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Letter to Editor Open Access

Comment to "Case Report after Introducing a New Abutment Surface for Bone Anchored Hearing Implants: Hydroxiapatite Abutment Surfaces and Skin Reaction" by Malou Hultcrantz

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Dear Editor

In a recent paper by Professor Malou Hultcrantz published in Volume 2, Issue 1 of this journal [1], we can read about a series of less than successful Baha implantations using the Hydroxyapatite coated abutments, also known as BIA400 or BA400. As a scientist and representative of Cochlear, I wish to make some clarifications in order to avoid misconceptions and provide some insights for surgeons to help secure good outcomes with the technology. I also wish to say that it is not my intention nor in my interest to discredit the author of this paper. I sincerely respect the work the author does for her patients, for promoting bone conduction as an option and for the work in advancing and developing this treatment.

As for introduction to people who are not acquainted to this product please find information at Cochlear.com and in the referenced articles [2-4]. The BIA400/BA400 has been FDA approved and available since 2013 and it has of today been implanted in more than 35,000 patients worldwide.

When we developed this product, we also developed a surgical protocol and an after care practice that takes into consideration that the skin integrates with the hydroxyapatite. It is clear that the surgeon and author of this paper has deviated from these recommendations, and instead followed a surgical principle and after care practice used for titanium abutments. This has likely contributed to the poor result. I strongly recommend using the procedures and recommendations provided by Cochlear for best results. To address some of the issues seen in this series of cases, I would like to point out some fundamentally different approaches used for hydroxyapatite coated abutments that has shown good and consistent outcomes.

First, pressing down the skin tissue around the abutment e.g. by packing the area with gauze may work for a titanium abutment. However, this is to be avoided for a hydroxyapatite coated abutment. The skin should be left at a neutral level so that it can integrate on a corresponding and appropriate level on the abutment. Otherwise, when the pressure comes off, the skin that has integrated will tear and will have to re-adapt. This causes unnecessary inflammation, sometimes bleeding and increases the risk of infection and skin overgrowth.

We also recommend stabilizing the skin-abutment interface with a thin wound dressing for up to two weeks so that the skin may heal into the abutment without disruption or ingress of bacteria. This is also the reason why we recommend single use wet wipe for daily maintenance rather than the brush technique used for titanium abutments which easily can tear into the junction and introduce bacteria and cause problems. Further, using etching techniques such as silver nitrate may be too aggressive and impede fibroblast proliferation.

Finally, as a supplement to antibiotics, an anti-inflammatory ointment (or in severe cases local injections) would presumably help with some of the reported tenderness and irritation. This has an effect on both titanium and hydroxyapatite abutments alike, but since the paper didn't discuss the use of anti-inflammatory, I would like to bring this to attention.

To conclude, Cochlear appreciates the commitment of surgeons around the world whose efforts in advancing surgical procedures in this field really makes a difference. We encourage surgeons to approach us either with research ideas or if they want to have discussions in how to improve the practice.

References

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