

Peer Review

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

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Title: *Pitavastatin: A Comprehensive Overview of its Mechanisms, Pharmacokinetics, Pharmacodynamics, and Adverse Effects*

Authors: Priyanka Chaurasiya, Md Sohel Ahmed, Sarita Sharma, Imran Khan

Summary

The manuscript provides an extensive and informative review of pitavastatin, a relatively newer statin, covering its mechanisms of action, pharmacodynamics, pharmacokinetics, clinical applications, and adverse effects. The article appears to aim for a comprehensive, evidence-based perspective useful for both academic and clinical audiences.

Strengths

Comprehensiveness:

The review thoroughly discusses key pharmacological aspects of pitavastatin, including its chemical structure, mechanism of action, pharmacokinetics, and effects in specific populations such as diabetic and dyslipidemic patients.

Evidence-Based Content:

Citations are provided throughout to support claims, which strengthens the scientific validity of the review.

Clinical Relevance:

The article outlines the comparative efficacy of pitavastatin with other statins and highlights its potential advantages in polypharmacy settings, particularly in elderly and diabetic patients.

Well-Structured Sections:

The review is logically organized with clearly defined sections, facilitating readability and ease of reference.

Attention to Drug Interactions:

The manuscript discusses transporter-mediated drug interactions and CYP metabolism, which are critical aspects in clinical pharmacology.

Areas for Improvement

Linguistic and Grammatical Clarity:

There are frequent grammatical errors, awkward phrasings, and inconsistent tenses throughout the manuscript (e.g., “That ought to contribute to higher rates of LDL-C target attainment” is unclear).

Consider a thorough language revision or professional proofreading to improve readability and scientific tone.

Redundancy and Repetition:

Several statements and concepts are repeated unnecessarily, such as the binding affinity of pitavastatin to HMG-CoA reductase and its effects on HDL-C.

These could be consolidated to reduce wordiness.

Referencing Style:

The current referencing format lacks consistency (e.g., “[1]”, “[19]”) and does not include a reference list.

Add a properly formatted reference section with full bibliographic details according to journal guidelines.

Figures and Tables:

The manuscript refers to figures (e.g., “Fig. 1”, “Fig. 2”) without actually providing or describing them. Ensure that all referenced figures are included, properly captioned, and referenced in the text.

Scientific Depth in Mechanisms:

The discussion on pleiotropic effects and the impact on β -cell function and insulin sensitivity could be more analytically explored, potentially incorporating current hypotheses or recent molecular findings.

Section 7 – Other Side Effects:

This section is quite scattered, combining CKD, cancer, skeletal muscle effects, and apoptosis without clear transitions or structure.

Consider dividing it into sub-sections or re-organizing the content under thematic headers.

Lack of Conclusion Synthesis:

The conclusion is brief and does not fully synthesize the key insights or potential clinical implications discussed in the body of the text.

Add a stronger, more integrated conclusion with future directions or research gaps.

Recommendations

Minor to Moderate Revisions Required.

The article is informative and has the potential to be a strong review in the field of clinical pharmacology. However, it would benefit from language editing, structural refinement, and the addition of missing components (such as the reference list and figures).

Declarations

Potential competing interests: No potential competing interests to declare.