

A COMPLEX CASE OF CRANIOFACIAL DEFECT WITH PROSTHETIC MANAGEMENT AND CO-OCCURRING SELLAR ENLARGEMENT IN 18TH-CENTURY CRACOW, POLAND

Anna Spinek¹, Marta Kurek² and Anna Drazkowska³

¹Polish Academy of Sciences, Hirszfeld Institute of Immunology and Experimental Therapy, Department of Anthropology, Wrocław, Poland; ²University of Łódź, Faculty of Biology and Environmental Protection, Department of Anthropology, Łódź, Poland; ³Nicolas Copernicus University in Toruń, Faculty of History, Department of Archaeology of Late Middle Ages and Early Modern Period, Toruń, Poland

Background: The co-occurrence of craniofacial defects and endocrine-related skeletal alterations in archaeological individuals is extremely rare, offering unique opportunities to explore health, medical care, lived experience in past populations. Cleft palate is an uncommon finding and only exceptionally accompanied by prosthetic intervention. Morphological changes of sella turcica, which may reflect pituitary pathology, remain underreported.

Objective: This study presents a complex case of an adult male from 18th-century Cracow, integrating osteological, radiological, and material evidence to provide a comprehensive reconstruction of pathological conditions and their functional implications.

Subjects and methods: The individual analysed in this study derives from crypts in the Church of St Francis of Assisi in Cracow. Sex and age-at-death were estimated using standard anthropological methods. Detailed macroscopic examination of the skull was complemented by high-resolution computed tomography (CT). The palatal prosthesis was analysed in terms of its morphology and elemental composition. The sella turcica was assessed morphometrically according to clinical radiological standards and compared with modern reference data.

Results: The individual exhibited a large defect of the hard palate consistent with an isolated bilateral cleft, associated with a well-preserved, custom-made obturator composed of a metal plate and a textile component. CT imaging additionally revealed marked enlargement of the ST with erosive remodelling of the dorsum sellae, indicative of long-standing pressure-related changes. These findings point to the coexistence of a craniofacial developmental defect and a probable pituitary macroadenoma.

Conclusions: This case represents a rare co-occurrence of multiple pathological conditions in an archaeological individual. The presence of a sophisticated palatal prosthesis indicates adaptation to functional impairment and access to specialized care, highlighting the value of integrating osteological, radiological, and material evidence to reconstruct past health and lived experiences.

Keywords: Cleft palate; Palatal obturator prosthesis; Pituitary macroadenoma; Crypts; 18th-century Cracow.

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