

Dermoscopic Findings in Traction Alopecia in Female Students in Secondary and Tertiary Institutions in Ibadan: A Preliminary Study

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INTRODUCTION:

A dermatoscope is an instrument used to examine the skin, study pattern of hair follicles and examine their densities. Trichoscopy is said to be useful in the diagnosis and follow up of hair and scalp disorders. There are very few studies on dermoscopy and these are mainly in Caucasians. The use of dermoscopy may contribute to understanding the pathogenesis of hair disorders.

MATERIALS AND METHODS:

The respondents were interviewed using a pretested questionnaire containing information about their biodata, hair care practices and history of hair loss if any. Subjects scalp were examined using a dermatoscope. Four hundred and fifty female students were enrolled in this descriptive, cross-sectional study over an 8 week period from May 2012 – June 2012 using Interviewer administered questionnaires to obtain data from the students. Informed consent was

obtained from each student before inclusion in the study following ethical approval. Dermatoscope was used to examine the scalp in those with hair loss.

Analyses were performed using the statistical Program for social sciences (SPSS) package version 20.0 with a 95% confidence interval.

RESULT:

Out of the 450 participants studied 210 had Alopecia (46.7%). Sixty seven (31.9%) of those with Alopecia had significant dermoscopic findings. Dermoscopic findings in traction Alopecia in this study included peripilar sign, pilar casts, perifollicular erythema. (Table 1) Interfollicular spacing between the hair shafts measured in normal scalp ranged from 3.81mm - 4.21mm with a hair shaft diameter of 1.54mm while in the alopecic scalp, measurements ranged from 3.10 mm-8.43mm and shaft diameter was 1.03mm. (Table 2)

Table 1: Dermoscopic Findings

FINDINGS	FREQUENCY	PERCENTAGE
Peripilar sign	10	2.22%
Peripilar cast	48	10.67%
Perifollicular erythema	8	1.78%
Honey comb pattern	1	0.22%
Total	67	14.89%

Table 2: Measurements

Measurements	Normal Scalp	Alopecic Scalp
Interfollicular Space	3.82-4.221mm	3.10-8.48mm
Hair Shaft Diameter	1.54mm	1.03mm

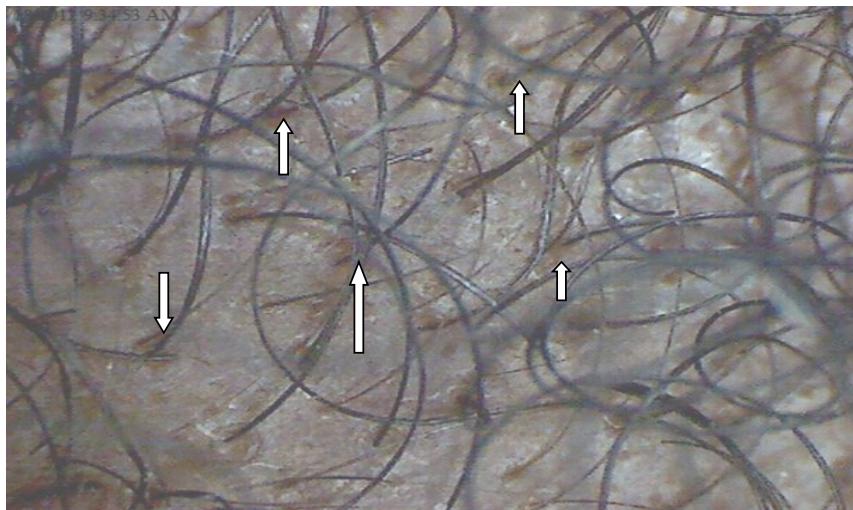


Figure 1: Scalp showing perifollicular sign (down halo around hair shaft)



Figure 2: Pilar cast on hair shafts (whitish cylindrical structure)

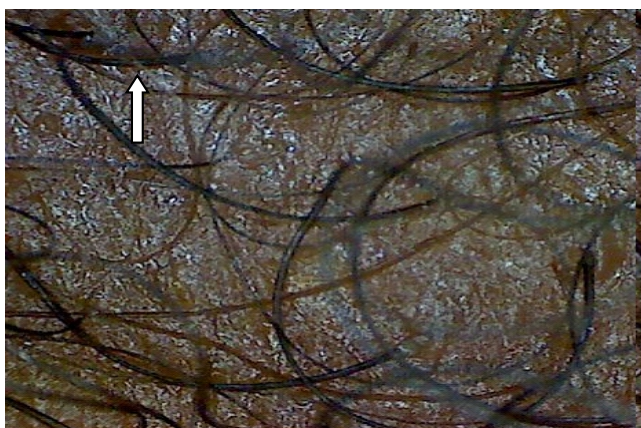


Figure 3: Peri-follicular erythema as shown by arrows in a study participant.



Figure 4 : Honey comb pattern on scalp



Figure 5 : Interfollicular measurement (3.81mm - 4.21mm) and hair shaft diameter (1.54mm) in a normal scalp.



Figure 6 : Inter-follicular measurement (8.43mm - 3.10mm) and hair shaft diameter (1.03mm) in an alopecic scalp.

REFERENCES

1. Tosti A. Hair shaft disorders. In: Tosti A, editor. *Dermoscopy of Hair and Scalp: Pathological and Clinical Correlation*. Illustrated ed. USA: CRC Press; 2007. pp. 51–53.
2. Tosti A, Miteva M, Torres F, Vincenzi C, Romanelli P. Hair cast are a dermoscopic clue to diagnosis of traction alopecia. *Br J Dermatol* 2010;163:1353-5.
3. Tosti A, Duque-Estrada B. Dermoscopy in hair disorders. *J Egypt Womens Dermatol Soc.* 2010;7:1–4.
4. Rakowska A, Slowinska M, Olszewska M, Rudnicka L. Androgenic alopecia. In: Rudnicka L, Olszewska M, Rakowska A, editors. *Atlas of trichoscopy*. London: Springer; 2012. p. 229-230.
5. Tosti A. Hair shaft disorders. In Tosti A. (Ed). *Dermoscopy of hair and scalp: Pathological and clinical correlation, illustrated edition*. USA. CRC press; pp 51-53.
6. Ley, Brain (1999).” Diameter of a human hair”