

## Rapid Communication

# Follicular Unit Method for Eyebrow Hair Transplantation

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Eyebrows play an important role in self-expression and beauty of the face. 224 female patients with eyebrow hair loss were treated by Follicular unit method in our clinic. The current method of using follicular unit grafts has led to natural restorations and outstanding results in our patients, who get 70%-75% survival rate after the first year. The technique is a simple, safe and effective method for eyebrow reconstruction.

**Keywords:** Eyebrow hair transplantation; Follicular unit; Strip harvesting; Hair growth outcome

**Background**

Eyebrows play an important role in eye protection and self-expression. Eyebrows are so unique in beauty of the face. It is apparent that normal eyebrow should arrange an outline for upper facial structures and would be a natural defense for eyes. Therefore eyebrow hair restoration can improve the appearance and psychological well-being of patients [1]. Understanding the unique anatomy and function of the eyebrow, including its movement in facial expression, is useful in achieving good reconstructive outcomes [2]. Hair color and direction matching is also very important for a successful hair restoration procedure in eyebrows.

**Methods**

Eyebrow hair transplantation is an office-based procedure, that can be performed safely in an outpatient under local anesthesia. The clinic should be equipped with facilities for monitoring and handling emergencies. The procedure is performed usually under a mild oral sedative, the two-hour procedure is essentially painless, as is the recovery period. In Follicular unit method strip was harvested from the temporo-occipital area of the scalp. Under stereomicroscopy, the strip was then separated into a series of follicular-unit grafts with 1-2 hairs. 50 to as many as 325 hairs into each eyebrow, depending upon the existing amount of hair and the desired size and density were needed in an average adult. After the slots were created in the recipient area, the micrografts were inserted into the tiny (half-millimeter) incisions that are angled at just the right direction and positioned to mimic natural growth. The incision or holes are made by puncturing the skin by 21G and 23G needles. Follow-up after the hair transplant occurs every 8 weeks.

Selection of hair graft method depends on the number of grafts required to cover the brows, for example if we need a full coverage and more grafts we had better to do follicular unit transfer via harvesting the strip, but if only a small part of eyebrow needs repaired, so we can easily do follicular unit extraction by micropunches instead of a larger procedure. The transplanted hairs fall out at around two weeks, then start to regrow at three months, where they will continue to grow for a lifetime.

**Results**

From Mar 2008 to Jan 2015, 224 patients (all were female) with

the age range of 22-54 years old, with eyebrow hair thinning or completely missing, were treated by Follicular unit method in one or maximally two sessions. Their problems were based on multiple etiologies such as natural thinning of the eyebrow with aging, thyroid or other hormonal abnormalities, or trauma due to surgery, burns or other types of accidents, congenital hypotrichosis, or constitutional eyebrow thinning. The patients were followed at intervals of 1 week, 3 months and 1 year after the treatment.

All of the patients were satisfied with the results. The grafted hairs grow proportionately in the same direction of normal brow, which achieve fullness and architecture and get 70%-75% survival rate after the first year. The appearance of the reconstructed eyebrows was almost natural, close to the normal brow.

**Discussion**

In most of the studies, the grafts were harvested from the occipital area of the scalp [1]. Sanusi Umar used lower leg hair as donor area for brow hair reconstruction [3], but Iranian patients are not satisfied with such donor hair, so we did not do similar method in our country. For some patients with limited scalp hair supply, it is probable to use non scalp hair sources to increase the follicular supply [4]. The current method of using follicular unit grafts has led to natural restorations for a variety of areas including not only the scalp but also eyebrows, eyelashes, and beard areas [5]. Even extracted partial longitudinal follicular units can be used as complete follicular units to regenerate completely differentiated hair growth in some studies [6]. Graft preservation is important to ensure survival [7].

**Conclusion**

Follicular Unit Transplantation (FUT) has gained more and more importance nowadays in eyebrow restoration because of its more rewarding results [8]. The above-mentioned technique is a simple, safe and effective method for eyebrow reconstruction. It might be an ideal method for eyebrow reconstruction with the appearance much closer to a normal eyebrow.

**References**

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