

Adrenalin in Medicine

6—In Endocrinology

THE action of Adrenalin is so fleeting as to narrow the scope of its utility in organotherapy. Its important place in clinical endocrinology is that of a diagnostic indicator of deviations from the normal secretory activity of certain glands.

Hyperthyroidism can be detected by the Goetsch test. This test is based on the fact that thyroid secretion sensitizes the sympathetic nerve endings to the action of Adrenalin. The technique consists of the subcutaneous injection of 0.5 cc Adrenalin 1:1000 and the subsequent observation of objective and subjective phenomena.

Blood-pressure readings are taken over a period of one and one-half hours at intervals varying from two and one-half minutes at the beginning of the reaction to ten minutes at the end. In positive cases the systolic blood-pressure rises at least ten points during the first fifteen minutes with an accompanying increase of about ten beats a minute in the pulse-rate. Soon there is noted a slight fall in systolic pressure and then a secondary rise. In about ninety minutes the blood-pressure is back to normal.

The subjective symptoms are sometimes

striking. There are heart consciousness, apprehension, and marked tremor and pallor occasionally followed by flushing and sweating. The greatest diagnostic importance of the Goetsch test is in distinguishing cases of mild hyperthyroidism from those of incipient tuberculosis.

A satisfactory test for suprarenal function can be performed by injecting subcutaneously fifteen to twenty minims of Adrenalin 1:1000 and estimating the consequent variations in blood sugar. In cases of suprarenal irritability there is an increase in blood sugar which comes on in about thirty minutes and lasts for several hours. A transient glycosuria may likewise be noted.

Loewi's test for pancreatic diabetes is dependent upon the fact that the suprarenal glands and the pancreas are physiological antagonists. In pancreatic diabetes there is impairment if not destruction of the secretory cells which allows certain Adrenalin effects to be more pronounced. One or two drops of Adrenalin 1:1000 should be instilled into one eye. In positive cases—cases of pancreatic insufficiency—there will be a prompt dilatation of the pupil.



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