

TUBERCULOSIS INFECTION IN A LATE-MEDIEVAL HUNGARIAN POPULATION

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Introduction: The 16-17th AD century Bácsalmás-Óalmás (Hungary) skeletal series has already been the subject of several paleopathological studies on TB-related bone lesions. Initial macromorphological research has suggested a low tuberculosis infection rate within this population.

Objectives: Due to recent development of macroscopic and molecular diagnostic methods in paleopathology and paleomicrobiology, a 5 year international research program was recently started in order to re-evaluate the TB-related lesions in the complete Bácsalmás-Óalmás series.

Materials & methods: Skeletal material of 205 individuals was chosen for the macromorphological investigation, which was focused both on classical/advanced stage skeletal TB alterations and atypical/early-stage TB lesions. Paleomicrobiological analysis was used to study the presence of *Mycobacterium tuberculosis* DNA both in morphologically positive and negative cases. Samples were examined for the repetitive element IS6110 in the *M. tuberculosis* complex. Paleoproteomical analysis of the samples is still in progress.

Results: From the 205 re-examined skeletons 135 possible TB infection cases were found; among them 12 cases were selected for further biomolecular examinations. 6 cases were positive with hot-start PCR for IS6110.

Conclusion: Compared to the previously described few tuberculous cases in this series, we identified a much higher prevalence of *Mycobacterium tuberculosis* infected skeletons. The atypical/early stage skeletal lesions occur significantly more frequently than the so called 'classical' alterations. The paleomicrobial analysis confirmed the *M. tuberculosis* infection in half of the samples selected for this pilot project. Our preliminary results indicate a better preservation of *M. tuberculosis* DNA in the compact long bones.

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