

thyroidism due to progression of the inflammatory process.

It is also of interest that Dr. Deborah Doniach has demonstrated a strongly positive complement-fixation test, and also a weakly positive tanned red cell agglutination—perhaps this correlates with the presence of the focal thyroiditis.

Lastly, the close correlation of the ^{131}I tests with the clinical thyroid status is shown: there was only a high uptake not suppressible when she became clinically toxic.

Thyrotoxicosis Merging into Hashimoto's Disease.—DEBORAH DONIACH, M.D. (for R. VAUGHAN HUDSON, F.R.C.S.).

C. H., male, aged 48. In February 1956 noticed thumping of the heart, sweating and heat intolerance, loss of weight of 2 st. with excessive appetite. On examination in October 1956 the patient had staring eyes, lid lag and lid retraction, warm skin and fine tremor of hands. The thyroid was diffusely enlarged, estimated weight 45 grams, of soft consistency with no thrill. Resting pulse rate 84–100, blood pressure 160/80, exophthalmometer readings R.23, L.22 mm. Provisional clinical diagnosis: diffuse small cervical goitre with stare, no exophthalmos, thyrotoxicosis of moderate severity.

Investigations.—B.M.R. = +20%. ^{131}I uptake 63% at three hours, 65% at twenty-four hours. Thyroglobulin precipitin test negative.

Treatment with carbimazole led to disappearance of all symptoms, and reduction in goitre size; an initial dose of 30 mg. was reduced to 5 mg. daily after three months. Seven months after onset of treatment the thyroid was barely palpable and very soft. The gland was still almost normal in size when a thyroglobulin precipitin was first noted in December 1957. The precipitin was weak since the Oudin double diffusion gel test, done on serial dilutions of serum, was only positive up to 1/2 serum dilution. The patient also had complement-fixing thyroid antibodies: C.F.T. gave positive results up to 1/64 serum dilutions using thyrotoxic thyroid gland extract as the antigen and 2 minimum haemolytic doses of complement (2MHD) for the test. Following a febrile cold in March 1958, tenderness and aching of the thyroid were noted for ten days and the goitre became firmer. The thyroglobulin precipitin became more strongly positive, and was visible up to 1/8 serum dilutions.

June 1958: Goitre firm, estimated weight 50 grams, not tender. No bruit could be heard, but the gland still showed increased pulsation and the patient was thought to be slightly hyperthyroid.

August 1958: Goitre more horseshoe shaped,

estimated weight 60–80 grams. There was a recent increase in exophthalmos, R.27, L.25 mm. but without subjective eye symptoms. Gamma globulins were within the normal range, thymol turbidity 3 units, zinc sulphate turbidity 10 units, colloidal gold test negative. Patient still felt better when taking carbimazole 5 mg. daily. In October 1958 he had an attack of influenza with a temperature of 100.5° F., sore throat and running nose for three days. Since this illness his neck became larger; tenderness of the thyroid had been noticed again since September. Neck circumference increased by 1½ in., the goitre was now firm and lobulated, estimated weight well over 100 grams, and felt like a typical Hashimoto goitre. The patient appeared euthyroid and carbimazole was discontinued.

Needle biopsy 29.10.58 (Mr. R. Turner-Warwick).—Dr. Drew Thomson reported a typical lymphadenoid appearance with diffuse Askanazy cell change and lymphoid infiltration with plasma cells. The thyroid epithelium in unaffected areas showed loss of colloid and tall follicular cells characteristic of thyrotoxicosis treated with antithyroid drugs.

November 1958: The patient complained of a choking sensation and excessive lacrimation. His goitre had not decreased in size since stopping carbimazole; the eyes showed some supraorbital oedema and slight conjunctival injection; exophthalmometer readings were R.29, L.29 mm., diplopia could be elicited on looking to the extreme right and upwards. B.M.R. now +36%, pulse rate 98, blood pressure 130/80. An area of indurated swelling and erythema 3½ × 2 in., suggestive of pretibial myxœdema, was noted on the lateral aspect of both shins, above the ankles. The precipitin test was now positive up to 1/32 serum dilutions and the complement-fixation titre had risen to 1/512.

In December 1958 he was mildly thyrotoxic and losing weight. The thyroid was somewhat smaller and less tense but pressure symptoms were still troublesome. Exophthalmometer readings decreased to R.27, L.27 mm., supra-orbital oedema and conjunctival injection were still present and the patient complained of a "gritty feeling" in the left eye; orbital pressure was moderately raised on digital palpation. In view of the increasing pressure symptoms and the persistent hyperthyroidism, it was decided to operate. The certain consequence of myxœdema will need careful control and the possibility of aggravation of the ophthalmoplegia has to be faced as a possibility particularly in view of the high titre of thyroid antibodies.

Dr. Raymond Greene said that the fear of thyroidectomy in cases of exophthalmos and the treatment of exophthalmos with thyroxine both arose from the

dogma that exophthalmos was due to the excessive production of T.S.H., which was demonstrably untrue. Though an increase in exophthalmos *post* thyroidectomy was occasionally seen, it did not follow that it was *propter* thyroidectomy. The same argument might be applied to the treatment with thyroxine. Though improvement had, very rarely, been observed, it had as often been seen during many kinds of treatment or during no treatment at all. He had recently shown that D-thyroxine, which has a negligible metabolic effect, completely suppressed the production of T.S.H., but he had failed by this means to influence exophthalmos.

REFERENCE

GREENE, R., and FARRAN, H. E. A. (1958) *Brit. med. J.*, ii, 1057.

Professor Russell Fraser suggested that while thyroxine was not a treatment of exophthalmos, its continuous administration was an important way of preventing any worsening of exophthalmos following thyroidectomy or any other antithyroid treatment.

Mr. Barrie Jones: *Lacrimal disorders associated with thyroid disease.*—Although the precise cause of epiphora in thyroid disturbances is conjectural, the symptom may be a troublesome one. Patients presenting in eye clinics complaining of epiphora, in the absence of derangements of the lacrimal passages, fall, apart from those with rosacea, into two groups: those who are thyrotoxic and those who are myxœdematous. In each group treatment of the endocrine disorder cures the watering, usually with a gratifying promptness. Although there is some experimental evidence that rabbits secrete more tears when treated with thyroxine, it is not clear that this applies to man. It is likely that the lid retraction and diminished blinking of thyrotoxicosis leads to corneal exposure and increased irritation, which results in a reflex hypersecretion of tears. In some cases lid retraction might lead to eversion of the lacrimal punctum, but this appears to be uncommon. It has been suggested that myxœdematous changes in the tissues around the lacrimal passages might impair drainage, but the epiphora is sometimes relieved before visible change in facial appearance has resulted from treatment. Blinking is known to exert a pumping action on the tear sac and it is likely that the torpid lack of blinking in myxœdema is of importance.

Stein-Leventhal Syndrome.—ARNOLD BLOOM, M.D., M.R.C.P.

Mrs. P. R., aged 33. Periods began at age 12, continued regularly with normal loss for about eighteen months and then ceased. About this time she began to put on weight, she developed hair on her face and an increased growth of hair on the trunk. She has shaved every other day since the age of 15. She married ten years ago, normal libido. She has five sisters, none hirsute. There is no history of family diabetes.

On examination.—Heavily built (14 st.). Attitude feminine, voice not deep. Plethoric facies, greying hair on head, slight recession at

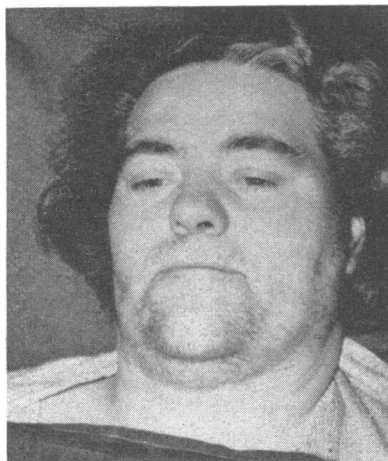


FIG. 1.

temples, looks older than her years (Fig. 1). Heavy growth of hair on face and trunk, tendency to masculine escutcheon. Colourless striæ over lower abdomen. Pelvic examination: clitoris slightly enlarged, ovaries not palpable. Blood pressure varied from 140/85 to 180/105.



FIG. 2.— $\times 9$.

Investigations.—17-ketosteroids 7.8 mg./twenty-four hours (average 7 estimations); total 17-hydroxycorticosteroids 9.8 mg./twenty-four hours (average 6 estimations), 39 mg./twenty-four hours on one occasion. Pregnanediol (Klopper) 2.2 and 5.9 mg./twenty-four hours. Glucose tolerance curve on two separate occasions: