

## Boomerang proximal tibial osteotomy for the treatment of severe varus gonarthrosis

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Received: 3 July 2013 / Accepted: 23 July 2013 / Published online: 18 August 2013  
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Dear Editor,

We read with interest the recent article by C. Sangkaew et al. [1], describing the role of boomerang osteotomy for the treatment of severe varus gonarthrosis.

There are a large number of research publications clearly indicating that, “HTO is to buy time until future TKR is planned in a properly selected patient”. But here the authors have given a good result in grade IV & V gonarthrosis with severe varus deformity. However, we have a few queries which we would like to communicate with the author:

1. The authors postulate that results of osteotomy would not depend on the number of compartments involved or associated angular deformity, but most authors consider HTO as a procedure for uni-compartmental involvement [2].
2. Flexion contracture is common in grade IV & V gonarthrosis with severe varus deformity due to shortening of the postero-medial structures including capsule, medial collateral ligament (MCL) and posterior cruciate ligament (PCL). Flexion contracture (FC) cannot be corrected without releasing these structures. But the authors have shown a decrease in FC in 30 of 42 patients ( $P < 0.001$ ).
3. Grade IV & V gonarthrosis is associated with a large number of osteophytes on the medial side of femur and tibia along with contracted MCL. Thus, it is really difficult to displace the proximal fragment laterally without removing the osteophytes and soft tissue release as shown in figure 1 of the article [3].

4. Severe gonarthrosis with bone loss on both medial and lateral sides with lateral subluxation of tibia as shown in a photograph in the article, if treated with osteotomy, will definitely exhibit a ‘teeter-totter’ effect, and most probably will remain in varus after HTO. The teeter-totter effect, where simultaneous contact of medial and lateral tibio-femoral compartment is not possible and it will remain unstable [4].
5. The author has done very well in taking considerations of pathophysiological origin of pain in varus gonarthrosis and relieving of pain by realignment [5], but mere correction of alignment will not relieve the pain, as all three compartments are diseased and unstable.

### References

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