Archaeological evidence for *Pott’s disease* on historical populations: Tomb 05 at the Roman Circus *maqbara* as an example of social solidarity (Toledo, Spain)

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With 4 figures and 1 table

**Abstract:** World societies can often be characterized by their attitude towards elderly and illness. It is well known that most cultures were concerned about those who were not able to produce and take care of themselves. This brings to the development of social processes that involve such individuals within the community, resulting in groups who stick together, and at last, ensuring the survival of the group. The contextualization of many of those social processes might be studied through Physical Anthropology and Paleopathology. This paper presents tomb 05 (T-05) as a new case of probable tuberculosis in Toledo from the medieval *maqbara* of the Roman Circus that provides new paleoanthropological data to understand the treatment given to sick people in a sparsely studied context.

**Keywords:** Social solidarity; Paleoanthropology; Paleopathology; *Pott's disease*; medieval society; Muslim Toledo

**Introduction**

Tuberculosis is an infectious disease known since prehistoric times (Sager et al. 1972; Grmek 1983; Formicola et al. 1987; Canzi et al. 1996; García-Guixé et al. 2009: 520). It became an epidemic with the increase in population density due to the emergence of large urban communities at the end of the Middle Ages (Roberts 2002: 111). The introduction of antibiotics and thoracic surgery from the second third of the 20th century reduced the morbidity, being finally eradicated at the end of the century (Roberts & Buikstra 2003). However, today it seems that it is taking certain boom, probably linked to the migratory processes, tourism, or the increase of other infectious diseases that cause the decrease in the organic defences (García-Guixé et al. 2009: 520).

The most common organs affected by the Tuberculosis (TB) are lungs, from where the infection can spread via blood to all organs in the body. But it might also develop TB in the lymph nodes and on the throat. When TB affects bones, it usually influences the vertebrae. This manifestation is called *Pott’s disease* and occurs as a result of two or more vertebrae being affected by the tuberculosis bacillus. The affected vertebrae are normally dorsal and sometimes lumbar. When the nutrition of the disc is interrupted, vertebrae start shortening and finally the column collapses. Then, the infection starts on the front of the vertebral body and expands from there. Once the process is well advanced it might cause medullary injury resulting in paraplegia due to the narrowing of the medullary canal.

It is known that in preantibiotic times, the *Pott’s disease* was usually developed in 50–70% of cases during the first 10 years of life of children with TB (Ulrich-Bochsler et al. 1982). If the disease does not mean quick death during this first phase, the tuberculosis pathogens may be latent for decades, shaped encapsulated by calcified tissue, increasing life expectancy to 30–50 years (Powell 1988). During this long period, the Koch Bacillus might cause manifestations in other organs, compromising life expectancy more quickly. In this way, those individuals with worse immunological response would begin to develop early lesions. The reactivation of the disease will occur by a severe systemic stress (post-primary infection), with localized rupture and consequent dissemination by all human body affecting the bone, and causing acute tuberculosis in later years (Hoeprich 1977).