Evidence of infectious disease in archaeological human skeletal samples, when combined with cultural and other biological data, provides insight into the prevalence and significance of those diseases in the past. Unfortunately few infectious diseases affect the skeleton and those that do, affect relatively few patients who have one of the disorders. Infectious diseases that affect the skeleton tend to be chronic with long-term survival of the patient with the disease.

Infectious disorders that can affect the skeleton and have been identified in archaeological human remains include: tuberculosis, leprosy, treponematosis, ulcer, brucellosis, osteomyelitis, periostitis and mycosis (Aufderheide and Rodríguez-Martin 1998; Ortner 2003). A major emphasis in my research for the past twenty years has been characterizing the skeletal manifestations of leprosy (e.g., Ortner 2002, 2008) and brucellosis (Ortner 2003). I also have an ongoing research interest in treponematosis.

In the research on the paleopathology of treponematosis, unfortunately in my opinion, there has been too much emphasis on where the venereal form originated. There has been inadequate emphasis on the pathogenesis of and relationship between the three syndromes (syphilis, yaws, bejel) that affect the skeleton. There is, however, increasing evidence for the presence of syphilis in the Old World well before 1500 AD.

Differential diagnosis in human skeletal paleopathology is a challenging exercise. Fortunately the number of disorders that can affect the skeleton is a relatively small fraction of all the diseases that cause morbidity and mortality. Ongoing research on human skeletal paleopathology has made significant progress in clarifying the differences between infectious disorders that can affect the skeleton.

Leprosy is one of the disorders that has received considerable emphasis over the past fifty years including the pioneer research of Møller-Christensen (1965, 1978). In my research on human remains from a medieval cemetery for patients with leprosy, very clear patterns of skeletal involvement occur and the diagnosis in most cases is almost certain.

The history of leprosy in Europe is of considerable interest because of the decline and virtual disappearance of the disorder by about 1500 AD. The reason for this decline remains a matter of speculation that has important implications for our understanding of host/pathogen coevolution in infectious disease.
References


