

Answers to the Reviewers

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: This study mainly explored the importance of vitamin D supplementation in patients with autoimmune hepatitis. Through the relationship between AIH and the immune system, as well as the relationship between vitamin D and the immune system, this article leads to the correlation between the immune regulation, anti-inflammatory, antioxidant, and anti-fiber effects of vitamin D and the prevention and treatment of AIH. However, there is a lot of irrelevant content. Moreover, I need to highlight several important considerations regarding this research. First of all, according to clinical manifestations, autoimmune liver diseases are divided into three types. Different types of autoimmune liver diseases have different clinical manifestations and pathological changes in the liver. Will the prognostic value of vitamin D supplementation vary depending on these subtypes? At the same time, vitamin D deficiency has been described in various liver diseases and non-liver diseases and other healthy people, so what is the reference vitamin D supplement dosage for patients with autoimmune liver disease, and how to give appropriate vitamin D supplementation for patients with different severity of liver disease?

Thank you for your comments and suggestions. We deleted some not relevant sentences. We focused on the effect of vitamin D on autoimmune hepatitis retrieving useful data from a recent systematic review. However, a number of questions remain not answered because as I indicated in my title. It is a topic that needs further investigation.

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30 **Reviewer #2:**

31 **Scientific Quality:** Grade C (Good)

32 **Language Quality:** Grade A (Priority publishing)

33 **Conclusion:** Minor revision

34 **Specific Comments to Authors:** The article is quite interesting and open a new research
35 domain. The conclusion did not reflect the content of the article. Several conclusion are
36 written but the substrate is not presented in the article (e.g. Vitamin D improves
37 glucocorticoids, increases the production of glutathione, and inhibits hepatic stellate
38 cells. Vitamin D may influence the histological severity of AIH, advanced liver fibrosis,
39 and the need for liver transplantation). I suggest to include these results in order to
40 have these conclusion. The author should also mention what is the recommendation for
41 supplementation of vitamin D in autoimmune hepatitis. In this way the author could
42 correlate better the tile of the article with the main content.

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44 Thank you for your comments and suggestions. According to your suggestions, we
45 specifically focused on the effect of vitamin D on autoimmune hepatitis retrieving
46 useful data from a recent systematic review. The recommendation for vitamin D for
47 patients with autoimmune hepatitis remains elusive. I retrived papers on the effect of
48 vitamin D on single basic functions of the hepatocytes. A number of questions remain
49 not answered because as I indicated in my title. It is a topic that needs further
50 investigation. I changed the title as well.

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Reviewer #3:

Scientific Quality: Grade E (Do not publish)

Language Quality: Grade C (A great deal of language polishing)

Conclusion: Rejection

Specific Comments to Authors: The title of this letter is 'Vitamin D is a critical supplement in patients suffering from autoimmune hepatitis'. The author argues that vitamin plays an important role in the immune system. A few important issues need to be addressed. 1. Title: The title is vague. Does vitamin D play an important role in the pathogenesis of autoimmune hepatitis? What is being 'critical'? 2. The author did not present any convincing data linking the pathogenesis of autoimmune hepatitis with vitamin D deficiency. The mere presence of vitamin D receptor on the surface of peripheral blood mononuclear cells does not automatically make it important in regulating the immune system. No reference is cited to support this claim. 3. In the last paragraph, the author claims vitamin D has immunoregulatory, anti-inflammatory, anti-oxidative, and anti-fibrotic effects, affecting the outcome of immune-mediated diseases. There was no supporting references, including specific reference linking vitamin D and autoimmune hepatitis. 4. Similarly, the statement linking vitamin D may influence the histological severity of AIH, advanced liver fibrosis and the need of liver transplantation is also not supported by any appropriate references. 5. Finally, the usage of English language needs to be improved.

Thank you for your comments and suggestions. We changed the title and retrieve single papers on the effect of hepatocytes and specifically on NAFLD and an important article on Turkish patients affected with autoimmune hepatitis and treated with vitamin D supplementation. We listed more references suggesting how vitamin D can act on the body influencing glutathione and glucocorticoid response. Since this is a letter to the editor, we found that an expansion of the text would make the manuscript a review. We

added a microphotograph of a patient with autoimmune hepatitis with remarkable interface hepatitis. We improved the English language (grammar and spellings) and apologize for previous version.

Reviewer #4:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: This is a well written manuscript. Focus more on immunomodulatory function of vitamin D rather than other effects e.g. skeletal.

Thank you for your comments and suggestions. We focused on autoimmune hepatitis, added a microphotograph and expanded the references suggesting the potential support of vitamin D supplementation for patients suffering from autoimmune hepatitis.