

**Face Transplant: Medical, Ethical and Social perspectives**

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**Sir,**

Massive facial disfigurement following burns, vitriolage, accidents and malignant spreading facial skin tumors can have devastating effect on one's life. The various reconstructive options becomes an endless series of painful operations and rarely results in satisfactory functional and aesthetic outcomes.

The recent success of Facial allograft transplant (FAT) has drawn wide public and peer attention. This has been considered as another step in the reconstructive ladder for patients with extreme facial disfigurement who cannot be helped by traditional reconstructive surgery.[1] Though from procedural point of view, the anatomical knowledge and micro-surgical skills are now well established, however, there are many medical, ethical, social and psychological concerns which need to be addressed.

Beyond doubt, the facial skin is unique in its characteristic and any attempt of reconstruction with similar skin is definitely a favored option for facial resurfacing as it is expected to provide a better match in the form of texture, color, pliability and redraping rather than attempted tissue transfer elsewhere from patient's body.[2] Though the transplant may look clinically successful, long term results of transplanted facial tissue in form of reanimation and integration in complex dynamics of the face still needs to be studied and results evaluated. Secondly, despite the best possible microsurgical expertise, chances of

failure are always there. The patient will be back to square one or even worse necessitating more complex or technically demanding reconstructive surgeries / transplant surgery. How the patient and surgeons will cope with this situation needs to be seen and addressed.

Thirdly, as the skin is very antigenic, the rejection by the immune system is very strong. Patient has to take lifelong immuno-suppressant. One will have to justify the risks posed by life-long immunosuppressant vis-à-vis benefits of doing face transplant. The possible role of stem cells technology in modulating immune response also needs to be considered in this context.

The fourth major factor is the perceived psychological effects - both on the patient and on the donor's family. How well an individual and his next of kin would psychologically adapt to the new face also needs to be studied.

The question of identity semblance has also been debated, though computer simulations have shown that the transplanted face would neither resemble the donor's nor the recipient's pre-injury, but would be a hybrid.

However, the potential benefits in terms of improvement of aesthetics, functional aspect and psychology needs to be weighed against the technical, psychological and immunological risks.[3]

The fifth factor, which is probably one of the hardest tasks of all, is the selection of the right candidate for face transplantation. The high hopes and expectations of transplant recipients become even more critical in face transplant and have always posed social and ethical concerns. To find the right candidate who is emotionally balanced, well informed, having appropriate expectations of restoration and accepting the risk of immuno-suppression and uncertainty of success is going to be a Herculean task.

The sixth important factor is the anticipated difficulty in getting approval from the respective medical review boards and legislation of the respective state or country. A proper research and logical appraisal of all aspects of facial allograft transplantation are going to be the decisive factor for countering any anticipated ethical objections.[4]

The next important factor is the necessity of developing a universally acceptable guidelines for facial transplant, development of facial procurement protocol, sorting out the issues related to funding, cost of life long immunosuppressant and identification of a full facial transplant team. This will play an important role in the viability and the ultimate success of the facial transplant program.

Lastly, but most importantly, the face transplant should never let to be portrayed as a cosmetic procedure .The general public need to be educated regarding the seriousness, complexity and the associated inherent surgical, medical ,immunological and psychological risks. Any misconstrued attempt to project this surgery from cosmetic enhancement point of view would be ethically, socially and medically unjustifiable.

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