

deal of activity the products of metabolism are turned back into the blood, they are not only useless but actually injurious to the system. In other cases, as for example the salivary glands, the function of the epithelial cells consists in forming from the constituents of the blood a useful material, which is conveyed by a suitable mechanical arrangement to the point where it is needed. Doubtless, these cells also form waste products, but the elaboration of useful material is the secretion. In still other organs, there is often no arrangement of the epithelial cells to accommodate secretion and there is no duct to care for the removal of any secretion. Still, although they do not go through the same changes in appearance as the ordinary secretory epithelium, it cannot be doubted that these cells are secretory, and that the substances which they produce are absorbed by the lymphatics and blood vessels—the so-called internal secretion. Thyroid, parathyroid, adrenal, hypophysis, and possibly also the pineal, carotid, and coccygeal glands may be included in this group, while the thymus, spleen, etc., form part of the lymphatic and blood circulatory system and, inasmuch as their function is concerned with the formed elements of the blood, do not belong here.

[Following this, the various types of myxoedema and cretinism were discussed, especial interest being found in the forms described as *Myxoedeme incomplet* and *Myxoedeme fruste*, all of which, however, differed from the myxoedematous idiocy or the idiocy of cretins only in degree and in the time of life at which the individual began to be affected. The nature of the common aetiological factor—the thyroid insufficiency—was further elucidated by the cases of myxoedema, following operative, extirpation of the thyroid, and by the results of experimental thyroidectomy in animals.]

There seems, therefore, no doubt that we have in all these disturbances one and the same basis, namely, the thyroid insufficiency, and we are called upon to explain its mode of action, but this is difficult because we do not know the function of the thyroid, and when we make the statement that it controls proteid metabolism, we are by no means sure in what this control consists. It is known, of course, that the thyroid produces a colloid material and it is thought that this is carried into the general circulation in small quantities by the lymph and that it serves there to neutralise some poisonous product of metabolism or by its presence to render possible some metabolic process. It is also known that it is by no means necessary, in order to gain these ends, that the thyroid should be in its proper position in due relation with nerves and vessels; on the contrary, it has been shown that transplanted pieces, provided they have become vascularized from the surrounding tissue,