
Title

A novel conservative technique to allow oral opening and overcome rigor mortis during medicolegal autopsy

Abstract

This study presents a novel conservative technique to increase oral opening and overcome rigor mortis during medicolegal autopsy (MLA). The method proposes a myotomy of the temporalis and masseter muscles, taking advantage of the incisions of the cranial opening procedures, to achieve a significant oral opening (≥ 30 mm) in fresh cadavers with established rigor mortis without altering facial aesthetics. The study was performed on 48 individuals aged between 18 and 66 years (20 males and 28 females) who were autopsied at the Instituto Nacional de Patología Forense Dr. Sergio Sarita Valdez (Santo Domingo, Dominican Republic). The proposed technique not only allowed the oral access to all autopsied cadavers but also complied with current ethical standards for preserving facial aesthetics, taking into account the concerns of family members by allowing respectful viewing of the cadaver. This advancement not only contributes to the efficiency of oral autopsies but also influences public perception of forensic procedures and highlights the importance of ethical and aesthetic considerations in the context of MLAs. The proposed technique represents a significant step towards more respectful and ethical forensic practices, and offers practical advantages for a more complete and accurate assessment during MLA. © The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2024.

Authors

Riquelme-Navarrete J.; Gómez L.; Sánchez M.C.; Navarro P.; Fonseca G.M.

Author full names

Riquelme-Navarrete, Javiera (58990704000); Gómez, Lourdes (58990842800);
Sánchez, María Candelaria (58990566600); Navarro, Pablo (55107616900);
Fonseca, Gabriel M. (35190337400)

Author(s) ID

58990704000; 58990842800; 58990566600; 55107616900; 35190337400

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Affiliations

Programa de Magíster en Odontología, Faculty of Dentistry, Universidad de La Frontera, Temuco, Chile; Centro de Investigación en Odontología Legal y Forense (CIO), Faculty of Dentistry, Universidad de La Frontera, Temuco, Chile; Instituto Nacional de Patología Forense Dr. Sergio Sarita Valdez, Santo Domingo, Dominican Republic; Instituto Universitario de Ciencias Biomédicas de Córdoba (IUCBC), Córdoba, Argentina; Universidad Autónoma de Chile, Temuco, Chile; Centro de Investigación en Ciencias Odontológicas (CICO), Facultad de Odontología, Universidad de La Frontera, Temuco, Chile

Authors with affiliations

Riquelme-Navarrete J., Programa de Magíster en Odontología, Faculty of Dentistry, Universidad de La Frontera, Temuco, Chile, Centro de Investigación en Odontología Legal y Forense (CIO), Faculty of Dentistry, Universidad de La Frontera, Temuco, Chile; Gómez L., Instituto Nacional de Patología Forense Dr. Sergio Sarita Valdez, Santo Domingo, Dominican Republic; Sánchez M.C., Instituto Universitario de Ciencias Biomédicas de Córdoba (IUCBC), Córdoba, Argentina; Navarro P., Programa de Magíster en Odontología, Faculty of Dentistry, Universidad de La Frontera, Temuco, Chile, Universidad Autónoma de Chile, Temuco, Chile, Centro de Investigación en Ciencias Odontológicas (CICO), Facultad de Odontología, Universidad de La Frontera, Temuco, Chile; Fonseca G.M., Programa de Magíster en Odontología, Faculty of Dentistry, Universidad de La Frontera, Temuco, Chile, Centro de Investigación en Odontología Legal y Forense (CIO), Faculty of Dentistry, Universidad de La Frontera, Temuco, Chile

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Correspondence Address

G.M. Fonseca; Programa de Magíster en Odontología, Faculty of Dentistry, Universidad de La Frontera, Temuco, Chile; email: gabriel.fonseca@ufrontera.cl

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