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Androgenetic alopecia in COVID-19: Compared to what?



To the Editor: In a timely study certain to attract considerable attention, Wambier et al¹ propose an association between androgenetic alopecia (AGA) and severe manifestations of coronavirus disease 2019 (COVID-19). In a cohort of patients hospitalized with COVID-19, they find AGA prevalence of 79% in men and 42% in women, citing other literature to argue these rates exceed expectation. Unfortunately, in the absence of additional clarification, the literature cited does not appear to support this claim. Rather, it suggests these rates are unremarkable.

For men, the authors cite AGA prevalence in “age matched males in a similar Caucasian population,” indirectly referencing 2 cross-sectional studies.^{2,3} How these data were aggregated and “age matched” to the COVID-19 cohort is not described. One of these studies reports age-stratified AGA rates in several categories.² Combining “vertex only,” Hamilton-Norwood Scale (HNS) III-vertex and V, and “frontal and vertex,” HNS IV-VII, yields a prevalence of 84 of 273 (31%) in age <55 and 215 of 405 (53%) in age 65 to 69, matching the range quoted by Wambier et al. However, this calculation excludes a “frontal only” AGA category, HNS II-IVa. Since Wambier et al define AGA as HNS \geq II, the “frontal only” category should have been included; even their “severe AGA” category of HNS \geq III should have included many of the “frontal only” cases. Doing so yields an AGA prevalence of 169 of 273 (62%) in age <55 and 343 of 405 (85%) in age 65 to 69. AGA prevalence is 323 of 401 (81%) in age 60 to 64, closely matching the 79% prevalence in the COVID-19 cohort with median age 62.5. The second study reports even higher AGA rates, with HNS \geq II in 31 of 32 (97%) and HNS \geq IV in 27 of 32 (84%) of men age 60 to 69.³ At least based on these data, AGA prevalence in the COVID-19 cohort hardly seems unexpected.

For women, Wambier et al cite a review⁴ to claim that the “highest AGA prevalence reported was 38%.” This figure appears to come from a cross-sectional study of 377 patients age 18 to 99, with 38% AGA prevalence in age \geq 70.⁵ The same review⁴ also cites another cross-sectional study that found 67 of 125 women (54%) age 70 to 79 had “cosmetically significant” AGA.⁶ Since the median age in the female COVID-19 cohort is 71, these groups are relatively age-appropriate comparisons. Although exact comparison between different definitions

of AGA is not possible, the 42% AGA prevalence reported by Wambier et al is likely consistent with the 38% or 54% prevalence reported by these prior studies.

For both men and women, the literature cited by Wambier et al suggests that the prevalence of AGA in patients hospitalized with COVID-19 is close to the expected rate. Whereas male sex and older age may be risk factors for COVID-19 mortality, the hypothesis that AGA may be independently associated with severe manifestations of COVID-19 remains a matter of conjecture. Given the unprecedented public interest in COVID-19 research in the context of an ongoing pandemic, any purported association requires a more cautious assessment of the underlying data.

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