



14th International Symposium on Dental Morphology

**Program
&
Abstracts**

A collage of dental morphology images. At the top left is a close-up of a tooth's surface. Below it is a yellowish, heart-shaped tooth. To the right is a jawbone with teeth. Below that is a skull with teeth. At the bottom left is a row of yellowish teeth. In the center is a diagram of a tooth cross-section with labels: Enamel, Metamel, D, M, Hypocanal, and Protocanal. To the right of the diagram is a close-up of several teeth.

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Tooth wear and changes of tooth dimensions in two Croatian skeletal populations**M. Vodanović¹**, H. Brkić¹, and M. Šlaus²¹Department of Dental Anthropology, School of Dental Medicine, University of Zagreb, Croatia; ²Croatian Academy of Science and Arts, Zagreb, Croatia*Presenter email: vodanovic@sfzg.hr*

Two medieval skeletal populations with different dietary habits are examined in order to test the relationship between tooth wear and adaptive changes of tooth dimensions. Research has been carried out on the skeletal remains of 95 skulls excavated at the Bijelo Brdo (BB) site in continental Croatia and on the remains of 44 skulls from the Glavice (G) site in coastal Croatia. Samples dated to the 10th - 11th centuries. Tooth wear was scored in five grades. The mesiodistal diameter of the tooth crown (MDC), mesiodistal diameter of the tooth neck (MDN), buccolingual crown diameter (BLC) and crown height are measured and robustness of teeth is calculated. Measurements were only taken on permanent teeth without exposed dentine in the right maxillary (U) and mandibular (L) quadrants. Data was analyzed by Chi-square test and Student's t-test. The sample from continental Croatia showed statistically significant higher tooth wear ($X^2=68.7$) as well as larger BLC diameter, MDN diameter and robustness of maxillary and mandibular first (P1) and second premolars (P2), $p<0.05$. The higher levels of tooth wear indicate a greater consumption of cereals and fibrous foods in the Bijelo Brdo population, which is confirmed with existing archaeological and historical data. Larger buccolingual crown diameter of premolars in the Bijelo Brdo sample (UP2 G 8.09 ± 0.65 , BB 8.99 ± 0.60 ; UP1 G 8.12 ± 0.45 , BB 8.89 ± 0.60 ; LP1 G 6.98 ± 0.65 , BB 7.58 ± 0.62 ; LP2 G 7.34 ± 0.59 , BB 8.03 ± 0.72) could be an adaptive change, however further investigations are needed to confirm this hypothesis.

Keywords: Archaeology; Medieval; Croatia; Tooth Wear; Odontology