



AN INVESTIGATION ON THE ALTERATION
OF PITUITARY HORMONE SECRETION IN THAI HYPERTHYROIDISM PATIENTS

BY

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ABSTRACT

To determine the pituitary hormone (PRL, TSH and LH) secretion in responses to exogenous TRH plus GnRH administration in hyperthyroid patients, we have examined one hundred and two patients of female hyperthyroidism. They were underwent a complete history taking and physical examination. All signs and symptoms were presented in percents of the subjects. These hyperthyroid patients received PTU treatment in the doses of 50-300 mg/day for the different duration until the thyroxine levels returned to the baseline values and PTU treatment was continued. Twelve patients were randomly selected for pituitary testings both before and after PTU treatment (i.e. when thyroxine levels were high and normal). Ten ml of blood sample was taken via an indwelling catheter at -15 and 0 min before and at 10, 20, 30, 60, 90 and 120 min after TRH (200 µg) and GnRH (100 µg) administration. The levels after TSH and PRL were measured by radioimmunoassay method and LH levels were determined by the bioassay method. The increase of PRL, TSH and LH in response to TRH plus GnRH administration in patients before and after PTU treatment was significantly lower than those in normal control subjects. The responses of TSH and LH were similar in both before and after PTU treatment (high and normal thyroxine levels.) whereas PRL response was lower in patients before treatment than after treatment. The TSH response became normal with a longer period of PTU treatment and the response was over exaggerated when the patients became hypothy-

roid by PTU treatment. These results indicated that the pituitary hormones (PRL, TSH and LH) responses to TRH and GnRH administration were blunted in hyperthyroid patients during both high thyroxine and normal thyroxine levels after short period of PTU treatment. These hormonal levels returned to normal after prolonged euthyroid states.

