in lieu of the law of the jungle.

Man's liability to the kinetic diseases, runs CRILE's theory, increases as his neuroglandular system develops more and more delicate adjustments to his environment. The brain, the thyroid, the adrenals, and the sympathetic nerves are the organs chiefly concerned with the increasingly fine "civilized" adjustment; and as complexity grows, maladjustment and breakdown are made easier.

Now, as it happens, among the "civilizing" organs, only nerve tissue can be artificially readjusted; that is, conditioned. The glands themselves cannot. But the hormones secreted by the endocrine glands form an essential link in the chain of adjustments touching the brain and the sym-

* CRILE, GEORGE, Pathologic Physiology of the Neuroglandular System, American Journal of the Medical Sciences 189:2, 286-280 (February), 1935.

thetic nervous system. And from the point of view of surgical anatomy (which civilization has perfected to such a degree that there remain practically no inaccessible spots in the human body) it also happens that the function of the endocrine glands in secreting hormones can be operatively altered. The conditioning supply of adrenal hormones can be quite simply & safely suspended by cutting out the adrenal glands or by cutting away some or all of their nerve connections.

At this point it becomes possible to put the theory of kinetic diseases to the decisive clinical test. The question is: "Will adrenal dekineticizing cure or relieve kinetic diseases?" CRILE has answered the question with 350 operations (53 adrenalectomies, 297 denervations). His results are:

- 100% cure in 84 cases of hyperthyroidism;
- 96% improvement or cure in 40 cases of peptic ulcer;
- 93% improvement or cure in 129 uncomplicated cases of neurocirculatory asthenia;
- 60% improvement or cure in 68 cases of epilepsy.

In 11 cases of diabetes, associated with hyperthyroidism, diabetes was cured or ameliorated along with relief of the hyperthyroidism. In the epilepsy cases, a disease involving hyperactivity of the entire energy system, it seemed to CRILE that 46 adrenal dekineticizing and 29 adrenal denervation operations were in order even if only they reduced a major to a minor

PECULIAR TO MAN (Contd)

epilepsy, a *grand* to a *petit mal*. He emphasizes the fact, however, that psychoses, neurasthenia, or any disturbances seated primarily in the brain, will not respond to these operations (contra-indicated), since these are not kinetic diseases and do not involve the adrenal-sympathetic system.

What Are Kinetic Diseases?

Just what is a kinetic disease? CRILE'S definition would include those diseases entities resulting from a continued hyperactivity of the brain-thyroid-adrenal-sympathetic system, indissolubly linked in the body economy. These groups of organs initiate and transform energy; hence the description "kinetic" for the diseases in which they are stimulated to abnormal hyperactivity.

CRILE places much of the blame for initiating the pathological physiology of kinetic diseases upon pathological emotions, particularly those which become fixed patterns. There is evidence on every hand that unhealthy emotional patterns lead up to hyperthyroidism, neurocirculatory asthenia, and peptic ulcer; and that rest and dispersion of the unfortunate emotional patterns will effect cures in the mild cases of these diseases—at least until the patient relapses into his former (usually abnormal) course of life. Says CRILE: "In a man or woman who is pre-disposed by heredity and temperament to excessive fears, worries, and strivings, or who, though normally poised, is excessively driven by misfortune, permanent changes may be wrought."

Chemical training or education of one part of the neuroglandular system by another is an additional tenet in CRILE'S hypothesis. For this he finds particular evidence in the exceptional growth of the cells of the thyroid gland under repeated pathological stimulation from the brain and, conversely, in the rise of the thyroid gland (and its brain-conditioning functions) as man has progressed toward civilization.

Repetition of the unfortunate pathological stimulations, holds CRILE, is an essential point in the physiological pathology of the neuroglandular mechanisms. He contends that "repeated activations in the neuroglandular mechanism cause such excessive facilitation that *normal* stimuli produce *abnormal* response." His argument here is by analogy and as such escapes objective proof. However, the happy results of the adrenal operations executed on the kinetic disease theory must remain as yet unchallenged proof of the clinical correctness of his new and far-reaching concept.

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Gland Therapy Treats Heart Disease Successfully

Removal of Normal Thyroid Gave Better Results In 64 Cases Than Did Any Other Treatment

REMARKABLE success in the treatment of heart disease by removal of the normal thyroid gland was described at the University of Minnesota by Dr. Elliott Carr Cutler, surgeon-in-chief of Peter Bent Brigham Hospital, Boston, and professor of surgery at the Harvard Medical School.

Dr. Cutler discussed this radical and sensational form of surgery wherein a part of the body distant to the diseased part but having an effect upon it is attacked by the surgeon, as an example of the surgery of the future.

He spoke of this change in the treatment of the body as a unit as "A progression from anatomical to physiological surgery."

"It is a step," he said, "representing the greatly increased knowledge of the function of the body and offering the hope that surgery will become less and less a method by which parts of the body have to be removed in order to effect relief."

Reporting observations made on 64 cases in which the thyroid was removed, Dr. Cutler said that "in spite of the almost hopeless condition of many of the cases either because of decompensation or angina pectoris, results were far more favorable than those following any other methods of therapy."

Total thyroidectomy for heart disease was proposed in 1932 and the first operation of this type was reported in 1933.

Close Relationship

Dr. Cutler pointed out that both experimental studies and bedside clinical observations had shown a close relationship between the thyroid gland and the heart, and it is known that patients who suffer repeated attacks of over-secretion of this gland (thyrotoxicosis) eventually show signs of heart failure.

Further observations showed that the speed of the blood flow roughly paralleled the basal metabolism in the body, rising when the basal metabolic rate was elevated and vice versa. Influence over the basal metabolic rate is only one function of the thyroid gland but, since it

can be measured by a simple test, is commonly used as an indication of thyroid gland function.

In patients with decompensated hearts the speed of blood flow is slow. This inter-relationship, said Dr. Cutler, suggested that when the circulatory rate in such patients could not be raised by rest, drugs or other means of medical therapy, the basal metabolic rate should be slowed by removing the thyroid gland.

In the 64 cases recounted, the only ones reported thus far, Dr. Cutler found that thyroidectomy did drop the basal metabolic rate, which in turn demanded a slow rate of circulation. When this demand dropped to the point where it could be supplied by the crippled heart, equilibrium was established and compensation resulted.

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