

Review of: "Hydroxyapatite coating techniques for Titanium Dental Implants — an overview"

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Potential competing interests: No potential competing interests to declare.

The present manuscript describes several coating techniques to improve Titanium (Ti) and Ti- alloys for dental applications. To improve the quality of the manuscript, general and more precise remarks may be found below.

- The author mentions that bioinert ceramic coatings have high brittleness and high elastic modulus, but it should be stated against what material. In addition, the author could present some values to better contextualize the readers.
- The language of the third paragraph (Introduction section) should be revised, particularly the third, fourth and fifth sentences.
- The last paragraph of the Introduction section should have a brief introduction on the active ingredients topic. Why are those needed? The full name of BMP-2 should be stated, and at least one publication should be cited to justify this example.
- The Sol- Gel Dip-coating technique is widely known, so I believe there is no need to cite five publications when explaining the process steps.
- Instead of beginning the "Electro-chemical Deposition (ECD)" section with a full sentence from a publication, it could be rewritten to "According to C.A.D Rodriguez" and then the full sentence.
- According to the author, two benefits of the Electro-phoretic Deposition are "bioactivity and suitable cell viability" but those are a result from the coating process and not from the material choice?
- In the same section, the author mentions "BG" for the first time without previously mentioning its abbreviation.
- The second sentence of the section "Plasma spraying (PS)" should be reformulated, as well as the second paragraph which is confusing.

Instead of citing numerous publications at the end of sentences, it would be beneficial to contextualize the experiment design and main findings based on those publications.

- After describing all techniques, a general conclusion is missing. For example, a comparative table could be prepared to compare the benefits and drawbacks of each technique. Furthermore, HA coatings are also intended to improve the clinical results of dental implants. Ti and Ti-alloys. Therefore, I believe it would be beneficial to include in vitro and in vivo results to include the clinical aspect.

- Finally, the bibliography style should be uniform in the “References” section.