Endocrinology.


The authors briefly review the history of the study of the ductless glands and their relation to mental disease. Twenty-two cases were chosen which showed frank endocrine abnormalities, and they were examined physically, psychologically, and chemically. The following tests were used: sugar tolerance test of Janney and Isaacson; thyroid function test of Harrower; uric acid in blood test of Folin and Wu; urea nitrogen in blood test of Folin; creatinine in blood test of Folin and Wu. The twenty-two cases are described in detail, and from their study the authors conclude that:

1. Since the activities of the nervous system, and particularly those of the autonomic division, are closely associated with endocrine functions, one must suppose that maladjustments of the individual to certain situations will produce a response in the glands varying according to the strength of the impulse, development, vigour, and physiological activity and balance existing between the component parts of the gland; and on the other hand, original defects in these glands, connected as they are with external form, and visceral and metabolic functions, must produce limitations in the action-systems and peculiarities of behaviour.

In many cases of mental disease, regardless of the priority of the mental disturbance or of the endocrine imbalance, there is certainly a circle of abnormality established, the arcs of which are composed of both groups of factors.

2. In glandular disturbances the effects are due to a change in rate of normal function, and as thyroid extract is an accelerator principle, the stimulating action of which is intracellular, and the effect of which is not felt in any particular set of organs or tissues alone, it is reasonable to suppose that its administration in hypoglandular types accelerates the organism in general, rendering introversion more difficult, and aiding the application of psychotherapy. This is well illustrated in several cases in which changes in behaviour and improvement began simultaneously with the thyroid-testing experiments.

3. For every case manifesting profound glandular disturbance there are doubtless dozens that show only little signs, and it is in these cases that a psychological or chemical attempt to break one of the arcs of the circle is more likely to result in success.

4. Both the sugar-tolerance test and the thyroid-function test have been found extremely valuable in differentiating and in sizing up the hypo- and hyper-glandular types, in which often instead of a profound, easily recognized disturbance, only the little signs may show. It is in these that scientific application of glandular therapy has its earliest and best opportunity.

5. Occupational therapy, when applied by a therapist well trained in observing patients with mental disorders, has been found of value in an
experiment of this sort, not only from a therapeutic standpoint, but as an early indicator of variations in behaviour. The attitude of the patient, fluctuations in interest and attention, and signs of improvement are early recognized by apt workers in this field.

R. G. GORDON.

[88] Endocrine stimulation as affecting dream content.—CAROLINE S. FINLEY. Arch. of Neurol. and Psychiat., 1921, v, 177.

The patient, a single woman of 45, was given one grain of pituitary extract a day to combat the indefinable languor and lassitude of which she had complained for some weeks. After ten days of this treatment she began to have vivid dreams every night, a thing she previously used to do only about once a month. These dreams were all of a delightful character: she would see herself travelling, and sometimes she would be wandering in strange and beautiful places; in all she felt wonderfully happy and exhilarated. A point of interest is that it was when under this treatment that for the first time she dreamt of colours; these were clear and vivid. One dream, however, differed from the rest: in this one she saw herself with her mother and sisters, and was expecting the birth of a child; no thought occurred to her concerning the possibility of the child’s having a father, and her mind seemed mostly centred on the case with which she was going to have her baby; she could recall no definite details on awaking. As, however, intention tremors occurred later, the patient was taken off pituitary extract, and given suprarenal gland. At this stage the dreams changed in character and were less vivid, not so distinctly recalled, contained little sense of colour, and were distinctly unpleasant. The actual incidents were often not remembered, and the patient would wake up with only an inexplicable though acute horror or fear. She sometimes dreamt that she had committed a crime, that she had quarrelled violently, or that she was awaiting some terrible news; once she saw herself as a man; another dream depicted her with a misshapen dwarf child clinging round her neck.

When the glandular treatment was stopped, the dreams ceased also, except at her menstrual periods, when they were vivid and pleasant, just as they had been when she had been taking pituitary extract; but after a few months even these disappeared.

The author draws attention to the dream contents of the first period, and the action of the pituitary extract on the ovaries, and she points out that the cause of the dreams was not psychic trauma, but ovarian stimulation, with the consequent (?) bringing up to dream consciousness of general and universally unfulfilled desires; and she adds that this explanation should not be lost sight of in the enthusiasm of Freudian interpretation.

Without entering into the question of the possible interpretation of these dreams according to the different psycho-analytical schools, one might point out that though the glandular administration may well account for the production of dreams, yet the form of these dreams, and still more their incidental contents, must have had an unconscious source, and that this origin must be explained by means of a symbolic interpretation, Freudian or otherwise.
An extensive study of dreams brought about under such conditions might reveal minor differences and peculiarities capable of elucidation only on the assumption of particular repressions and personal complexes. These complexes would be probably derived from some primitive instinct which education causes to be repressed, and as long as that repression were successfully carried out, and no undue stimulation of that complex occurred, the individual would be normal and healthy. But when that buried trend is stirred up by the medicinal production of the physical changes corresponding to the emotions relating to that hidden trend, then, and then only, will it tend to express itself in dreams. And in so far as no repression can be carried out in exactly the same way and under exactly the same conditions in a number of persons, then each dream will bear the imprint of the individual developmental peculiarities of the dreamer.

We find here also marked support for the view that the mental affect we term an emotion is dependent upon, and not the cause of, a series of physical changes produced by glandular activity and the corresponding activity of the associated segments of the autonomic system.

J. E. Nicole.


The patient who suffers from an endocrine disorder which is associated with mental symptoms is rarely given the benefit of both glandular treatment and a mental analysis, utilized concomitantly as necessary elements of a rational scheme of re-education. While the experimental work which has already been done has shown the close relationship between the emotions and the glands of internal secretion, it has not been carried far enough to give in many instances a satisfactory basis for treatment. The therapeutic results, however, already obtained in certain definite conditions, suggest a promising foundation for the treatment of the innumerable deviations which individual cases present. A close relationship is observed between the vegetative nervous system and personality development. In the hypothyroid state there is often found a sluggish mentality and slow physical response, while the over-active mental state and rapid physical response are associated with hyperthyroidism. Associated with this, fear and apprehensive states are often found, with a resulting temperament making adjustments to everyday life difficult. Similar remarks apply to dyspituitarism, which may be associated with sexual imbalance and difficulties in emotional inhibitions, both perhaps leading to mental deviation and adaptational problems. Though Adler has pointed out the many traits that may result from glandular inadequacy, there still remains an almost unexplored field in the study of personality to be reached by the psycho-physical route. Five cases are cited to demonstrate the value of endocrine therapy together with mental analysis.

C. S. R.

The writer points out that with the advent of more exact methods of research into the functional values of the endocrine glands, many pages of physiology must be re-written, and results bid fair to revolutionize the practice of medicine. To study the functions of brain, spinal cord, and peripheral nervous system intelligently, neurologists, psychiatrists, and alienists must have as intimate a knowledge as possible of those factors which constitute endocrine balance. Even now, he says, we may attempt to designate patients in terms of glandular types such as thyroidal, pituitary, suprarenal, thymic, and gonadal, and by means of certain physiological and structural markings observed in physical objective examination alone, without other information, we may make an accurate designation.

There are two great subdivisions of the vegetative nervous system, anatomically distinct but physiologically antagonistic and normally in counterbalances. These are (1) the sympathetic, and (2) the autonomic or parasympathetic or vagus. Both innervate the non-striped muscles of the body, all endocrine as well as duct glands, the viscera, heart, blood-vessels, and genital organs. "The vegetative nervous system is an outgrowth from the cerebrospinal system, with which it remains connected by afferent and efferent fibres. A number of specialized vegetative nerve-cells remain within the cerebrospinal axis, thereby accounting for the occurrence of vegetative phenomena in certain central diseases" (Stewart).

A short but concise description of the two subdivisions then follows, and the endocrine system is regarded as, in part at least, structurally and functionally identical with the vegetative nervous system, influencing the function of the latter by the hormones created by its glands. The suprarenal glands are most definitely noticed as being part of the sympathetic, because the paraganglion cells of the latter secrete adrenaline. There is also reason to believe that the posterior portion of the pituitary gland dominates the autonomic portion of the vegetative nervous system.

The writer states that it was in his dealings with neurotics that his interest in endocrine function was aroused. He came to the conclusion that in a great many cases purely psychological treatment was not successful, and that success could be attained by psychological methods only if combined with recognition of the endocrine dysfunction associated with the neurosis.

With the Freudian school, of which at one time he was an ardent disciple, he was thoroughly in accord in attributing all neuroses to underlying psychic traumata, usually of sexual origin, to repressions, and their consequent maladjustments. In other words, the psyche harboured the hidden etiology as repressed complexes to which all somatic symptoms were correlated. To release the subconscious current by psycho-analysis was to effect a cure! Prolonged observation has convinced him that the elimination of the psychic irritant is only a small part of the problem. The recognition of a physical basis as revealed by disturbed endocrine function elucidates the symptomatology of these patients. The continued assault of
the psychic irritant will not express its symptomatology until it has been sufficient to undermine the endocrine balance. After the removal of the psychic irritant, regardless of the method, the return to normal health will not occur until the endocrine readjustment is effected. The profoundly irritant effects of accumulated psychical and physical traumata were not expressed in the war-neuroses until endocrine exhaustion occurred. To analyze the psychic content enlightens the patient as to the psychology of his ‘complexes’, and thus may relieve mental tensions through knowledge of the nature of the symptoms; but it by no means necessarily enables him to effect control of his psychic processes and hold his obsessions in abeyance!

A list of commonly observed symptoms, depending on whether the vagus or sympathetic is in dominance, is then given. All states of hypoadrenia, regardless of etiology, are stated to lower the sympathetic tone and to create a vagotonia, which may be segmentally expressed as a local vagotonia, or as a general vagotonia when all segments are affected. Hyperadrenia produces a sympatheticotonia. Hypopituitarism produces lowered vagal tone with resulting sympatheticotonia, while hyperpituitarism creates a vagotonia. Examples of compensatory and inhibitory reactions are given to show the intimate inter-relation of function between certain endocrine glands, particularly the thyroid, suprarenals, pituitary, and gonads.

The writer concludes by saying that annoying symptoms may be eradicated by creating an endocrine balance in a manner that is frequently uncanny and spectacular, as well as quite impossible by any other method at our disposal.

James Young.

Psychopathology.

Psychology and Psychopathology.


Jung’s well-known types which he termed ‘introvert’ and ‘extravert’ are here subdivided into four by the characterization of a greater subjectivity in one group and a greater objectivity in the other. In each of the subjective types is found something of the nature of both extravert and introvert, with an alternating centripetal and centrifugal movement of the libido, first one and then the other predominating. This produces an instability, as a true perception of the outer reality is difficult. The term ‘subjective extravert’ is used when the major movement of the libido is outward, and the term ‘emotional introvert’ when it is towards the ego. As the antitheses of these we have the objective extravert and introvert—six types in all. This long paper consists of a detailed dissection of these, with illustrated cases. The subjective represent the most complex