Author’s response to reviews

Title: An evaluation of superhydrophilic surfaces of dental implants - a systematic review and meta-analysis.

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Author’s response to reviews:

Answers to the reviewers’ questions

We would like to thank the reviewers for their comments. We hope that we were able to improve the quality of our paper by editing the comments. All the corrections in the text are highlighted in yellow.

Below you will find our answers to individual comments and questions.

Reviewer #1

Reviewer 1 (Lukasz Witek)

I would like to commend the authors on their thorough research for this review. While the work is of value but the authors should be either:

1) Comparing nearly the same number of implants
   -or-

2) For both systems the dates searched should be the same (currently authors are searching for a greater time for STR)
Since the number of publications for each surface varies it is not possible to evaluate the same number of implants in each group. Statistical tools are used for comparative purposes.

The authors included in their analysis articles that were available in English and dated between 01.01.2008 and 12.31.2016 in the case of Straumann implants or between 01.01.2010 and 12.31.2016 in the case of Thommen implants (page 5, Material and Methods)

The shorter date range for INCELL is due to the fact that the INCELL surface is relatively new, and has only been available on the market since 2010.

Additionally, the authors state objective to be "present study was to assess the basic success parameters for Straumann SLActive® and of Thommen Inicell® implants with a superhydrophilic surface after either functional immediate loading or loading after a short healing period (up to 4 weeks)" , but from the text all that is mentioned is 6 and 12 months, no mention of early healing.

MBL (marginal Bone Level) and any change in this parameter can be measured after a certain time. It usually takes 6 and 12 months after implant loading to radiologically evaluate any change in MBL.

Furthermore, as this is comparing two different implants, which in conclusion claim to be nearly similar, a section on the surface would be ideal, in an effort to better educate/inform the audience as to different properties.

The aim of the study was not to compare two types of implants but rather to evaluate the superhydrophilic surface. The conclusion was that the new type of surface allows the possibility of early and predictable implant loading.

(Aim p. 4) The objective of this study was to compare survival rates and marginal bone loss as well as assess the degree of stability of a dental implant with a superhydrophilic surface - Straumann SLAactive® and Thommen Incell® implants.

Reviewer #2

PEER REVIEWER COMMENTS: To view the full report from the academic peer reviewer, please see the attached file.

REVIEWER COMMENTS FROM REPORT: Overall the study is nice while there are concerns regarding the research quality of the manuscript besides the loop holes in the presentation of the manuscript too.
The study is a meta-analysis and a systematic review which is a statistical analysis that combines the results of multiple scientific studies.

The study lacks a pertinent PROTOCOL DEVELOPMENT. In other words, The authors must mention that the review employs the PRISMA statement (Preferred Reporting Items for Systematic Review and Meta-Analyses).

The review employs the PRISMA statement. The authors have included this information in the material and methods section. Please find the PRISMA diagram and checklist included.

Further, the authors need to indicate whether any detailed protocol was designed to answer the research questions? (There are methods like the PICO system for such things. The authors have not mentioned clearly in the text in the material and method section that implants of which site were considered. Please mention about the ethnic origin of the articles too, if possible. Exclusion and Selection criteria must be more furnished, clear and reliable.

The authors have screened the available data. No ethnic criteria were used for the available articles. Only manuscripts that met the inclusion criteria were evaluated in the study.

Selection criteria

- Prospective clinical studies on patients fitted with Straumann SLActive® or Thommen Inicell® implants, or with both these systems
- Studies which describe both criteria of success and failure
- No surgical techniques, types of restoration, age, sex, etc. were distinguished

Please mention clearly how many authors screened the articles. Further, what was done if there was any conflict while screening? Were the investigators who screened the articles calibrated? Kindly mention this in the text.

Only one of the authors, Arkadiusz Makowiecki, screened the articles. The first author did not declare any conflict of interest in relation to this manuscript.

This is already made clear in the manuscript contributions.

Competing interests / Funding

The authors declare that they have no competing interests. The study was self-funded.

Author contributions
1. Arkadiusz Makowiecki – A,B,C,D
2. Jakub Hadzik – E,F
3. Tomasz Gedrange – E,F
4. Marzena Dominiak – A,F

A – research concept and design; B – collection and/or assembly of data; C – data analysis and interpretation; D – writing the article; E – critical revision of the article; F – final approval of article.

There is no mention about the risk of Bias in this meta-analysis. Please mention this as this is an important aspect.

The diverse selection of researchers was intended to exclude any bias or risk of bias. The article and its methodology were evaluated and critically revised by:

2. Jakub Hadzik – E,F
3. Tomasz Gedrange – E,F
4. Marzena Dominiak – A,F

A – research concept and design; B – collection and/or assembly of data; C – data analysis and interpretation; D – writing the article

The authors have mentioned that the articles were removed depending upon their suitability and at the end after full text reading, only 20 articles were considered. Please mention in detail the reasons at each stage for the exclusion of the articles. Mention these reasons in the text as well as in the flow chart of Fig 1.

REQUESTED REVISIONS:

There are various things to consider regarding the methodology about meta-analysis which are not considered by the authors. The detailed description is mentioned in the section above. Basically the research question is not designed with detail and the screening authors doesn't seem to be calibrated. This may lead to bias which will make the evaluations meaningless. Kindly rectify.

The review employs the PRISMA statement. The authors have added this information in the material and methods section. Please find the PRISMA diagram and checklist included.
ADDITIONAL REQUESTS/SUGGESTIONS:

The abstract is not a good presentation of the potential of the manuscript. Revise it. Even the introduction section must be more elaborate. There are various grammatical and sentence forming errors too.

The English has been evaluated by a native speaker.