

#### Response to the reviewer 1 comments.

The authors would like to thank the reviewer for valuable comments and thorough analysis of our manuscript.

Concerning the number of patients enrolled – we plan to enroll more patients, however current situation with COVID strongly affect the research we conduct: more and more patients reject the idea to attend follow-up: they just afraid of getting infected. Planning the research power analysis was performed (PASS 2008, Monte Carlo method, 2000 simulations, also Statistica 12, SPSS 20 were used for all calculations), sample size of 170 patients was sufficient to support the conclusions reached, furthermore a model with fair characteristics was estimated.

It is not easy to enroll patients in this study because surgeons tend to use screws of different parameters: they prefer 7,0-7,5 screws on S1 level, if different screws had been used patient was considered an exclusion criterion present. This work was reviewed by IRB and it was considered that researchers influence on implant selection is prohibited – those circumstances slow down patients enrollment. To conclude, we cannot enroll additional patients during the time given for revision of manuscript. On the other hand, the results of the statistical analysis support the conclusions reached, weak sides are acknowledged. We suppose that even though weak sides are present, the researchers may use our work (some thoughts on study design and data handling) for planning a research on relevant topic.

#### Response to Reviewer 2 comments

Authors would like to thank the reviewer for thorough review of the manuscript and valuable suggestions made.

Concerning the suggestion of adding a new variable – BMI, it sounds reasonable, however the enrolled cohort is not suitable for the detection of BMI impact: mean was 32,88, SD=5,28 50% of patients had BMI between 29 and 36, initial analysis demonstrated that because of low variability, this factor turned out insignificant. This factor was pulled out during the initial analysis as far as it produced only noise.

Concerning grammar polishing I understand that manuscript should be submitted without any grammar mistakes, with a good layout and easy to understand. Being afraid of rejection because of quality of English language, this text was reviewed and edited by a native speaker, however incorrect tense was used – the recommended correction was made in the revised text.

#### Responses to the scientific editor comments.

1. Author contribution section was filled out, the requested information is present.
2. Strobe statement was filled out, we apologize for sending initial form
3. Comas that separate decimals were replaced by dots (I sincerely apologize for my inattentiveness).
4. The figure used in this manuscript demonstrates the radiographic criterion for screw loosening, this figure is original has not been published and does not require any permission, furthermore we submit only original figures that are anonymous and fit the recommendation of IRB committee.

5. The reference order was checked out, the number of references is superscripted in square brackets, the references were counted according to the citation order, the additional check was performed.
6. Article highlight section – I Sincerely apologize, I have no idea on how manuscript was submitted without filling out this section, probably it happened because of software failure.
7. Picture (Fig 1) can be easily used for power point or any other application. I think no arrows are required – both screws presented with signs of loosening