

Human Skeletal Material from Pompeii: A Unique Source of Information about Ancient Life

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ABSTRACT

Use of human skeletal remains excavated in Pompeii as a source of information regarding ancient life is described. Available for studies, variously preserved remains of approximately 500 individuals allow reconstruction of demographic dynamics and age structure of the population indicating high mortality (newborn life expectancy 20-25 years) and large proportion of infants and children in the population. Pathological signs on bones (trauma, anaemias, congenital malformations, chronic infections, malignant neoplasms) and teeth (enamel hypoplasia, caries, periodontal disease, abscesses) are described and discussed in view of environmental conditions. High disease load is reflected in adult stature about 10 cm shorter than modern reference despite availability of nutrients provided by classical Mediterranean diet of inhabitants of Pompeii. Morphological studies of bones and teeth are aided by chemical analyses of DNA for possible genetic characterisation of individuals. DNA, however, is poorly preserved in most of the remains, which limits its usefulness.

Traditionally, life in the Graeco-Roman antiquity has been reconstructed from written sources and archaeological finds. Though these are extremely rich and valuable sources of information they tend to put the emphasis on prominent political, social and military events and major technological and artistic achievements.¹ They tell us less about everyday life of an average person and even less about the human natural history. Moreover, they rarely provide an opportunity to obtain statistically correct picture of basic vital events such as mortality, diseases and fertility of the entire population.

The interest in studying the human remains of past populations dates back at least to the late eighteenth and then nineteenth century when attempts have been made to describe human morphological characteristics, pathological changes on bones and, using the biological characteristics, to relate the past populations to one another whether contemporary or recent.²

Palaeopathology, as a separate field of study, was defined in 1913 by Sir Marc Armand Ruffer as “the

science of diseases whose existence can be demonstrated on the basis of human and animal remains from ancient times”.³ The investigation into the diseases in the past by way of autopsy, that means, “to see by oneself” the real evidence, has been conducted already for centuries. Yet, systematic epidemiological studies of all human bones from excavated areas were rather rare. Usually the investigators concentrated on one or a few diseases, such as, for example, leprosy, anaemia, or treponematosi, for statistical analysis of the entire skeletal material.⁴ Most commonly, many singular “interesting cases” of diseases represented by changes on bones have been described. Even at present over 70% of papers published in the *Journal of Paleopathology* are descriptions of single cases of rare diseases or disorders. One of the reasons for overrepresentation of case studies in palaeopathological literature has been that skeletal samples derived from archaeological sites were often poorly excavated, badly preserved and their essential historical and archaeological documentation was incomplete preventing sys-

tematic biological studies on the population level.

Even today very few skeletal samples, although relatively recently excavated from classical archaeological sites, have been thoroughly and systematically studied by biological anthropologists and palaeopathologists. Among these few, probably the best studied up to now, are the samples from Pontecagnano (V-IV c BC) in central Italy,⁵ Alfedena (Abruzzo, VI-V c BC),⁶ Roman sites such as *Lucus Feroniae*, *Portus Romae* and *Isola Sacra* (near Rome, I-III c AD)⁷ and the Greek colony of Metaponto in southern Italy.⁸ All of these sites are located in Italy, despite the fact that many other classical Greek or Roman archaeological sites in the Mediterranean region and other parts of Europe have been excavated. Human skeletal remains from those sites have often not been preserved (example Greek Olbia on the Black Sea).⁹

Despite the long-standing interest of members of medical profession and scientists of various biological and geological disciplines with biological anthropologists in the leading position, archaeologists still find