

ผลการออกฤทธิ์ของยาด้านไทรอยด์ METHIMAZOLE

ในคนไข้ GRAVES' DISEASE



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EFFECTS OF METHIMAZOLE, AN ANTITHYROID DRUG,
ON THE PATIENTS WITH GRAVES' DISEASE

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A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Pharmacy

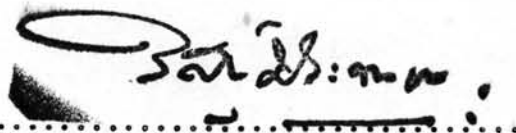
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ABSTRACT

The effects of an antithyroid drug, methimazole, on serum T_4 and serum T_3 on Graves' disease patients were observed. The normal range of serum T_4 in 57 healthy subjects was found to be 3-11 $\mu\text{g}\%$, and that of serum T_3 in 20 subjects was 70-200 $\text{ng}\%$. All Graves' disease patients had serum T_3 above normal range but 6 patients failed to have elevated serum T_4 making the incidence of T_3 thyrotoxicosis of 12.5%.

Methimazole caused a rapid drop of serum T_3 resulting in an increase in the T_4/T_3 ratio early in the course of therapy (39 ± 15 before therapy and 50 ± 21 one week after); but by the fourth week the T_4/T_3 ratio dropped almost to the original level found before therapy (42 ± 18). As hypothyroidism developed the T_4/T_3 ratio dropped even further to only almost half of the original value (24 ± 15). This illustrates the relative importance of serum T_3 in hyperthyroid state and of serum T_4 in hypothyroid state in the diagnosis of the two conditions.

Only skin rashes and hypothyroidism were found as side effects of methimazole. The incidence of skin rashes was 9.8%. Hypothyroidism however was found in 72% of patient during the follow up period of 8 months. The peak incidence was in the fourth month.

Serum T_4 appeared to be a much more sensitive indication than serum T_3 for detection of hypothyroidism while serum T_3 is definitely superior to serum T_4 for detection of hyperthyroid state.



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