

Pairing Technique with the Shiao Micro-Implanter: A Low Traumatic Method to Place 18–30 FUs per Minute per Assistant

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For a better illusion of density, many hair transplant surgeons use coronally placed double follicular unit or multi-unit grafts in the area behind the frontal hairline zone. The placement of two follicular units into one recipient site, also known as the pairing technique reported by the Moser Medical Group,¹ can also achieve the same goal.

Because 85% of the follicular units contain only 1–2 hairs in Asian patients,² we have been pairing two single-hair grafts into one 18G Shiao micro-implanter³ and treating them as one 2-hair graft for the past 18 months. Realizing the advantage of this method, we started pairing follicular units with 2 or more hairs into one 16G micro-implanter four months ago.

As our assistants have gained more experience with the micro-implanters during the past two years, they can now place 9–15 grafts/minute on patients in whom popping and bleeding do not present significant problems. Using the pairing technique, assistants can also place 9–15 paired grafts per minute, which translates to 18–30 follicular units per minute (see Tables 1 and 2 below for rate data collected on two test subjects).

Our typical graft placement process is described below:

1. The hairline zone receives about 250 single-hair follicles placed with 19G micro-implanters.
2. The zone immediately behind the hairline receives 2-hair follicular units and paired single-hair follicular units placed with 18G micro-implanters.
3. The frontal forelock, where the illusion of density counts the most, receives 3-hair follicular units via 18G micro-implanters and paired 2-hair follicular units via 16G micro-implanters. On rare occasions, a 2-hair follicular unit is paired with a 3-hair follicular unit and placed via a 16G micro-implanter.

Table 1. Rate Data Collected from Patient #1, June 2007

Elapsed Time	# of graft pairs placed	# of follicle placed
2 minutes	22	44
2 minutes	28	56
2 minutes	30	60
2 minutes	22	44
2 minutes	36	72
Total time: 10 min.	Total Pairs: 138	Total grafts: 276
Number of grafts per minute		27.6

Table 2. Rate Data Collected from Patient #2, July 2007

Elapsed Time	# of graft pairs placed	# of follicle placed
2 minutes	16	32
2 minutes	18	36
Total time: 4 min.	Total Pairs: 34	Total grafts: 68
Number of grafts per minute		17

The technique used to load a pair of follicular units into the micro-implanters is similar to that of loading a single follicular unit. The sharp tip of a straight forceps is used to grasp two follicular units together at their epithelium. Both follicular units can slide smoothly into the micro-implanter by aiming the forcep's tip at the micro-implanter's opening (Figure 1). This is much easier, and potentially less traumatic, than grasping a pair of follicular units at their roots to stuff them into a slit on the scalp. Generally, our assistants can load from 12–15 pairs of follicular units per minute.

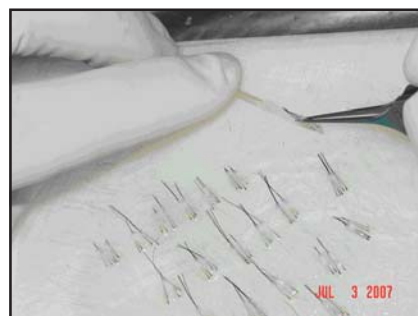


Figure 1. Loading a pair of follicular units into the micro-implanters.

Thus far, our limited experience in Asian patients showed this pairing technique with Shiao micro-implanters could be helpful in reducing the number of recipient incisions, lessening the chances of crush injury, increasing the illusion of higher hair density (Figure 2), and more importantly, achieving a high rate of implantation (up to 18–30 grafts per minute).

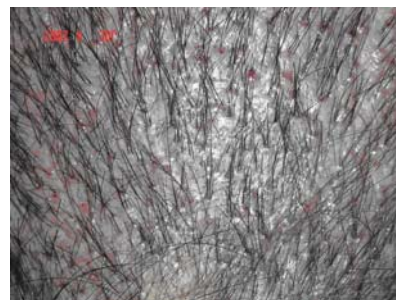


Figure 2. Paired follicular units pictured 2 weeks post-op.

As with the use of Shiao micro-implanters for previously described follicular unit transplantation,³ clinics with four or five existing assistants can easily adopt this simple pairing technique. ♦

References

1. Moser, K., et al. "The pairing Technique of the Moser Medical Group." *Hair Transplant Forum International* Vol. 15, No. 2 (2005):41,46.
2. Haber, R.S., Stough D. *Hair Transplantation*. China: Elsevier Saunders (2006): 150.
3. Shiao, T-K, Shiao, I-S. "Easier and More Efficient Implanting: A Two-Handed Technique for Faster and Less Traumatic Graft Placement." *Hair Transplant Forum International* Vol. 16, No. 5 (2006):169–170.