Congenitally Missing Maxillary First Molars: A Case Study Conducted on FSD 19-161

Hope A. Vance
The University Of Montana, hv151665@umconnect.umt.edu

Follow this and additional works at: https://scholarworks.umt.edu/gsrc

Let us know how access to this document benefits you.

https://scholarworks.umt.edu/gsrc/2020/posters/10

This Poster Presentation is brought to you for free and open access by ScholarWorks at University of Montana. It has been accepted for inclusion in UM Graduate Student Research Conference (GradCon) by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.
Congenitally missing maxillary first molars are considered a trait that is indicative of Asian ancestry, specifically Japanese. Previous studies, including the one conducted by Abe et al. (2010), have linked the absence of this tooth with groupings of individuals that originate in this region of the world. In the forensic context, understanding the congenital absence of this molar can allow for greater interpretation of the skeletal remains and provide the forensic anthropologist the ability to create a more accurate biological profile of the individual in question.

FSD 19-161 arrived at the University of Montana from the Petroleum County Coroner’s Office in September of 2019 when forensic anthropological analysis began. After conducting the analysis of the remains presented, it was originally profiled as a European Male through metric and non-metric methods. However, several methods assessed contradictory ancestry estimations. One method indicated European ancestry, while another indicated Japanese ancestry. Dental x-rays were also taken of the decedent and analyzed to provide a greater understanding of the individual and their pathologies. After reviewing the dental x-rays, it was confirmed that the maxillary first molars were actually missing and that these molars are congenitally absent and were not pulled antemortem, due to the placement and angle of the second molar root. Taking what was already known about the ancestral relationship of this pathology, with the new information provided by the dental x-rays, we were able to readjust the biological profile of the decedent and included that the individual was likely of mixed European and Japanese descent.

The congenital absence of the first maxillary molars is indicative of Japanese descent and understanding that this pathology is associated with certain ancestral populations can assist forensic anthropologists in creating a more accurate and complete biological profile, as evidenced by case FSD 19-161. Understanding the significance of the congenital absence of teeth, specifically the first maxillary molar, will result in more accurate biological profiles in the future. In depth analyses of a decedent’s teeth may allow for a more reliable interpretation and analysis of remains, which in turn would increase the likelihood of correctly identifying a decedent.

This presentation was created with the assistance of the University of Montana’s Forensic Anthropology Laboratory (UMFAL), the Montana State Crime Lab, and the support of Dr. Kirsten Mink-Green.

REFERENCES

ACKNOWLEDGMENTS
This presentation was created with the assistance of the University of Montana’s Forensic Anthropology Laboratory (UMFAL), the Montana State Crime Lab, and the support of Dr. Kirsten Mink-Green.