

tion of the globe may occur. The exophthalmos is generally regarded as a mechanical protrusion of the eyeball due to venous hyperæmia and increased development of fat in the cellular tissue of the orbit. The results of ophthalmoscopic examination seem to justify the assumption of venous hyperæmia, and the increased deposit of retrobulbar fat has been directly proved by a series of autopsies, but when we ask why we have venous congestion and increase of orbital fatty tissue, we are at a loss for a satisfactory answer.

The third cardinal symptom of Graves' disease to be noticed, is acceleration of the heart's action. This symptom is usually the first to be developed. For a long time it was supposed to be due to anæmia, but this view has now but few supporters. That it is due, as some have supposed, to a primary disease of the heart is also unsupported by evidence. The bulk of evidence among pathologists of the last twenty years, tends to show that it is caused by disturbance of the function of the cervical sympathetic. It is well known that irritation of the sympathetic will increase the action of the heart, and if we could assume a condition of permanent irritation in any group of nerve fibres, this view would in a large measure explain the increase in the heart's rate. Friedreich has attempted a somewhat different explanation. He thinks that the vaso-motor nerves that originate from the sympathetic are in a state of paralysis, which produces a dilatation of the coronary arteries and causes an increased flow of blood to the muscle of the heart, and so an increased action of that organ. This view, however, does not differ essentially from the former; for the branches of the sympathetic which support the heart are commonly supposed to have the function of transferring the excitement coming from their centre to the ganglia of the heart. Another hypothesis worth mentioning is that of Roben, who considers that the goitre exerts pressure on the sympathetic, causing both exophthalmos and acceleration of the heart. This view is supported by several German pathologists of repute, but it is contradicted by the fact that goitre often appears at the same time as the exophthalmos, or even years after it, and in some cases is altogether wanting. Besides, the ordinary cystic goitre, that often occurs endemically and is often harder and bulkier than that of Graves' disease, produces no exophthalmos, and in cases where compression of the sympathetic is proved to exist, the exophthalmos is wholly wanting. Moreover, exophthalmos does not diminish in proportion to the diminution of the goitre, as would be expected if it were due to the effect of pressure. Thus we see that the demand for a theory of the disease that will satisfactorily account for all the symptoms has not yet been supplied.

The theory of systemic infection by the absorption of poisonous ma-