

Face transplantation—An established option to improve quality of life in patients with severe facial trauma

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Thirteen years after the first successful face transplant, US trauma surgeons should be aware of the current role of facial transplantation for patients with severe facial disfigurement - including evidence that the final appearance and functioning are superior to that provided by conventional reconstructive surgery. That's the message of a special update on 'Face Transplantation Today' in the June issue of *The Journal of Craniofacial Surgery*, edited by Mutaz B. Habal, MD.

Eduardo D. Rodriguez, MD, DDS, and colleagues of the Hansjörg Wyss Department of Plastic Surgery at NYU Langone Health, New York, summarize the world experience with facial transplantation to date, along with a new study showing better aesthetic outcomes with facial transplant, compared to conventional reconstruction. The researchers write, "It is therefore important for trauma surgeons who deal with these injuries regularly to be familiar with the literature on face transplantation following traumatic injuries."

Face Transplant Should Be an Option for Patients with Severe Facial Trauma

The researchers provide an update on all full or partial facial transplant procedures performed to date -emphasizing the risks and benefits, surgical indications, and aesthetic and functional outcomes. They write, "Face transplantation has evolved...into a safe and feasible reconstructive



solution, with good aesthetic and functional outcomes for <u>patients</u> with severe facial defects are not amenable to reconstruction through conventional and autologous [using the patient's own tissues] approaches."

Face transplantation may be considered for patients with defects involving at least 60 percent of the facial surface area, with irreparable damage or loss of the "aesthetic units" of the central face (eyelids, nose, lips). While such severe facial injuries are rare, the trauma mechanisms causing them are not. Dr. Rodriguez and colleagues note that most facial transplants performed to date have been in patients who suffered ballistic (firearms) trauma or burns.

In such severe cases, skin grafts and other conventional reconstructive techniques fall short of providing adequate aesthetic and functional outcomes. Trauma surgeons need to be aware of the potential benefits and limitations of facial transplantation. "This can potentially expedite the reconstructive process for patients who may benefit from face transplant," the researchers write.

Yet there are still important gaps in research on the full benefits of facial transplantation. In a new survey study, Dr. Rodriguez's group asked members of the general public to rate before-and-after pictures of patients with severe facial deformities, treated by either conventional reconstruction or facial transplantation.

Ratings were performed using a validated nine-point scale, from minimal (1 point) to severe (9 points) disfigurement. The average perceived disfigurement scores were 4.9 points for the <u>facial transplant</u> recipients versus 8.5 points for those who underwent conventional reconstruction (compared to 1.2 points for a group of individuals with no apparent facial disfigurement).



That supports the impression, communicated to patients considering facial transplantation, that while they may not appear completely normal after the procedure, their appearance "will likely improve dramatically" compared to conventional reconstructive surgery. Recipients have also reported becoming more active in their communities after facial transplantation, due to feeling less conspicuous when out in public. Further research is needed, including assessment of the impact on quality of life and other patient-reported outcomes.

Dr. Rodriguez and coauthors hope their studies will help to make the trauma community more aware of the option of facial transplantation in appropriate cases, and provide a step toward comparing its outcomes to those of conventional reconstruction. With ongoing advances—including the development of less toxic, more effective immunosuppressive therapies to prevent rejection—facial transplantation may become a more widely available alternative for patients with severe disfiguring facial trauma.

More information: Scott J. Farber et al, Face Transplantation, *Journal of Craniofacial Surgery* (2018). DOI: 10.1097/SCS.000000000004615

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