WHERE ARE WE IN 2023? A Q&A ON HAIR TRANSPLANTATION

Robin Unger, MD, and Marc Avram, MD, reveal how they are treating hair loss in their practices today and what they anticipate in the future.

The science of hair transplantation provides the opportunity to treat a condition that may affect quality of life[1,2] and emotional wellness[2] in the millions[3] of men and women dealing with hair loss. This ever-growing field has advanced substantially since its inception, leading to more refined techniques that produce a more natural appearance and more permanent results compared to earlier methods. Research findings suggest a graft survival rate exceeding 90% with modern hair transplantation techniques.[4]

For the latest insights on the present state of practice in hair transplantation, *Modern Aesthetics* interviewed Robin Unger, MD, assistant clinical professor of dermatology at the Icahn School of Medicine at Mount Sinai in New York, New York, and Marc Avram, MD, clinical professor of dermatology at Weill Cornell Medical College in New York, New York. Each physician also maintains a private practice specializing in hair restoration.

How would you describe the current landscape of treatments for hair transplantation?

Dr. Unger: Hair transplantation has come quite far during my 24 years of practice, and we currently have a number of tools in our toolbox. Having a variety of approaches is especially advantageous because the skilled surgeon can cater surgery to each individual patient. There are two harvest methods: follicular unit extraction (FUE) and strip excision, also known as follicular unit tranplantation (FUT).[4]

Both methods have advantages and disadvantages, and a good surgeon

should know which to choose. The strip excision maximizes the number of relatively permanent hairs that can be removed in a single surgery and does not require shaving at all. It is especially helpful for patients with a narrow rim of permanent donor hair. The follicular unit excision is beneficial for patients who like to wear their hair in very short styles and have a relatively wide donor area, and this method is also generally more comfortable during the immediate postoperative period.

Other tools in the box include scalp micropigmentation, regenerative treatments, and of course, medical approaches using oral or topical medications.

Dr. Avram: Transplantation can now restore lost hair for men and women in a natural way in which no one can tell it was done. There's some residual perception that transplants look unnatural, pluggy, and that's frankly from 20th century. In the last 20 years, we've done follicular unit surgeries in which we remove hair from the back of the scalp as individual hair groupings and place them into the front, and that translates into natural restoration of hair.5

While we have many very good medical treatments, including oral finasteride, oral and topical minoxidil, PRP, and lasers to help keep and regrow hair, for some patients, only a transplant will actually restore lost hair. The best results come from transplant coupled with successful medical therapy; achieving the maximum density requires both.

In terms of techniques, one advance is that we can now remove hair from the back of the scalp individually with FUE, with not a single stitch in the entire procedure. The biggest incision in the procedure is less than 1 millimeter. When we're removing hair from the back to transplant in the front, we're leaving incisions that are 0.9 millimeters, and they heal on their own in about 5 days.

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What are some of the most notable recent advances in hair transplantation?

Dr Unger: Hair transplantation has evolved to create very natural results over much larger areas of the scalp than previously possible. A combined approach using follicular unit transplantation (FUT) and follicular unit extraction (FUE), and sometimes FUE from the body, expands the number of grafts that can be harvested in a patient's lifetime.

One of the great advances, as mentioned, is refinement of FUE harvest devices. The grafts obtained with the newer devices are beautiful and their growth much more robust than they were in the early days of FUE. With good surgical planning, we can create patterns that mimic those in nature. A feathered hairline, denser frontal tuft and the look of a natural thinning pattern. If performed properly, and combined with regenerative and medical treatments, we can look forward to great long-term results with these approaches.

Are there any pressing issues in the field that deserve attention currently?

Dr. Unger: Unfortunately, these advances have also led the way for business models to develop that focus on graft quantity and profit rather than the best long-term results for patients. The International Society of Hair Restoration Surgery (ISHRS) has a Fight The Fight campaign to try to

protect patients from this unethical practice.[6]

Technicians perform the surgery with minimal or no oversight by physicians, and their daily fee is not dependent on long-term results. I fear this will result in many patients in the future with unnatural hairlines and hair distribution. The more serious problem with this model is that technicians are limited in terms of their training, and the areas where grafts are harvested as well as the recipient areas may become necrotic or infected.

Dr. Avram: It should be noted that women can benefit from transplants just as much as men. For some reason, in the general population, and sometimes even in the medical community, people often think of hair transplants as being for men, which is a false perception.

What future developments would you most like to see in this area?

Dr. Avram: In the future, the holy grail of hair transplantation would be to clone hair follicles.[7] There's only so much hair you can take in a hair transplant because there is not enough hair there to repopulate the entire scalp, so we are very strategic where to put the hair to make the biggest long-term impact. But hopefully, in the next years–and I would say years, not weeks or months–someone will come up with a technology to clone hair.

Another big advance in transplantation would be greater predictability of where someone's hair loss is going. If a man or woman comes in, they're 30 years old and thinning and you want to transplant them. What's their hair going to look like when they're 40, 50 ,or 60? How do you plan? We don't have a way to predict the natural progression.

Those are like the wish list items, but right now between medical and surgical treatment, we can already make a huge impact for patients who don't want to live with thinning hair.

What topics should be the focus of further research in the realm of hair transplantation?

Dr. Unger: Exosome research is very promising. Prior to the FDA statement position,[8] I achieved many positive results with my patients. If exosome products eventually receive FDA approval, I anticipate this to be an excellent adjunctive treatment.

Dr. Avram: Improved robotics would mean even faster procedures for patients. What we're doing in the field right now would have been considered unbelievable, like aspirational, 10 years ago.[9] We currently use a robot in our office, and it's truly robotic in the sense that it functions independently of me–independently finds the hair and independently removes the hair follicle while I'm a foot away from the patient overseeing everything. I think that's an advance, but I think it's also important to note you can do the surgery very well without a robot too. It's not making it better, just quicker.

We could do it so much better if we could basically further improve instrumentation through quicker robotics. I'd say improved instrumentation, robotics, and artificial intelligence will impact transplantation in the future. ■

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