

succeeded always in obtaining cultures of streptococci from the pus from suppurating cervical glands and in the discharge from the ear in cases of otitis media. The urine also, in suitable cases, contained streptococci, particularly if the patient had marked albuminuria at the time of examination. Courtois has found streptococci in the urine of 91 per cent. of the cases of scarlet fever examined by him while the patient was suffering from an attack of albuminuria, and in 27 per cent. of those without albuminuria. Many other workers have, from time to time, noted the frequency with which the streptococci are to be found in scarlatinal anginae, more especially, I might here mention, Kurth, Seitz, Booker, Pearce and Dowson, all of whom have written lengthy reports giving the results of their investigations.

I would here note that for some months I was considerably interested in endeavouring to confirm the work done by Glass of Chicago upon an organism which he has termed the *Diplococcus Scarlatinæ*. There is no doubt that an organism corresponding with that described by him can be isolated from cases of scarlet fever, especially when his methods are followed, but I was unable to satisfy myself that it had anything to do with the causation of the disease. However, I must add that the streptococcus also does not appear to be the essential agent in the disease as has been claimed by D'Epine and others. In the mild, uncomplicated cases streptococci were not found. These cases gave no trouble and, after the first week or more, required little more than detention in quarantine. My bacteriological studies, carried on at the time when I was also observing the cases clinically, bred in me the conviction that the streptococcus leads to a secondary infection, and that this secondary streptococcal infection is the cause of most, if not all, of the unfavourable complications of the disease. The severity of the attack appears to be due to the concurrent, or, as Roger employs the term, symbiotic action of this micro-organism and the causative agent of scarlet fever upon the susceptible individual, much as it has been noted that streptococcus infection renders diphtheria more severe, though the ill-effects of this symbiosis in scarlet fever appear to be still more marked.

The administration of anti-streptococcus serum was therefore indicated, to counteract the effects of the toxins of the streptococcus and to bring about the destruction of that organism. For it appeared that if this could be accomplished, the cases would resolve into a less severe type and the prognosis would become more favourable.

The various anti-streptococcic sera have, from time to time, been tried in these cases by Baginsky and others, including myself, but with little or no result. Within the last few months, however, I have had submitted to me, and have been given the opportunity to test, an anti-