

the disease as being altogether due to neurotic causes. During the last decade, some of the best of modern pathologists have sought to find a solution of the strange trio of symptoms which form the cardinal features of the disease, on the theory that they all arise as a result of a general toxæmia of the system due to the absorption of septic material from the intestinal canal and caused by imperfect digestion and mal-assimilation of food. And when we remember that gastro-intestinal irritation is an almost constant and most troublesome feature in most cases of Graves' disease, as it has been in the case under my own observation, we are inclined to hope that a satisfactory solution of the cause of the disease will eventually be found along this line of investigation.

A theory of the disease, to deserve the name, should be able to derive all the symptoms, or at least the cardinal ones, from a common source; so far this has never been done. An attempt has frequently been made to show that the other symptoms depend upon the struma or goitre, and many arguments have been advanced in support of the theory that the disease is virtually due to an excessive thyroid secretion, and therefore essentially a thyroid secretion toxæmia. Doubtless, the excessive thyroid secretion, when present, influences the other symptoms, but it merely aggravates the symptoms which it did not cause, just as starch and sugar in the diabetic diet aggravate the disease which these articles do not cause. But the goitre is by no means the first symptom in the majority of cases, and hence cannot be regarded as the cause of the others.

The most generally accepted theory in the past of the struma or goitre, has been a hyperæmia of the thyroid gland owing to paralysis of the vaso-motor nerves running in the cervical sympathetic. In support of this view we have the following conditions which are usually present:—strong pulsations of the small branches of the carotid, the rapid growth of the tumour, the perceptible pulsations of the thyroid arteries, and the abnormal development of the thyroid arteries and veins, as shown by the pathological anatomy of the disease; but that these conditions are due to a paralysis of the sympathetic is as yet a matter of question. There is, moreover, as yet no experimental proof that section of the sympathetic can produce struma.

Exophthalmos, the second cardinal symptom, usually makes its appearance soon after the struma; in a few cases it has been seen first. It is almost without exception bilateral. Sometimes it makes its appearance in one eye earlier than the other, and often it is not equally developed on both sides. In some cases it is wholly wanting. In degree, the exophthalmos varies greatly; sometimes there is but slight prominence of the eyeball, at other times the protrusion is so great that no part of the globe is covered by the eyelids, and even disloca-