

Micro-Autologous Fat Transplantation (MAFT) for the Correction of Sunken Temporal Fossa - Long Term Follow up

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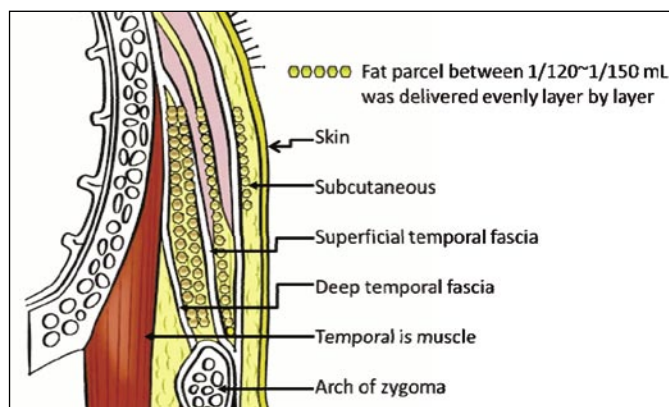
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Instruction

Sunken/hollow appearance in temporal fossa is sometimes seen in Asian people. Most of them present this phenomenon without any preceding events like trauma history, congenital anomaly or malnutrition. Due to physiognomic considerations, they want to re-contour the hollow look and obtain a fuller shape. Various strategies to construct the depressed area were reported in the literature, including soft tissue fillers, auto-/allo-dermal graft and silicone implants or flap surgeries. However, little was known about the use of autologous fat transplantation in this reconstruction, in order to produce a better camouflage effect and the long-term follow-up was also unsatisfactory.

Purpose

We reported the experience of the application of the concept of Micro-Autologous Fat Transplantation (MAFT) to re-contour the hollowed temporal fossa, discussed the long term results and reviewed the surgical techniques. Materials and Methods: Micro- Autologous Fat Transplantation (MAFT) was performed on 58 patients from March 2006 to March 2010. Patients received MAFT under total intra-venous anesthesia. Follow up was regularly done with photography taken for comparison thereof.



MAFT-Gun® is applied to deliver the fat parcel precisely and accurately in the sunken/hollow temporal area.



Comparisons of a 52-year-old female receiving MAFT to re-contour the hollow appearance of her temporal area. At one year follow-up after MAFT by 4.5 cc and 5.0 cc fat grafting to the right and left side respectively, the effect was satisfactory. The sunken upper eyelid was also grafted with good results.

Results

Each injected parcel between 1/120 - 1/150 cc was evenly and precisely delivered with the assistance of MAFT-Gun®. Total injected fat volume of each area ranged from 4.5 to 12.5 ml (average 6.6 ml). All patients undergoing MAFT for hollow temporal were post-operatively uneventful. No major complications, such as neurovascular injury or infection were recorded. During the long-term follow up (> 6 months) period, most patients were satisfied with the results.



Panorama of MAFT-Gun® (Fig. 2-A). The pre-determined fat parcel volume delivered by pulling the trigger can be chosen according to different recipient areas. For re-contouring of the sunken temporal fossa, the insertion site of injection needle is the pivot-point of the temporal fossa along the hair-line as shown in the picture (Fig. 2-B).

Conclusion

In conclusion, the concept of MAFT was proven to be of value for the correction of sunken/hollow temporal fossa. The patented micro-controlling system of the instrument, MAFT-Gun®, provides an innovative concept

which enables surgeons to perform fat transplantation in an accurate and precise way and achieve higher satisfaction. With the understanding of the anatomy of the temporal area and the application the MAFT-Gun®, good long term clinical results should be anticipated.