

Letter to the Editor

Bone Graft Harvest Using a New Intramedullary System

Jason A. Lowe MD, Brett D. Crist MD

Published online: 30 June 2009

© The Association of Bone and Joint Surgeons® 2009

To the Editor:

We read with interest the December 2008 article by Belthur et al. [1] entitled “Bone Graft Harvest Using a New Intramedullary System.” The authors’ comparison of iliac crest bone graft harvesting to intramedullary collection with the Reamer/Irrigator/Aspirator (RIA) system (Synthes, Inc, West Chester, PA) is an important study comparing these two methods of bone graft harvesting.

In discussing the potential risks associated with RIA, the authors caution, “Care should be taken not to over-thin the femoral cortices. The effect of cortical thinning on mechanical strength of the femoral diaphysis is negligible when overreamed by 2 mm.” Although we acknowledge the potential risk of iatrogenic fracture with over-thinning the cortices, we are curious about the 2 mm limit. Upon review of Pratt et al. [2], we found no mention of a 2 mm limit when reaming femurs. In their biomechanical

evaluation of reaming on the torsional strength of femurs, Pratt et al. do not specify the size of the endosteal diameter in relationship to the size of the reamer. Rather they comment that a ratio of reamer diameter to bone diameter greater than 0.48 predicted a “significant change in the way in which the bone fails in torsion.” Would the authors please clarify the basis of their suggested 2 mm limit?

References

1. Belthur MV, Conway JD, Jindal G, Ranade A, Herzenberg JE. Bone graft harvest using a new intramedullary system. *Clin Orthop Relat Res.* 2008;466:2973–2980.
2. Pratt DJ, Papagiannopoulos G, Rees PH, Quinnell R. The effects of medullary reaming on the torsional strength of the femur. *Injury.* 1987;18:177–179.

(Re: Belthur MV, Conway JD, Jindal G, Ranade A, Herzenberg JE. Bone graft harvest using a new intramedullary system. *Clin Orthop Relat Res.* 2008;466:2973–2980.)

Editor’s Note: No response to this letter was received from Belthur et al.

J. A. Lowe (✉), B. D. Crist
Department of Orthopaedic Surgery, University of Missouri,
213 McHaney Hall, DC053.00, One Hospital Drive, Columbia,
MO 65212, USA
e-mail: lowejas@health.missouri.edu; manringm@mac.com

B. D. Crist
e-mail: cristb@health.missouri.edu