

What are the ‘*what ifs*’ for face transplantation ?

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As I write this, the recipient of the first partial face transplant is giving a news conference, some 10 weeks after surgery. She looks good, and seems happy with the results. Will this innovation now become a fully fledged research therapy?

This procedure has been countenanced on the grounds that the need for repeated plastic surgery in cases of severe disfigurement is protracted, painful and significantly ineffectual in providing acceptable physical appearance and capabilities, particularly where the lips have been lost. However, unlike standard organ transplantation, these composite tissue allografts (CTA) will not be life saving but life enhancing, literally trading the quantity of life (and potentially the quality of death) for a potentially better quality of life.

On 19th November 2003 the Royal College of Surgeons of England published their working party report on facial transplantation.¹ In confirming the basic feasibility of CTA for the face, the report also noted a considerable number of ‘unknowns’ It therefore suggests an ‘incremental approach’ would be preferable, for instance, further research into the generic transplantation goal of immunotolerance, potentially using stem cells to promote graft assimilation into the host immune network, thus provoking chimerical immunologically privileged.² There was also the suggestion of further work being needed with regard to the psycho-social impact and ethical issues prior to an initial operation. A French report in 2004 drew similar conclusions.³

Yet just 18 months later we are witness to the first partial transplant. Further recipients are being selected in the USA, the UK and in France. However, the media reports leave one asking whether this will constitute an incremental approach, and what if it does not? Has sufficient further immunological, clinical, psycho-social and ethical research been done? What are some of the ‘what ifs’ we might consider?

What if it fails?

As with all transplants there is both an immediate risk of the transplant not grafting and then the risk of abrupt, acute or gradual, chronic rejection. Consider that the ‘life expectancy’ of a kidney transplant is 40% to 50% after 10 years – if it fails a new kidney is needed or dialysis. A face transplant as a CTA involves various types of tissue, with skin being considered the most difficult tissue to stabilise with immunosuppressant drugs. So the ‘life expectancy’ of a face transplant is potentially less than that of a kidney.⁴ Transplant graft rejection is an unpleasant experience, possibly made worse for face CTA recipients as they and others will be able to see and touch the process. The first limb transplant recipient, who later requested amputation, made reference to this.⁵

What if it succeeds?

As rejection is a possibility even years after the initial transplant, it will be interesting to see at what point any face transplant will be considered a success. It was some 20 months after the second hand transplant that the surgeons notified the media that they considered that operation a success, bearing in mind that the first hand transplant was eventually removed following ambiguous psychosocial complications, which raised questions of recipient selection. At present all that can be hoped for facial allograft recipients is that they will be as currently successful as the 18 recipients of 24 hands have been, with just the one amputation to date.

If face transplantation is deemed successful and becomes a tenable option for correction of severe disfigurement, will hospitals be able to meet demand? Presently, the demand for life saving organs increasingly outstrips supply. As face transplants, as with limb and other innovative transplants, are not life saving, but life enhancing, will this affect donor attitudes? Should life enhancing tissue requests be separated from life saving ones on the donor card? Indeed, will this reconfigure the socio-ethical debates on opting in, over opting out of donation?

We must also consider the possible longer term trajectory for non-vital quality of life transplants. There is of course the concomitant effect of success upon the demand for such procedures and how in turn that affects the transition from research to standard therapy. It is worth reflecting here upon the history of the plastic surgery that face transplantation aims to improve upon. Some 60 years ago plastic surgery emerged from the severe needs of the Second World War. Those innovations provided the groundwork for the multimillion dollar global industry in cosmetic surgery.⁶

What if it succeeds, then fails?

This is a real possibility. Psychologically and clinically, failure will be a difficult issue for all concerned. Recipients will have to undergo further multiple skin grafts, or another transplant, in order to have a face. The emotional rollercoaster for organ rejection is considered psychologically highly demanding for recipients and their supporters.⁷ How much more so for the face? More broadly, the failure of face transplantation at this time may not only affect the research therapy for facial disfigurement, but potentially may reduce the number of donations in general – a serious concern expressed by French researchers.⁸

What if it succeeds clinically, but there are difficulties adjusting to the look?

Evidence suggests that coming to terms with facial disfigurement needs significant psycho-social support.⁹ If the first hand transplant was indeed removed due to the recipient's difficulty in coping with the functionality and appearance of the hand and the reactions of others, then will face transplant recipients be able to request a removal if they cannot come to terms with their appearance? It appears that a good deal of care was taken in aesthetically matching the first partial face allograft, unlike the first hand allograft.¹⁰

What if it succeeds clinically & personally, but the recipient can't deal with the social consequences, including media attention?

Face transplantation attracts sensationalism. Recipients of any innovative technology deserve our respect and to be treated with dignity, especially considering the complex and perplexing set of choices they have and will face. There has been some debate about how and when and to what end the identity and personal circumstances of this first recipient were revealed, which in turn questions the practicality of ethical protocols.¹¹

So, how and when is success to be judged, by whom and for whom?

Judging success for the individual recipient will be an ongoing, possibly life long affair. For the clinicians, success or failure will be a function not only of the recipient outcomes, but the development and funding of future therapy. Publicly, face transplantation will be a success when it becomes a standard treatment of choice for severe disfigurement, just as transplantation has for chronic kidney disease. Whether non-vital enhancement transplants will become the next cosmetic solution only time will tell.

What we need to pay close attention to now is why both English and French surgeons, psychologists and medical ethicists did not support this innovation some 18 months ago, but now do. This is not just a cost/risk-benefit analysis. There are some fundamental clinical and ethical questions here, not least the so called trading of quantity for quality of life, for a non-life threatening condition. Non-vital CTA draws our attention to how we understand issues and markers of quality and quantity of life, and the interrelationship of these personally and publicly.

The inauguration of face transplantation as a research therapy in humans may or may not now follow, but genetic and biochemical innovations in inducing immunotolerance rather than immunosuppression may herald a new era for all transplantations in time, aiming to alleviate the serious consequences that can come from a life of avoiding transplant rejection. Whether it is now or later that non-vital CTAs become part of the surgical repertoire, the ethical issues regarding human flesh as medical resource, not least in the debates over quality against quantity of life, will remain.

¹ Royal College of Surgeons November 2003. Face Transplantation: Working Party Report. Prof. Sir Peter Morris Chair. London, Royal College of Surgeons. Online at http://www.rcseng.ac.uk/rcseng/content/publications/docs/facial_transplantation.html (accessed 9/2/06).

² T.E. Starzl. 2000. The Mystique of Transplantation: Biological and psychiatric considerations. P.T. Trzepacz & A. F. DiMartini eds. Cambridge, Cambridge University Press. 1-20.

³ Comité Consultatif National d'Ethique [CCNE] 2004. Composite tissue allotransplantation CTA of the face (full or partial transplant). Online in English at <http://www.ccne-ethique.fr/english/start.htm> (accessed 9/2/06).

⁴ J. Jones. Concerns about Human Hand Transplantation. The Journal of Hand Surgery. 2002 27A, (5): 771-787.

⁵ BBC 1 2000. Superhuman: spare parts. Introduced by R. Winston; producer, director J. Groom.

⁶ F. K. O'Neill. 2006 forthcoming. Fashioning Flesh: inclusion, exclusivity and the potential of

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- genomics. In *New Genetics New Identities*, P. Atkinson & P. Glasner (eds.), London, Routledge.
- ⁷ P. Franklin. 2002. The Recipients Perspective. In *Transplants*. Sir P. Morris, co-ord. Strasbourg, Council of Europe Publishing. 51-62.
- ⁸ D. Jones. The haunting story of the incredible woman who could be given the world's first face transplant. *Daily Mail* 19/6/2004 10-12.
- ⁹ R. Lansdown et.al. (eds.) 1997. *Visibly Different Coping with Disfigurement*. Oxford, Butterworth_Heinemann.
- ¹⁰ BBC online news 6th February 2006. Face op woman braves media glare.
<http://news.bbc.co.uk/1/hi/world/europe/4685202.stm> accessed 9/2/06.
- ¹¹ Transplanting a face is only half the challenge. *New Scientist* 10/2/2006: 2529. 5.
<http://www.newscientist.com/article.ns?id=mg18825293.300> (accessed 13.2.2006). F. K. O'Neill. Face Transplantation: Is it should we, or how should we, proceed? *Bioethics-today*. December 2003
<http://www.bioethics-today.org/FSarticles.htm> (accessed 13.2.2006).

About the author

Fiona O'Neill is completing an interdisciplinary PhD based in CESAGen, at Lancaster University entitled *Uncanny Belongings: ethics and the technologies of fashioning flesh*. Her current work considers human-technology relations with regard to bioethical issues across standard and innovative medicine. She continues to contribute to the ethical debates regarding face transplantation.