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October 31, 2019

Platelet Rich Plasma Found to be Effective in Regrowing Hair

By Jen Schutz

Platelets spun from a person's own blood may be a new option for treating baldness in women, according to research at Mayo Clinic's (https://www.mayoclinic.org/) Florida campus. A pilot study found platelet rich plasma (PRP), a regenerative therapy associated with natural growth factors and tissue healing, regrows hair as well as other treatments on the market. The findings could lead to new options for hair restoration beyond the pills or creams currently available.

Hair loss occurs when the cycle of hair growth and shedding is disrupted or when the hair follicle is damaged. There are several causes of hair loss, and not all treatments work for all hair loss.

Androgenetic alopecia is a type of hair loss known as male- or female-patterned hair loss. Researchers at Mayo Clinic's Florida campus recently completed a clinical trial designed to validate platelet rich plasma to treat hair loss in women. The results, published in *Journal of Dermatological Surgery*

(https://journals.lww.com/dermatologicsurgery/Abstract/publishahead/A_Randomized,_Controlled_Pilot_Trial_Comparing.9813 0.aspx), found PRP to be effective in regrowing hair when injected into the skin of the scalp.

"Androgenetic alopecia is a challenging problem to treat, and many women are affected by this disorder," says Alison Bruce, M.B., Ch.B. (https://www.mayo.edu/research/faculty/bruce-alison-j-m-b-ch-b/bio-00086409), a Mayo Clinic dermatologist and principal investigator of the study. "It is typically very distressing to women, and there are limited treatment options currently available."

Minoxidil, the current standard of care, is a topical treatment option. However, Dr. Bruce says the required daily application makes it difficult for patients to use. Alternatively, PRP uses the body's own restorative capability to help restore and maintain hair growth. In this treatment, platelets are isolated from the patient's own blood. The resulting concentrated platelets are then injected into the scalp.

The Research

In a randomized control trial, researchers followed 19 women with female pattern baldness. The participants used topical minoxidil for 12 weeks followed by an 8-week washout between treatments and PRP scalp injections for 12 weeks.

The Mayo Clinic study uses a high resolution camera and software to digitally count hairs, hair thickness, and hair density.

"Interestingly, both the PRP treatment and minoxidil worked to regrow hair," says Shane Shapiro, M.D. (https://www.mayo.edu/research/faculty/shapiro-shane-a-m-d/bio-20037376), medical director of the Regenerative Medicine Therapeutics Suites (https://www.mayo.edu/research/centers-programs/center-regenerative-medicine/patient-care/regenerative-medicine-therapeutic-suites) on Mayo Clinic's Florida campus and co-principal investigator. "We now have scientific evidence that PRP works to temporarily regrow hair, offering patients more options for the treatment of hair loss due to androgenetic alopecia."



Shane Shapiro, M.D.

The study found 21% of the volunteers had bruising or discomfort after PRP, but overall patient satisfaction was higher when treated with PRP than the minoxidil treatment. No adverse effects were reported during minoxidil treatment.



Alison Bruce, M.D., Ch.B.

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(https://www.mayo.edu/research/centers-programs/center-regenerative-medicine/patient-care/regenerative-medicine-therapeutic-suites) on all three Mayo Clinic campuses offers PRP cosmetically and medically for hair loss.

"Many dermatology, cosmetic and regenerative medicine practices commonly promote PRP's hair regenerating effect, but more study was needed to prove this," says Dr. Shapiro. "Our research supports current literature confirming that PRP is effective in increasing overall hair count."

Mayo Clinic Center for Regenerative Medicine seeks to translate regenerative therapies into the clinical practice. This is another example of how regenerative approaches may fill treatment gaps and provide patients additional choices for their health care. The study's conclusions that both PRP and minoxidil can help regrow hair, may open new opportunities for Mayo Clinic physicians to combine these therapies for possible greater benefit than that of either treatment alone.

Tags: Dr. Alison Bruce (https://regenerativemedicineblog.mayoclinic.org/tag/dr-alison-bruce/), Dr. Shane Shapiro (https://regenerativemedicineblog.mayoclinic.org/tag/dr-shane-shapiro/), hair loss (https://regenerativemedicineblog.mayoclinic.org/tag/hair-loss/), platelet rich plasma (https://regenerativemedicineblog.mayoclinic.org/tag/platelet-rich-plasma/), PRP (https://regenerativemedicineblog.mayoclinic.org/tag/prp/), regenerative medicine (https://regenerativemedicineblog.mayoclinic.org/tag/regenerative-medicine/), Research (https://regenerativemedicineblog.mayoclinic.org/category/research-2/)



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