A study of non-specific skeletal health indicators in two non-adult populations from western Britain

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Abstract Skeletal health indicators are often employed to measure how past populations adapted to their physical environment. The skeletons of children provide a measure of population fitness, as the ability of a community to keep their younger inhabitants alive and in general good health attest their ability to adapt to their environment. In this study, skeletal remains of non-adults from foetal to 17 years of age (n=300) from two cemetery populations in western Britain, namely the early medieval site of Llandough in south Wales (n=204) and the multi-period site of St Oswald’s Priory in Gloucester (n=96), were assessed. Non-specific indicators of physiological stress (cribra orbitalia, porotic hyperos-

Resumen Indicadores de la salud del esqueleto se emplean a menudo para medir las poblaciones del pasado adaptadas a su entorno físico. Los esqueletos de los niños proporcionan una medida de la aptitud de la población, ya que la capacidad de una comunidad para mantener con vida a sus habitantes más jóvenes y en buen estado de salud general atestigua su capacidad para adaptarse a su entorno. En este estudio, se evaluaron los restos óseos de no adultos, de fetos a 17 años de edad (n = 300), de dos poblaciones de cementerios en el oeste de Gran Bretaña, a saber, el sitio de la época medieval temprana de Llandough en el sur de Gales (n = 204) y el sitio multiepoca de St Oswald’s Priory en Gloucestershire.
Introduction

The study of human skeletal remains allows bioarchaeologists and anthropologists to study the health of past populations and the impact by environmental changes. This is particularly important when considering the health of children, which are thought to represent the most sensitive index of biocultural change (Van Gerven and Armelagos, 1983; Roth, 1992). The skeletal remains of the younger members of a community allow this measure of population fitness (Mensforth et al., 1978: 3). The ability of communities to keep their most vulnerable members alive and healthy is testament to their abilities to adapt to the changing environment, and exposure to specific stressors may have occurred (Ribot and Roberts, 1996). Infancy and early childhood are critical periods for growth and development and have been recognised as periods of increased mortality and morbidity, this is evident in higher mortality rates for children but also increases in stress levels, increased prevalence of certain diseases (i.e. rickets, scurvy), and also decreases in growth. The study of non-specific physiological stress indicators is frequently employed to assess the health of past populations and many studies have been carried out on non-adult skeletons both in Britain and abroad (Ribot and Roberts, 1996; Lewis, 2002; 2010; Bennike et al., 2005; Gowland and Redfern, 2010; Wheeler, 2010). It is often desirable to assess disease, nutrition and bone growth together in order to investigate the impact of poor health and nutrition on growth patterns. However, the interpretation of the health pro-

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