Secondary Amenorrhea Mimicking PCOS Following Severe Dietary Restriction and Moringa Supplementation: A Case Report

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Abstract (300 word limit)

Statement of the Problem: Secondary amenorrhea is a frequent menstrual disorder with complex etiologies, including endocrine disorders, polycystic ovary syndrome (PCOS), and hypothalamic suppression. The rising incidence of unsupervised restrictive dieting and herbal supplements in young females has added to the complexity of diagnosis. Functional hypothalamic amenorrhea due to nutritional deficiency can present similarly to PCOS, thus posing diagnostic dilemmas and incorrect management. This case report illustrates the diagnostic difficulties created by lifestyle-related hormonal imbalances that mimic PCOS. Case Presentation & Methodology: The case is presented of a young female who developed secondary amenorrhea after a period of extreme caloric restriction and daily moringa supplements as a weight loss strategy. The patient was found to have amenorrhea and mild hyperandrogenic symptoms, thus suggesting PCOS. However, the absence of polycystic ovarian morphology on pelvic ultrasonography excluded PCOS. The patient's hormonal profile revealed hypothalamic suppression rather than typical PCOS hormonal abnormalities. A detailed clinical evaluation was required to reach a diagnosis. Findings: The patient was advised to stop restrictive dieting and herbal supplements. Nutritional support and proper medical management helped the patient gradually resume normal menstrual cycles. This case report emphasizes the reversible nature of lifestyle-related menstrual disorders if diagnosed and treated promptly. Conclusion & Significance: The current case highlights the significance of a comprehensive dietary and supplement intake in the assessment of secondary amenorrhea. It is important to consider functional hypothalamic amenorrhea prior to attributing the condition to young women with PCOS, especially in the setting of a restrictive diet. Given the increasing trend in the use of herbal supplements such as moringa, it is important to be aware of their possible endocrine effects.

Image



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Photograph



Biography (150 word limit)

Maha Ahmed is a fourth-year medical student at Dow University of Health Sciences, Karachi, Pakistan. She has extensive research experience across multiple study designs including case reports, case studies, cross-sectional studies, literature reviews, systematic reviews, meta-analyses, and letters to the editor. She has authored over eleven publications in peer-reviewed journals and has presented her work at several international conferences including ASiT, Heart Failure 2026, and RCPCH Birmingham. She has received a Best Presenter Award at a national conference. Maha also serves as a peer reviewer for multiple PubMed-indexed journals, including the Heart Journal of Pakistan and BMJ. Her academic interests include women's health, endocrine disorders, public health, and evidence-based clinical research.

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