

The CORRESPONDENCE department of the ARCHIVES is meant to provide a forum for exchange of ideas about cutaneous medicine and surgery, and is divided into two sections. The COMMENTS AND OPINIONS section is intended for responses to articles previously published in the journal or for comments on philosophic and practical issues pertaining to dermatology. If an ARCHIVES article is discussed, the letter should contain this reference and be received within two months of the article's publication. The VIGNETTES section contains ministudies, very short case reports, rapid publications, and preliminary observations that lack the data to qualify as full journal articles.

We encourage submission of letters for publication in the CORRESPONDENCE section. Acceptance is contingent on editorial review and space available. Correspondence should be double-spaced, submitted in triplicate, and be clearly marked "for publication." Correspondence should not exceed 500 words, contain more than five references and two figures, and must include a copyright transfer statement (see Instructions for Authors) when submitted.

Comments and Opinions

Duration of Minoxidil Therapy to Yield Maximum Benefit

To the Editor.—Koperski et al,¹ in a previous issue of the ARCHIVES, noted a drop in total hair counts between the 12th and 30th month of minoxidil use. This drop was seen in subjects with average and above-average response. The same protocol was employed at our study center, and the results of use to 24 months have been reported previously.² Since long-term experience with trichogenic drugs is small, the results obtained from careful follow-up of the individuals continuing in the original protocol may provide insight as to the duration of therapy that yields maximum benefit.

Our study group began with 149 subjects, but only 102 completed 12 months of study, which is a minimum amount of time for evaluating efficacy on terminal hair growth in our experience.² While 89 individuals completed

two years of the protocol, only 54 (50 men and four women) continued into their third year of use, and now, with an average follow-up of 45 months, 27 men continue follow up. The terminal hair counts taken from a target circle in the center of the vertex bald spot are presented in the Table.

We have not noted a drop in the average hair count of those individuals continuing to use topical minoxidil solution or in the average hair counts of our two-year plus users who dropped out of the protocol. We did note a drop in the terminal hair count in five men in each group (18.5% of the continuing users and 21.7% of the dropouts), but the magnitude of this change was small. Often, total hair counts (vellus, indeterminate, and terminal) were continuing to increase.

At the end of 12 months of the original study, all subjects were placed on 3% minoxidil solution. During months 13 through 24, we found that 18 of 54 men and women who entered the third year of study showed greater increases in terminal hair growth in year 2 than in year 1. We considered the possibility that changing the solution from 2% to 3% at the 12-month mark may have accounted for this growth, but only five individuals had been receiving 2% minoxidil, while 13 were already receiving 3% minoxidil.

While it may seem reasonable that individuals with a shorter duration of balding would be more responsive to prolonged topically applied minoxidil therapy, we found that our long-term users had been balding longer than our long-term dropouts.

Our experience has suggested that a continuing increase in terminal hair counts is associated with long-term use of topically applied minoxidil and was seen in approximately 80% of assessable cases. This continued increase may or may not be sufficient to motivate continued use of such a product, since those with increasing hair counts discontinued participation in the study. Patient expectations play a major role in the decision to pursue and continue the use of topically applied minoxidil.

The final end point for concluding a study on androgenetic alopecia may not be 12, 24, 30, or even 48 months. Since we are dealing with a lifelong condition, it may be more appropriate to look at five-year or even ten-year figures as is done with the treatment of malignancy (where lifetime outcome is of interest). In our group, 98 men and four women used minoxidil long enough to make a reasonable decision on efficacy (12 months), and 27 men continue to use this agent nearly four years later. Male pattern baldness was thus successfully treated in 27.5% of cases. The data for women are inadequate for evaluation.

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Classification of Subjects	No. of Subjects	Terminal Hair Count, mo of Study				Average Duration of Baldness, y
		0	13	26	45	
Continuing users	27	45.7	146.7	214.3	298.4	10.9
Discontinued participation after 2+ years of use	23	49.4	136.3	178.6	...	7.7