

Total face, double jaw, and tongue transplantation: An evolutionary concept

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Introduction: The central face high-energy avulsive injury has been frequently encountered and predictably managed at the R Adams Cowley Shock Trauma Center.

However, despite significant surgical advances and multiple surgical procedures, the ultimate outcome continues to reveal an inanimate, insensate and sub-optimal aesthetic result.

Methods: To effectively address this challenging deformity, a comprehensive multidisciplinary approach was devised. The strategy involved the foundation of a basic science laboratory; the cultivation of a supportive institutional clinical environment; the innovative application of technologies; cadaveric simulations; a real-time clinical rehearsal; and an informed and willing recipient who had the characteristic deformity.

Results: Following Institutional Review Board and organ procurement organization approval, a total face, double jaw and tongue transplantation was performed on a 37- year-old male with a central face high-energy avulsive ballistic injury.

Conclusion: This facial transplant represents the most comprehensive transplant performed to date. Through a systematic approach and clinical adherence to fundamental principles of aesthetic, craniofacial, and microsurgery as well as the innovative application of technologies, restoration of human appearance and function for individuals with a devastating composite disfigurement is now a reality.

Biography

Michael R. Christy earned his medical degree (M.D.) at the Boston University School of Medicine. He completed his residency in General Surgery and Plastic and Reconstructive Surgery at The Mount Sinai Hospital in New York City. As a fellow, he received additional training in Reconstructive Microsurgery at The University of Southern California Keck School of Medicine and the Southern California Orthopaedic Institute (SCOI) Los Angeles, California. He is Assistant Professor of Plastic, Reconstructive and Maxillofacial Surgery at the R Adams Cowley Shock Trauma Center.