Author’s response to reviews

Title: Silver-coated modular Megaendoprostheses in salvage revision arthroplasty after periimplant infection with extensive bone loss - a pilot study of 34 patients

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Author’s response to reviews:

Dear Xinhua Qu,

Dear Reviewer,

We have the pleasure of sending you our revised manuscript entitled:

‘Silver-coated modular Megaendoprostheses in salvage revision arthroplasty after periimplant infection with extensive bone loss – a pilot study of 34 patients in order to submit it for consideration for publication in BMC Musculoskeletal Disorders.

We thank the esteemed reviewers for their helpful comments. We hope to have improved the quality of our work through the changes. The individual remarks are explained below.

Reviewer 1: This is a very interesting paper on the use of silver coated mega-prostheses in the treatment of periprosthetic infection, both hip and knee. Considering the small number of cases and the retrospective feature of the analyses I have some concern:
1) In the text the Authors denote that there were 2 drop-out cases but in the analyses of results they consider all the cases screened (20 for SCG and 14 for NSCG).

We have not expressed ourselves clearly in this point. The results refer to 34 patients who have been included after exclusion of 2 patients. We have made this fact clear in the text.

2) The tables 2 and 3 are reversed in the table legend;

We have corrected the tables.

3) Table 2 (or table 3 in the legend) is not clear: can the Authors better explain how many patients have bacterial associations and which type of association?

The determination of the bacteria has changed over the years. At first, only a few swabs were taken from the wound. In the recent period, both tissue samples and implants were examined by sonication. How exactly the determination at the beginning of the investigation period took place cannot be answered. The evaluation was carried out on the basis of the available files. This is a major problem at this retrospective survey. A passus has been added in the limits.

4) Considering the development of new antibiotic pre-operative prophylaxis during the years between 1994 and 2014 and the appearance of new bacterial resistance, can the Authors emphasize the use and the different types of antibiotics used as pre-operative prophylaxis and if there were changes in this approach during the 20 years of study?

Until 1999, β-lactam antibiotics (mainly ampicillin) were used as perioperative antibiotic prophylaxis. As of 1999, 2-generation cephalosporins (mainly cefuroxime) were used. Glindamycin was used in allergies.

Reviewer 2: The authors investigate the efficacy of the Silver-coated modular Megaendoprostheses in salvage revision arthroplasty after periimplant infection with extensive bone loss. Silver is thought to be a great antibacterial element and this valuable study. However, there are still some details to revise before publication.

1. Would it be more appropriate and accurate to change the "retrospective study" into "pilot study" in this article?

The title has been changed.
2. Please include a power analysis to show if the numbers are sufficient.

This is a retrospective study of a very special patient population. Finally, the presented patients, the only ones who meet the inclusion criteria and have been treated in our clinic during these 20 years. A realistic power analysis would require a significantly higher number of patients. However, this seems unrealistic due to the rarity of the patient population. We have supplemented this limitation in the passus limits.

3. I would advise engaging language consultants to improve the scientific language of the paper as the authors are not native English speakers.

The manuscript was completely revised by a native speaker.

We confirm that this manuscript has not been published or submitted elsewhere. The study was approved by the Institutional Review Board (ethics committee of the University of Leipzig). If you need any further information to help in your consideration of our article, please do not hesitate to contact us.

Sincerely yours,

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