Int. j. adv. multidisc. res. stud. 2026; 6(3):492-493

Received: 26-04-2026
Accepted: 06-05-2026

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Letter to the Editor

Before Anxiety and Depression in PCOS Patients can be Attributed to Vitamin D Deficiency, All Alternative Causes must be Ruled Out

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DOI: https://doi.org/10.62225/2583049X.2026.6.3.6284
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Letter to the Editor

We read with interest the article by Karam *et al*. on a cross-sectional study of the relationship between serum vitamin D levels and anxiety and depression, as assessed using the Hospital Anxiety and Depression Scale (HADS), in 60 Saudi female patients with polycystic ovary syndrome (PCOS) [1]. PCOS patients had lower vitamin D levels compared to the control group, vitamin D levels were associated with anxiety and depression, anxiety was associated with low educational level, obesity, and infertility, and depression was associated with obesity, hirsutism, and infertility [1]. The study is interesting, but some points should be discussed.

The first point is that anxiety and depression are multifactorial and not necessarily related to serum vitamin D levels. In general, anxiety and depression can be attributed to endogenous or exogenous factors. Endogenous factors for anxiety/depression include genetic predisposition, personality type, adverse childhood circumstances, negative thinking, coping strategies for exogenous or endogenous stress, comorbidities, hormonal changes, education, socioeconomic status, loneliness, isolation, and sleep quality. Exogenous factors for anxiety/depression include the geopolitical situation, life events, marital status, and satisfaction with one's professional and personal life.

The second point is that dihydroepiandrosterone and prolactin were elevated in women with PCOS, but no explanation was given for this finding [1]. Prolactin is not usually elevated in PCOS patients, which is why it is important to rule out prolactinomas or pituitary adenomas in general. Were patients with elevated prolactin levels generally subjected to an MRI examination of the pituitary gland? In a study of 330 PCOS patients, two-thirds had normal prolactin levels and 10% of patients had a prolactinoma [2]. It is therefore essential to rule out pituitary adenomas as a cause of hyperprolactinemia.

The third point is that PCOS is associated with consanguinity of the parents [3]. However, it was not mentioned how many of the parents were blood relatives. Knowing this number is crucial, as avoiding consanguineous marriages can also reduce the prevalence of PCOS. Since consanguineous marriages can lead to offspring with chromosomal abnormalities [4], patients with PCOS should also undergo chromosome analysis.

The fourth point is that 55% of PCOS patients were classified as fertile and that two-thirds of the patients were married [1]. Therefore, we should know how many of these women became pregnant, how many gave birth, and whether any of their children also developed PCOS.

The fifth point is that the reference limits are missing in Table 2 [1]. Without reference limits, it is difficult to assess whether the values given are within the normal or abnormal range.

Before attributing anxiety and depression in PCOS patients to vitamin D deficiency, all alternative causes must be ruled out.

Declarations

Ethical Approval: Not applicable.

Consent to Participation: Not applicable.

Consent for Publication: Not applicable.

Funding: None received.

Availability of Data and Material: All data are available from the corresponding author.

Completing Interests: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Author Contribution: JF was responsible for the design and conception, discussed available data with coauthors, wrote the first draft, and gave final approval. FS and CS: contributed to literature search, discussion, correction, and final approval.

Keywords: Polycystic Ovary Syndrome, Vitamin D Deficiency, Anxiety, Depression

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