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INDUCTION OF OVULATION

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MAMMARY GLAND, etc.

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OESTROGENS

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II. Medizinische Klinik der Universität München, Germany

THYROID FUNCTION TESTS IN ENDEMIC GOITRE

J. Richter, H. Alberts, J. Beckebans, K. Schwarz and P. C. Scriba

Thyroid function was evaluated by determination of $PB^{127}I$, binding of triiodothyronine- ^{125}I to serum proteins using dextran gel filtration and of maximal (6–48 hour) ^{131}I -uptake (% dosis) and of total 48 hrs. ^{131}I in serum (% dosis/liter). In comparison with normal controls ($n = 37$): $PB^{127}I = 5.09 \pm 0.97 \mu g \%$ (all value given as mean \pm S.D.), “free” $T_3 = 15.0 \pm 1.7 \%$, and with patients sent to the thyroid clinic ($n = 156$) in whom no enlargement of thyroid and no obvious thyroid disease was found upon investigation: $PB^{127}I = 4.55 \pm 1.00 \mu g \%$, “free” $T_3 = 14.6 \pm 2.0 \%$, ^{131}I -uptake = $54.1 \pm 11.7 \%$, 48 hrs $^{131}I = 0.16 \pm 0.08 \%/l$, the following values of thyroid parameters were found in patients with nontoxic goiter from an endemic goiter area (Munich):

In patients with diffuse goiter ($n = 99$) values of $PB^{127}I = 4.18 \pm 1.02 \mu g \%$ and of “free” $T_3 = 13.3 \pm 2.5 \%$ were significantly lower ($p < 0.0005$) than in controls; ^{131}I -uptake = $60.3 \pm 11.1 \%$, 48 hrs $^{131}I = 0.16 \pm 0.15 \%/l$. — A group of patients ($n = 115$) with diffuse goiter and ^{131}I -avidity (^{131}I -uptake = $77.2 \pm 7.6 \%$, 48 hrs. $^{131}I = 0.48 \pm 0.28 \%/l$) also had significantly ($p < 0.0005$) lower values of $PB^{127}I = 3.99 \pm 1.11 \mu g \%$ and of “free” $T_3 = 12.7 \pm 2.2 \%$. — Further, values of $PB^{127}I = 4.29 \pm 1.14 \mu g \%$ and of “free” $T_3 = 13.0 \pm 2.2 \%$ of patients with nodular goiter ($n = 91$) were significantly below controls ($p < 0.0005$), this group showing an ^{131}I -uptake = $61.9 \pm 11.7 \%$ and an elevated 48 hrs $^{131}I = 0.74 \pm 0.76 \%/l$. — In addition to these three main groups of goiter there were 35 nontoxic patients with markedly increased ^{131}I -turnover (48 hrs $^{131}I = 1.84 \pm 1.67 \%/l$), this group having values of $PB^{127}I = 4.00 \pm 1.11 \mu g \%$, of “free” $T_3 = 13.6 \pm 2.1 \%$ and of ^{131}I -uptake = $68.7 \pm 13.1 \%$. — Following subtotal thyroidectomy of nontoxic goiter two groups could be differentiated. The patients without recurrent enlargement of thyroid remainder ($n = 66$) had especially low values of $PB^{127}I = 3.91 \pm 1.20 \mu g \%$ and of “free” $T_3 = 11.9 \pm 1.6 \%$ ($p < 0.0005$); ^{131}I -uptake = $50.2 \pm 15.2 \%$, 48 hrs $^{131}I = 1.00 \pm 0.90 \%/l$. — The patients with recurrent goiter ($n = 81$) had values of $PB^{127}I = 4.22 \pm 1.08 \mu g \%$ and of “free” $T_3 = 12.4 \pm 2.1 \%$ ($p < 0.0005$); ^{131}I -uptake being $62.1 \pm 14.0 \%$ and 48 hrs $^{131}I = 1.01 \pm 0.30 \%/l$.

Effects of treatment with D-triiodothyronine on thyroid enlargement and diagnostic indices are reported.

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