

The Effectiveness of Non-surgical Treatment for Androgenetic Alopecia in Men: A Systematic Review and Meta-Analysis

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Abstract : Introduction: Androgenetic alopecia (AGA) is a genetically predetermined disorder due to an excessive response to dihydrotestosterone (DHT). Currently, non-surgical treatment of androgenetic alopecia is more in demand by the patient. There are many non-surgical treatments, ranging from topical treatments oral medications, and procedure treatments. Objective: We aim to assess the latest evidence of the efficacy of non-surgical treatments of androgenetic alopecia in men in comparison to placebo for improving hair density, thickness, and growth. Method: We performed a comprehensive search on topics that assess non-surgical treatments of androgenetic alopecia in men from inception up until November 2021. Result: There were 24 studies out of a total of 2438 patients divided into five non-surgical treatment groups to assess the effectiveness of hair growth, namely: minoxidil 2% (MD: 8.11 hairs/cm²), minoxidil 5% (MD: 12.02 hairs/cm²), low-level laser light therapy/LLLT (MD: 12.35 hairs/cm²), finasteride 1mg (MD: 20.43 hairs/cm²), and Platelete-Rich Plasma/PRP with microneedling (MD: 26.33 hairs/cm²). All treatments had significant results for increasing hair growth, particularly in cases of androgenetic alopecia in men (P<0.00001). Conclusion: From the results, it was found that the five non-surgical treatment groups proved to be effective and significant for hair growth, particularly in cases of androgenetic alopecia in men. In order of the best non-surgical treatment for hair growth is starting from PRP with microneedling, Finasteride 1mg, LLLT, minoxidil 5%, to minoxidil 2%.

Keywords : androgenetic alopecia, non-surgical, men, meta-analysis, systematic review

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