Review of: "[Review Article] Pitavastatin: A Comprehensive Overview of its Mechanisms, Pharmacokinetics, Pharmacodynamics, and Adverse Effects"

Jieyun Cao

Potential competing interests: No potential competing interests to declare.

The authors did a good job trying to comprehensively summarize all available Pitavastatin information. They gathered information from many different perspectives such as chemical structure, pharmacodynamics, MoA, PK, indications, DDI and side effects.

1. Overall impression is the manuscript need more proofread, to correct grammas and typos, or write it into complete sentences. A few examples are:

“Fungal-derived inhibitors of HMG-CoA reductase, including Lovastatin, Pravastatin, and Simvastatin, and wholly synthetized molecules, including Atorvastatin, Cerivastatin, Fluvastatin, Pravastatin, Pitavastatin, and Rosuvastatin [12], are known.”

“Pitavastatin was mostly absorbed in the small intestine rather than the colon; bioavailability (51%), Tmax 1 hour.”

“Data from both inside and outside of living organisms; experiments show that statins limit the formation……..”

“Polypharmacy, ADRs, and statin-drug interactions: terms such as "statin" (along with others, such as "HMG CoA reductase inhibitor"), terms concerning polypharmacy (such as "polypharmacy" or "interaction" or "concomitant" or "co-morbid"), and words concerning ADRs (such as "adverse drug reaction" or "adverse event" or "side-effect" OR "myopathy" and others were searched).”

2. Please explain more what do you mean by “Compared to other medications in its class, pitavastatin exhibits a more robust effect on cholesterol levels due to its new, totally synthetic nature” Why being totally synthetic leads to more robust efficacy? Does not make sense to me.

3. “Pitavastatin was mostly absorbed in the small intestine rather than the colon; bioavailability (51%), Tmax 1 hour.”

This should be in PK section rather than PD section.

4. Regarding to “Statins often bind to HMG-CoA reductase with several thousand times greater affinity than HMG-CoA, and their structures are comparable to that of HMG-CoA [5]”

What is the pitavastatin’s binding affinity as compared to other statins?

5. For section 4.1 Absorption and Distribution, this section is almost a duplicate from a paragraph in your reference 19, published in 2012. Please add any new information available in recent 10 years.

6. Please explain abbreviations when first mentioned in the manuscript.

7. “Since OATP2B1 is likewise found in the human liver's basolateral membrane, we used two methods to validate OATP2B1's negligible role in the liver's absorption of pitavastatin”

You want to say the authors in referenced publication?

8. Section 6, "Drug Interactions," needs some polish and rewriting. Not clear what the authors are trying to say. Explain what enzyme/transporter is involved in drug-drug interactions, and what clinical or preclinical data are available for each enzyme/transporter.

Hope this is helpful.