

a very small proportion of globulin and still smaller amounts of albumin. Since the discovery of Baumann of the thyroglobulin and its organic iodine group, Oswald has found in simple colloid and parenchymatous goitre a relatively large amount of globulin poor in iodine, from which he bases his theory of the origin of the disease—namely, a flooding of the system with a globulin poor in iodine. This latter is after all in favour of the hypersecretion theory commonly accepted to-day.

As yet we have no satisfactory explanation of the mechanism of the hypersecretion theory; the tachycardia is assigned by Gley to inhibition of the vagus and stimulation of the accelerator nerves by the gland extracts, though recently it has been shown that the central nervous system may be in no way concerned with tachycardia.

Shaffer has made an interesting contribution to metabolism in this disease by demonstrating that the kreatinin excretion in the urine is below normal and more especially in the more toxic forms of the disease; further, with the low kreatinin excretion there is an increased kreatin excretion. As to the origin of the hyperactivity of the gland, nervous shock and compensatory hypertrophy during toxæmia are the two explanations. The former has some clinical and the latter some histological support.

"The Pathology of Exophthalmic Goitre" was presented by MacCallum, of Baltimore, who has devoted much time to the study of this subject. He first points out that none of the changes generally found have the character of primary changes, but "seem in each instance to be the response or reaction to some fundamental or primary disturbance of which as yet we have no very clear notion." In this disease the thyroid presents a similar picture to the changes described by Halsted and Marine in both the post-operative and spontaneous compensatory hypertrophy of the thyroid gland in dogs, though in neither of the latter were the symptoms of exophthalmic goitre observed. From a study of the material from sixty, more or less, typical cases, he describes the gland as usually slightly enlarged, but sometimes normal or even decreased in size; it presents a very congested appearance; the tissues are hard and more rigid than elastic; there is a grayish opacity, while the cut surface is dry and granular. Microscopically, there are strands of fibrous tissue separating the gland into lobular masses; the alveoli are irregular in size and form, full of colloid and lined with low cubical epithelium, which becomes columnar in the small as well as in the large alveoli and encroaches upon the lumen. Mitosis is frequent. He believes that the "colloid cells of Langendorff are the results of degenerative processes," and the "Schmelzepithel" of Hürthle is the effect of