The effect of saw palmetto on scalp coverage and hair thickness in women diagnosed with androgenetic alopecia

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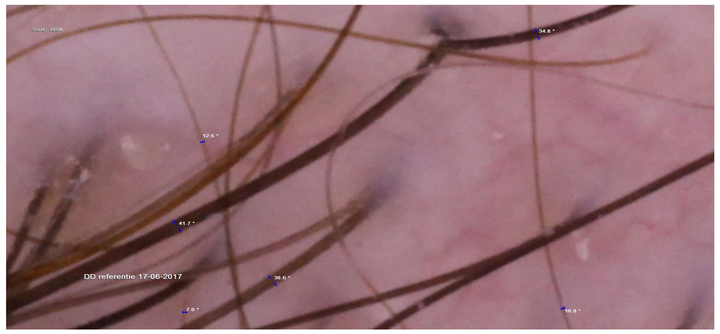
Introduction & objectives

Literature findings suggest that saw palmetto (serenoa repens) reduces hair loss in patients with androgenetic alopecia. We investigated the effect of (Trix Basic Alpha (15:1 extract of saw palmetto) on scalp coverage and hair thickness in women with androgenetic alopecia.

Materials, methods, results

From a large database, female subjects diagnosed with androgenetic alopecia by two trichologists, who used 150 milligrams of saw palmetto extract 15:1 daily for one to four consecutive years were selected. Reproducible macroscopic images of the scalp and microscopic images of the hair implant were made at yearly visits.



Hair thickness measurements from microscopic images

Study data

Number of included subjects		42
Average age at start (years)		54.4
Average continuous use of saw palmetto (years)		2.6

An increase in the thickness (diameter) of hairs is a valid effect parameter (Boersma et al, Indian J Dermatol Venereol; 80 522-25). At the start and endpoint of the study, TT-ratios were determined. To calculate a TT-ratio, the sum of the thickness of the three thinnest hairs, measured on microscopic images, was divided by that of the three thickest hairs in the same image. As such, TT-ratios constitute a dimensionless measurement of hair thickness, obtained from four predilection sites at the scalp.

Hair thickness measurements: the thickness (diameter) of the hairs has significantly increased.

	Pre-test TT-ratios	Post-test TT-ratios
Mean (arbitrary units)	31.72	35.71
Standard deviation	3.13	5.09
Paired Student T-test	P=0.00	

Pre-test / post-test images of two subjects who used saw palmetto for 3.5 years: scalp coverage varies from unchanged to improved

Subjective *ratings by subjects on scalp coverage: scalp coverage has improved.*

	Rating scale	Mean
Scalp coverage score (visual rating by subjects)	1=less coverage; 2=no change; 3=more coverage	2.3
Hair loss change	1=more hair loss; 2=no change; 3=less hair loss	2.1

Subjective ratings by trichologists on scalp coverage: scalp coverage has improved.

	Rating scale	Mean
Scalp coverage score (visual rating by trichologists)	1=less coverage; 2=no change; 3=more coverage	2.3

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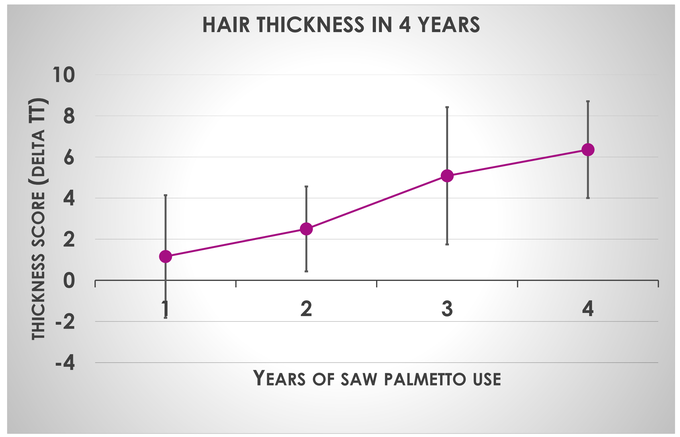
Delta-TT, expressing the increase or decrease of hair thickness, was obtained by subtracting the pre-treatment TT-ratios from the post-treatment TT-ratios.
A logistic regression identified " years of usage" to significantly explain for the variance in delta-TT (P<0.05)

Hair thickness change (delta TT) increased in the course of four years of saw palmetto use).



Hair thickness (diameter) increase in years 3-4 of saw palmetto usage is significantly more than in years 1-2.

	Delta TT-ratios	
	Usage < 2 years	Usage ≥ 2 years
Mean (arbitrary units)	1.68	5.72
Standard deviation	5.24	5.69
Unpaired Student T-test	P=0.02	

Conclusions

1. Scalp coverage is improved by the use of saw palmetto;

2. Hair thickness (diameter) of hairs increased significantly;

3. Hair thickness increase depends on the number of years saw palmetto is used;

4. The maximum effect of saw palmetto is, on average, still not achieved after four years of usage.

5. Hair thickness increase by saw palmetto suggests that the effect is achieved by partial inhibition of dihydrotestosterone, as in finasteride and dutasteride.