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Editorial

A Perspective to: Re-evaluating the Necessity of Routine Laboratory Monitoring during Isotretinoin Therapy for Acne

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Introduction

Isotretinoin, a vitamin A metabolite retinoid derivative, is well known for its inhibitory effect on sebaceous gland proliferation and inhibitory lipid synthesis. Also, the anti-inflammatory effect caused by isotretinoin on the specific *Cutibacterium Acnes*, especially phylotypes IA-1, with the subsequent increased porphyrin levels, which induce inflammation, as well as interleukin-8 expression and induced selective Human β-Defensin-2 [2], play a pivotal role in severe acne types.

Routine laboratory monitoring in patients with isotretinoin use for conglobate acne is part of the evaluation process to continue its use during treatment safety. According to Park YJ et al., different laboratory values have been found, and the most predominant changes are cholesterol levels and low-density lipoprotein in the first months after its use [3]. Another study by Xia E. et al. revised and concluded in a Delphi consensus to monitor alanine aminotransferase and triglycerides at baseline and one month before the treatment initiation but not monthly, excluding other liver and complete blood counts checking [4]. The latest guide to acne includes a review of isotretinoin by Raynolds R et al., where the Delphi consensus is reaffirmed. It suggests the low benefit of laboratory testing for adverse events but maintains the necessity of mandatory pregnancy prevention [5].

Discussion & Conclusion

As the number of patients treated with isotretinoin increases, laboratory monitoring, although relevant, has not been established as a schematic standardized routinary examination. Several schemes have been proposed based on different results. Isotretinoin is used in adolescents and adults when topical therapy is ineffective. Although I agree with the authors to have a baseline level of laboratory tests before starting therapy, I have had adolescent patients who initially presented average values and, one month after treatment with isotretinoin, double or triple the level of transaminases despite being previously healthy patients. Although it is not for most patients, the evaluation should be considered one month after using the medication and monitored at a crescendo value peak of four or five months. Many teenagers do not have a balanced diet, and high-limit hepatic enzyme levels can be an early warning to a faster elevation of these levels than a patient with normal-low levels. This change hasn´t been found evident in cholesterol or triglyceride levels. Still, it cannot be excluded from the evaluation, and I agree with the authors on the assessment at the peak time dosage. I send routine hepatic enzymes and lipid values at baseline, at one month, and after five months of treatment. If fatty liver is suspected, hepatic ultrasonography monitoring is done, and there have been numerous cases of fatty liver disease in children found. The final alanine aminotransferase and aspartate aminotransferase laboratory are not evaluated, nor is the hepatic ultrasonography sent if the previous examinations have been within normal ranges. Although these findings are based on personal observations, further investigation and consensus regarding a proper scheme that includes serum analyses are needed. Publications like the ones on Isotretinoin therapy for acne still have many modalities to discuss and discover. Publications like Zhu et al. contribute to initiating an adequate consensus in regulating serum analyses using isotretinoin.

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