Critical Comment on “Vitamin D Level in Alopecia Areata”

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Indian J Dermatol 2018:63(1):82

Sir,

We appreciate the article “Vitamin D level in alopecia areata” published in Indian J Dermatol 2017;62:407-10 and for raising an important issue of highlighting the importance of Vitamin D in the treatment of patients with alopecia areata (AA).

In the Material and Methods, the authors have mentioned that “This was a hospital-based cross-sectional study involving 50 patients of AA. The control group consisted of 35 age- and sex-matched individuals selected randomly from our OPD with no history of AA.”

However, we have a few concerns related to the methodology being adopted by the authors. First, the authors have clearly written that it is a cross-sectional study, but they have chosen cases and controls. The outline of methodology sounds confusing. The authors might be saying comparison group rather than age and sex-matched controls. How were the alopecia areata (AA) patients recruited in the study? Were all these patients, that is, cases recruited consecutively by the authors or were they taken randomly among many patients of AA visiting the outpatient department?

It is not clear in the study as to how the authors have calculated the sample size of 50 patients in case group and 35 in control group. In cross-sectional studies, the aim is to estimate the prevalence of unknown parameter(s) from the target population using a random sample. Hence, an adequate sample size is needed to estimate the population prevalence with good precision.

If the sample size is too small, the investigator may not be able to answer the study question. In this study, the sample size is 85. It is difficult to derive causal relationships from a cross-sectional analysis.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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Access this article online
Quick Response Code:
Website: www.e-ijd.org
DOI: 10.4103/ijd.IJD_552_17

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How to cite this article: Saini R, Kaushal K. Critical comment on “Vitamin D level in alopecia areata”. Indian J Dermatol 2018;63:82.

Received: November, 2017.
Accepted: November, 2017.

Authors’ Reply to Critical Comment on “Vitamin D Level in Alopecia Areata”

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Indian J Dermatol 2018:63(1):82-3

Sir,

We thank the authors for showing keen interest in our article. We would like to clear the doubts that have been raised regarding our article.

The concerns related to the methodology that have been raised are very relevant. The issue of study design is important. It depends on the outcome and the exposure variables in the study. In our study, alopecia areata (AA) is “the outcome of interest” and vitamin D level is “the exposure of interest”. Our research hypothesis was that “lower Vitamin D levels increase the risk of developing AA” and we have sampled on the basis of the outcome. We have studied exposures among AA patients (cases) and other patients (controls).

We have designed a case–control study since we have sampled on the basis of the outcome (AA). The cross-sectional study design has been erroneously mentioned due to the notion that the patients were
Presents a correspondence about a study on Vitamin D levels in patients with alopecia areata (AA) and the use of the statistical power analysis program G Power. The authors discuss the methodology of their study, which was designed to assess Vitamin D levels among AA patients versus controls. They present the results of their study, which showed a significant difference in Vitamin D levels between the AA patients and controls, with a large effect size. The authors also discuss the sample size calculation, which was not done a priori, but was done using G Power. They conclude by noting that the financial support and sponsorship for the study was not an issue.

The authors also address the conflicts of interest and financial support sponsorship, and conclude that there are no conflicts of interest.

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Conflicts of interest: Nil.

There are no conflicts of interest.

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Quick Response Code:
Website: www.e-ijd.org
DOI: 10.4103/ijd.IJD_15_18

How to cite this article: Bhat YJ, Haq IU, Hassan I, Sajad P, Latif I. Authors' reply to critical comment on "Vitamin D level in alopecia areata." Indian J Dermatol 2018;63:82-3.
Received: January, 2018. Accepted: January, 2018.