

treatment may be counted upon to restore the function of the part, not necessarily the joint, most completely.

I shall be obliged to take a little time to discuss the etiology of the various types of infectious arthritis and will endeavor to bring before you the character of the changes which take place in joints affected by different and frequently indeterminate infections and the treatment which, from an orthopedic point of view, is most clearly indicated.

It is not possible, as was formerly the case, to entirely ignore etiology in these cases, though we must admit, even now, that very many times it is impossible to determine it accurately. Tuberculosis as an infectious cause for arthritis is in a class by itself. Gonorrheal infection has always held a prominent place among the etiologic factors entering into joint lesions. In fact, the gonococcus has had ascribed to it a specificity in the etiologic rôle second only to that of the tubercle bacillus, and that with much less ground for the assumption. Streptococcic infections through the tonsils and as sequelæ of streptococcic infections in other parts of the body, e.g., the uterus, are quite common, though it is not always possible to prove that a given joint infection is of streptococcic origin. Colon and other infections from the gastrointestinal tract are even more difficult of demonstration. Associated with Riggs' disease there is not infrequently a polyarthritis dependent upon the absorption of toxins from suppuration about the roots of the teeth. Inflammations of the antrum and other sinuses in connection with the upper air passages are occasionally the seat of inflammatory processes of uncertain bacteriologic origin, for which there is inadequate drainage, and consequently the possibility of toxic absorption.

There is considerable uncertainty, therefore, as to the specificity of bacteria seemingly the cause of joint infections. There is but little definitely known as to the sources of the infections within the body from which these joint involvements may take place. We are uncertain whether the supposed infection is due to bacteria themselves or to the products of their life history—toxins. Neither can we determine certainly whether toxins are conveyed from the reservoir where they are made to the joints where they produce their lesions, or whether they operate through some intermediate process, as is apparently the case with syphilitic virus in its production of the joint changes of tabes. There is much to be learned in this connection before we shall be in a position to understand all the etiologic phenomena of polyarthritis.

From a study of the gross pathology of arthritic lesions during life but little information can be obtained regarding the kind of infection primarily responsible for the lesions. The characteristics of the acute changes are not those of the chronic, and when they have passed out of their acute stage, whatever there may have been that was path-