



# Editorial on “Bone remodeling in acetabular reconstruction using a Kerboul-Type reinforcement device and structural bone-grafting in total hip arthroplasty”

Toshiki Iwase

Department of Orthopedic Surgery, Hamamatsu Medical Center, Hamamatsu, Japan

*Correspondence to:* Toshiki Iwase. Department of Orthopedic Surgery, Hamamatsu Medical Center, Hamamatsu, Japan. Email: tossy.iwase@gmail.com.

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The article entitled “*Bone Remodeling in Acetabular Reconstruction Using a Kerboul-Type Reinforcement Device and Structural Bone-Grafting in Total Hip Arthroplasty*” (1) was reviewed in detail. In primary or revision total hip arthroplasty, acetabular bone loss is one of the challenging conditions to place the acetabular component at the original acetabular region. Although recent advance of ultra-porous coated metal acetabular shell or augment implants may influence the surgeons’ decision making at the time of pre-operative planning for such technically demanding conditions, we have to recognize that the most important concept of total hip arthroplasty is to place the hip rotation center at around the anatomical position with preserving the bone stock of the hip joint.

The authors emphasized that the Kerboul-Type acetabular reinforcement device can guide the surgeons to achieve this concept correctly with protecting the grafted bone from the post-operative over load, and this provides high rate of grafted bone remodeling even in revision setting with using structural allograft.

The authors also described the surgical techniques in detail, and the readers can imagine the precise procedures. The summaries of operative key points are placing the hook of the Kerboul-Type acetabular reinforcement device under the obturator foramen precisely without the horizontal or the vertical plate contacting the acetabular floor, and using the structural graft especially at the weight bearing zone.

In terms remodeling of the grafted bone, the authors acknowledged that tightly packed morselized bone such

as used in “impaction bone grafting” technique might have some advantage compared to the structural allograft. Several reports showed “impaction bone grafting” provides good bone stock recovery and good long-term results in primary and revision THAs. However, as we have previously reported (2), especially for very massive bone defect conditions of the maximum acetabular defect distance of  $\geq 20$  mm, or of complexed wall defects, “impaction bone grafting” may compromise the mechanical stability of the reconstructed cemented cup-graft complex.

As the authors concluded, the Kerboul-Type acetabular reinforcement device with structural graft and cemented cup is one of the useful options especially for massive acetabular defect conditions, and we convince that every hip revision surgeons should eager to master this technic in detail.

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## References

1. Oe K, Iida H, Tsuda K, et al. Bone Remodeling in Acetabular Reconstruction Using a Kerboul-Type Reinforcement Device and Structural Bone-Grafting in Total Hip Arthroplasty. *J Arthroplasty* 2017;32:908-14.
2. Iwase T, Ito T, Morita D. Massive bone compromises postoperative cup survivorship of acetabular revision hip arthroplasty with impaction bone grafting. *J Arthroplasty* 2014;29:2424-9.

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