



Letter to the Editor

Comments on “Cementless distal fixation modular stem without reconstruction of femoral calcar for unstable intertrochanteric fracture in patients aged 75 years or more” of Zha GC, Liu J, Wang Y, Feng S, Chen XY, Guo KJ, Sun JY. Published in Orthop Traumatol Surg Res. 2019;105(1):35–39



We read with interest the article regarding bipolar hemiarthroplasty for unstable intertrochanteric fractures in patients aged 75 years or more [1]. We would like to congratulate the authors for this first of its kind study describing hemiarthroplasty in unstable intertrochanteric fractures without calcar reconstruction or replacement. High failure rates of internal fixation and risk of reoperation have resulted in the emerging trend of hemiarthroplasty in these patients [2–4]. It is also an accepted fact that involvement of calcar and greater trochanter in the fracture pattern makes this procedure more complicated and surgically challenging when compared with hemiarthroplasty done for neck femur fractures. Following are the main challenges in managing such fractures with hemiarthroplasty:

- to maintain the long-term stability of implant and prevent subsidence of stem in the absence of medial calcar support;
- to ascertain the amount of anteversion given to the prosthesis and also to accurately correct limb length discrepancy (LLD) in the absence of proximal bony landmarks, i.e. Lesser Trochanter (LT) and Greater Trochanter (GT);
- to restore abductor mechanism.

The authors have nicely described the surgical technique to use distal fitting modular stem without need of calcar reconstruction in unstable intertrochanteric fractures. The modularity of implant helps in fine tuning of anteversion and limb length while the distal fitting of the stem takes care of the stability part. However, there are certain technical concerns which need further elaboration by the authors.

- How did the authors decide regarding the correct degree of anteversion in the prosthesis as LT was neither brought to its anatomical position as a guide to anteversion nor the described method of using distal femoral epicondylar axis as a guide to anteversion was used [5].
- The results show that none of the patient had symptomatic LLD. How did the authors ensure that limb length has been corrected intraoperatively in the absence of bony landmarks? Also, can the limb length be adjusted intraoperatively with other uncemented distal fitting prosthesis which do not have the option of spacers.

- The authors have described fixing the greater trochanter with locking plate and screws, but all the representative radiographs shown in the article have multiple encirclage wires which are probably holding the plate. Nothing has been mentioned in the surgical technique regarding the usage of encirclage wires which needs further detailing.

We request the authors to provide clarity on the above-mentioned points regarding surgical technique, so that the excellent results as shown by the authors can be replicated by all in this complex problem.

Disclosure of interest

The author declares that he has no competing interest.

Funding

No financing was received.

References

- [1] Zha GC, Liu J, Wang Y, Feng S, Chen XY, Guo KJ, et al. Cementless distal fixation modular stem without reconstruction of femoral calcar for unstable intertrochanteric fracture in patients aged 75 years or more. *Orthop Traumatol Surg Res* 2019;105(1):35–9.
- [2] Mariani EM, Rand JA. Nonunion of intertrochanteric fractures of the femur following open reduction and internal fixation. Results of second attempts to gain union. *Clin Orthop Rel Res* 1987;81–9.
- [3] Haentjens P, Casteleyn PP, De HB, Handelberg F, Opdecam P. Treatment of unstable intertrochanteric and subtrochanteric fractures in elderly patients. Primary bipolar arthroplasty compared with internal fixation. *J Bone Joint Surg Am* 1989;71:1214–25.
- [4] Mäkinen TJ, Gunton M, Fichman SG, Kashigar A, Safir O, Kuzyk PR. Arthroplasty for pertrochanteric hip fractures. *Orthop Clin* 2015;46(4):433–44.
- [5] Thakkar CJ, Thakkar S, Kathalgere RT, Kumar MN. Calcar femorale grafting in the hemiarthroplasty of the hip for unstable inter trochanteric fractures. *Ind J Orthop* 2015;49:602.

Siddharth Dubey
Vivek Tirkha
Arvind Kumar
Samarth Mittal

*JPN Apex Trauma Centre, AIIMS Orthopaedics,
Department of Orthopedics, J P N Apex Trauma
centre, AIIMS, New Delhi, 110029 Ansari Nagar, India
E-mail addresses: samarthmittal@gmail.com,
samarthh@yahoo.com (S. Mittal)*

DOI of original article: <https://doi.org/10.1016/j.otsr.2018.11.015>.

<https://doi.org/10.1016/j.otsr.2019.04.004>

1877-0568/© 2019 Elsevier Masson SAS. All rights reserved.