Review of: ""Quantum Jump" and Their Effects on the Photo Whitening Technique"

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Potential competing interests: No potential competing interests to declare.

Recent advancements in tooth whitening technology have shown that the use of violet light, specifically at a wavelength of 408 nm, yields superior results compared to other commonly used light sources in whitening procedures. This particular wavelength of light effectively targets and breaks down the pigmented molecules that lead to tooth discoloration, thus enhancing the overall whitening effect.

In addition, combining violet light with lower concentrations of peroxide-based gels, such as 38% hydrogen peroxide or 30% carbamide peroxide, results in a synergistic effect. This combination not only optimizes the whitening process but also minimizes the potential side effects often associated with higher concentrations of peroxide, such as tooth sensitivity and damage to oral tissues.

The safety profile of the violet light tooth whitening technique is notably impressive. Reports indicate minimal or no occurrence of tooth sensitivity, roughness, or damage to both soft and hard tissues within the oral cavity. This makes it a preferable choice for patients seeking effective yet gentle whitening solutions.

Some comments are:

1. The article does not provide detailed information on the study design, sample size, or statistical analysis of the research findings, which would be necessary for a comprehensive evaluation of the results.

2. While the authors claim that the violet light whitening technique is safe, the article lacks specific data or quantitative measures related to the potential side effects or long-term implications on oral tissues.

3. The article does not compare the violet light whitening method with other established whitening techniques in terms of efficacy, safety, and cost-effectiveness, which would be helpful for readers to assess the relative advantages of this approach.

4. The article does not address potential limitations or challenges associated with the implementation of the violet light whitening technique in clinical practice, such as equipment requirements, treatment duration, or patient acceptance.

5. The article lacks information on the long-term stability and durability of the whitening effects achieved with the violet light technique, which is an important consideration for patients and dental professionals.

Overall, while the article presents an interesting and scientifically grounded approach to tooth whitening using violet light,

a more comprehensive evaluation of its advantages and disadvantages would require additional details on study design, statistical analysis, comparative performance, and potential limitations or challenges in clinical application.

The paper is accepted with major revision