

Traction alopecia in women: An under-recognised cause of hair loss

Angelyn Chen Yin Lua¹ MRCP (UK), Wei Leong Ang² MBBS, Shiu Ming Pang¹ FRCP (London)

Dear Editor,

Alopecia ranks among the most common clinical complaints encountered by dermatologists.¹ In particular, affected women often experience great psycho-emotional stress leading to a reduction in quality of life.²

We conducted a prospective epidemiological study conducted over 77 weeks from 1 August 2022 to 23 January 2024 at an outpatient dermatology clinic at Singapore General Hospital. Our primary aim was to evaluate the aetiology of hair loss in adult women in Singapore. Patients above the age of 21 years consented to participation after a formal diagnosis of alopecia. Patient characteristics were analysed to reflect the various aetiologies causing hair loss in women.

All study procedures were implemented with written informed consent obtained from participants, in accordance with protocols approved by the Nanyang Technological University and Singapore General Hospital Institutional Review Boards (IRB approval number: 2021/2552).

A total of 38 female patients were recruited into this study. The mean age of patients was 46.6 years, with an age range of 25 to 78 years. History and clinical examination, including use of trichoscopy, was used to ascertain the aetiology of alopecia. Two patients underwent scalp biopsy for scarring alopecia.

The ethnic mix of female patients with hair loss (Chinese: 61%, Malay: 16%, Indian: 21%, Others: 3%) was largely in line with the ethnic population of Singapore (Chinese: 76%, Malay: 15%, Indian: 7%, Others: 2%). Indian patients were the exception, comprising 21% in our study despite making up only 7% of the Singapore population (Fig. 1).

Nineteen (50%) out of 38 patients had multiple aetiologies attributed to their hair loss. Patients with more than 1 aetiology were included in both categories. Overall, the most common cause of alopecia was female pattern hair loss (27/38; 71%), followed by traction alopecia (13/38; 34%) and alopecia areata (8/38; 21%), as illustrated in Fig. 2.

Seven different aetiologies for hair loss were identified in the study group. Out of these, 2 were scarring (frontal fibrosing alopecia and folliculitis decalvans) while 5 were non-scarring (female pattern hair loss, alopecia areata, traction alopecia, telogen effluvium and trichotillomania). Half (19/38) of the patients had more than 1 aetiology for alopecia; 9 (47%) of them had alopecia caused by both female pattern hair loss and traction alopecia. Non-scarring alopecia accounted for the bulk of hair loss complaints, which affected 34/38 (90%) patients.

Of note, 12 of the 13 patients (92%) with traction alopecia had 2 aetiologies to their hair loss. Of these 13 patients, 6 (46%) were Indians, 5 (38%) were Chinese and 2 (15%) were Malays, with an average age of 40 years. Interestingly, traction alopecia was a cause of alopecia in 80% of the Indian patients in the study group. The mechanism of traction alopecia was either hair tying or clipping.

In terms of co-existing conditions, seborrhoic dermatitis (21%) and eczema (16%) were commonly seen in the study group. This is higher than expected, compared to the prevalence of 7% for seborrhoic dermatitis and 11% for eczema in the Singapore adult population.^{3,4}

From the results of this study, Indian patients comprised 21% of female patients with hair loss despite only comprising 7.4% of the Singapore population. This increased proportion of Indian patients may be reflective of cultural hair tying and braiding practices that may predispose individuals to alopecia. Previous literature has shown that there exist significant morphological differences in the hair of various ethnicities such as Asians, Caucasians and Africans.⁵ These differences may contribute to the development of alopecia. However, further studies can be conducted to establish a definitive relationship between ethnicity and the incidence of alopecia due to the many confounding factors that exist. This may include differences in hair texture, health-seeking behaviour, hair care practices, climate and nutrition. For example, 80% of Indian patients in this study were affected by traction alopecia.

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¹ Department of Dermatology, Singapore General Hospital, Singapore

² Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore

Correspondence: A/Prof Shiu Ming Pang, Department of Dermatology, Singapore General Hospital, Outram Road, Singapore 169608.

Email: pang.shiu.ming@singhealth.com.sg

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Fig. 1. Ethnic distribution of patients in relation to Singapore’s population.

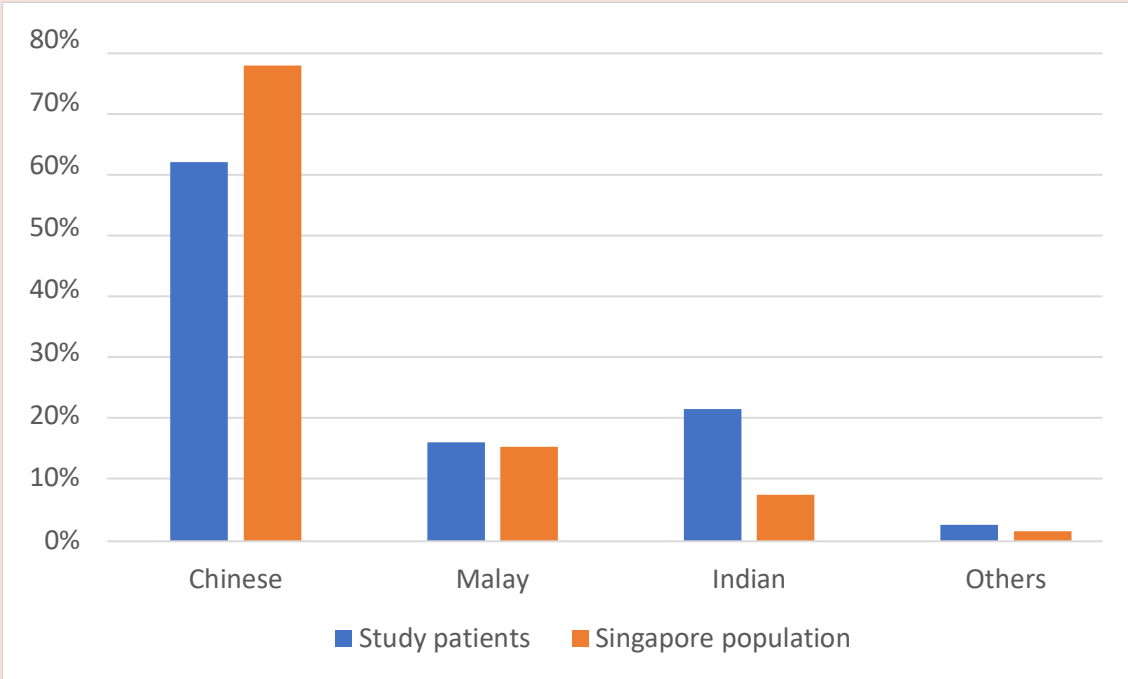
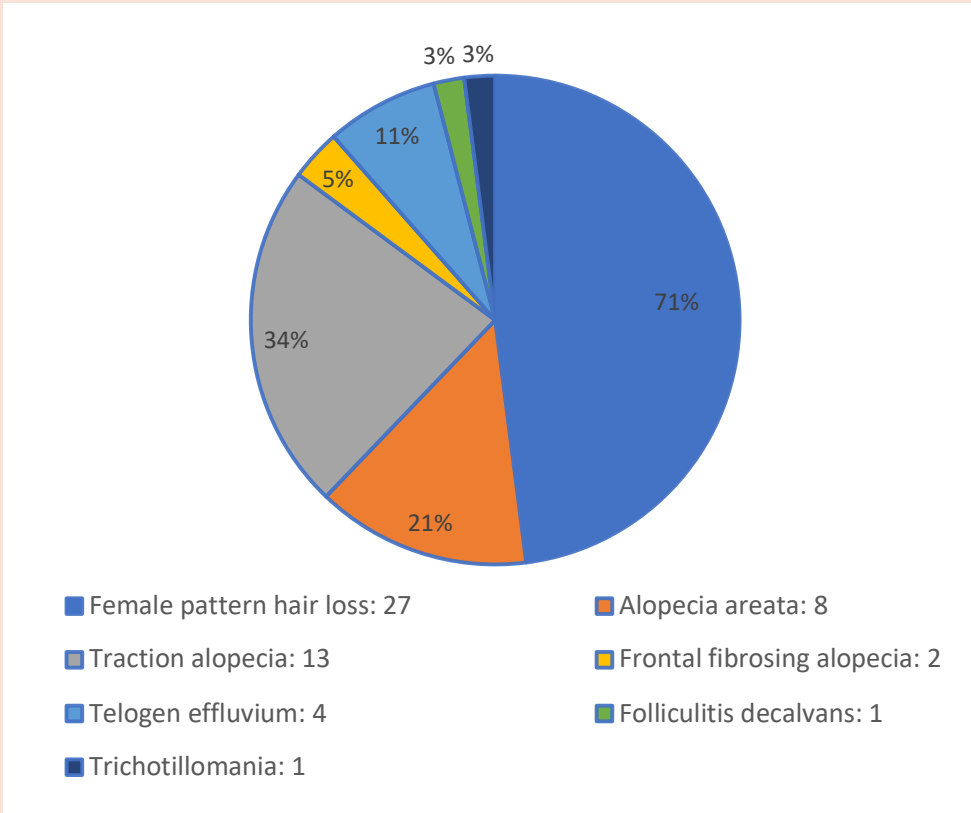


Fig. 2. Aetiology of hair loss.



Possible reasons for this could be hair type and hair practices. Wearing braids, ponytails with elastic band, cornrows, dreadlocks and turbans have been associated with traction alopecia.⁶

Pruritic skin conditions such as eczema and seborrhoeic dermatitis affected 16% and 21% of the study group, respectively. These inflammatory conditions predispose to alopecia through diffuse telogen hair loss.⁷ Scratching also damages hair follicles, causing hair shedding. Good control of underlying, primary skin conditions causing itch appears to be important in treating patients with alopecia.

Our study found traction alopecia to be the second most common cause of alopecia in our cohort. It is potentially reversible if detected and treated early. Despite this, traction alopecia is often a neglected entity, mentioned at the end of the list of causes of alopecia in literature.⁸ This may be due to the lack of awareness that mechanical factors in common hairstyles across all races and hair types can cause alopecia, not only in those of African descent with tight, spiral curly hair.

All patients in this study who were diagnosed with traction alopecia had either another aetiology for hair loss or were seeking treatment for another condition affecting their scalp. Patients often try various coping mechanisms, such as concealing their hair loss, before seeking professional consultation, often when the disease is more severe.⁸ In this study, the secondary factors found to be present may have attributed to the increased severity, prompting medical consultation.

Previously an underdiagnosed aetiology, this study found that one-third of patients suffer from traction alopecia. Raising awareness of this condition and education on methods of hair care to prevent traction alopecia is important. Many occupations, such as those in the food and beverage or service sectors, require hair to be tied back to maintain hygiene and a kempt appearance. Patients can be advised to keep their hair loose or wear low risk hairstyles such as loose low ponytails or buns, ensure their braids are not too tight, use

hair extensions only for a short period of time, and to change their hairstyle periodically.⁹

Additionally, we have identified possible risk factors for alopecia such as hair practices common to Indian ethnicity, and co-existing conditions such as seborrhoeic dermatitis and eczema. Identifying patient groups at higher risk of alopecia in this study will help with the early detection and institution of preventive and treatment strategies for alopecia. This study was limited by small sample size. This precluded in-depth comparisons of aetiologies with adequate statistical power. Further studies can be done to substantiate its findings.

Declaration

The authors declare they have no affiliations or financial involvement with any commercial organisation with a direct financial interest in the subject or materials discussed in the manuscript.

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