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substance in the splitting of sugar which induces this reaction. The problems relating to intoxication are being attacked from several standpoints, but the above indicates in general the line of procedure.

Dr. Dochez has continued his work in relation to the occurrence of pneumococci of the different types, not only in patients suffering from the disease, but also in normal mouths. While sufficient studies have not yet been made to bring conclusive evidence in regard to this point, it seems fairly evident that the pneumococci obtained from normal mouths are not of Types I and II, but in general behave quite differently from these organisms, which are apparently more fixed in their characteristics. The definite solution of this problem will be of some importance from the epidemiological standpoint.

Dr. Avery's work at present is concerned with methods for the concentration of the serum used in treatment. This work so far indicates that the protective substances are all contained in the globulin fraction, about equally distributed in the pseudoglobulin and the euglobulin. The separation of the so-called insoluble globulin by the method of passing CO<sub>2</sub> gas through the serum diluted in water has given most interesting results. This fraction of the protein, which represents only about one-twentieth of the total protein of the serum, contains a large part of the protective substances, so that it is now possible to obtain a concentrated serum containing twenty times the protective power of that of the whole serum, but containing no more protein than the whole serum. However, in the manipulations almost one-half of the protective substances have been lost, and a study is now being carried on to try to reduce this loss if possible. Concentration with a loss of only twenty-five percent we would consider very satisfactory, and it is quite probable that this result can be obtained by the present method after the technique has been better developed. As soon as this work is completed, I hope to have Dr.

Avery study further the question of immunity to Pneumococcus mucosus.

Syphilis. During the past quarter Dr. Ellis has had to carry on entirely alone the work of the treatment of patients and, therefore, has been able to carry on very little study outside of the clinical study in the treatment of these patients.

The method of intraspinous injection of serum, as devised by Dr. Swift and Dr. Ellis, is now being employed quite widely throughout this country with, in most cases, favorable results. This work has not only been valuable in itself, but it has undoubtedly stimulated a great deal of work in the treatment of tabes and general paresis by intravenous treatment alone. The results of intensive intravenous treatment have undoubtedly shown that in many cases excellent results may be obtained by this method alone. In other cases, however, it is necessary to use the intraspinous method before results are obtained. In the future, no doubt, the method will consist in treatment, first by intravenous injections, with careful study of the spinal fluid, and second, in the cases where satisfactory results are not obtained, by the direct intraspinous method of treatment. The intraspinous method of treatment has been employed elsewhere in the treatment of general paresis, and a number of observers have reported excellent results. All this work is undoubtedly going to lead to very great improvements in the method of treatment of tabes and general paresis. Dr. Swift, who has studied our cases and has investigated the reports of others, believes that tabes can probably be arrested in ninety per cent of the cases.

We believe that it is important that in the future these cases be treated as syphilis by those who are engaged in the active treatment of this disease, and not be treated by neurologists who have little knowledge concerning the nature of infectious disease and are little interested in specific