Reply to comments on the article: Bone remodelling around the Metha short stem in total hip arthroplasty: a prospective dual-energy X-ray absorptiometry study

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We thank Mr. Diamond and Mr. McAlinden for their interest in our article [1]. We agree that a comparison of the two stems might be of interest, but only at first glance. During the study we learned that a direct comparison of the DEXA results of the two stems would lead to a misunderstanding of the implants. The Bicontact stem (BBraun, Aesculap, Tuttlingen, Germany) is a straight, standard stem which is implanted in an older population when compared to the Metha stem. Both stems follow a different femoral loading philosophy. Deeper resection for the Bicontact straight stem and the greater diaphyseal loading, with a larger proximal plasma sprayed surface leads to stabilisation in the intertrochanteric area [2, 3]. The Metha stem (BBraun, Aesculap, Tuttlingen, Germany) is not filling, a closed cortical ring of the femoral neck, bears some weight and due to the geometry of the implant follows the femoral neck during implantation and has a varus loading on the calcar (Fig. 1). Furthermore, the Gruen zones for the DEXA scans differ enormously. Most of the zones that have to be set for one implant involve completely different regions of the femur when compared to the other. The regions also have different sizes. Therefore a statistically valid comparison is not possible

in our opinion and the reader will simply obtain false information. A direct comparison of the implants might

Fig. 1 The Metha short stem (a) compared to the Bicontact straight stem (b). Both implants differ in terms of loading area and direction (yellow lines), resection height (black lines) and size

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lead the reader to the wrong assumption that one implant is better than the other, though each implant has its own indication. Numerous quite similar short stems have been introduced recently. We strongly believe that we need to compare these stems to investigate whether the minor differences between the implants have an impact on periprosthetic bone remodelling. However, we conducted the study exactly as displayed on the Controlled-Trials website including the Bicontact branch. We will report on these results shortly.

References

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