

Nissl-Nonne test so as to perform it in the same way as the Heller test. The fluid is taken up in a fine pipette, and allowed gently to flow on to the surface of the ammonium sulphate solution. The solution must be quite saturated, and this is best attained by dissolving the salt in boiling water, and keeping an excessive amount of salt in the vessel containing the solution. Care must be taken that the salt is pure, so that the solution is neutral in reaction. When the test is positive a ring forms at the junction of the two liquids. The ring is rather characteristic in having a clear white appearance, and, in being fine, compact and sharply cut. After about half an hour it assumes a mesh appearance as of a delicate cobweb. It must be viewed in an indirect light. Some idea of the quantitative intensity of the reaction can be obtained by the Brandberg method—that is, by forming a standard estimate according to the length of time before the ring appears; the fluid can be tested for this purpose at different dilutions. It is hard to say what are the actual physical conditions present at the junction of the two liquids. It may well be that penetration of the ammonium sulphate solution occurs so gradually as to permit the formation of a layer in which the concentration is only a third—namely, the concentration which is most favourable for the precipitation of euglobulin as distinct from other globulins.

The results obtained by the ring test agree almost exactly with those obtained by Noguchi's test, and it offers the advantage of being more readily applicable. It is never positive in the normal, and up to the present I have never found it positive in any chronic affection except active syphilis, or metasyphilis, of the nervous system. The cases mentioned above, therefore, need not be again enumerated.

#### SUMMARY.

An increase in the globulin content of the cerebro-spinal fluid almost invariably occurs in general paralysis; the proteid concerned is a euglobulin. A peculiar quali-