Commentary on an Article by van Leur et al., “Trochanteric Fixation Nail[®] with Helical Blade Compared with Femoral Neck Screw for Operative Treatment of Intertrochanteric Femoral Fractures”

Sang-Min Kim, MD, PhD

*Department of Orthopedic Surgery, Korea University Guro Hospital,
Korea University College of Medicine, Seoul, Korea*

I recently read an interesting article titled “Trochanteric Fixation Nail[®] with Helical Blade Compared with Femoral Neck Screw for Operative Treatment of Intertrochanteric Femoral Fractures (Hip Pelvis 2019;31(1):48-56; <https://doi.org/10.5371/hp.2019.31.1.48>).” This study was retrospectively designed to compare outcomes of the Trochanteric Fixation Nail (TFN[®]) with a helical blade and TFN[®] with a lag screw for the treatment of intertrochanteric femoral fractures. This letter to the editor contains some queries and personal concerns.

According to the “Materials and Methods” section, the authors describe that the surgeons could choose between a helical blade and lag screw for the collum implant. It is well understood that assigning patients is one of the most significant sources of a selection bias. Thus, if it was not a randomized trial, I believe that the authors should reveal

the indication of choosing a blade or screw. If it was the surgeons’ decision, as the authors noted, did each surgeon: i) use exclusively one type (screw or blade), ii) use both fixation approaches depending on their specific indication (s)? Additional information relating to these specific questions would help the readers better interpret the results?

The second concern relates the author’s definition of a mechanical complication. In the “Materials and Methods” section, axial migration was defined as being a parameter of mechanical complications. However, it is a normal phenomenon because of the collapsing of the fracture-implant composite until sufficient stability is achieved. I believe that an expected event which occurs during the healing process should not be considered a complication. The authors highlighted that axial migration occurred in 35.2% of all patients. Many authors explain that excessive sliding of the helical blade or lag screw is an important risk factor for failure. Kulkarni et al.¹⁾ note that sliding of more than 15 mm leads to a higher prevalence of fixation failure. I understand that it is difficult to define the exact cut-off value between physiologic and pathologic sliding, however, not all cases of axial migration should be considered a complication. If the authors disagree with this opinion, an explanation would be helpful.

A “cut through” phenomenon is known to be a unique complication of a helical blade, although they may also occur in other fixation modalities²⁾. Many readers are curious about whether this complication also occurs in the new generation of proximal femoral nail antirotation.

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Address reprint request to

Sang-Min Kim, MD, PhD

(<https://orcid.org/0000-0001-6172-6954>)

Department of Orthopedic Surgery, Korea University Guro Hospital, Korea University College of Medicine, 148 Gurodong-ro, Guro-gu, Seoul 08308, Korea

TEL: +82-2-2626-1163 FAX: +82-2-2626-1164

E-mail: heavystone75@gmail.com

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Cut through needs to be distinguished from the “cut out” seen with intramedullary nailing using lag screws. The authors used the term “axial cut-out” and “lateral cut-out,” however, it was not clear if “axial cut-out” was the cut-through phenomenon? If so, it would be helpful if the authors could explain their interpretation suggesting that there was no difference in the occurrence of the cut-through between the blade and screw.

CONFLICT OF INTEREST

The author declare that there is no potential conflict of interest relevant to this article.

REFERENCES

1. Kulkarni GS, Limaye R, Kulkarni M, Kulkarni S. *Intertrochanteric fractures. Indian J Orthop.* 2006;40:16-23.
2. Frei HC, Hotz T, Cadosch D, Rudin M, Käch K. *Central head perforation, or “cut through,” caused by the helical blade of the proximal femoral nail antirotation. J Orthop Trauma.* 2012;26:e102-7.