Monasticism and Activity Patterns: Evaluating Osteoarthritis Distribution and Entheseal Changes in a Feminine Monastic Community (Santa Maria de Vallsanta, Spain)

Abstract:

During the 12-13th AD, a feminine monastic expansion occurred in the northeast of the Iberian Peninsula, related to the Cisterian Reform. According to the literature, the daily activity of these communities was mainly based on farming and liturgical practice. Santa Maria de Vallsanta appears as an example of this event. The aim of this study is to evaluate the osteoarthritic prevalence and its distribution in this group, as well as entheseal changes, in order to reconstruct their activity pattern. The presence of osteoarthritis has been recorded in a sample of 14 female individuals corresponding to burials of abbesses and prioresses of Santa Maria de Vallsanta by two different scoring methods. Moreover, entheseal changes (from both upper and lower limb) have been analysed following the already contrasted method of Mariotti and colleagues, in order to assess the adequacy of osteoarthritis as a marker of occupational stress. Severe osteoarthritis has been observed even in individuals under the age of 40 in the group of abbesses and prioresses from Santa Maria de Vallsanta. The joints most severely affected are usually the elbows, wrists and knees. The entheses of the gluteus maximus muscle in the femur, soleus in the tibia, pectoralis major in the humerus and deltoideus in the clavicle are those that are most developed in the group. Farming and the liturgical practice may explain the prevalence and specific patterning of osteoarthritis and entheseal changes in this community. Despite the complexity of its aetiology, the systematic evaluation of osteoarthritis provides information on differences between individuals in the response to a stressful environment. A standardized method of registering the disease is strongly needed in order to enable comparisons between populations.

Keywords: *Osteoarthritis, entheseal changes, markers of occupational stress, monasticism, Middle Ages*