#### e12 Correspondence

Our findings support strong participation in international health electives by dermatology residency programs, comparable to other specialties.<sup>1</sup> The benefits and purpose of international health electives include increasing medical knowledge, cultural sensitivity and humility, sustained research projects, and advancement of clinical skills when working in resource-limited settings.<sup>3,4</sup>

Several respondents expressed desire for structured programs with adequate funding, such as the AAD rotation in Botswana, and lack of these programs was a key reason for not participating. The short duration of many global health electives make predeparture preparation and adequate orientation to the host site crucial to the success of the rotation.<sup>5</sup> Formal structured programs should also provide sustained benefit to host sites<sup>2</sup> and limit disruption by short-term visitors. International health electives should include structured objectives and goals, mentorship with predeparture counseling, on-site or remote support, and a posttrip debriefing and peer education.<sup>5</sup>

Skin diseases cause substantial disability worldwide<sup>6</sup>; dermatology training in global health helps address these needs. Although residents primarily gained clinical experience, they also helped build capacity by training local healthcare providers and engaging in research which, if sustained, could benefit the host sites and local communities.<sup>2</sup> Future studies should assess dermatology residents' perspectives on their international health experiences and the impact on host sites.

> Karolyn A. Wanat<sup>1,\*</sup>, MD Alexia P. Knapp<sup>2</sup>, MD

<sup>1</sup>Departments of Dermatology and Pathology, University of Iowa, Iowa City, IA, USA <sup>2</sup>Department of Dermatology, Health Partners, St. Paul, MN, USA \*E-mail: karolyn-wanat@uiowa.edu

Funding: None. Conflicts of interest: None.

Redcap was used for the production of the survey.

#### References

- Hau DK, Smart LR, DiPace JI, *et al.* Global health training among U.S. residency specialties: a systematic literature review. *Med Educ Online* 2017; 22: 1270020.
- 2 Introcaso CE, Kovarik CL. Dermatology in Botswana: the American Academy of Dermatology's Resident International Grant. *Dermatol Clin* 2011; **29**: 63–67.
- 3 Hayward AS, Jacquet GA, Sanson T, *et al.* Academic affairs and global health: how global health electives can accelerate progress towards ACGME milestones. *Int J Emerg Med* 2015; 8: 45.
- 4 Tucker JD, Hughes MA, Durvasula RV, *et al.* Measuring success in global health training: data from 14 years of a postdoctoral fellowship in infectious diseases and tropical medicine. *Clin Infect Dis* 2017; **64**: 1768–1772.

- 5 Dacso M, Chandra A, Friedman H. Adopting an ethical approach to global health training: the evolution of the Botswana – University of Pennsylvania partnership. *Acad Med* 2013; 88: 1646–1650.
- 6 Karimkhani C, Dellavalle RP, Coffeng LE, et al. Global skin disease morbidity and mortality: an update from the global burden of disease study 2013. JAMA Dermatol 2017; 153: 406– 412.

# Clinical study of fibrosing alopecia in a pattern distribution in a Latin American population

Fibrosing Alopecia in a Pattern Distribution (FAPD) is a recently described clinical variant in the lymphocytic group of primary cicatricial alopecias.<sup>1</sup> Combined clinical and histopathological signs of lichen planopilaris and androgenetic alopecia are the hallmark of this condition, and early diagnosis and treatment are paramount to prevent permanent hair loss.

Few series and case reports of FAPD from Europe, North America, and Asia have been published, and in Latin America, demographic and clinical data have not been described.

In this study, we investigated demographics, clinical features, and treatment modalities and outcomes in Chilean patients with FAPD.

After obtaining informed consent, records of Chilean patients with FAPD were collected from the dermatology department of the University of Chile Clinical Hospital and private practice. In each case, demographic, medical history, and clinical features were recorded. All patients had clinical, dermoscopic, and histopathological confirmation of FAPD (Figs. 1 and 2). Local



Figure 1 Alopecic cicatricial patches in the frontal and midscalp regions



**Figure 2** Scalp dermoscopy shows perifollicular erythema, follicular keratosis, loss of hair orifices, and thin, miniaturized hairs

treatment protocol was recorded with follow-up every 3 months for up to 1 year. Treatment improvement was clinically graded as null (persistent inflammation and progression of cicatricial patches), mild (reduction in inflammatory signs and symptoms but no hair regrowth), and satisfactory (reduction in inflammation and signs of hair regrowth). Once clinical signs of improvement were observed, treatment was tapered to the lowest dosage possible.

Between 2012 and 2016, 2018 patients with a hair disease were evaluated; 13 cases (0.64%) were diagnosed with FAPD. These included 9 women with an average age of 47.8 years (ranges from 38 to 70) and 4 men with an average age of 37 years (ranges from 28 to 46). Table 1 shows demographic and clinical features of Chilean cases with FAPD.

All patients were treated initially with clobetasol 0.05% in shampoo, 3–5 times a week. In addition, 12 (92%) received minoxidil lotion 2–5% every night, and 5 women eventually required systemic medication: 4 with finasteride (1–2.5 mg/day) and 3 with hydroxychloroquine (200–400 mg/day). All patients completed their annual follow-up and showed signs of

improvement: 9 were recorded as mild and 4 with a satisfactory response.

Since its first description in 2000, few other cases of FAPD in European, North American, and Asian populations have been reported.<sup>1–5</sup> Although recent scarring (cicatricial) alopecia classification includes FAPD in the lichen planopilaris group, it is unclear if it is a true form of lichen planopilaris or a lichenoid reaction that selectively involves miniaturized hair follicles. Other clinical settings such as androgenetic alopecia, cicatricial pattern hair loss, and frontal fibrosing alopecia share clinical and/or histological findings, suggesting an overlap or progression between these conditions.<sup>2,3,6</sup> Enhanced local effects of androgens (and other unidentified triggering factors) may modify the hair follicle immune status, induce inflammation, and increase connective tissue remodeling.

Similar to previous studies, our series showed a predominance of FAPD in postmenopausal women; however, we found that men were affected at a younger age. Burning sensation of the scalp and inflammatory signs, and worsening of hair loss were common findings and may be the initial clues to this condition. Careful examination of alopecic patches may also show absence of follicular openings, which we found in 38.5% of our patients. Early treatment and close clinical monitoring are necessary to alleviate inflammatory signs and prevent irreversible follicular damage. In our series after 1 year, all patients showed some improvement of inflammatory signs and symptoms, and 30.7% also showed hair regrowth with topical treatment. Only women required antiandrogen and anti-inflammatory medication such as finasteride and hydroxychloroquine.

This clinical study is the first to analyze FAPD in a Latin American population, and it shows similar epidemiologic and clinical profiles to previous reports. Larger multicenter studies may be necessary to investigate the pathogeny and delineate treatment guidelines for this condition.

> Felipe Mardones \*, MD Karla Hott, MD María C. Martinez, MD

Hospital Clínico Universidad de Chile, Santiago, Chile \*E-mail: felipemardonesv73@gmail.com

Table 1 Demographic and clinical features in Chileans with FAPD.

	Cases	Mean age (years)	Morbidities	Duration of disease (years)	Dysesthesia	Worsening of hair loss	Erythema and follicular hyperkeratosis	Loss of hair openings
Female	9	47.8	Yes, 6 (hypertension, fibromyalgia, depression, insulin resistance)	3.7	Yes, 7/9 (77.7%)	Yes, 9/9 (100%)	Yes, 9/9 (100%)	Yes, 4/9 (44.4%)
Male	4	37	Yes, 1 (dyslipidemia)	1.3	Yes, 4/4 (100%)	Yes, 4/4 (100%)	Yes, 4/4 (100%)	Yes, 1/4 (25%)
Total	13	44.5	Yes, 7 (54%)	2.5	Yes, 11/13 (85%)	Yes, 13/13 (100%)	Yes, 13/13 (100%)	Yes, 5/13 (38.5%)

© 2017 The International Society of Dermatology

### Funding sources: None

Conflict of interest: The authors have no conflict of interest to declare

### References

- Zinkernagel M, Trüeb R. Fibrosing alopecia in a pattern distribution. Patterned lichen planopilaris or androgenetic alopecia with a lichenoid tissue reaction pattern? *Arch Dermatol* 2000; 136: 205–211.
- 2 Olsen E. Female pattern hair loss and its relationship to permanent/cicatricial alopecia: a new perspective. *J Investig Dermatol Symp Proc* 2005; **10**: 217–221.
- 3 Fergie B, Khaira G, Howard V, et al. Diffuse scarring alopecia in a female pattern hair loss distribution. Australas J Dermatol 2017; https://doi.org/10.1111/ajd.12557. [Epub ahead of print].
- 4 Chiu HY, Lin SJ. Fibrosing alopecia in a pattern distribution. J Eur Acad Dermatol Venereol 2010; 24: 1113–1114.
- 5 Amato L, Chiarini C, Berti S, *et al.* Case study: fibrosing alopecia in a pattern distribution localized on alopecia androgenetica areas and unaffected scalp. *Skinmed* 2004; **3**: 353–355. PubMed PMID: 15538092.
- 6 Magro CM, Rossi A, Poe J, *et al.* The role of inflammation and immunity in the pathogenesis of androgenetic alopecia. *J Drugs Dermatol* 2011; **10**: 1404–1411.

## A case of severe pediculosis capitis

Head lice, *Pediculus humanus capitis*, are obligatory ectoparasites that feed exclusively on human blood. These parasites affect over 100 million people worldwide each year.<sup>1,2</sup> The infestation by head lice, *Pediculosis capitis*, is generally considered as a benign condition. Although all age groups may be affected, it is particularly frequent among children 3 to 11 years of age.<sup>3</sup> *Pediculosis capitis* may cause skin irritation, secondary infection from scratching, social stigmatization, and psychological distress. Recent studies suggest that head lice, as is the case of body lice, could act as a vector for louse-borne diseases.<sup>4–7</sup>

We report a case of a heavy infestation in a patient with several comorbidities, resulting in serious cutaneous damage. A 41-year-old man was admitted to our hospital to take care of a cardiac decompensation complicating a dilated cardiomyopathy (left ventricular ejection fraction = 20%). Suffering from insulindependent diabetes mellitus for 10 years, the patient developed a diabetic nephropathy (creatinine clearance: 46 ml/min) and a diabetic neuropathy. He presented with chronic anemia with a hemoglobin rate fluctuating around 10 g/dl. He also reported having asthma, occasionally treated by salbutamol sulfate. The patient, unemployed at the time of presentation, was a former homeless person living in an apartment. The patient presented with a major carelessness. His head was covered in lice, harboring numerous adult and nymphs, eggs, and nits (hatched eggs). No lice were seen on the rest of the body, including within the pubic hair. A dermatological examination highlighted many hurts of scratching on the scalp, the neck (Fig. 1), and the shoulders. There was no history of previous dermatologic



Figure 1 The head and neck of the patient shortly after shaving of the scalp

condition. No secondary bacterial infection was found. The patient's head was totally shaved. No other treatment, either topical or oral medication, was given. The pediculosis was successfully treated and did not occur another time during the follow-up of the patient. The patient was rehospitalized 6 months and 4 years after the initial hospitalization. The patient died of terminal cardiac and renal failure during the course of the last hospitalization.

Severe *pediculosis capitis* is rarely reported.<sup>8</sup> Chronic and heavy lice infestation were rarely reported as associated with anemia, particularly in women who were already suffering from iron deficiency anemia.<sup>9</sup> Hyperinfestation has also been reported as leading to iron deficiency anemia in schoolchildren.<sup>10</sup> In the present case, the anemia was probably in relation to the chronic nephropathy as the elimination of lice was not followed by a correction of the hemoglobin rate. Repeated scratching may lead to loss of skin integrity with secondary bacterial infection and impetigo.<sup>3</sup> Severe pyoderma of the scalp can rarely lead to irregular patches of cicatricial alopecia. As the patient was a former homeless person, it is likely that his pediculosis was chronic. The scraping lesions observed on neck and shoulders resembled those that may be observed in a case of body lice infestation, although such lice were not present on the clothing or on the body of the patient, as we verified it. The debilitated health of the patient, presenting several comorbidities, may explain the uncommon aspect of the lesions associated with the parasitic condition.

Shaving the scalp is one of the oldest and simplest methods to remove the lice and eggs.<sup>11</sup> However, head shaving is generally not recommended because of possible psychological