

seven streptococcus mitis, four streptococcus salivarius, one streptococcus equinus, and four other unnamed types of the streptococcus viridans were used. None of these inoculations gave rise to pus formation (one recently isolated strain of streptococcus salivarius was found to be highly virulent for rabbits, death being produced in forty-eight to seventy-two hours). The inoculated animals were killed at different intervals, and the lesions were studied both macroscopically and microscopically. In the majority of instances only one inoculation was given.

In brief, we were able to demonstrate pathological processes in the majority of animals surviving beyond the fourth day. The variation in the pathogenicity was quite evident even among the organisms of the same strain. Some of the older cultures proved to be of low pathogenicity so that, although a slight non-suppurative reaction appeared at the end of the first week, complete resolution occurred within a month. On the other hand, the more virulent forms showed quite intense reactions by the end of the first week which persisted for varying periods of time up to six weeks. When, however, the inoculations were repeated at intervals of three weeks, a progressive inflammation with productive fibrosis was observed over a period of seven months.

In our experiments we were unable to indicate definitely the type of organism which appeared to give the greatest tissue reaction. The variation in the length of time in which the different organisms had been cultivated on artificial media had greatly altered their pathogenic qualities.

The particular point, however, in which we were interested was the simultaneous occurrence of lesions in the heart, arteries, and kidney. The affection of the heart was mainly to be observed in the myocarditis which simulated that described for the human heart. An interstitial infiltration of lymphocytes and plasma cells was the usual observation, and this infiltration was mainly in the vicinity of the small arteries. We failed to demonstrate the uniform periarteritis and mesarteritis of the ascending aorta, as we have on a previous occasion indicated for the human vessel. In two instances a slight grade of periaortitis was present. Otherwise, however, we found an irregular and inconstant periarteritis of the arteries of the liver, diaphragm, mesentery, and kidney. In the latter organ upon which our attention was concentrated, some remarkable results were obtained.

The kidney lesions were common and occurred in greater frequency and intensity than in the heart. They were associated