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Frontal fibrosing alopecia in men – an association with facial moisturisers and sunscreens

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Dear Sir

Frontal fibrosing alopecia (FFA) was first described by Kossard in 1994 in 6 postmenopausal women.[1] FFA remained rare during the 1990s but in the last 10-15 years it has become increasingly common, a phenomenon observed worldwide. The recent onset and apparent rising incidence of FFA suggest involvement of an environmental factor(s) in the aetiology. We previously reported a questionnaire study in women with FFA that asked about a wide range of medical, social and environmental exposures. The results suggested an association between FFA and leave-on facial products, including moisturisers and sunscreens.[2] However, although the regular use of moisturisers was greater in women with FFA, these products are used by most women and we were unable to show a significant difference in their use between women with FFA and similarly-aged control subjects. The use of primary sunscreens was significantly greater amongst women with FFA compared to controls but we were not able to assess whether subjects were also exposed to sunscreens from other sources.

We have therefore repeated our questionnaire study in men with FFA as we anticipated that the use of leave-on facial skin care products would be lower than in women.

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As FFA is rare in men subjects were recruited from across the UK and one case was recruited from Belgium. In all cases the diagnosis was made by a clinician with special expertise in hair disease and supported by histology in most cases. The clinical diagnosis was based on scarring alopecia affecting the frontal hairline causing recession of the hairline. Additional features included loss of eyebrows, follicular erythema of the frontal hairline and loss of sideburn/beard hair. Male control subjects aged between 35-80 years were recruited from three sites (Sheffield, Salford, Glasgow). Subjects completed a questionnaire similar to that used in our female study but inviting more detailed information on the use of facial skin and hair care products. Male FFA patients were asked about the timing and distribution of hair loss but otherwise the questionnaires completed by both groups were identical.

Seventeen men with FFA and 73 control subjects were recruited. The mean age of onset of hair loss in the FFA subjects was 54.5 (range 35 – 77). All had loss of hair from the frontal hairline and 16 (94%) had lost eyebrows. Twelve men (71%) reported loss of hair from the beard and thirteen (76%) reported loss of hair from the limbs. All men with FFA reported using facial moisturisers compared to 40% in the control group. Facial moisturisers were used at least twice a week by 94% of FFA subjects but by only 32% of controls ($p<0.0001$) (Table). Sixteen subjects reported using moisturisers for a period consistent with their use prior to the onset of FFA. The use of primary sunscreens by men with FFA was significantly more common than by controls. 35% of men with FFA reported using a sunscreen at least twice a week all year round compared to 4% of control subjects ($p=0.0012$). When moisturisers containing sunscreen chemicals were included in the analysis at least 71% of men with FFA applied a product containing a sunscreen at least twice a week all year round compared to 11% of controls ($p<0.0001$). One man with FFA applied a sunscreen product once a week all year round. Four men with FFA did not provide adequate information on the products they used to assess their sunscreen exposure. There was no difference between the two groups in the use of hair care and other facial skin care products (scrubs, masks, aftershave, cleansers), medications, smoking and alcohol.

Although the numbers are small these results support the conclusion from the previous female study[1] that there is an association between FFA and the use of facial moisturisers and sunscreens. The time course of sunscreen use by the population does seem to parallel the apparent increase in the incidence of FFA and to some extent the predominant distribution of FFA accords with the usual sites of moisturiser and sunscreen application. On the other hand, a causative role for leave-on facial products does not readily explain the frequency of hair loss on the limbs and occipital hairline seen in some men and women, or the occasional association with cutaneous or mucosal lichen planus.[3] Although the frequency of use was significantly greater than in control subjects, we have also not shown that all men with FFA were applying sunscreens, a pre-requisite were this to be the cause of FFA. A study from Scotland found that women with FFA had a higher degree of affluence than expected.[4] There is an association between sunscreen use and higher socio-economic status[5,6] and it is possible our results reflect this demographic rather than indicating a causative link.

In summary, our results in a cohort of men with FFA support a previous suggestion that there is an association between FFA and the use of leave-on facial skin care products and

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sunscreens. This may indicate a causal role but our results do not provide proof. The absence of a test that provides more conclusive evidence of cause is a significant limitation and the development of such a test should be a focus of future research into this increasingly common disorder.

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Table

Reported use of skin and hair care products by FFA and control subjects.

	FFA		Controls		
Number of subjects	17		73		
Age (mean, range)	63.1 (42-80)		59.1 (37-79)		
Age at onset of hair loss (mean, range)	54.5 (35-77)		N/A		
	n=	%	n=	%	p
Facial moisturiser[1]	16	94.1	23	32.4	<0.0001
Primary sunscreen[2]	6	35.3	3	4.1	0.0012
Sunscreen[2]	12	70.6	8	11.0	<0.0001
Facial cleanser[1]	4	23.5	5	7.0	0.066
Facial scrub[1]	0	0	0	0	
Facial mask[1]	0	0	0	0	
Aftershave[1]	7	41.2	28	39.4	1.000
Shampoo[1]	13	76.5	62	84.9	0.267
Conditioner[1]	4	23.5	13	18.3	0.733
Hair spray[1]	1	5.9	2	2.9	0.479
Hair mousse[1]	0	0	0	0	
Hair gel[1]	2	11.8	10	13.7	1.000
Hair dye[3]	2	11.8	3	4.3	0.255

[1] Twice a week or more frequently
[2] Twice a week or more frequently all year round
[3] At least once a year
Sunscreen includes exposure to sunscreen chemicals in primary sunscreens and moisturisers.
Analyses were performed after excluding subjects who failed to answer the question.
Frequencies in FFA and control subjects were compared using Fisher's Exact Test.

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