

Thesis Title	Reproductive Hormone Profiles in Thai Women with Thyroid Disorders.
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Abstract

Hormonal changes in 92 hyperthyroid Thai women with and without menstrual disturbance were studied. Plasma thyroid hormone (T3, T4) and TSH together with LH, FSH, estradiol (E2), progesterone (P4), testosterone (T), prolactin (PRL) and cortisol were measured and compared among different groups of patients.

Thyroid hormone levels in hyperthyroid patients showed no statistically significant difference ($p > 0.05$) between those with (N = 31) and without (N = 61) menstrual abnormality or between patients during follicular (N = 64) and midluteal phase (N = 28).

Reproductive and anti-reproductive hormones were not statistically different when comparison was done between group before and after receiving propylthiouracil (PTU). Mean plasma T4 concentration in treated group was significantly lower than in pre-treated group ($p < 0.01$) but the group-difference was not detected for plasma T3 concentrations.

Hyperthyroid women with or without abnormal menstrual history had higher mean follicular FSH concentration and lower mean follicular P4 concentration than the corresponding mean midluteal values ($p < 0.01$ and $p < 0.001$ respectively). Significantly higher mean follicular LH value than mean midluteal value was found in patients with abnormal menstruation ($p < 0.01$). Mean midluteal E2 level in patients with normal menses but not in those with abnormal menses was higher than mean follicular E2 level ($p < 0.05$). Mean follicular T level was higher than mean midluteal T level in those with abnormal menstruation ($p < 0.01$). PRL and cortisol showed no phase-difference either in patients with or without abnormal menstrual history.

Mean plasma estradiol in patients having excess thyroid hormone level was significantly higher than in patients with normal thyroid hormone levels ($p < 0.05$).

T3 and T4 were positively correlated with estradiol and with testosterone ($p < 0.01$) while TSH did not correlate with any studied hormone ($p > 0.05$). Testosterone, FSH and PTU treatment were the dependent variables of plasma T3 but the dependent variable of plasma T4 was shown to be PTU treatment only.

This investigation demonstrated the hormonal status of thyroid hormones, TSH together with some reproductive and anti-reproductive hormones in hyperthyroid Thai women. Excess circulating thyroid hormones were associated with abnormal profiles of E2 and T during menstrual cycle. These hormonal alteration became normal after PTU treatment when the patients had normal plasma thyroid hormone levels.