

An age-related disease or a biocultural marker? Osteoarthritis of the foot in the modern era Franciscan community of Azzio (17th-18th century BCE)

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To the Editor,

Feet arthropathies, or foot deformities, are a common type of condition found in clinical. They can take many forms, including heel spurs, clubfoot, and other deformities of the toes and feet, and can be caused by a variety of factors, including genetics, trauma, prolonged standing, or walking on hard surfaces.

In the past, certainly harsher living conditions determined the onset of these degenerative pathologies in greater quantities and at a considerably premature age compared to today. It is important to investigate the presence of certain pathological conditions in the past as it allows us to better understand the possible causes, especially for those pathologies in which the etiology is not yet clear or characterized by a high multifactorial risk.

And this is what we want to bring here, a pathological testimony of the past obtained from an osteological sample dating back to the 17th-18th century that allows us to elaborate reflections on the onset of this degenerative condition very common in today's population. Among these we know that even certain posture and movement habits affect the health of the joints, and it is interesting to note that the relationship between social or work categories can be characterized by certain arthritic conditions. Today's clinic manages to establish the major risk factors for the various occupational categories but certainly this data is missing for the historical ages.

Our osteoarchaeological sample was discovered in the *putridarium* of the Franciscan church of Azzio (Modern Age - Varese, northwestern Italy) (1) and it was characterized by the bodies of 11 partially mummified Franciscans. The paleopathological study, conducted according to the anthropological standards (2), has allowed us to verify the presence of severe foot arthropathies in 8 mature subjects, unaffected by arthropathies in other locations. This has made us question about the etiology of this condition, which is usually associated with aging.

In the field of paleopathology, foot deformities have been studied as an indicator of religious practices, beliefs, or activities (3). For example, some spiritual traditions have included practices such as prolonged standing, walking barefoot, or walking on hard surfaces as a form of devotion or penance. This can lead to the development of foot deformities in individuals who engage in these practices over a prolonged period (4).

One well-known example of these practices is the one of prolonged standing during religious services existing in some Christian denominations, such as Eastern Orthodox and Coptic Christians. This practice can lead to the development of heel spurs, a type of foot deformity caused by the accumulation of calcium deposits on the heel bone (5).

In conclusion, the study of foot deformities in paleopathology can provide valuable insights into the history of religious practices and beliefs, as well as the impact of these habits on the health and well-being



Figure 1. Bone remains of the Franciscan friar found in niche number 3 of the putridarium in Azzio (VA). The arrangement of the bones reflects the anatomical order of the subject in a supine position.

of individuals in past populations. By analyzing the skeletal remains of individuals from different historical periods and cultures, paleopathologists can gain a better understanding of the prevalence and causes of foot deformities, as well as the cultural and religious context in which they developed. This information can help to shed light on the lived experiences of individuals in the past and can also inform our understanding of the impact of religious practices on health and well-being today.

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