Clinical Studies of the Thyroid Disorders with Special Reference to the Thyroid Autoantibodies

Part 1. Thyroid autoantibodies in various thyroid disorders

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The sera of subjects with and without thyroid disease were tested for the presence of circulating antibodies against thyroid extracts by precipitation test, tanned red-cell hemagglutination technic and microsomal compliment fixation test.

The thyroglobulin antibodies (demonstrated by tanned red-cell hemagglutination technics) were detected with the highest frequency in patients with chronic thyroiditis. In 26 patients studied, 21 had these antibodies in the serum.

By the precipitation test, the thyroid autoantibodies were detected only in patients with chronic thyroiditis, in 5 among 26 cases.

By the tanned red-cell hemagglutination technics, auto-antibodies could be rarely demonstrated in subjects without thyroid diseases. Among 196 cases of non thyroidal diseases, thyroglobulin antibody was detected in 14.

In 29 of 60 hypothyroidism cases of various causes, and in 8 of 15 thyroid cancer, this antibody was detected.

Among 153 patients with hyperthyroidism, thyroglobulin antibody was demonstrated in 49.0% and microsomal compliment fixation antibody in 52.8%.

On the other hand, the finding in 126 diffuse simple goiter, in 73 nodular simple goiter and in 16 subacute thyroiditis did not differ essentially from those in the non thyroidal diseases.

Biopsy studies showed a correlation between the presence of thyroid antibody and the inflammatory histological changes in the gland, but this correlation was not absolute.

In hyperthyroidism there was poor correlation between microsomal compliment fixation antibody and thyroglobulin antibody detected by the tanned red-cell hemagglutination technics or between these thyroid autoantibodies and clinical pictures such as age, sex, the weight of thyroid, exophthalmos, thyroid function tests and thyroid stimulating hormone or long-acting thyroid stimulator in sera, while autoantibodies were found in higher incidence in the long-standing cases.

Thyroglobulin antibody was slightly reduced by treatment with 1-triiodothyronine or glucocorticoid in chronic thyroiditis. The decrease of thyroglobulin autoantibody titer was not always accompanied by the reduction of the gland with the treatment.

Thyroglobulin antibody was also found with higher titer in untreated myxedema than in cases treated with 1-triiodothyronine or desiccated thyroid for various periods.

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