

broad application. We all know that practically every pathogenic organism can attack a variety of structures. That is not what is meant. But just as the pneumococcus has a special predilection for the respiratory tract, though it does produce lesions elsewhere, and in the same way the meningococcus for the meninges, so the *Streptococcus viridans* confines itself to the heart, or to the joints, or, as we suggested above, to both. It seems plain from our findings, at any rate, that the type of strain in the mouth and throat has a great deal to do with the type of lesion the patient is liable to develop. Take for example the results in respect to aortitis. The regularity with which this condition, in conjunction with endocarditis, was produced by certain strains is very striking. Strains L-7 and M-8 yielded aortitis in every instance. Strain M-8 was inoculated into six rabbits, and definite aortitis resulted in all.

Although the *Streptococcus viridans* usually produces chronic lesions, in which round cells greatly predominate, it can attract leukocytes in relatively large numbers, and therefore produce microscopic abscesses. Sections of vegetations show a small area in the center, composed chiefly of polymorphonuclear leukocytes with some of the nuclei undergoing fragmentation. There are also present some lymphocytes. Surrounding this focal mass of cells there is an area of proliferating endothelial cells. Some of the older vegetations show fatty changes with calcareous deposits in the center.

The focal areas in the heart muscle generally surround a small blood vessel which is completely occluded by a bacterial embolus. There is a necrosis of the muscle fibers, and a round cell infiltration composed of both polymorphonuclear leukocytes and lymphocytes.

CONCLUSION

Let us venture to suggest that we have established three important points:

1. The *Streptococcus viridans*, isolated from the blood in cases of chronic infectious endocarditis, is of very low virulence, probably lower than any hitherto reported as being recovered from a similar source.

2. These streptococci are capable of producing lesions