causality of the suspected culprit drug. Moreover, PPIs can elicit serious cutaneous side-effects. Therefore, the indication for PPIs always requires careful consideration in order to avoid potentially harmful overconsumption.

Conflict of interest

The authors declare that there are no conflicts of interest.

Informed consent

The patient in this manuscript has given written informed consent to publication of his case details.

> E. Van Tendeloo,* D J. Gutermuth, M. Grosber Department of Dermatology, Universitair Ziekenhuis Brussel, Vrije Universiteit Brussel (VUB), Brussels, Belgium *Correspondence: E. Van Tendeloo. E-mail: emma.vantendeloo@uzbrussel.be

References

- Lerch M, Mainetti C, Terzirolli Beretta-Piccoli B, Harr T. Current perspectives on stevens-johnson syndrome and toxic epidermal necrolysis. *Clin Rev Allergy Immunol* 2018; 54: 147–176.
- 2 Savarino V, Marabotto E, Zentilin P, et al. Proton pump inhibitors: use and misuse in the clinical setting. *Expert Rev Clin Pharmacol* 2018; 11: 1123–1134.
- 3 Frey N, Bodmer M, Bircher A, Jick SS, Meier CR, Spoendlin J. Stevens-Johnson Syndrome and toxic epidermal necrolysis in association with commonly prescribed drugs in outpatient care other than anti-epileptic drugs and antibiotics: a population-based case-control study. *Drug Saf* 2019; **42**: 55–66.
- 4 Barbaud A, Collet E, Milpied B, *et al*. A multicenter study to determine the value and safety of drug patch tests for the three main classes of severe cutane-ous adverse drug reactions. *Br J Dermatol* 2013; **168**: 555–562.

- 5 Wolkenstein P, Chosidow O, Flechet M, et al. Patch testing in severe cutaneous adverse drug reactions, including Stevens-Johnson syndrome and toxic epidermal necrolysis. *Contact Dermatitis* 1996; 35: 234–236.
- 6 Hassoun-Kheir N, Bergman R, Weltfriend S. The use of patch tests in the diagnosis of delayed hypersensitivity drug eruptions. *Int J Dermatol* 2016; 55: 1219–1224.
- 7 Lin CY, Wang CW, Hui CYR, *et al.* Delayed-type hypersensitivity reactions induced by proton pump inhibitors: a clinical and in vitro T-cell reactivity study. *Allergy* 2018; **73**: 221–229.

DOI: 10.1111/jdv.16814

Yellow dots in frontal fibrosing alopecia

Editor,

Frontal fibrosing alopecia (FFA), a common type of lichen planopilaris most frequently affecting postmenopausal women, is characterized by progressive loss of the eyebrows and frontotemporal recession.¹ Although FFA is a considered a scarring alopecia, the hair loss is not always irreversible and regrowth has been occasionally reported on the scalp, the limbs and, more consistently, the eyebrows.^{2,3,4} Preservation of sebaceous glands has been proposed as a possible explanation for hair regrowth, especially in the eyebrows.⁴ Yellow dots, first described in alopecia areata, are considered a common trichoscopic feature of non-scarring alopecias.⁵ Yellow dots correspond pathologically to dilated follicular infundibula, reminiscent of the holes in







Figure 2 Reflectance, confocal microscopy of a yellow dot showing a dilated infundibulum and a hyperkeratotic, periosteal white ring.

Swiss cheese in horizontal sections.⁶ In recent years, we have observed the presence of yellow dots in the affected hairline of patients with FFA, interspersed irregularly among the remaining hairs and also in the cicatricial band.

We report 10 patients with FFA and numerous yellow dots. Four cases are complemented with histopathology obtained from dermoscopy-guided, 2 mm biopsies and six cases with in vivo reflectance confocal microscopy. On trichoscopic examination, the yellow dots were irregularly distributed between remaining follicles at the hairline (Fig. 1b,c,d). The affected area also had peripilar casts surrounding by broken, dystrophic hairs arising from the ostia and occasional short, regrowing hairs (Fig. 1e). On confocal microscopy, the yellow dots were dilated follicular infundibula with a peripheral hyperkeratotic, white ring (Fig. 2). Remaining hair shafts in the affected area often emerged from distorted infundibula. Interadnexal keratinocytes were highlighted in a web-like fashion. Transverse histologic sections through the entirety of the 2 mm punch biopsy were performed. Nine transverse sections were obtained, demonstrating all levels of the tissue segment. Sections showed superficial, dilated follicular epithelium at the level of the infundibulum with a sparse perifollicular lymphocytic infiltrate (Fig 1f). No perifollicular fibrosis was identified either H&E sections or a colloidal iron stain. Directly beneath this milium were sebaceous lobules with a dilated duct (Fig 1g). There was some lower root segment follicular epithelium was attached (arrow). Our small series shows that yellow dots in FFA correspond to enlarged, empty infundibula associated with preserved, subjacent sebaceous glands

Perhaps preservation of sebaceous glands is an early feature of FFA and yellow dots are associated with follicles that have potential for regrowth. Since the follicular stem cells of the bulge region reside close to the sebaceous lobule in the follicle, involved follicles with preserved sebaceous glands might still retain their bulge region stem cells. Further research can elucidate whether yellow dots in FFA might represent a trichoscopic sign for possible hair regrowth. Indeed, it is not uncommon to identify regrowing hairs along the affected hairline after treatment.

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1964, as revised in 2013.

Acknowledgements

The patients in this manuscript have given written informed consent to the publication of their case details.

Funding

None.

Conflict of interest

Curtis T Thompson and María Abril Martínez-Velasco have nothing to disclosure. Antonella Tosti is consultant for DS laboratories, P&G and PI for Incyte.

C.T. Thompson,^{1,2} M.A. Martínez-Velasco,^{1,3} A. Tosti^{1,4,*}

¹Department of Pathology, Oregon Health and Science University, Portland, OR, USA, ²Department of Dermatology, Oregon Health and Science University, Portland, OR, USA, ³Universidad Nacional Autónoma de México Clínica de Oncodermatología, Del Coyoacán, Ciudad de México, Mexico, ⁴Department of Dermatology and Cutaneous Surgery, University of Miami Miller School of Medicine, Miami, FL, USA *Correspondence: A. Tosti. E-mail: ATosti@med.miami.edu, antonellatosti1@gmail.com

References

- 1 Kossard S. Postmenopausal frontal fibrosing alopecia. Scarring alopecia in a pattern distribution. *Arch. Dermatol.* 1994; **130**: 770–774.
- 2 Cranwell WC, Sinclair R. Frontal fibrosing alopecia: Regrowth following cessation of sunscreen on the forehead. *Australas J. Dermatol.* 2019; 60: 60–61.
- 3 Fertig R, Farias D, Tosti A. Postcast hypertrichosis in a patient with frontal fibrosing alopecia. *J. Eur. Acad. Dermatol. Venereol.* 2017; **31**: e53–e54.
- 4 Katoulis AC, Damaskou V, Diamanti K et al. Eyebrows involvement in Frontal fibrosing alopecia: a clinicopathologic cohort study for the reversibility of hair loss. J. Am. Acad. Dermatol. 2020; 82(3): 755–757
- 5 Miteva M, Tosti A. Hair and scalp dermatoscopy. J. Am. Acad. Dermatol. 2012; 67: 1040-1048.
- 6 Müller CSL, Shabrawi-Caelen LEI. Follicular Swiss cheese' pattern another histopathologic clue to alopecia areata. J. Cutan. Pathol. 2011; 38: 185–189.

DOI: 10.1111/jdv.16820