untreated thyrotoxicosis and hypothyroidism differed less from control group than free thyroxine indices, according to analysis of variance ($P < 0.01$).

(3) Patients with treated thyrotoxicosis were divided into two groups. Patients in Group I were still in hyperthyroid state and those in Group II were in euthyroid state after treatment. Elevated free thyroxine indices were found in patients in Group I (10.83 ± 6.04 vs 3.51 ± 1.13 in the Group II). The values of Triosorb and of Tetrasorb in patients in Group I differed less from Group II than free thyroxine indices, according to analysis of variance ($P < 0.001$).

(4) Striking correlation was evident in the plots of free thyroxine indices against free thyroxine values in serum (Magnesium precipitation method).

Thus, free thyroxine indices were most useful indicators of thyroid function.

Free Thyroxine Index—T_7 Value—in Normal Pregnancy

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T_3 test was becoming routine in vitro test for thyroid function studies. Recently, T_4 test was recognized as a companion test to T_3 test. T_3 and T_4 test are mutually correlated to thyroid function in general. Mathematical product (T_3 in $\% \times T_4$ in $\mu g/dl \times 1/100$), T_7 value, which is derived from free thyroxine index was presented by Abbott Laboratory. We have studied T_7 value in hyper-, hypo- and euthyroid. Result of normal range for T_7 value was 1.4 to 4.5 and T_7 value minimized the error with the interpretation of only one test and reflected more precise thyroid status compared with T_3 and T_4 test.

In pregnancy, thyroxine binding protein (TBP) is increased. The increase in TBP results in lowered T_3 and elevated T_4 and the thyroid status is quite difficult to evaluate.

We have investigated T_7 value in pregnancy. T_3, T_4 and T_7 values were measured for 42 normal pregnant females of first, second and third trimester. In most of pregnant females, T_3 fell in the low range from about 4 months pregnant and T_4 tended to fall in the elevated range from 3–4 months pregnant. These levels were maintained to the end of pregnancy. Pregnant females falling outside the normal range for T_3, T_4 and T_7 values were 80.9%, 59.5% and 7.1% respectively. Falling outside the normal range for T_7 value was remarkably improved compared with T_3 and T_4. Mean T_7 value was 3.17 (STD $\pm$ 0.88) for 42 pregnant females.

From these results we arrived at the conclusion that T_7 value will be very important to evaluate true thyroid status in pregnancy.