

Review of: "Phyto-Therapeutic Potential and Pharmaceutical Impact of Shilajit (*Asphaltum punjabianam*): Current Research and Future Prospects"

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Potential competing interests: No potential competing interests to declare.

This review discusses the traditional medicinal uses of Shilajit and its potential health benefits. Here are some suggestions to the authors to improve the quality of the manuscript:

Introduction

Page no 1:

Paragraph 1

Please give space between “medicine” and “as” in the following sentence. “The World Health Organization defines traditional medicineas the application of herbal,.....”

Paragraph 2

Please correct the sentence to: “In the Himalayas, from Kashmir in the west to Arunachal Pradesh in the east, Shilajit is frequently found.”

Paragraph 3

The sentence should be rewritten as: "Hindus believe that in the high-altitude Himalayan hills, there are Sadhus and Yogis who have lived and meditated for hundreds of years without ever becoming ill or elderly."

Page no 3:

- The corrected sentence should be: "Shilajit is an exudate of plant gum, resin, latex, etc., that originates from the rocks of a mountain when extreme heat is present."
- For clarity and completeness, the table 1 heading can be rewritten as “List of Synonyms for Shilajit.”

Page no 4:

Therapeutic use in traditional system

- For better readability and precision, please use “bone fractures” instead of “breaks” in the statement “Shilajit is

recommended in conjunction with milk to manage diabetes, and with *Commiphora wightii* (Arn.) Bhand (guggulu) to cure breaks.”

- There should be no full stop before the comma in the statement “.....preventive measure against Alzheimer's.,”
- The statement contains an incorrect parenthetical explanation. "Shilajit" is not synonymous with "diabetes mellitus." Instead, Sushruta describes the use of Shilajit in the treatment of diabetes mellitus, which is referred to as "Madhumeha" in Ayurvedic texts.

Page no 4:

Chemical composition

- Remove “as follows and” in the statement “The three main chemical components that make up Shilajit are as follows and listed in Figure 1.”
- Correct Dibenzo-pyrones chromo proteins (DCPs) to Dibenzo-pyrone chromo proteins (DCPs).
- The grammar and punctuation need some corrections for clarity and accuracy in the following sentence. “In addition, 65 chemical compounds, including amino acids, waxes, resins, polyphenols, essential oils, free fatty acids, coumarins, albumins, and organic acids like citric, tartaric, oxalic, succinic, and adipic are included, major phytochemical and their activities listed in Table 2.”
- There are some redundancies in the description of the chemical components of Shilajit. For example, fulvic acid was mentioned twice. Other Shilajit components and their specific types are also repeated. Overall, the description can be made more concise by combining redundant information.

Page no 8:

Pharmacological Activities

Correct the title of Figure 2: Pharmacological properties of Shilajit. (Page no 8).

Antimicrobial activity

- "Both kinds of bacteria" is vague. Please specify Gram-positive and Gram-negative bacteria.
- "S aureus" should be "S. aureus" and "E coli" should be "E. coli."
- Authors have mentioned that Shilajit had no impact on E. coli and then claim E. coli was the most affected organism. These are two contradictory statements.
- "Exposed to UV light, all known bacterial strains" should be "Exposed to UV light, all known bacterial strains."
- "Shilajit" should be consistent in capitalization throughout the text.

Page no 9:

Anti-diabetic effects:

- The term "OS" is unclear. Please explain or remove it.
- "A-lipoic acid" should be "α-lipoic acid."

- Consider including more details about the research on how Shilajit may improve blood sugar regulation (mention if it's for type I or II diabetes), and clarify if it should be used alongside conventional medications. Refer to studies mentioned in references [77, 79] to elaborate on this point.

Antioxidant activity and Anti-viral property:

Please check that there are several grammatical errors and unclear phrases that need revision for clarity.

Cardioprotective effects

- Shilajatu should be Shilajit
- Some statements are overly broad or not specific enough, such as claiming Shilajit is "more advantageous than simvastatin for lipid profile" without specific comparative data.
- The concluding sentence needs clarification to clearly state the impact of Shilajit on reducing cardiotoxic effects of isoproterenol.

Page no 10:

Anti-Ulcerogenic and Inflammatory Effects

Please correct. It was additionally shown that Shilajit had strong anti-inflammatory effects in all three models of acute, subacute, and chronic inflammation.

The authors can combine the two sections on anti-viral property and anti-AIDS activity into one.

Page no 11:

Combinational Approaches

- Please note that there are several grammatical issues that make the text unclear and difficult to follow. For example, "Previously in the past" is redundant and can be simplified. The sentence structure overall needs improvement for better readability.
- The text mentions that heavy metals cannot be included in medicinal formulations to prevent toxicity, but then mentions Ayurvedic formulations that include metals for medicinal purposes. This needs clarification or reconciliation.
- Please rewrite. The statement "reciprocal guidance, reciprocal assistance, reciprocal discipline, and reciprocal" does not accurately describe interactions between naturally occurring plant components and traditional herbal formulations. Interactions between plant components and herbal formulations are more commonly described as synergistic (where components enhance each other's effects), antagonistic (where one component reduces the effectiveness of another), or additive (where effects are simply combined). These interactions can affect the overall efficacy and safety of herbal products.

Additional Points to Consider:

- While the manuscript mentions traditional uses, citing more scientific studies to support the claims of Shilajit's health benefits would strengthen the overall credibility.
- Shilajit may have side effects and interact with medications. The manuscript should mention the importance of consulting a healthcare professional before consuming Shilajit.
- Briefly mention the limitations of current research on Shilajit.