Letter to the Editor From Singh et al: “Female Adult Acne and Androgen Excess: A Report from the Multidisciplinary Androgen Excess and PCOS Committee”

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Abbreviations: DHEAS, dehydroepiandrosterone sulfate; NHMRC, National Health and Medical Research Council.

We read with interest the recent article by Carmina et al [1] that outlines recommendations for the evaluation, diagnosis, and treatment of adult female acne, and its association with hyperandrogenism. However, we have concerns about the recommendations to measure serum androgens in all women with adult acne and to consider spironolactone only for those with hyperandrogenic adult acne not responding to usual treatments.

Based on the authors’ evaluation of current evidence using the National Health and Medical Research Council (NHMRC) guidelines, they conclude that “Measurement of serum androgen values (total testosterone, free testosterone, and DHEAS) by high-quality assays is recommended in all women with adult acne (level A evidence).” However, after re-assessing the cited evidence, support for androgen testing in all females with acne is limited in evidence base, consistency, and generalizability, 3 of the 5 criteria outlined by NHMRC guidelines [2]. As such, the evidence for testing cannot be considered level A. The quality of the evidence base is limited, as cited studies to support the prevalence of hyperandrogenism among adult women with acne are only considered as level C evidence by the authors; furthermore, many cited studies defined hyperandrogenism based on single elevations in androgen precursors or metabolites. Additionally, there is considerable inconsistency in the evidence, with prevalence estimates of hyperandrogenism among adult women with acne ranging from 8% to 80% [1]. Generalizability of cited studies is limited as several included individuals with clinical signs of hyperandrogenism, which are not applicable to a screening recommendation for all adult women with acne. Though androgen testing can be valuable in women with additional signs of hyperandrogenism, we disagree with the strong recommendation that testing is indicated in all women with adult acne given the limitations of the underlying evidence.

The authors recommend limiting spironolactone use to those with moderate or severe hyperandrogenic adult acne not responding to usual treatments and only in combination with estroprogestins. However, this recommendation ignores the growing body of evidence that spironolactone can be effective in both adolescents and adult populations that are not specifically selected for having hyperandrogenic acne [3, 4]. It can be safely and effectively used as monotherapy, though the risk of irregular menses is reduced when prescribed in combination with combined oral contraceptives. In addition, given concerns about antibiotic resistance and overuse, spironolactone is an important alternative to oral antibiotics that may have similar effectiveness [5, 6]; it should be considered as an alternative first-line option for adult women with acne [3, 7].

Spironolactone is widely used as an effective acne treatment in women with normal androgens. Although it can be prescribed without concomitant estroprogestins, efficacious contraception is needed due to potential teratogenic effects on development of male genitalia in persons who can become pregnant. The American Academy of Dermatology acne guidelines recommend androgen testing in women with an additional clinical sign of hyperandrogenism, such as hirsutism or irregular menses [8]. Since testing serum androgens in all women with acne will increase the cost of care, or may lead to false positives or patient stress, a stronger evidence base than is currently available is needed to support this recommendation.

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References

1. Carmina E, Dreno B, Anne Lucky W, et al. Female adult acne and androgen excess: a report from the multidisciplinary androgen excess and PCOS committee. J Endocr Soc. 2022;6(3):bvac003.
2. National Health and Medical Research Council (NHMRC). NHMRC additional levels of evidence and grades for recommendations for developers of guidelines—Stage 2 consultation—early 2008–end June 2009. Accessed April 15, 2022. https://www.mja.com.au/sites/default/files/NHMRC.levels.of.evidence.2008-09.pdf
3. Roberts EE, Nowsheen S, Davis DMR, Hand JL, Tollefson MM, Wetter DA. Use of spironolactone to treat acne in adolescent females. Pediatr Dermatol. 2021;38(1):72-76.
4. Garg V, Choi JK, James WD, Barbieri JS. Long-term use of spironolactone for acne in women: A case series of 403 patients. J Am Acad Dermatol. 2021;84(5):1348-1355.
5. Barbieri JS, Bhat K, Hartnett KP, Fleming-Dutra KE, Margolis DJ. Trends in oral antibiotic prescription in dermatology, 2008 to 2016. JAMA Dermatol. 2019;155(3):290-297.
6. Barbieri JS, Choi JK, Mitra N, Margolis DJ. Frequency of treatment switching for spironolactone compared to oral tetracycline-class antibiotics for women with acne: a retrospective cohort study 2010-2016. J Drugs Dermatol. 2018;17(6):632-638.
7. Barbieri JS, Spaccarelli N, Margolis DJ, James WD. Approaches to limit systemic antibiotic use in acne: Systemic alternatives, emerging topical therapies, dietary modification, and laser and light-based treatments. J Am Acad Dermatol. 2019;80(2):538-549.
8. Zaenglein AL, Pathy AL, Schlosser BJ, et al. Guidelines of care for the management of acne vulgaris. J Am Acad Dermatol. 2016;74(5):945-973.e33.