

Peer Review

Review of: "Evaluation of Ozonized Fibrin-Rich Plasma as a Therapy for Facial Rejuvenation: A Clinical Case Study"

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Here is my detailed review of the manuscript, "Evaluation of Ozonized Fibrin-Rich Plasma as a Therapy for Facial Rejuvenation: A Clinical Case Study".

General Comments:

The manuscript presents a clinical case study on the use of ozonized injectable fibrin-rich plasma (I-PRF) for facial rejuvenation. The topic is of significant interest in the field of aesthetic and regenerative medicine. The authors have clearly outlined their methodology and reported the outcomes for five patients, providing a foundation for further research. However, a case study, by its nature, is a preliminary form of evidence and has inherent limitations. The manuscript would benefit from a more cautious and rigorous presentation of the findings to align with the standards of a scientific publication.

Strengths:

Novelty: The combination of ozonized I-PRF for facial rejuvenation is an innovative and potentially valuable topic.

Detailed Methodology: The authors provide a clear and detailed protocol for the preparation and application of the ozonized I-PRF, which is crucial for replicability in future studies.

Patient Documentation: The inclusion of before-and-after photographic documentation (even if not visible in the text) is an important part of a clinical case study and is well-documented in the manuscript.

Ethical Compliance: The study was approved by an ethics committee, and all participants provided informed consent, which is essential for clinical research.

Weaknesses and Areas for Revision:

Overstated Conclusions: The abstract and conclusion make strong claims about the therapy's effectiveness ("significant improvement," "promising and innovative therapy," "sustainable and satisfactory aesthetic results"). However, these conclusions are based on a small, uncontrolled case series of only five patients. The observed improvements are subjective and lack objective, quantitative data. For example, metrics for "reduction of expression lines" or "decrease in hyperpigmentation" are not provided.

Recommendation: The language used in the abstract, results, and conclusion should be revised to reflect the nature of a case study. The authors should use more cautious phrasing like "the findings suggest," "preliminary results indicate," or "a positive response was observed in all five cases" rather than definitive statements.

Lack of Objective Evaluation: The evaluation of results was based on "inspection and palpation" and "visual clinical examination," which are subjective methods. While patient-reported satisfaction is a valid outcome, it is prone to bias, especially in the absence of objective measurements.

Recommendation: For a future revision, the authors could consider including a section on objective assessment tools, even if they were not used in this pilot study. This could involve using standardized scales for wrinkles (e.g., Fitzpatrick Wrinkle Scale), digital skin analysis tools for pigmentation, or a quantitative patient satisfaction scale. For this version of the manuscript, explicitly stating that the evaluation was a subjective assessment would be more accurate.

Study Design Limitations: The manuscript is titled a "clinical case study," but the abstract and introduction discuss it as an "observational study of clinical instances" and make broad conclusions. The case study design is a significant limitation for drawing general conclusions. The absence of a control group (e.g., a group treated with non-ozonized I-PRF or another therapy) means it is impossible to definitively attribute the results to the ozonized I-PRF alone.

Recommendation: The authors should be more explicit about this in the "Limitations" section. They should clarify that their findings are preliminary and that a randomized controlled trial (RCT) with a larger sample size and a control group would be necessary to validate the efficacy of this therapy.

Inconsistent Patient Information: The case reports provide varying levels of detail. The first patient's age is 25, while the others are 51, "years old," 50, and 70. This wide age range is an important variable that is not explicitly discussed in the context of the results. Also, the third patient's age is missing. The fourth

patient has an autoimmune condition (Hashimoto's disease) and takes continuous medication, which could be a confounding variable that influences skin condition and treatment response.

Recommendation: The authors should complete the missing information (age of the third patient). They should also discuss the heterogeneity of the patient sample (age, health conditions) in the "Discussion" section, as it affects the interpretation of the results. The inclusion of a patient with a known autoimmune condition, even if stable, should be acknowledged as a factor that could influence treatment outcomes.

Typographical and Grammatical Errors: The manuscript has several minor grammatical and formatting errors that detract from its professionalism. Examples include:

"facial rejuvenation, acting on the tone of facial cells" - "tone of facial cells" is unclear.

The "Methodology" section is missing subheadings for "Sequence of Services" and "Results".

The description of the third patient is missing the patient's age.

The reference list is not included, which is a major omission.

Recommendation: A thorough proofread of the entire document is needed. The authors should pay close attention to grammar, consistency in formatting, and ensuring all essential information is included.

Conclusion:

This manuscript reports on a promising new therapy in a clear and structured way. However, to be considered for publication, it needs to be revised to align its language with the limited scope of a case study. The authors should tone down the definitive claims of success and be more explicit about the subjective nature of their findings. Addressing the issues of a small sample size, lack of objective metrics, and incomplete patient details would significantly improve the manuscript's scientific rigor and make it a more valuable contribution to the literature. I would recommend a **Major Revision** to address these fundamental issues.

Declarations

Potential competing interests: No potential competing interests to declare.