

A large number of temperature coefficients have been measured. These were found to be in the majority of cases positive, *i.e.*, the conductivities increase with rise of temperature.

All the experiments which have been hitherto carried out lead to the conclusion that it is the dissolved substances (*i.e.*, the acetamide, etc.) which carries the current and not the halogen hydride. In other words, we are dealing with solutions in which the organic and not the inorganic substance undergoes electrolytic dissociation.

Further experiments are at present in progress, having for their object the measurement of the molecular weight of the dissolved substances (McIntosh and Archibald) and the determination of the transport numbers (Steele).

Discussion of the results so far obtained is deferred until these experiments are completed.

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“Note on the Lymphatic Glands in Sleeping Sickness.” By Captain E. D. W. GREIG, I.M.S., and Lieutenant A. C. H. GRAY, R.A.M.C. Communicated by Colonel BRUCE, F.R.S., at the desire of the Sleeping Sickness Commission. Received and Read May 5, 1904.

Captain Greig, in a letter dated March 17, 1904, writes that following a suggestion of Dr. Mott, they have examined the contents of lymphatic glands during life from fifteen sleeping-sickness patients. In all of them actively motile trypanosomes were very readily found in cover-glass preparations taken from the cervical glands. They were also present in other glands such as the femoral, but were not nearly so numerous.

They found the trypanosomes to be far more numerous in the glands than in the blood or cerebro-spinal fluid, and believe that the examination of fluid removed from lymphatic glands will prove to be a much more rapid and satisfactory method of diagnosing early cases of sleeping sickness than the examination of the blood.

At first the glands were excised, but this was soon found to be unnecessary, as it is easy to puncture a superficial gland with a hypodermic syringe and suck up some of the juice into the needle and blow this out on a slide. The actively moving trypanosomes were readily found after a short search in these slides, when a prolonged search in similar preparations of the blood from the finger failed to discover them. In stained specimens, in addition to well-formed trypanosomes, there exist many broken-down remains, which suggests that a destruction of the trypanosomes takes place in the glands.

The authors also examined the cervical lymphatic glands of the five natives suffering from trypanosomiasis who have been under observation for the past year, and found actively motile trypanosomes in the liquid withdrawn from the glands in all of them. Tabula, one of these patients, is employed in the hospital, and the dispenser reports he is getting very stupid.

The lymphatic glands were also examined for streptococci by staining and culture, but in every case were found to be sterile. Some of the cases, the glands from which were examined for streptococci, were very far advanced. The streptococcus invasion must, in the opinion of the authors, be a very late one and only occur shortly before death.

Observations made upon the blood show a constant increase in the percentage of lymphocytes, but the total leucocytes are not increased.

The authors consider that these observations throw a new light upon the glandular enlargements which have been so constantly noticed in sleeping sickness, and that the disease is essentially a polyadenitis brought about by the arrest of the trypanosomes in the glands where many of them are destroyed, but whence some escape from time to time into the blood stream and thus occasion the increase which has been observed in the peripheral circulation.

They regard their observations upon the presence of trypanosomes in number in the lymphatic glands of both early cases of trypanosomiasis and advanced cases of sleeping sickness, as affording important evidence of the unity of these diseases, and further proof that the trypanosomes are the essential cause of sleeping sickness.

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