Evidence for Infectious Disease in the Ancient American Southwest
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The evidence for infectious disease in the American Southwest prior to the arrival of Europeans depends primarily upon pathological changes observed in ancient Native American skeletons. The evidence for three conditions, Tuberculosis, Treponematosis, and Coccidioidomycosis, will be examined in this presentation.

Thanks primarily to work done on mummies in South America by researchers at the Medical College of Virginia, there is no longer any question that Tuberculosis, caused by *Mycobacterium tuberculosis*, was present in the Americas before European contact. Current questions deal instead with its distribution in the Americas through space and time, and the identification of various strains of the mycobacterium to determine the evolutionary history of the pathogen itself. The condition is passed from human to human, but may also be transmitted through the consumption of contaminated animal products, such as bovine milk. The role of animal vectors in the New World, if any, is not understood. Although the details are not clear, what does seem clear from the osteological record is that Tuberculosis of some form was present in the Southwest at least five hundred years prior to European contact.

Evidence for the presence of spirochete infections of the group known as Treponematosis in the Southwest prior to European contact is also present in the skeletal record. The specific condition involved is probably Syphilis, caused by *Treponema pallidum*, and its transmission likely occurred across the placenta as well as through adult sexual contact. The pattern of pathology associated with congenital transmission is seen in historic Native American skeletons as well as prehistoric, suggesting a continuity of the disease pattern across the Old World-New World contact boundary.

Unlike the two previous conditions, which are widespread in both the Old World and the New World, the third condition to be considered, Coccidioidomycosis, caused by the fungus *Coccidioides immitis*, is limited to the New World. Associated with dry climates and primarily, but not exclusively, low elevations, the condition is currently a problem in the American Southwest and parts of South America. Unlike the two previous conditions, which can be passed from human to human, the normal transmission of Coccidioidomycosis is from the environment to the human host, not from human to human. “Epidemics” are generally associated with environmental disturbances such as severe wind storms and earthquakes. Since Coccidioidomycosis affects the skeleton in a manner similar to that of Tuberculosis, careful study is required to distinguish between the two conditions.

This presentation will examine examples of these three conditions as observed in the skeletal record of the ancient American Southwest and speculate on the direction of future research.